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Author(s): McGehee, Ellen D.
Garcia, Kari L. M
Towery, Kenneth R.
Honig, Kristen A.

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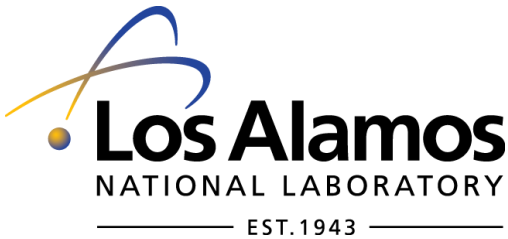
An Assessment of Cold War-Era Buildings at Technical Area 46

Los Alamos National Laboratory

LANL FY 2014/FY 2015 Footprint Reduction Program Project

Historic Building Survey Report No. 328

Survey No. 1147



Prepared for: the U.S. Department of Energy/National Nuclear Security Administration, Los Alamos Field Office

Prepared by: **Ellen D. McGehee**, Historian and Historic Buildings Manager
Kari L. M. Garcia, Cultural Resources Manager
LANL Environmental Stewardship Services (ENV-ES)

with

Ken Towery, Architect, LANL Infrastructure Planning (OI-IP)
Kristen Honig, LANL Infrastructure Planning (OI-IP)

EXECUTIVE SUMMARY

The U.S. Department of Energy, National Nuclear Security Administration, Los Alamos Field Office proposes to decontaminate, decommission, and ultimately demolish several Cold War-era properties located within Technical Area (TA) 46, Los Alamos National Laboratory (LANL). These buildings have been identified as excess property, and their demolition is being planned as part of LANL's Footprint Reduction Program activities during fiscal year (FY) 2014 and FY 2015.

In compliance with Section 106 and Section 110 of the *National Historic Preservation Act*, LANL's cultural resources staff have completed the evaluation of several potentially-eligible historic properties for inclusion in the National Register of Historic Places (Register): TA-46-2, TA-46-41, TA-46-59, TA-46-74, TA-46-75, and TA-46-76. LANL historic building inventory forms for all six properties are included in Appendix A. Of the six evaluated properties, TA-46-2, TA-46-41, and TA-46-76 are considered Register-eligible based on the findings in this assessment report. Buildings TA-46-59, TA-46-74, and TA-46-75 are deemed not eligible. In addition to Register evaluations, historic properties at TA-46 were assessed for their preservation and public interpretation potential. None of the Register-eligible properties were identified for permanent retention.

The State Historic Preservation Officer (SHPO) is requested to concur with the eligibility determinations contained in this report for the properties at TA-46. Additionally, this report serves as notification that the six properties described in this report will be demolished. Adverse effects to Register-eligible buildings will be resolved using standard documentation and reporting measures developed in consultation with the SHPO's office (stipulated in Section 9 of the LANL Cultural Resources Management Plan) (LANL 2006a). Standard measures include a written history of the technical area and a use history of the affected properties as well as detailed architectural documentation of the properties, such as archival quality photographs and updated as-built drawings. In addition, archival records along with historically significant equipment and "artifacts" associated with the historic properties will be identified prior to any demolition action and stored at appropriate LANL repositories.

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INTRODUCTION

The U.S. Department of Energy, National Nuclear Security Administration, Los Alamos Field Office proposes to demolish several Cold War-era properties during fiscal year (FY) 2014 and FY 2015 as part of the Los Alamos National Laboratory (LANL or the Laboratory) Footprint Reduction Program activities.

Historic Property Eligibility Assessment

In compliance with Sections 106 and 110 of the *National Historic Preservation Act*, this report contains documentation regarding the National Register of Historic Places (Register) eligibility status of six Cold War-era buildings located at Technical Area (TA) 46. Work processes carried out at TA-46 supported Cold War reactor technology and strategic and supporting science programs including nuclear rocket research (Project Rover), laser research, and chemistry and materials science research projects. Historical context information about activities at TA-46, property descriptions, and recommendations for Register eligibility are included in this report. A discussion of the multiple property method used to evaluate these properties is also included. Appendix A includes historic building inventory forms for the six buildings.

Survey Methods

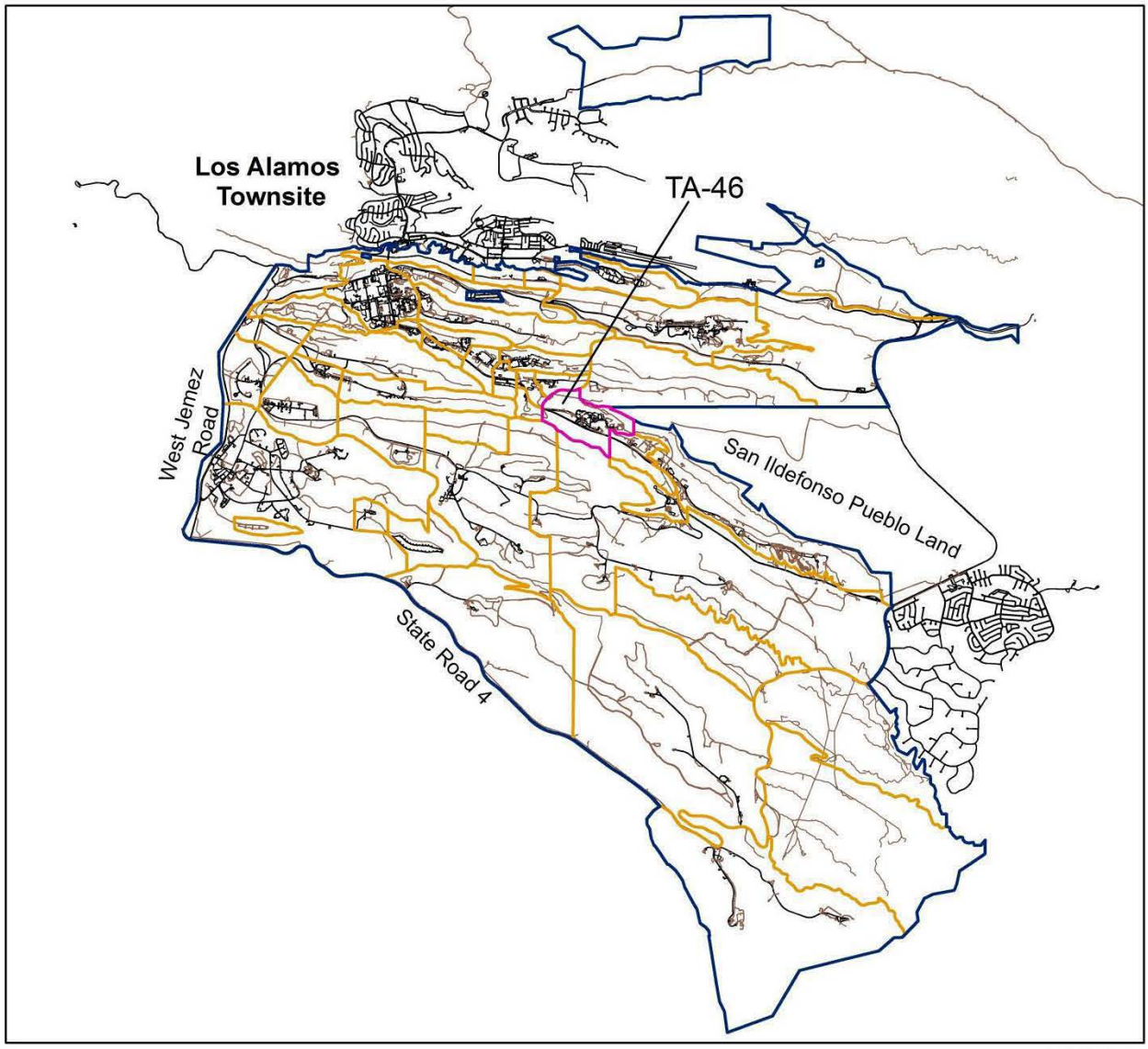
Initial surveys of historic properties located at TA-46 were conducted by Sheila A. McCarthy, Historical Architect, Benchmark Consulting Group in 2006. Follow-up survey and documentation work was conducted in 2014 by Ken Towery, Architect, and Kristen Honig, LANL Infrastructure Planning Group, and Kari Garcia and Ellen McGehee, LANL Environmental Stewardship Services Group. The building surveys were accomplished by conducting field visits to the buildings at TA-46 (Map 1). Architectural and engineering elements of the properties were documented and photographs were taken. LANL records research was also conducted.

HISTORICAL OVERVIEW

Early Cold War Era (1946–1956)

The future of the early Laboratory was in question after the end of World War II (WWII). Many scientists and site workers left Los Alamos and went back to their pre-war lives. Norris Bradbury was appointed director of the Laboratory following Oppenheimer's return to his pre-WWII duties, and he felt that the nation needed "a laboratory for research into military applications of nuclear energy" (LANL 1993a:62). In late 1945, General Groves directed Los Alamos to begin stockpiling and developing additional atomic weapons (Gosling 2001). Post-war weapon assembly work was now tasked to Los Alamos's Z Division, which had been relocated to an airbase (now Sandia) in nearby Albuquerque, New Mexico (Gosling 2001).

In 1946, Los Alamos became involved in "Operation Crossroads," the first of many atmospheric tests in the Pacific. Later, also in 1946, the U.S. Atomic Energy Commission (AEC) was established to act as a civilian steward for the new atomic technology born of WWII. The AEC formally took over the Laboratory in 1947, making a commitment to retain Los Alamos as a permanent weapons facility.



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Los Alamos
National Laboratory
Resources Management Team
ENV-ES Environmental
Stewardship Group

7,000 3,500 0 7,000 14,000 Feet

2,000 1,000 0 2,000 4,000 Meters

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W E
S

Technical Area 46
LANL Boundary
Technical Areas
Dirt Roads
Paved Roads

LANL Boundary and TA-46

With the beginning of the Cold War—the term "Cold War" was first coined in 1947—weapons research once again became a national priority. Weapons research at Los Alamos, spearheaded by Edward Teller and Stanislaw Ulam, focused on the development of the hydrogen bomb, the feasibility of which had been discussed seriously at Los Alamos as early as 1946. The simmering Cold War came to a full boil in late 1949 with the successful test of "Joe I," the Soviet Union's first atomic bomb. In January 1950, President Truman approved the development of the hydrogen bomb; Truman's decision led to the remobilization of the country's weapons laboratories and production plants. The year 1950 also marked the initial meeting of Los Alamos's "Family Committee"—a committee tasked with developing the first two thermonuclear devices (LANL 2001). In 1951, the Nevada Proving Ground was established and the first Nevada atmospheric test, "Able," was conducted. In the same year, Los Alamos directed "Operation Greenhouse" in the Pacific and successfully conducted both the first thermonuclear test, "George," and the first thermonuclear "boosted" test, "Item." In 1952, the first thermonuclear bomb, known as "Mike," was detonated at Enewetak Atoll in the Pacific (LANL 1993a).[1] In short order, the Soviet Union responded with a successful fusion demonstration in August 1953, followed by a test of a hydrogen bomb in 1955. The arms race was on. By 1956, Los Alamos had successfully tested a new generation of high explosives (plastic-bonded explosives) and had begun to make improvements to the primary stage of a nuclear weapon (LANL 2001).

Although weapons research and development has always played a major role in the history of LANL, other key themes for the years 1942–1956 include supercomputing advancements, fundamental biomedical and health physics research, high explosives research and development, reactor research and development, pioneering physics research, and the development of the field of high-speed photography (McGehee and Garcia 1999). The Early Cold War era at Los Alamos ended in 1956, a date that marks the completion of all basic nuclear weapons design at LANL; later research at Los Alamos focused on the engineering of nuclear weapons to fit specific delivery systems. The year 1956 was also the last year that Los Alamos was a closed facility—the gates into the Los Alamos town site came down in 1957.

Late Cold War Era (1956–1990)

The Late Cold War era saw Los Alamos's continued support of the atmospheric testing programs in the Pacific and at the Nevada Test Site. In 1957, the first of many underground tests in Nevada was conducted, and in 1963, the Limited Test Ban Treaty was signed, which banned atmospheric testing and also nuclear weapons tests in the oceans and space (U.S. DOE 2000). Defense mission undertakings during this time included treaty and test ban verification programs (such as the satellite detection of nuclear explosions), research and development of space-based weapons, and continued involvement with stockpile stewardship issues. Non-weapons undertakings supported nuclear medicine, genetic studies, National Aeronautics and Space Administration collaborations, superconducting research, contained fusion reaction research, and other types of energy research (McGehee and Garcia 1999).

The Cold War Ends

The Cold War ended in the early 1990s. Its demise was marked by START, the Strategic Arms Reduction Treaty (signed by Reagan's successor, George Bush, and Soviet president, Mikhail

[1] A better understanding of the Marshall Islands language has permitted a more accurate transliteration of Marshall Island names into English. Enewetak is now the preferred spelling (formerly Eniwetok).

Gorbachev), and by Bush's announcement in September 1991 of a unilateral decision to decrease significantly the U.S. nuclear weapon stockpile. That announcement was followed in June 1992 by an agreement between President Bush and Russian president Boris Yeltsin to reduce each country's nuclear arsenal gradually over the next decade. The arms race that had lasted nearly half a century was over (Machen et al. 2010).

DESCRIPTION OF TECHNICAL AREA

TA-46 (WA-Site) Historical Background

TA-46, historically known as Weapons Assembly (WA) Site, was first used during the Cold War years to support the Rover nuclear rocket program and later served as a center for laser and materials chemistry research. The technical area is located along the Pajarito Road corridor in the center of LANL and consists of laboratory and office buildings along with warehouses and other storage buildings (Map 2).

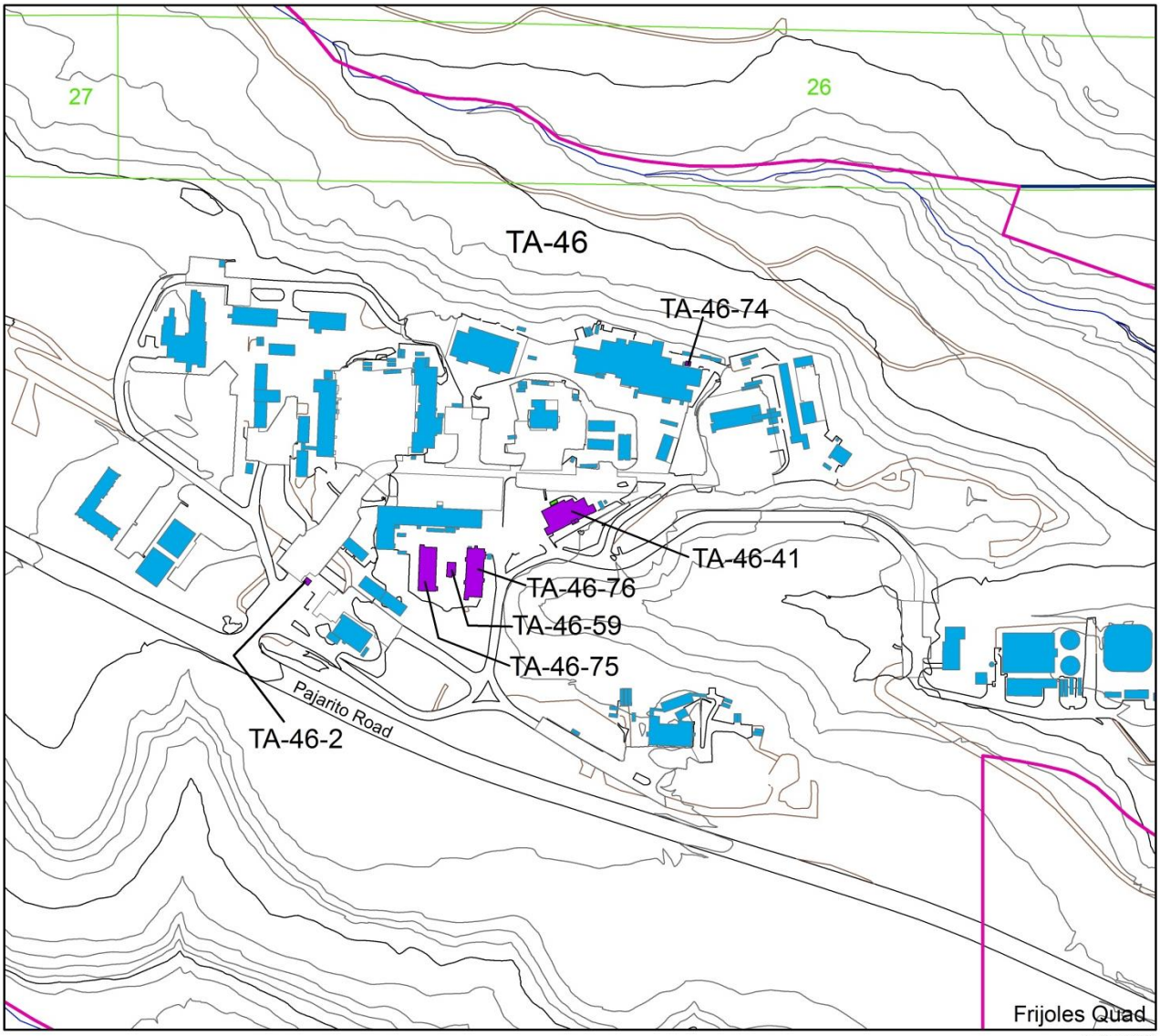
TA-46's first building, TA-46-1, was constructed in 1954 to support weapons assembly operations, but was never used for that purpose. Over the years, TA-46 has supported the Laboratory's basic science mission. Research priorities at TA-46 have changed several times since the technical area's first use supporting Nuclear Rocket (N) Division's development of reactors for rocket propulsion. Following the termination of the Rover program in 1973, activities at TA-46 supported laser isotope separation, the production of nonradioactive isotopes of oxygen, carbon, and nitrogen, and nanoscale chemistry research (LANL 1993b; LANL 2002). In the 1970s and 1980s, Energy (Q) Division personnel also conducted solar energy experiments at TA-46, including the construction of experimental solar buildings and solar ponds. In the 1990s, scientific work focused on photochemical research involving free electron lasers and hydrogen fuel cells. Heat pipe studies, and accelerator and electronics research were also conducted during this time (LANL 1993b). Most recently, the facilities at TA-46 have been used for diverse chemistry and materials science research, including nanoscale studies in support of solar energy research.

LANL Cold War Context and Themes at TA-46

Key historical themes have been identified in a LANL Cold War context report produced as part of the documentation of the former LANL Administration Building (SM-43) (Machen et al. 2010). The scientific work at TA-46 has contributed significantly to several of these important LANL-wide Cold War historical themes, especially *Reactor Technology* (and its Project Rover subtheme) and *Strategic and Supporting Research* (including the subthemes of "nuclear science" and "energy research").

Reactor Technology

Reactors have been developed and used at LANL ever since Manhattan Project days. They have served such diverse purposes as providing measurements essential to the World War II atomic bomb project, producing radioisotopes for research projects, conducting criticality experiments (to determine when a chain reaction would occur in fissionable materials), and powering rockets in space (Machen et al. 2010).



Los Alamos
National Laboratory

Resources Management Team
ENV-ES Environmental
Stewardship Group

500 250 0 500 Feet

125 62.5 0 125 Meters

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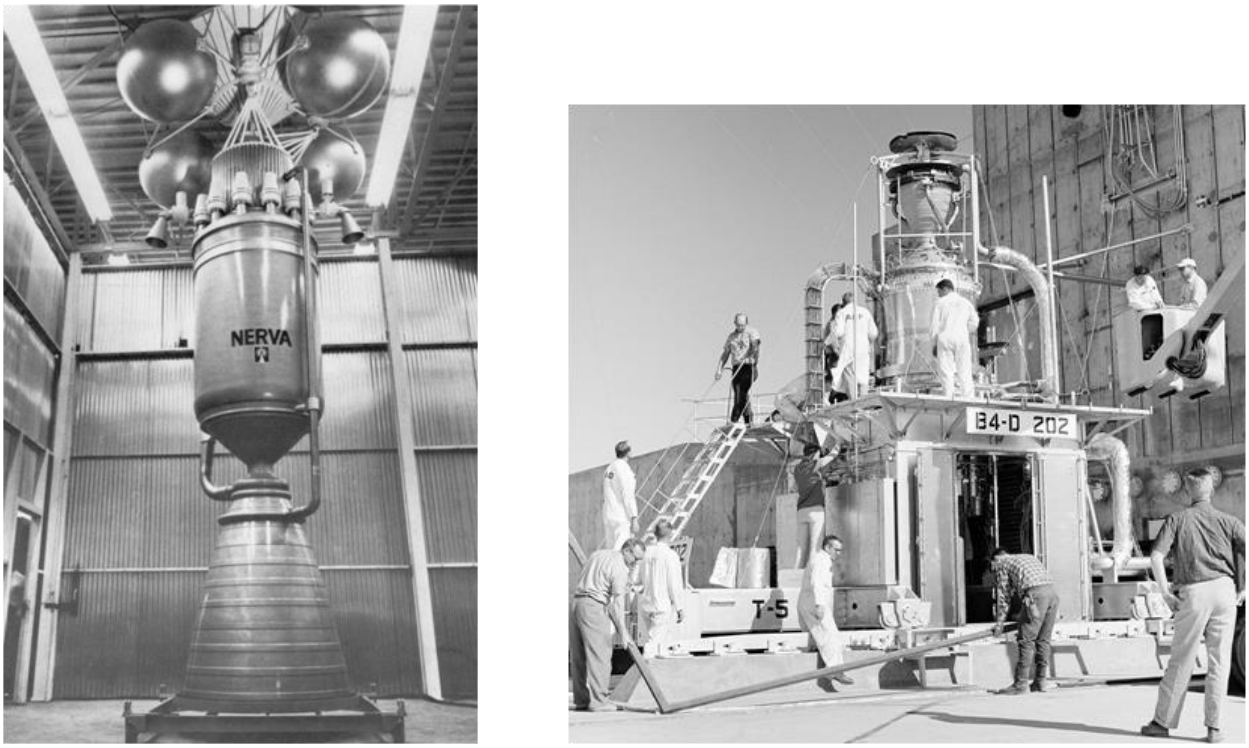
TA-46 Currently Being Evaluated
Exempt Building/Structures
Buildings Yet to be Evaluated
Buildings/Structures
Technical Area 46
LANL Boundary
Technical Areas
Drainage
Township, Range, Section
USGS 7.5 Minute Quad
20 Foot Contours
100 Foot Contours
Dirt Roads
Paved Roads

TA-46
Evaluated Buildings

PROJECT ROVER

Using the experience gained in its pioneer reactor development endeavors, Laboratory scientists concentrated on other projects that used reactors for power. From 1955 to 1972, the Laboratory developed fission reactors for Project Rover, a program designed to meet the needs of an interplanetary mission—in particular, a manned mission to Mars. Chemically powered rockets were already being developed elsewhere for the Intercontinental Ballistic Missile program, but it was not certain that a rocket powered by chemicals could travel as far as desired. To provide a backup, scientists working on the Rover program studied and built test reactors that could be used in a nuclear-powered rocket. A cool gas would be passed through a hot reactor powered by atomic energy; as the superheated gas shot out of a nozzle, the resulting propulsion would far exceed that provided by chemically powered rockets. Los Alamos scientists developed a series of four reactors to understand the underlying principles of nuclear-rocket reactor technology. They designed the Kiwi reactor to develop the basic technology of nuclear thermal rockets; the Phoebus reactor to test designs for interplanetary voyages; a reactor they called Peewee-1 to test smaller, more compact reactor designs; and Nuclear Furnace-1 to test advanced fuels and designs for reducing emissions of radioactive material into the atmosphere. These reactors were tested at the Nevada Test Site. Project Rover successfully demonstrated that a nuclear reactor could be used to heat liquid hydrogen for spacecraft propulsion. But in 1969, the nation's plans for human exploration of Mars were abandoned, and Project Rover was canceled in the early 1970s (Machen et al. 2010).



The Project Rover nuclear reactor (photo at left) was designed to power rockets. Compressed hydrogen in the spheres at the top flowed through the reactor core (center) and formed a jet as it exited the nozzle at the bottom (LANL 1983). The Laboratory's Kiwi B-4D reactor (photo at right) being readied for a "hot run" in May 1964 (LASL 1964).

Strategic and Supporting Research

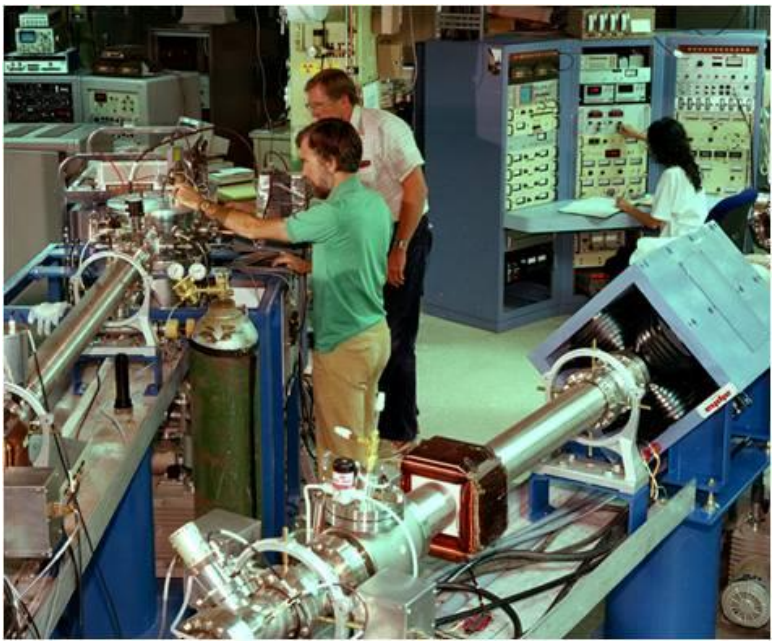
Throughout the Cold War years, the Laboratory's strategic and supporting research provided critical capabilities in support of the Laboratory's core responsibilities to the nation's nuclear weapons complex. Besides augmenting the areas of weapon physics, weapon engineering, and threat reduction, it consisted of a broad spectrum of high-quality, basic research that added to the national and international scientific knowledge base.

Nuclear Science

Nuclear science is a term that integrates capabilities and disciplines spanning the study of high-energy-density systems driven by intense beams, including nuclear physics and nuclear chemistry, plasma physics, accelerator technology and beam physics, and a wide range of technology applications involving many scientific disciplines. Nuclear science at the Laboratory originated in the nuclear weapons program; during the Cold War years, efforts in this field spanned from internationally recognized basic science programs in medium-energy and neutron nuclear physics to reactor safety studies (Machen et al. 2010).

Materials Science

Materials science covers an extraordinarily wide variety of work, all based on developing an understanding of, and controlling, the complexity of materials. From the beginning years of the Laboratory, scientists were in the business of processing new materials for technological needs because the very nature of building an atomic weapon required new materials and new technologies. To deal with the unique materials used in nuclear weapons, such as actinides, special ceramics, polymers, and so forth, Los Alamos scientists not only had to develop significant expertise in materials research but also needed to develop expertise on how materials behave (Machen et al. 2010).



Materials science is one of the Laboratory's core competencies, underpinning national security and civilian programs. The Ion Beam Materials Laboratory, shown here, characterized properties of various materials including geological and electronic materials and high-temperature superconductors (LANL 1991).

Research on Nanoscale Materials

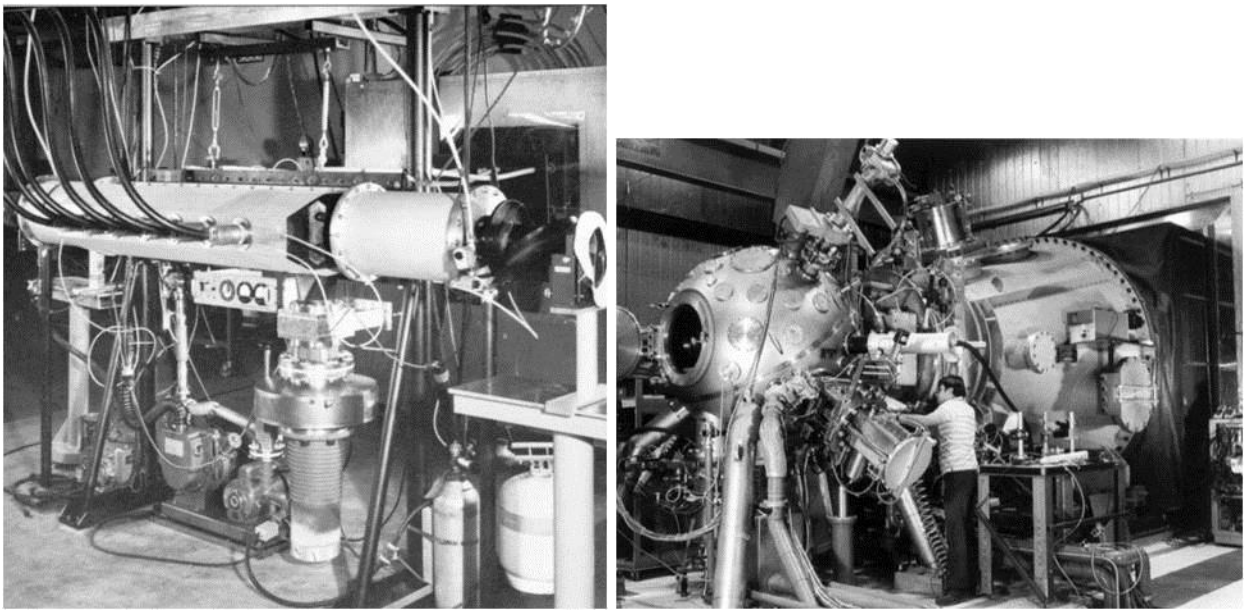
Nanoscience is the study of materials and their interactions at the atomic and molecular levels (that is, at the scale of one-billionth of a meter or a second); it has the potential to create novel and significantly improved devices or systems in the areas of agriculture, biotechnology, defense, electronics, environmental remediation and protection, health care, transportation, and many other fields. Potential applications range from how health care practitioners detect and treat diseases at the molecular level to novel methods of protecting national security (Machen et al. 2010).

Energy Research

Energy research at Los Alamos during the Cold War years encompassed many interests: finding new sources of energy, increasing domestic energy supplies, finding ways to use energy more efficiently, and modernizing the energy infrastructure. Pressures for such research included an increasing environmental awareness within the general population and the political consequences of that awareness; other reasons were related to the increasing demand for energy and the increasing turmoil in the energy-rich Middle East (Machen et al. 2010).

Laser Fusion

In 1969, Laboratory scientists began an experimental effort to see if fusion could be ignited by a high-energy laser. Over the years, several kinds of lasers were tested: carbon-dioxide lasers, so-called glass lasers, chemical lasers, and the free-electron laser. By 1972, the program had achieved sufficient size and complexity that a laser division was created at the Laboratory. But problems developed, and the final utility of laser fusion for energy production remained uncertain during this era. Many successful spin-offs resulted, nonetheless: the use of laser energy to separate uranium and plutonium isotopes, laser photochemistry, high-resolution laser spectroscopy, photochemical processing, laser sound generators for potential military purposes, and chemical and biological warfare-agent detectors (Machen et al. 2010).



One of the amplifiers (left) for the first large carbon-dioxide laser chain, built in the early 1970s (LANL 1983). A Laboratory technician (right) adjusts the final focusing system of Aurora, a krypton fluoride laser (LANL 1989).

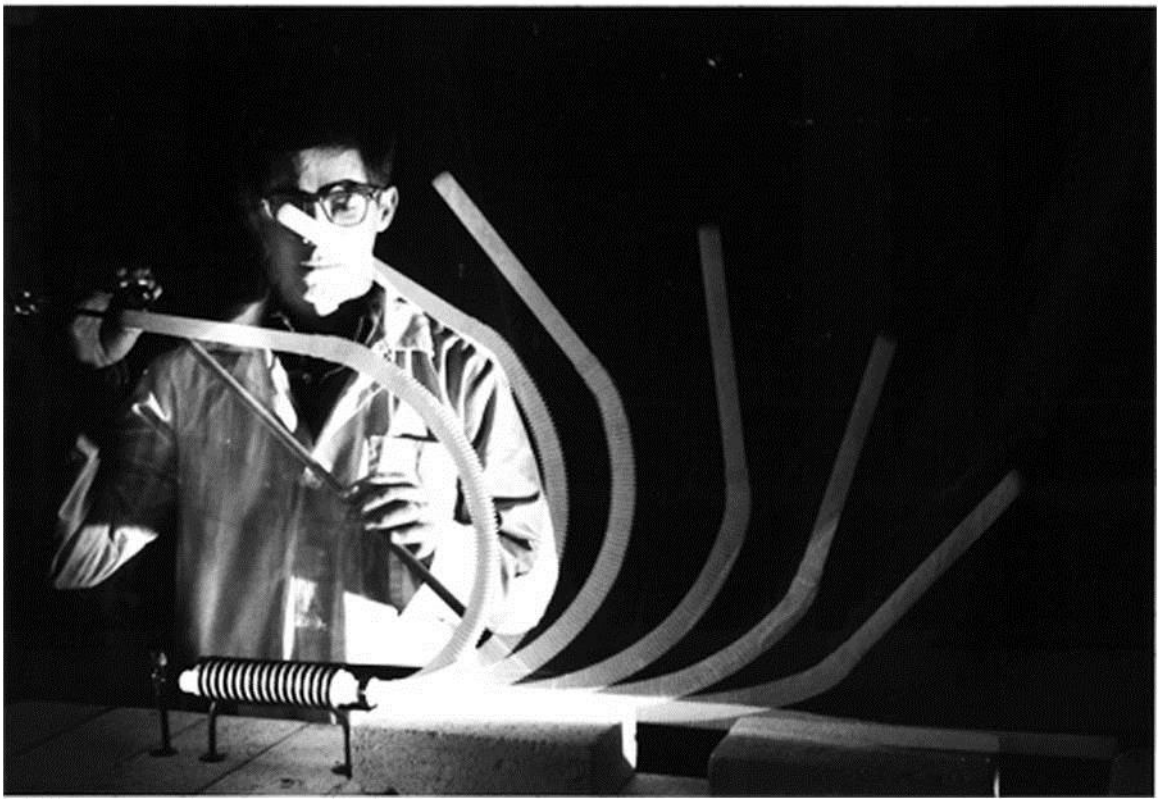
Solar Energy

A research and development program in active solar energy was initiated in the early 1970s to work on the design, installation, and operation of a solar-energy system to heat and cool the Laboratory's newly proposed National Security and Resources Study Center. Subsequently, scientists focused their attention on passive and low-energy solar research until 1988, after which this work was transferred to the Solar Energy Research Institute in Colorado (Machen et al. 2010). However, other solar energy research involving the study of nanoscale materials is still conducted at LANL.

Laboratory scientists examine the first of 40 solar collectors being installed at a test station in 1975 (LASL 1975).

Heat Pipes

Modern heat-pipe technology was first developed at Los Alamos over 40 years ago. Heat pipes are pencil-sized metal tubes that move heat from one end of the tube to the other without the aid of a pump. Within the heat pipe, heat vaporizes a small amount of fluid at the pipe's hot end, the fluid travels to the other, slightly cooler end, and condenses before returning to the hot end through a capillary wick, where it repeats the process. The device efficiently transfers large quantities of heat. At Los Alamos, during Cold War era, heat pipes were studied for future space-age travel. Heat pipes vary greatly in size, depending upon their particular use. Some are the size of hypodermic needles, while larger versions stretch to 24 feet. Modern applications of this technology include miniature heat pipes that cool the chips inside most laptop computers. Heat pipes work efficiently in a zero-gravity environment; commercially developed heat pipes are now routinely used to cool electronics in communications satellites (Machen et al. 2010).



Heat pipes rechannel waste heat back into the production cycle of a system. Applications could range from permafrost control on the Alaska pipeline to heat-transfer devices in solar collection systems (LANL 2006b).

Project Rover at TA-46

Rover program work began at TA-46 in the 1950s and primarily involved the testing of reactor fuel elements, which were composed of uranium-loaded graphite. The fuel elements were tested for structural soundness—occasionally even being tested to failure. Related coolant-flow studies were also conducted in support of the Rover program as well as beryllium control rod testing (LANL 1993b; Roberts and Griggs 1992). To carry out the fuel element thermal tests, test cell facilities were constructed with electrical furnaces. Warehouse facilities, like TA-46-75 and TA-46-76, were built to store the fuel elements and other laboratory equipment (Ehrenkranz 1964). A 1962 memo to file described how the test cells were used.

> Test Cell #1 [TA-46-16] is used to evaluate the effects of high temperatures (2500° C) on Kiwi fuel elements. The elements are placed in the furnace and hydrogen is passed through the element at high pressure. Helium is used to flush the system and cool the element to a temperature where it can be handled. All gases are vented directly to a stack on top of the building. The elements are then removed from the furnace, visually inspected and checked for weight loss, change in dimensions and general deterioration. Usually the fuel element can easily be removed from its casing. In those instances where this is not possible, the casing is cut on a saw located outside the Test Cell. A vacuum cleaner and flexible hosing is used to remove all particles from the cutting operation. Both Uranium-235 and depleted Uranium elements are tested, with the majority of the work involving U-235 (Ettinger 1962a).

At TA-46, heat transfer studies and fluid flow studies were conducted at different temperature ranges at the different Rover program facilities. For example, TA-46-31 supported cryogenic studies using liquid hydrogen and nitrogen. Low temperature testing of structural components was conducted at TA-46-59, and other low temperature studies were carried out in an area of TA-46-1 called the "Dog House." At- or above-room temperature heat transfer and fluid flow studies were conducted on graphite and metals at Test Cell 2 (TA-46-16), and Test Cells 3 and 4 (TA-46-16) were used to conduct similar heat and flow studies and other kinds of structural testing at high temperatures, with Test Cell 4 being used for larger components (Ettinger 1962b). The Core Support Test Facility (TA-46-88) was built in the later 1960s to support the Phoebus reactor rocket engine (Roberts and Reading 1992). During the Rover program years, reactor subassembly work was conducted at other LANL technical areas, including TAs 1 and 18 (Ettinger 1962b).

Laser Research at TA-46

Laser isotope separation studies and other laser programs have been some of the primary research activities carried out at TA-46 since the termination of the Rover program in the early 1970s. The Applied Photochemistry (AP) Division's Jumper Program, which developed uranium isotope separation methods, was an early laser program that began operations at TA-46 by 1976. Additional support buildings were constructed to support the new laser research, including TA-46-154, the Laser Isotope Enrichment Building, built in 1978 (LANL 1993b).

Existing buildings, originally supporting Project Rover research, were converted for use by the Laboratory's laser program, including TA-46-24, used for experimental work involving lasers and uranium hexafluoride; TA-46-30 (the Hydraulics Laboratory or the Electronics Laboratory); TA-46-31 (Test Building #2, which originally housed Rover test cells 6, 7, and 8); TA-46-41 (the Laser Isotope Separation Support Facility or the Aerochemistry/Diagnostics Building); TA-46-75 (warehouse and krypton ion laser building); and TA-46-76 (the Laser Laboratory) (LANL 2002; LANL ER Program 1986).

Other more recent facilities built for laser research at TA-46 include TA-46-154 (the Physical Chemistry Laboratory or Applied Photochemistry Building), housing high-powered gas lasers; TA-46-158 (the Laser-Induced-Chemistry Laboratory); TA-46-161 (Accelerator Vault Building), used for experimental work involving an accelerator and lasers; TA-46-200 (the Chemistry/Laser Laboratory or Fourier Transform Spectrometer Facility), used for spectroscopic study of atoms and molecules, applied photochemistry, and photophysics; TA-46-208 (the Free-Electron Laser Laboratory), used before 2002 for experimental work involving a radio-frequency generator (X-rays); and TA-46-250 (the Analytical Chemistry Building) (LANL 2002).

Post-Cold War Research

Recent research conducted at TA-46 by LANL scientists include chemistry and materials science projects involving heat flow studies, carbon dioxide capture research, and nanoscale research including nanoenergy applications and the study of nanostructured materials to boost the efficiency of solar energy conversion. Other research includes synthetic inorganic and organic chemistry focused on the field of energetic materials.

MULTIPLE PROPERTY METHOD OF EVALUATION

The six buildings at TA-46 proposed for demolition in FY 2014 and FY 2015 were evaluated using a multiple property documentation approach. This systematic approach serves as a useful evaluation tool to determine the historical significance of a group of thematically related properties, such as those located at TA-46. A key element of the multiple property documentation approach is context. Contexts provide information about historical patterns and trends and have clearly defined themes, geographical areas, and chronological periods (U.S. NPS 1999).

All of the potentially historic buildings and structures at TA-46 (those 50 years old or older) are technologically related and date to the late Cold War era at Los Alamos (1956–1964). As discussed in the historical background section above, properties at TA-46 are linked to specific subthemes underlying two of the LANL-wide Cold War historical themes identified in a LANL Cold War context document: *Reactor Technology* and *Strategic and Supporting Science* (Machen et al. 2010). Decisions relating to final eligibility recommendations were based on the type of property, the level of physical integrity, and associations with significant themes.

Associated Property Types

The multiple property documentation approach requires the identification of property types that are associated with historical contexts. This identification facilitates the evaluation of individual properties within the broader complex of properties being reviewed. Properties are compared with other historical resources that have similar histories and similar physical characteristics (Hanford Site 1999a).

There are four general property types associated with TA-46's historical themes.

1. **Laboratory-Testing Buildings or Structures** such as test cells and laser facilities.
2. **Administration Buildings** such as office buildings and facilities housing facility management and health and safety personnel.
3. **Security Buildings and Structures** such as guard stations, security lights, and fencing.
4. **Support Buildings and Structures** such as warehouses, storage buildings, water tanks, utilities, and waste treatment facilities.

Laboratory-testing facilities located at TA-46 are associated with the technical functions underlying the main Cold War themes of *Reactor Technology* and *Strategic and Supporting Science*. Specific activities carried out in this type of property supported Cold War Rover rocket engine development and later laser, solar energy, chemistry and materials science, and nanoscale research. Some minor test support facilities, identified in this report as "second tier" properties, are considered an essential but secondary type of laboratory-testing building. These properties do not usually house key operations.

Laboratory-testing facilities are representative of the "industrial vernacular" architectural style prevalent at Los Alamos. Like LANL's other research facilities, the design of TA-46's properties is primarily determined by the nature of the technical area's specific operations. For example, reinforced concrete is the primary construction material used when designing a facility for chemicals and radioactive materials research because concrete is inherently secure, durable, and cleanable. The

type of activities carried out in each building or structure also determines the configuration of interior space.

Administration buildings located at TA-46 are closely associated with the operation of nearby laboratory-testing facilities. Administration buildings typically house support and research operations such as administrative and staff offices, monitoring and facility management staff offices, light laboratory space, showers, and change rooms. Administration buildings are typically located away from the experimental areas. This practice allows personnel and material from the administration facilities to remain separate from chemical, radioactive, or other hazards and maximizes the distance from experiments.

Security buildings and structures are associated with the general operation of TA-46 and support the main overarching theme of research, development, and testing related to the Laboratory's reactor technology and strategic and supporting science programs. Examples of this property type include guard stations and physical exclusion structures such as fencing and barriers.

Support buildings and structures were originally built to support Cold War research and development. Like laboratory-testing facilities, support facilities are divided into two subcategories. "First tier" support properties are primarily buildings and include machine shops, warehouses, power plants, and significant water tanks. "Second tier" support properties are primarily structures; examples include pump houses and electrical substations.

Core properties within each associated property type have also been identified. These buildings or structures are key representatives of their associated theme(s) and are often eligible for the National Register.

Integrity

Although properties may be significant or exceptionally significant and may be eligible for the Register based on association with historical events and contexts, integrity must be determined for all buildings that, on first-cut, are considered eligible. LANL historic buildings staff have developed four integrity codes to better assess potentially eligible properties. The integrity requirements for properties eligible under Criterion A are less stringent than for those properties eligible under Criterion C. A historically significant property with a level 3 integrity could still be eligible, especially if an element of historical uniqueness is involved. Properties eligible under Criterion C should have no lower than a level 2 integrity. Level 4 integrity properties are not eligible for the Register.

1. Excellent Integrity—the property is still closely associated with its primary context and retains integrity of location, design, setting, workmanship, materials, feeling, and association. Little or no remodeling has occurred to the property and all remodeling is in keeping with its associated historic context and significant use period.

2. Good Integrity—the property's interior and exterior retain historic feeling and character but most of the original equipment may be gone. The property may have had minor remodeling.

3. Fair Integrity—a property in this category should retain original location, setting, association, and exterior design. All associated interior machinery and equipment may be absent but the key question is "Is this property still recognizable to a contemporary of the building's historic period?"

4. Poor Integrity—the property has no connection with the historically significant setting, feeling, and context. Major changes to the property have occurred. The property would be unrecognizable to a contemporary.

Themes

Activities within TA-46 can be grouped under several historical subthemes that support the technical area's two main Cold War scientific themes *Reactor Technology and Strategic and Supporting Science*. Specific subthemes related to the six buildings described in this report are listed below. One building also falls under the general administrative subtheme of "security." Because of their reuse history, all of the evaluated facilities are linked to more than one theme.

Cold War Reactor Technology (Project Rover)
TA-46-2, TA-46-41, TA-46-59, TA-46-74, TA-46-75, and TA-46-76

Late Cold War Strategic and Supporting Science (Lasers/Chemistry and Materials Science/Nanotechnology/Solar Energy)
TA-46-2, TA-46-41, TA-46-59, TA-46-74, TA-46-75, and TA-46-76

Security
TA-46-2

Eligibility Criteria

Laboratory-testing facilities, administration buildings, and security buildings and structures do not need to possess an integrity of both exterior and interior features in order to be eligible for the National Register under Criterion A. In cases where original equipment has been removed, a property can still be considered significant for its historical associations. Laboratory-testing, administration, and security properties need only retain original location, setting, association, feeling, and exterior design to maintain significant historical integrity under Criterion A. Properties eligible under Criterion C have to meet a more stringent standard of physical integrity. However, additions and remodeling that reflect changing scientific missions are acceptable under Criterion C (Hanford Site 1999b).

In order to be eligible under Criterion A, support buildings and structures must have functioned as significant support facilities within an associated historical context (Hanford Site 1999b). "First tier" support properties, if linked to a historically significant context and 50 years old or older, may be eligible for the Register. If less than 50 years old, support properties must be exceptionally significant. "Second tier" support and laboratory-testing properties, primarily structures, are usually not eligible for the Register (even if they are 50 years old or older) because of the minor role they played in history.

DESCRIPTIONS OF EVALUATED BUILDINGS

Technical Area: 46
Building Number: 2

Original Function: Guard Station
Current Function: Guard Station
Date Constructed: 1955

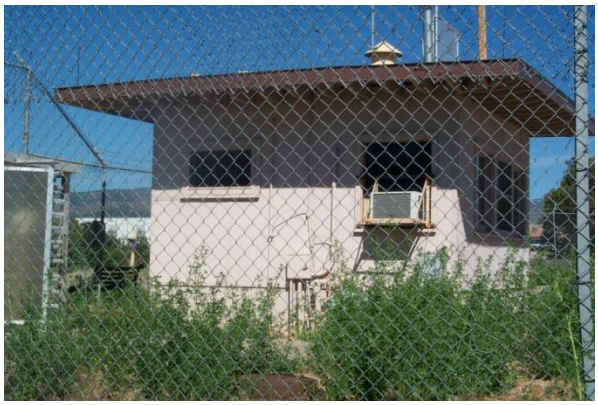
Associated Theme: Reactor Technology/Late Cold War Strategic and Supporting Science/Security
Property Type: Security
Integrity: Excellent
Core: Yes
Eligibility: Eligible (Criteria A and C)

Buildings with same floorplan within TA: none

View of south side


View of west side


View of north side


View of east side

Architectural Description:

TA-46-2 is a one-story, square-in-plan building measuring 14 ft by 14 ft in size. The building was designed for use as a guard station. It has a raised, reinforced-concrete foundation and a 5-in. floor slab. A concrete apron is located on the building's west side. The wood-framed walls are sheathed with painted asbestos-cement board siding. The low-pitched shed roof is constructed with wood joists, topped with tongue and groove wooden boards, and finished with a built-up tar and gravel roofing system and a 3-ft overhang. A single, painted, hollow-metal entry door with wire ½-glazing is located on the building's west side. The building is equipped with several windows. The west elevation has two, fixed, wood-frame windows with reflective glass. The south side of the building has a double-hung, wood window with exterior screen as well as a fixed, wood-frame window with

reflective glass. The east side contains a double-hung, wood window as well as a hopper-style window; the north side has a double-hung, wood window flanked by two, fixed, wood-frame windows with reflective glass.

Additional exterior building elements include wall-mounted light fixtures, exterior conduit, building signage, and a fire extinguisher. The roof is equipped with lightning rods, roof-mounted lights, and an antenna.

Historical Background:

TA-46-2 originally served as the main security access control point at TA-46. The guard station was designed by Black & Veatch, Consulting Engineers, Kansas City, Missouri. It was built by the R.E. McKee Company, and construction took place between July 10, 1954, and October 25, 1955.

According to a LANL environmental report, the guard station was moved in the mid 1960s from a nearby location at TA-46 northeast of its present location (LANL 1993b:5-12). This information is substantiated by Laboratory drawing ENG-C 22766 (Appendix A), which shows the guard station's original location in relation to building TA-46-24. The building was moved approximately 275 ft southwest within TA-46 to accommodate the expanding technical area and to support a reconfiguration of the main security area fence.

Determination of Eligibility:

The building is significant because it played a vital security role at the Laboratory during the Cold War years. Furthermore, it meets National Register of Historic Places criteria for significance in that it possesses integrity of design, setting, materials, workmanship, feeling, and association. Specifically, the building is significant under Criterion A due to its association with Cold War science in support of the Laboratory's reactor technology, laser research, nuclear chemistry, and solar energy programs. Even though the building was moved during its operational lifetime, its integrity of location was not affected because the minor relocation was essential to its function as a perimeter security facility. The building is also deemed eligible under Criterion C due to its design qualities, which are representative of the Laboratory's Cold War security theme and architecture.

Technical Area: 46
Building Number: 41

Associated Theme: Reactor Technology/Late Cold War Strategic and Supporting Science
Property Type: Support; Laboratory/Testing (1st Tier)

Original Function: Rover Program Warehouse/ Laser Isotope Separation Support Facility
Current Function: Chemistry and Materials Science
Date Constructed: 1958

Integrity: Good
Core: Yes
Eligibility: Yes

Buildings with same floorplan within TA: none


Oblique view of east and north sides


View of north side


View of west side


Oblique view of south side to the east

Architectural Description:

TA-46-41 is an oversized, one-story, high bay building that is primarily rectangular in plan and measures 101-ft-long by 40-ft-wide. The Butler-type, metal building is constructed with a concrete perimeter foundation and 6 in. floor slab, steel-framed walls sheathed with corrugated, galvanized steel panels, and a medium-pitched front gable roof. The gable roof is constructed with steel beams that are also covered with corrugated, galvanized steel panels. The building was originally equipped with two, 10-ft-wide by 13-ft-high single, sliding, metal doors. Today, both of the doors have been removed. The west end now contains a pair of painted, hollow-metal doors with ½-glazing set into the original sliding door opening. The east end is also equipped with a pair of painted hollow-metal doors with ½-glazing; however, this is offset to the north side.

In 1976, a small equipment room was constructed on the southeast corner and a pump room was constructed on the northwest corner of the building. Both of the additions are constructed with concrete foundations, 6-in. concrete floor slabs, painted concrete-block walls, and low-pitched shed roofs with steel I-beams, decking, and a built-up tar and gravel roofing system. A pair of painted, hollow-metal doors accesses the equipment room, while a single, painted, hollow-metal door with ½-glazing accesses the pump room.

Since 1976, the building has undergone several further modifications and additions. A rectangular-in-plan, corrugated metal addition with a low-pitched, corrugated metal roof is centered on the north side adjacent to the pump room. Access into this addition is possible through a pair of painted, hollow-metal doors with ½-glazing. To the east of this metal addition is another small, painted, concrete-block addition with a low-pitched shed roof. A fifth addition is located on the southwest side of the building. This addition is also constructed with a concrete floor slab and has painted, concrete-block walls with a low-pitched roof. Additional building equipment includes lights, signage, wall-mounted conduit, and two gas bottle storage areas. The roof is further equipped with lightning rods and large vent stacks.

Historical Background:

TA-46-41 was built in 1958 for use as a Rover program warehouse. The building was designed by Neuner & Cabaniss, Architect Engineers, Albuquerque, New Mexico. The warehouse was modified in 1976 and 1977 to support changing scientific priorities at TA-46 that came about with the end of Project Rover in 1973. The warehouse was extensively modified to create laboratory spaces. Additions included a pump room and an equipment room; a restroom and janitor's room were also added. By the 1990s, there were six laboratory spaces in the building. The warehouse was renamed the Laser Isotope Separation Support Facility, but was also known as the Aerochemistry/Diagnostics Building. In the later Cold War years, the facility was used for experimental work involving lasers. Nanoscale and chemistry and materials science research was also conducted in the building.

Determination of Eligibility:

This building meets National Register of Historic Places criteria for significance in that it possesses integrity of design, setting, materials, workmanship, feeling, and association. The building is significant under Criterion A due to its association with Cold War science in support of the Laboratory's reactor, laser isotope, and nanoscale research programs. The building was originally designed to be a warehouse for the Rover program. Although its footprint has been modified over the years to include several additions and interior laboratory spaces, this modification relates to its use a key laboratory facility in support of later Cold War strategic science.

Technical Area: 46
Building Number: 59

Original Function: Rover Engineering Test Bldg.
Current Function: Storage
Date Constructed: 1961

Associated Theme: Reactor Technology/Late Cold War Strategic and Supporting Science
Property Type: Laboratory/Testing (2nd Tier); Support
Integrity: Fair
Core: No
Eligibility: No

Buildings with same floorplan within TA: none


View of north side


Oblique view of east side


View of south side


Oblique view of west side

Architectural Description:

TA-46-59 is an oversized, one-story, rectangular-in-plan building measuring 20 ft by 30 ft with two small additions. The building is constructed with a concrete perimeter foundation, 6 in. interior floor slab, 16-ft-high painted pumice block walls, and a flat roof. The roof is constructed with 20-gauge steel decking covered by 12 in. of rigid insulation, with a final built-up roof system of tar and gravel. The roof also contains a large vent stack, smaller stack, lightning rods, and a loud speaker. The walls are equipped with exterior conduit, signage, and lighting.

The north side of the building contains a 10-ft-wide roll-up door and a drive-up ramp. A small grille and louver are set into the wall near the upper left corner of the overhead door opening. A metal, flush-panel, personnel door is located on the west side of the building near the north end. A second

metal, flush-panel personnel door is located on the south side of the building and is sheltered by a metal awning. In front of the door is a 4-in.-thick concrete slab.

Located on the south side of the building, are two, small, one-story building additions. The west addition (the compressor room) was constructed in 1966. It measures 6-ft 4-in. wide by 3-ft 8-in. deep and is constructed with painted, concrete-block walls and a flat roof. A single flush panel metal door with louvers is centered on the south wall. In front of the door is a 4-in.-thick concrete slab. Sometime after 1966, a second addition was constructed immediately to the east of the first addition. This addition is also constructed with painted, concrete-block walls and a flat roof. This addition has a single metal door as well. Mechanical equipment is located on the roof.

Historical Background:

TA-46-59 was built in 1961 as a small laboratory space to conduct low temperature structural testing in support of the Rover program. Initial equipment in the building included a compressor, work benches, and a 3,000-pound capacity, I-beam bridge crane. In 1966, the entire building was retrofitted: the roof was rebuilt, a new tile floor was installed, and new laboratory benches and cases were added along with a new sink, air, and gas lines (Ettinger 1962b). It was designated as a laser laboratory in 1995, but over the years has been primarily used to conduct pressure and electrical tests on programmatic equipment used elsewhere at TA-46. The building last functioned as a craft shop and storage area.

Determination of Eligibility:

This small building was a minor test facility used to support Project Rover. It is now used for storage. Most of its original equipment had been removed prior to recent documentation activities; however, the I-beam bridge crane remains. Although the building's exterior is relatively unchanged since it was constructed and its overall physical integrity is good, the building was not a core research facility during the Rover program years or during the later Cold War years when TA-46 was a center for strategic science.

Technical Area: 46
Building Number: 74

Associated Theme: Reactor Technology/Late Cold War Strategic and Supporting Science
Property Type: Laboratory/Testing (2nd Tier)

Original Function: Rover Test Facility
Current Function: Storage
Date Constructed: 1961

Integrity: Fair
Core: No
Eligibility: No

Buildings with same floorplan within TA: none

Oblique view of east and north sides


Oblique view of north and west sides

Architectural Description:

TA-46-74 is a one-story building that is approximately square in plan and measures 12 ft by 10 ft. The building is constructed with a concrete-slab foundation, a steel-frame structure sheathed with corrugated metal wall panels, and a slightly sloped shed roof covered with corrugated metal panels. The north side of the building contains a pair of full-width metal doors.

In 1964, a monorail was installed in the building, which is located directly behind and to the north of TA-46-31. At that time, the existing aluminum roof was removed and a new, sloped shed roof was added. The monorail set up, including a hoist and trolley, is the only remaining equipment located inside TA-46-74. The original doors were changed from accordion-type doors to the current full-width doors sometime after 1983.

Historical Background:

The shed-like building was used to support Rover program operations and later Cold War scientific research. Not much is known about the specific activities conducted in the metal building, but, by its design and appearance, it seems to have functioned as a minor support facility used to suspend test components during diagnostic work. At the time of the building survey, the building was being used to store pallets and empty containers.

Determination of Eligibility:

This small, shed-like building is not historically significant and is not considered eligible for the Register. It has served as a storage building for several years and, even when it functioned as a test facility, the building played a minor role in the Cold War history of TA-46 and the Laboratory.

Technical Area: 46

Building Number: 75

Original Function: Rover Program Warehouse
Current Function: Miscellaneous Operations (storage, gym space, laser work space)
Date Constructed: 1963

Associated Theme: Reactor Technology/Late Cold War Strategic and Supporting Science
Property Type: Support; Laboratory/Testing (2nd Tier)

Integrity: Good
Core: No
Eligibility: No

Buildings with same floorplan within TA: Yes (TA-46-76, as originally designed, is an identical building).

View of east and north Sides

View of south and east sides

View of north and west side

View of west side

Architectural Description:

TA-46-75 is a pre-engineered metal building, manufactured by Mesco, consisting of a standard structural steel frame and galvanized steel, formed/corrugated, exterior roof and wall panels. The structure is approximately 40 ft by 100 ft with a medium-slope pitched roof and gable ends. The building has been well maintained and has not suffered from traffic damage as is typical of older metal buildings. The color is a soft gray patina, typical of older galvanized metal structures. Flat skylights, lightning protection, and barrel type ridge vents are visible on the metal roof. A rain gutter and downspout system is also incorporated into the building.

The foundation is a standard concrete slab on grade with a perimeter footing and spot footings supporting the structural column and beam system. Steel girts in the roof structure and steel purlins in the wall structure support the steel panels. The building is insulated and interior finishes are evident.

The building is laid out on a general north/south orientation. The end elevations of the building are similar, in that each end consists of an 8 ft by 10 ft, two panel sliding steel door and a 3 ft by 7 ft personnel door. The side elevations have one 3 ft by 7 ft personnel door each. Several wall penetrations have been cut into the side walls in which small air conditioning units have been installed.

Over the years, two lean-to type structures, approximately 10 ft by 10 ft, have been added to the north end and to the southeast corner of the building. Typically, these additions contain fire protection valve systems and mechanical equipment, such as air compressors. Other typical building systems are located on the exterior of the building, including panel boxes, lighting, and alarm bells.

In 1975, a wood stud partition wall was added dividing the building into two interior spaces. A sliding door with a built-in pass door was installed in the new wall. This modification supported the building's changing function to isotope storage. In 1983, the larger space was subdivided into three areas. At some unknown date, a small addition was added on the north side of the building. In 1995, additional subdividing of the building's interior resulted in the addition of two more rooms. Another small exterior room was also added.

Historical Background:

TA-46-75 was built in 1963 to support the Rover program. The metal building was designed by Neuner & Cabaniss, Architect Engineers, Albuquerque, New Mexico. It functioned as a storage warehouse for raw materials, and original fixtures included specially designed graphite storage racks. During its use by the Rover program in the 1960s and early 1970s, the building likely stored graphite, uranium-235, and uranium-238 fuel elements and possibly beryllium parts (Edmonds 1963).

In 1975, the building was modified to store isotopes. The modifications were intended to provide an insulated and heated portion of the warehouse for its new isotope storage function. Since the late 1980s, the building has functioned as a multi-use area, with laboratory storage spaces, light laboratory spaces, including an area for a krypton ion laser, and a space used for a wellness center satellite gym (LANL ER Program 1986).

Determination of Eligibility:

This building was used for many years as a warehouse supporting the Laboratory's Rover reactor program. Although part of the building was later modified for isotope storage and other minor laboratory functions, it did not play a significant scientific role in the history of TA-46 or the Laboratory, either during Project Rover or in support of later Cold War strategic and supporting science programs.

Technical Area: 46
Building Number: 76

Associated Theme: Reactor Technology/Late Cold War Strategic and Supporting Science
Property Type: Support; Laboratory/Testing (1st Tier)

Original Function: Rover Program Warehouse
Current Function: Laser Chemistry Laboratory
Date Constructed: 1963

Integrity: Good
Core: Yes
Eligibility: Yes

Buildings with same floorplan within TA: Yes (TA-46-75, as originally designed, is an identical building).


View of south side


View of north side


View of north and west sides


View of west and south sides


View of east and north sides


View of south and east side

Architectural Description:

TA-46-76 is a pre-engineered metal building, manufactured by Mesco, consisting of a standard structural steel frame and galvanized steel, formed/corrugated, exterior roof and wall panels. The structure is approximately 40 ft by 110 ft with a medium-slope pitched roof and gable ends. The building has been well maintained and has not suffered from traffic damage as is typical of older metal buildings. The color is a soft gray patina, typical of older galvanized metal structures. Flat skylights, lightning protection, and barrel type ridge vents are visible on the metal roof. The roof supports four exhaust fans with guy wire supports and fan motor housings. A partial rain gutter and downspout system is also incorporated into the building at locations to protect outdoor equipment.

The foundation is a standard concrete slab on grade with a perimeter footing and spot footings supporting the structural column and beam system. Steel girts in the roof structure and steel purlins in the wall structure support the steel panels. The building is insulated and interior finishes are evident.

The building is laid out on a general north/south orientation. The north end of the building has double-panel personnel doors creating a 6-ft-wide by 7-ft-high opening. A metal panel equipment lean-to has also been added. A subsequent elevated heating, ventilation, and air conditioning (HVAC) equipment stand plus the equipment has been added. A metal lean-to has been added to the east elevation of the structure. Typically, these additions contain fire protection valve systems and mechanical equipment, such as air compressors. The south elevation of the building shows several additions, including; an 8 ft by 16 ft concrete block addition, which contains the fire protection equipment; and an 8 ft by 8 ft metal lean-to addition that is attached to the block addition. The west elevation also contains two mechanical equipment lean-to type structures which appear to have contained mechanical equipment. Other typical building systems are located on the exterior of the building, including panel boxes, lighting, and alarm bells.

In 1975, dedicated laboratory rooms were added along with a shop, an equipment room, a restroom, and a janitor's room. The building's large warehouse doors were removed and their former openings were infilled. Pedestrian doors were installed on the north and south ends of the building to support the new laboratory function. Vacuum pump sheds (enclosures) were added on the east and west sides of the building in 1976, and, in 1977, air lock enclosures were added on the north and south sides. By 1983, the large laboratory space on the southeast side of the building had been subdivided into two rooms.

Historical Background:

TA-46-76 was built in 1963 to support the Rover program. The metal building was designed by Neuner & Cabaniss, Architect Engineers, Albuquerque, New Mexico. Like TA-46-75, it originally functioned as a storage warehouse; however, it stored laboratory equipment, not fissionable materials. In 1975, after the end of the Rover program, the building was modified to function as a laser chemistry laboratory. The laboratory facility continued to support Cold War strategic scientific research at TA-46 until 2014.

Determination of Eligibility:

This building meets National Register of Historic Places criteria for significance in that it possesses integrity of design, setting, materials, workmanship, feeling, and association. The building is significant under Criterion A due to its association with Cold War science in support of the Laboratory's reactor and laser research programs. The building was originally designed to be a warehouse for Project Rover. Although its footprint has been modified over the years to include

several additions and interior laboratory spaces, this modification relates to its use a key laser chemistry laboratory in support of late Cold War strategic science.

National Register Eligibility Recommendations

Properties Determined Eligible for the National Register of Historic Places

Of the six Cold War-era buildings evaluated for Register eligibility in this report, two are deemed eligible under Criterion A (properties "associated with events that have made a significant contribution to the broad patterns of our history"). One building, a Cold War-era guard station, is recommended for eligibility under Criterion A and Criterion C (properties that "embody the distinctive characteristics of a type, period, or method of construction"). Historically, these properties supported advancements in reactor technology and various strategic and supporting science programs during the late Cold War, circa 1956 to 1990 at LANL. Buildings 41 and 76 at TA-46 were originally built as warehouses to support the Rover program. However, following the end of Project Rover in the early 1970s, these two buildings were remodeled for use as core laboratory buildings supporting laser and materials chemistry science during the late Cold War. TA-46-2, the guard station, supported all scientific activities at TA-46 by functioning as the main security access control point; it symbolizes the security and secrecy theme prevalent at Los Alamos during the Cold War years.

Table 1 lists evaluated buildings located at TA-46 that are considered eligible for listing in the Register.

Table 1. Eligible TA-46 Properties

Property Number	Use	Date	Associated Themes	Property Type	Integrity	Core
46-2	Guard Station	1955	Reactor Technology/ Late Cold War Strategic and Supporting Science/Security	Security	Excellent	Yes
46-41	Rover Program Warehouse/ Laser Laboratory	1958	Reactor Technology/ Late Cold War Strategic and Supporting Science	Support; Laboratory/ Testing (1st Tier)	Good	Yes
46-76	Rover Program Warehouse/ Laser Laboratory	1963	Reactor Technology/ Late Cold War Strategic and Supporting Science	Support; Laboratory/ Testing (1st Tier)	Good	Yes
Total Number of Eligible Properties: 3						

Properties Determined Not Eligible for the National Register of Historic Places

Not all LANL properties constructed within the Laboratory's Manhattan Project and Cold War periods of significance[2] are historically important. In some cases, a property is of secondary or minor importance and does not contribute to the understanding of the key historical events or scientific developments that have taken place at Los Alamos. For example, some properties have served a purely support function and do not adequately illustrate the historical themes shaping the history of the Laboratory. In other cases, properties associated with significant LANL events have been modified to such an extent that the loss of physical integrity has impacted their status as Register-

[2] See LANL Cultural Resources Management Plan (LANL 2006a).

eligible properties. The three properties listed below have functioned as second-tier test buildings and storage buildings during their use lives. For example, buildings 59 and 74 at TA-46 were used during the Rover program to test equipment components prior to their being used at main testing facilities located elsewhere at TA-46. After the Rover program ended, the two buildings were used for support functions. TA-46-75 was used for many years as a storage warehouse and then was converted to a second-tier, multi-purpose building with storage, light laboratory, and gym spaces.

Table 2 lists recently reviewed properties located at TA-46 that are not eligible for listing on the Register.

Table 2. Non-Eligible TA-46 Properties

Property Number	Use	Date	Associated Themes	Property Type	Integrity	Core
46-59	Rover Engineering Test Building/Storage	1961	Reactor Technology/Late Cold War Strategic and Supporting Science	Laboratory/Testing (2nd Tier); Support	Fair	No
46-74	Rover Test Facility/ Storage	1961	Reactor Technology/Late Cold War Strategic and Supporting Science	Laboratory/Testing (2nd Tier); Support	Fair	No
46-75	Rover Program Warehouse/ Miscellaneous Operations	1963	Reactor Technology/Late Cold War Strategic and Supporting Science	Support; Laboratory/Testing (2nd Tier)	Good	No
Total number of non-eligible properties: 3						

CONCLUSION

Six Cold War-era buildings at TA-46 are scheduled for demolition during FY 2014 and FY 2015 as part of LANL's Footprint Reduction Program activities. In compliance with the *National Historic Preservation Act*, LANL's cultural resources staff have completed the evaluation of these potentially-eligible historic properties. Of the six evaluated properties, TA-46-2, TA-46-41, and TA-46-76 are considered Register-eligible and TA-46-59, TA-46-74, and TA-46-75 are considered not eligible.

In addition to Register evaluations, historic properties at TA-46 were assessed for their preservation and public interpretation potential. None of the Register-eligible properties were identified for permanent retention. Guard station TA-46-2, although retaining excellent physical integrity, is not a candidate for preservation. It is no longer needed as a checkpoint building due to recent mission changes at TA-46. Additionally, another LANL guard station, TA-69-1, is identical in design to TA-46-2, and has an active function at one of the Laboratory's main security checkpoints. Furthermore, similar Cold War-era guard stations, such as TA-16-1451 and TA-72-8, have already been identified as candidates for preservation.

The State Historic Preservation Officer (SHPO) is requested to concur with the eligibility determinations contained in this report for the properties at TA-46. Adverse effects to Register-eligible buildings will be resolved using standard documentation and reporting measures developed in consultation with the SHPO's office (stipulated in Section 9 of the LANL Cultural Resources Management Plan) (LANL 2006a).

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APPENDIX A. Historic Building Inventory Forms with Selected Photographs and Building Drawings for TA-46-2, -41, -59, -74, -75, and -76.

LANL TA- Building # 46-0002

Camera 984231

Frame #s P0002897 through P0002900

Surveyor(s) S. McCarthy, J. Ronquillo, N. Naranjo

Date 5/25/2006

Los Alamos National Laboratory
RMT Historic Building Survey Form

Building Name Guard Station UTMs easting 384165 northing 4E+06 zone 13

Legal Description: Map USGS Frijoles Quad 2002 tnsp 19N range 6E sec

Current Use/ Function Guard Station Original Use/ Function Guard Station

Date (estimated) 1955 Date (actual) 1955 Property Type Security

Type of Construction

Pre-Fabricated Metal ☐ Steel Frame ☐ Wood Frame ☑ CMU ☐ Reinforced Concrete ☐

Other Type of Construction # of Stories 1

Foundation Concrete Slab

Exterior CMU-Exterior ☐ Reinforced Concrete-Exterior ☐ Steel (galvanized) ☐ Steel (corrugated) ☐

Wood Siding ☑ Asbestos Shingles-Exterior ☐ In-Fill Panels ☐ Other-Exterior Painted wood siding.

Exterior Treatment (painted, stuccoed, etc) Painted

Exterior Features (docks, speakers, lights, signs, etc) Exterior building elements include wall-mounted style light fixtures at exterior conduit, signage, and a fire extinguisher. The roof is equipped with lightning rods, roof-mounted lights, and an antenna.

Addition CMU-Addition ☐ Reinforced Concrete-Addition ☐ Steel (galvanized)- Addition ☐ Wood ☐

Steel (corrugated)-Addition ☐ Asbestos Shingles-Addition ☐ Other- Addition

Exterior Treatment-Addition

Exterior Features-Addition

Roof Form Slanted/Shed ☐ Gable ☐ Other Roof Type Flat

Degree of Pitch/ Slope Slight

Roof Materials Corrugated Metal ☐ Rolled Asphalt ☐ Asbestos Shingles ☐ 4-Ply Built Up ☐

Other Roof Materials Wood joists with tongue and groove wood decking finished with built-up tar and gravel roofing system.

Window Type Casement ☐ Single Hung Sash ☐ Double Hung Sash ☑ Fixed Window ☑

Other Window Type Hopper

# of Each Window Type/ Comments West: 2 fixed windows with reflective glass. South: double-hung window with exterior screen and a fixed window with reflective glass. East: hopper-style window and a double-hung wood

window. North: a double-hung wood window flanked by 2 fixed windows.

Glass Type Clear ☐ Wire Glass ☐ Opaque ☐ Painted Glass ☐ Glass Block ☐

Light Pattern: 1 over 1 or single light

Door Type

Personnel Door Types — Exterior: Fire Door ☐ Single ☑ Double ☐ Roll-up ☐ Sliding ☐ Hollow Metal ☑ Solid Wood ☐ 1/2 Glazed ☑ Paneled ☐ Louvered ☐ Painted ☑

Personnel Door Types — Interior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐ Hollow Metal ☑ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐ Louvered ☐ Painted ☑

Equipment Door Types — Exterior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐ Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐ Louvered ☐ Painted ☐

Equipment Door Types — Interior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐ Hollow Metal ☐ Solid Metal ☐ 1/2 Glazed ☐ Paneled ☐ Louvered ☐ Painted ☐

# of Each Door Type/Comments: Single door on west side and single interior restroom door.

Interior Wall Gypsum Board ☑ Reinforced Concrete- Interior ☐

CMU- Interior ☐ Plywood ☐ Other- Interior

In-Wall Electrical Wiring ☐ On-Wall Electrical Wiring ☐

Ceiling Drop Ceiling ☐

Interior Comments (Equipment, etc)

Degree of Remodeling Unknown/None

Condition Excellent ☐ Good ☑ Fair ☐ Deteriorating ☐ Contaminated ☐ Burned ☐

Associated Building ☑

If yes, list building names and #s: Remainder of buildings in technical area.

Integrity Excellent

Significance Eligible

Eligible Under Criterion A ☑ B ☐ C ☑ D ☐ Not Eligible ☐

DOE Themes

Nuclear Weapon Components and Assembly ☐

Nuclear Weapon Design and Testing ☐

Nuclear Propulsion ☑

Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science ☑

Energy and Environment: Research and Design Projects ☑

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support ☐

Super Computing ☐

Reactor Technology ☑

Biomedical/Health Physics ☐

Strategic and Supporting Research ☑

Environment/Waste Management ☐ Administration and Social History ☑ Architectural History ☐

Recommendations/ Additional Comments

Architectural Features (elevations)

The Guard Station is constructed as a one-story square in plan building measuring 14 ft by 14 ft in size. The building is constructed with a raised reinforced concrete foundation and 5-in. floor slab. A concrete apron is located on the west side. The wood framed walls are sheathed with painted asbestos-cement board siding. The low-pitched shed roof is constructed with wood joists, topped with tongue and groove wooden boards and finished with a built-up tar and gravel roofing system and a 3-ft overhang. A single painted, hollow metal entry door with wire ½-glazing is located on the building's west side. The building is equipped with several windows. The west elevation is equipped with two, fixed, wood-frame window with reflective glass. The south side has a double-hung, wood window with exterior screen as well as a fixed, wood frame window with reflective glass. The east side contains a double-hung, wood window as well as a hopper-style window and, the north side has a double-hung, wood window flanked by two fixed, wood-frame windows with reflective glass.

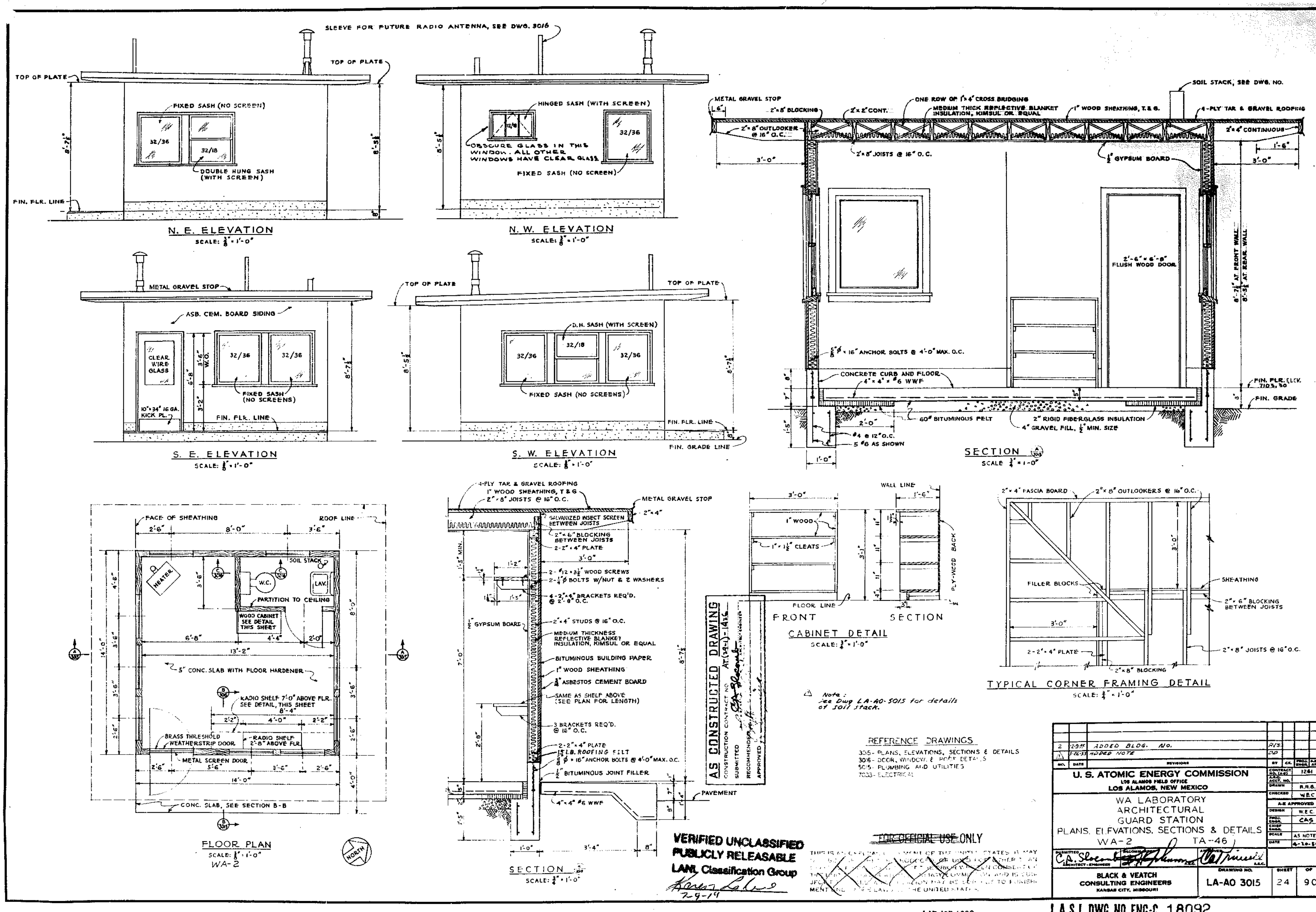
Total sq ft 174 Net **Architect/ Builder** Black & Veatch

Alterations Building moved within the technical area in the mid 1960s from a nearby location approximately 375 feet northeast of its present locaiton.

List of Drawings (Cntrl + Enter for para break)

ENG-C 18092
Sheet 24 of 90
WA-2, TA-46 (TA-46-2)
Guard Station
WA Laboratory, Architectural
Plans, Elevations, Sections & Details
April 20, 1954

AB 552
Sheet 1 of 1
TA-46-2
Guard House
Architectural: Record Floor Plan
October 16, 1995


SLEEVE FOR FUTURE RADIO ANTENNA, SEE DWG. 3016
TOP OF PLATE
FIXED SASH (NO SCREEN)
DOUBLE HUNG SASH (WITH SCREEN)
FIN. FLR. LINE
N. E. ELEVATION
SCALE: 1/8" = 1'-0"
HINGED SASH (WITH SCREEN)
OBSCURE GLASS IN THIS WINDOW. ALL OTHER WINDOWS HAVE CLEAR GLASS.
FIXED SASH (NO SCREEN)
N. W. ELEVATION
SCALE: 1/8" = 1'-0"
METAL GRAVEL STOP
ASB. CEM. BOARD SIDING
CLEAR WIRE GLASS
10" x 34" 16 GA. KICK PL.
FIXED SASH (NO SCREENS)
S. E. ELEVATION
SCALE: 1/8" = 1'-0"
D.H. SASH (WITH SCREEN)
FIXED SASH (NO SCREENS)
FIN. GRADE LINE
S. W. ELEVATION
SCALE: 1/8" = 1'-0"
SOIL STACK, SEE DWG. NO.
2" x 8" BLOCKING
2" x 2" CONT.
ONE ROW OF 1" x 4" CROSS BRIDGING
MEDIUM THICK REFLECTIVE BLANKET INSULATION, KIMSUL OR EQUAL
1" WOOD SHEATHING, T & G.
4-PLY TAR & GRAVEL ROOFING
2" x 8" OUTLOOKER @ 16" O.C.
2" x 4" CONTINUOUS
2" x 8" JOISTS @ 16" O.C.
1/2" GYPSUM BOARD
2'-6" x 6'-8" FLUSH WOOD DOOR
8'-7 1/2" AT FRONT WALL
8'-5 1/2" AT REAR WALL
5/8" Ø x 16" ANCHOR BOLTS @ 4'-0" MAX. O.C.
CONCRETE CURB AND FLOOR 4" x 4" x #6 WWF
FIN. FLR. ELEV. 7103.50
FIN. GRADE
60# BITUMINOUS FELT
2" RIGID FIBERGLASS INSULATION
4" GRAVEL FILL, 1/2" MIN. SIZE
#4 @ 12" O.C.
5 #6 AS SHOWN
SECTION
SCALE 3/4" = 1'-0"
FACE OF SHEATHING
ROOF LINE
SOIL STACK
HEATER
W.C.
LAV.
PARTITION TO CEILING
WOOD CABINET SEE DETAIL THIS SHEET
5" CONC. SLAB WITH FLOOR HARDENER
RADIO SHELF 7'-0" ABOVE FLR. SEE DETAIL, THIS SHEET
BRASS THRESHOLD WEATHERSTRIP DOOR
RADIO SHELF 2'-8" ABOVE FLR.
METAL SCREEN DOOR
CONC. SLAB, SEE SECTION B-B
FLOOR PLAN
SCALE: 1/4" = 1'-0"
WA-2
NORTH
4-PLY TAR & GRAVEL ROOFING
1" WOOD SHEATHING, T & G
2" x 8" JOISTS @ 16" O.C.
METAL GRAVEL STOP
GALVANIZED INSECT SCREEN BETWEEN JOISTS
2" x 6" BLOCKING BETWEEN JOISTS
2-2" x 4" PLATE
2 - #12 x 3 1/2" WOOD SCREWS
2 - 1/4" Ø BOLTS W/NUT & 2 WASHERS
4 - 2" x 6" BRACKETS REQ'D. @ 2'-8" O.C.
GYPSUM BOARD
2" x 4" STUDS @ 16" O.C.
MEDIUM THICKNESS REFLECTIVE BLANKET INSULATION, KIMSUL OR EQUAL
BITUMINOUS BUILDING PAPER
1" WOOD SHEATHING
1/8" ASBESTOS CEMENT BOARD
SAME AS SHELF ABOVE (SEE PLAN FOR LENGTH)
3 BRACKETS REQ'D. @ 16" O.C.
2-2" x 4" PLATE
15 LB. ROOFING FELT
5/8" Ø x 16" ANCHOR BOLTS @ 4'-0" MAX. O.C.
1/2" BITUMINOUS JOINT FILLER
PAVEMENT
4" x 4" #6 WWF
SECTION
SCALE: 3/4" = 1'-0"
AS CONSTRUCTED DRAWING
CONSTRUCTION CONTRACT NO. AT(29-1)-1416
SUBMITTED
RECOMMENDED
APPROVED
1" WOOD
1" x 1 1/2" CLEATS
FLOOR LINE
WALL LINE
PLY-WOOD BACK
FRONT
SECTION
CABINET DETAIL
SCALE: 3/4" = 1'-0"
Note: See Dwg LA-AO-5015 for details of soil stack.
REFERENCE DRAWINGS
3015 - PLANS, ELEVATIONS, SECTIONS & DETAILS
3016 - DOOR, WINDOW & ROOF DETAILS
5015 - PLUMBING AND UTILITIES
7033 - ELECTRICAL
2" x 4" FASCIA BOARD
2" x 8" OUTLOOKERS @ 16" O.C.
FILLER BLOCKS
SHEATHING
2" x 6" BLOCKING BETWEEN JOISTS
2" x 8" JOISTS @ 16" O.C.
2-2" x 4" PLATE
2" x 8" BLOCKING
TYPICAL CORNER FRAMING DETAIL
SCALE: 3/4" = 1'-0"
2 ADDED BLDG. NO.
ADDED NOTE
REVISIONS
U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS FIELD OFFICE
LOS ALAMOS, NEW MEXICO
WA LABORATORY
ARCHITECTURAL
GUARD STATION
PLANS, ELEVATIONS, SECTIONS & DETAILS
WA-2 TA-46
CONTRACT NO. 1261
DRAWN R.R.G.
CHECKED W.E.C.
DESIGN W.E.C.
SCALE AS NOTED
DATE 4-20-54
BLACK & VEATCH
CONSULTING ENGINEERS
KANSAS CITY, MISSOURI
DRAWING NO. LA-AO 3015
SHEET 24 OF 90
VERIFIED UNCLASSIFIED
PUBLICLY RELEASABLE
LANL Classification Group
7-9-14
FOR OFFICIAL USE ONLY
LAB JOB 1380
L.A.S.L. DWG. NO. ENG-C 18092

ROOM INFORMATION CHART

RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE
100	152	100A	22		

TOTAL ROOM NET SQUARE FOOTAGE (BUILDING) = 174

GROSS SQUARE FOOTAGE (BUILDING) = 198

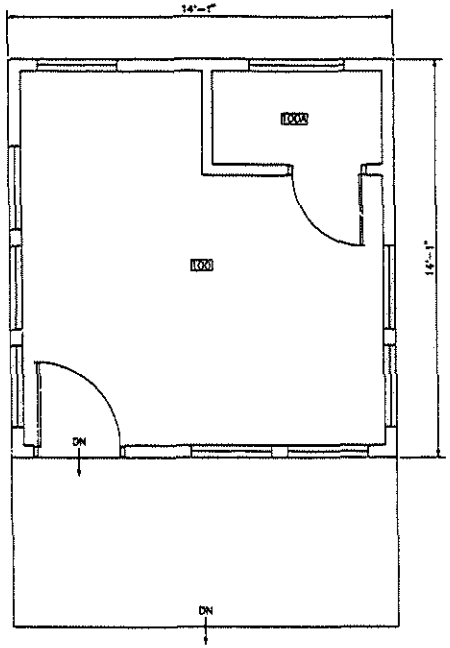
LEGEND

WINDOW

WOOD OR METAL STUD

NOTES

1. ALL EXTERIOR WALLS ARE 5" THICK UNLESS OTHERWISE NOTED.
2. ALL INTERIOR WALLS ARE 5" THICK UNLESS OTHERWISE NOTED.
3. REFERENCE DRAWING ENG-R3162.
4. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS. AREAS SHOWN ARE ROUNDED TO THE NEAREST SQUARE FOOT.
5. GROSS SQUARE FOOTAGE IS EQUAL TO ALL FLOOR AREA (INCLUDING ALL OPENINGS IN FLOOR SLABS) MEASURED TO THE OUTER SURFACES OF EXTERIOR OR ENCLOSING WALLS, AND INCLUDES ALL FLOORS, MEZZANINES, HALLS, VESTIBULES, STAIRWELLS, SERVICE AND EQUIPMENT ROOMS, PENTHOUSES, VAULTS, AND ENCLOSED PASSAGES.
6. DIMENSIONS SHOWN ARE ROUNDED TO THE NEAREST INCH.



RECORD FLOOR PLAN

SCALE: 1/2" = 1'-0"

GRAPHIC SCALE 2 1 0 2 4 6

N

FIELD VERIFIED 9-26-95

NO	DATE	CLASS REV	DESCRIPTION	DRWN	VER	CHKD	SUB	APP

JOHNSON CONTROLS

AS-BUILT RECORD FLOOR PLAN
GUARD HOUSE
ARCH: RECORD FLOOR PLAN

DRAWN F. GURULE
VERIFIED FG/DWF
CHECKED
DATE 10-16-95

BLDG 2 TA-46

SUBMITTED JERRY FORTE

APPROVED FOR RELEASE FRED THOMPSON 11-3-95

Los Alamos Los Alamos National Laboratory Los Alamos, New Mexico 87545

SHEET 1 OF 1

CLASSIFICATION U REVIEWER T. GUSDORF DATE 11-2-95

PROJECT ID 7556

DRAWING NO AB552

REV

ICN 110-16

TA-46-2 Northwest Side

TA-46-2 Southwest side

TA-46-2 Southeast side

TA-46-2 Northeast side

LANL TA- Building # 46-0041

Camera 984231

Frame #s P000 2922 through P0002925

Surveyor(s) S. McCarthy, J. Ronquillo, N. Naranjo

Date 5/25/2006

Los Alamos National Laboratory
RMT Historic Building Survey Form

Building Name Laser Isotope Separation Support Facility UTMs easting 384348 northing 4E+06 zone 13

Legal Description: Map USGS Friioles Ouad 2002 tnsp 19N range 6E sec

Current Use/ Function chemistry & Material Science Original Use/ Function Rover Program Warehouse/Laser Isotope Separation Support Facility

Date (estimated) 1958 Date (actual) 1958 Property Type Support

Type of Construction

Pre-Fabricated Metal ☑ Steel Frame ☑ Wood Frame ☐ CMU ☐ Reinforced Concrete ☐

Other Type of Construction # of Stories 1

Foundation Concrete Slab

Exterior CMU-Exterior ☐ Reinforced Concrete-Exterior ☐ Steel (galvanized) ☑ Steel (corrugated) ☐

Wood Siding ☐ Asbestos Shingles-Exterior ☐ In-Fill Panels ☐ Other-Exterior

Exterior Treatment (painted, stuccoed, etc)

Exterior Features (docks, speakers, lights, signs, etc) Additional building equipment includes lights, signage, wall-mounted conduit, and two gas bottle storage areas. The roof is further equipped with lightning rods, and large vent stacks.

Addition CMU-Addition ☑ Reinforced Concrete-Addition ☐ Steel (galvanized)- Addition ☐ Wood ☐

Steel (corrugated)-Addition ☑ Asbestos Shingles-Addition ☐ Other- Addition

Exterior Treatment-Addition

Exterior Features-Addition Combination of painted CMU and corrugated metal panels.

Roof Form Slanted/Shed ☐ Gable ☑ Other Roof Type

Degree of Pitch/ Slope Moderate

Roof Materials Corrugated Metal ☑ Rolled Asphalt ☐ Asbestos Shingles ☐ 4-Ply Built Up ☐

Other Roof Materials

Window Type Casement ☐ Single Hung Sash ☐ Double Hung Sash ☐ Fixed Window ☐

Other Window Type

# of Each Window Type/ Comments None

Glass Type Clear ☐ Wire Glass ☐ Opaque ☐ Painted Glass ☐ Glass Block ☐

Light Pattern

Door Type

Personnel Door Types — Exterior: Fire Door ☐ Single ☐ Double ☑ Roll-up ☐ Sliding ☐ Hollow Metal ☑ Solid Wood ☐ 1/2 Glazed ☑ Paneled ☐ Louvered ☐ Painted ☑

Personnel Door Types — Interior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐ Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐ Louvered ☐ Painted ☐

Equipment Door Types — Exterior: Fire Door ☐ Single ☑ Double ☐ Roll-up ☐ Sliding ☐ Hollow Metal ☑ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐ Louvered ☐ Painted ☑

Equipment Door Types — Interior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐ Hollow Metal ☐ Solid Metal ☐ 1/2 Glazed ☐ Paneled ☐ Louvered ☐ Painted ☐

# of Each Door Type/Comments: North: 2 single hollow-metal painted doors with 1/2 glazing and 2 pairs painted hollow-metal doors with 1/2 glazing; East: 2 pairs painted hollow-metal doors one of which has 1/2 glazing; West: 1 pair painted hollow-metal doors with 1/2 glazing

Interior Wall Gypsum Board ☑ Reinforced Concrete- Interior ☑

CMU- Interior ☐ Plywood ☐ Other- Interior

In-Wall Electrical Wiring ☐ On-Wall Electrical Wiring ☐

Ceiling Drop Ceiling ☐

Interior Comments (Equipment, etc)

Degree of Remodeling Moderate

Condition Excellent ☐ Good ☑ Fair ☐ Deteriorating ☐ Contaminated ☐ Burned ☐

Associated Building ☐

If yes, list building names and #s: Remainder of buildings in technical area.

Integrity Good

Significance Eligible

Eligible Under Criterion A ☑ B ☐ C ☐ D ☐ Not Eligible ☐

DOE Themes

Nuclear Weapon Components and Assembly ☐

Nuclear Weapon Design and Testing ☐

Nuclear Propulsion ☑

Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science ☑

Energy and Environment: Research and Design Projects ☐

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support ☐ Super Computing ☐

Reactor Technology ☑ Biomedical/Health Physics ☐ Strategic and Supporting Research ☑

Environment/Waste Management ☐ Administration and Social History ☐ Architectural History ☐

Recommendations/ Additional Comments

Architectural Features (elevations)

TA-46-41 is an oversized one-story, high bay building that is primarily rectangular in plan and measures 101-ft-long by 40-ft-wide. The Butler-type, metal building is constructed with a concrete perimeter foundation and 6 in. floor slab, steel framed walls sheathed with corrugated galvanized steel panels, and a medium pitched front gable roof. The gable roof is constructed with steel beams also covered with corrugated galvanized steel panels. The building was originally equipped with two 10-ft-wide by 13-ft- high single, sliding metal doors. Today, both of the doors have been removed. The west end now contains a pair of painted, hollow-metal doors with 1/2-glazing set into the original sliding door opening. The east end is also equipped with a pair of painted hollow-metal doors with ½-glazing; however, this is offset to the north side.

Total sq ft 5.739 Gross **Architect/ Builder** Neuner & Cabaniss Architects Engineers

Alterations

In 1976, a small equipment room was constructed on the southeast corner and a pump room was constructed on the northwest corner of the building. Both of the additions are constructed with concrete foundations, 6 in. concrete floor slabs, painted concrete block walls, and low-pitched shed roofs with steel I-beams, decking, and a built-up tar and gravel roofing system. A pair of painted, hollow-metal doors accesses the equipment room while a single painted, hollow-metal door with ½-glazing accesses the pump room.

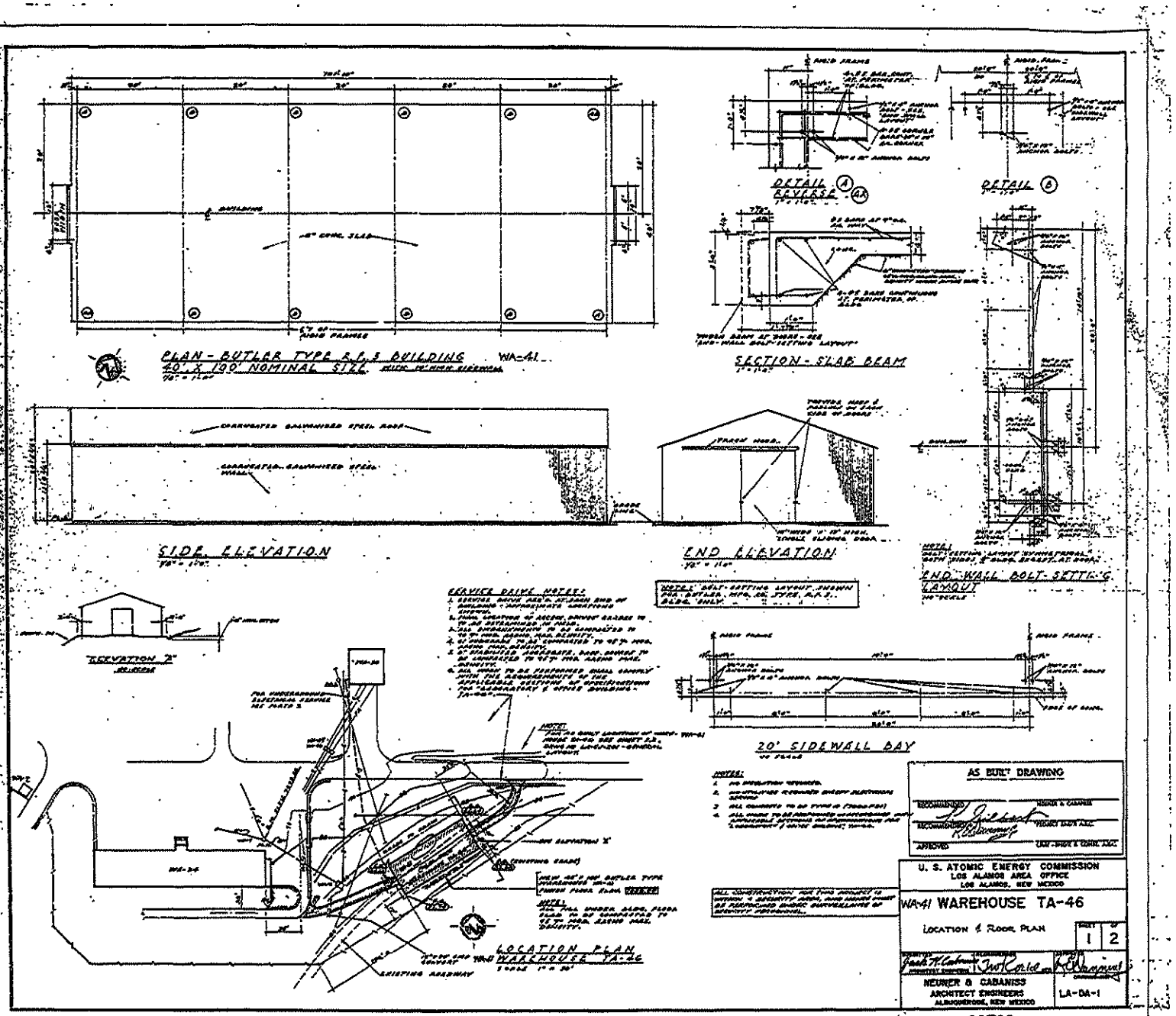
Since 1976, the building has undergone several more modifications and additions. A rectangular-in-plan, corrugated metal addition with a low-pitched, corrugated metal roof is centered on the north side adjacent to the pump room. Access into this addition is possible through a pair of painted, hollow-metal with ½-glazing doors. To the east of this metal addition is another small, painted, concrete block addition with a low-pitched shed roof. A fifth addition is located on the south side of the building. This addition is also constructed with a concrete floor slab and has painted, concrete-block walls with a low-pitched roof.

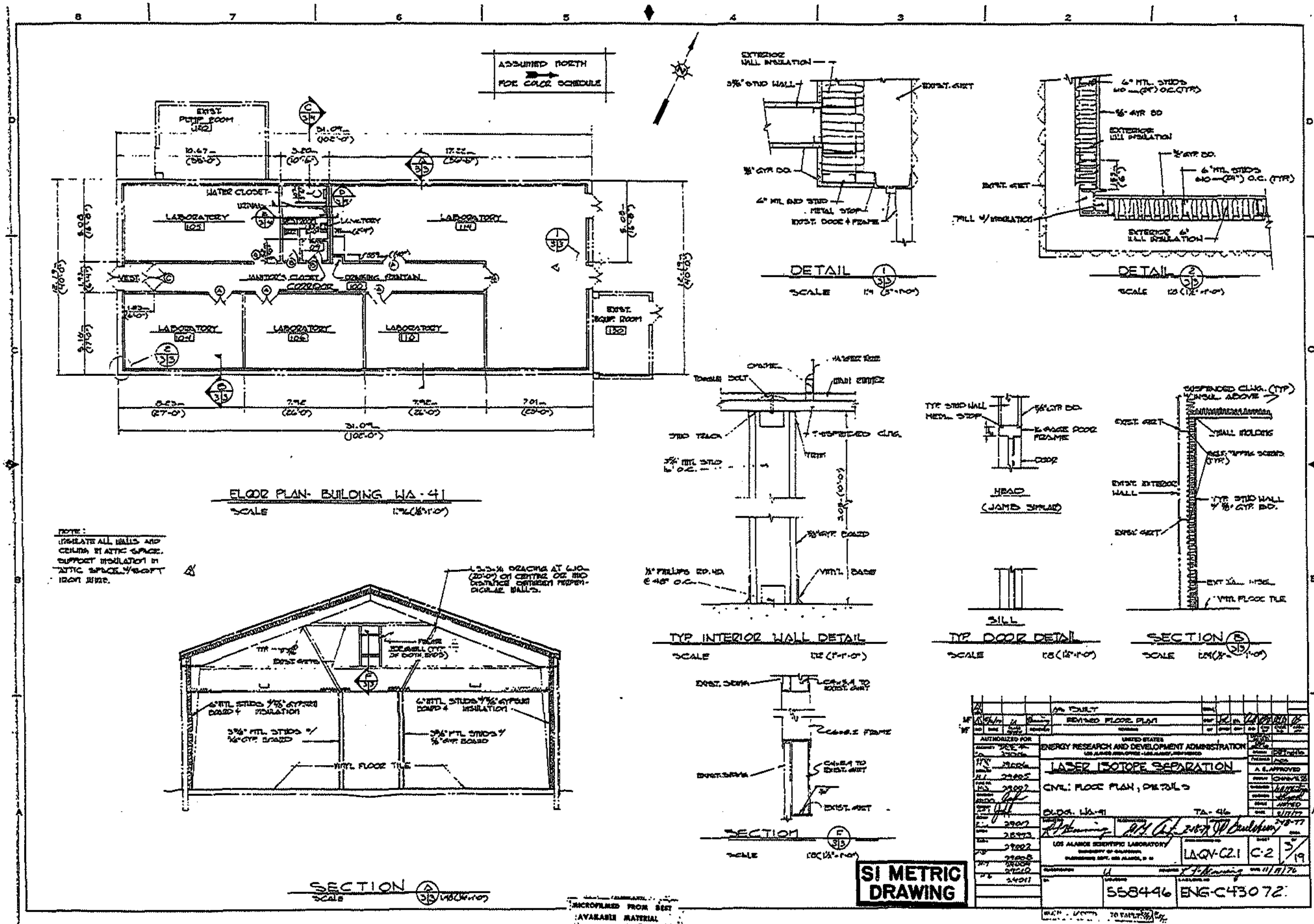
List of Drawings (Cntrl + Enter for para break)

ENG-C 22766
Sheet 1 of 2
WA-41 (TA-46-41)
Warehouse TA-46
Location & Floor Plan
1958 ?

ENG-C 43072
Sheet C-2 (3 of 19)
Bldg. WA-41, TA-46 (TA-46-41)
Laser Isotope Separation
Civil: Floor Plan, Details
February 17, 1977

AB303
Sheet 1 of 1
TA-46-41
Laser Isotope Support Facility
Record Floor Plan
July 1, 1994


PLAN - BUTLER TYPE S.F.S BUILDING WA-41
40' X 100' NOMINAL SIZE
SECTION - SLAB BEAM
SIDE ELEVATION
END ELEVATION
END WALL BOLT SETTING LAYOUT
20' SIDEWALL BAY
LOCATION PLAN WAREHOUSE TA-46
AS BUILT DRAWING
U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS, NEW MEXICO
WA-41 WAREHOUSE TA-46
LOCATION & ROOF PLAN
SHEET 1 OF 2
NEUMER & CABANISS
ARCHITECT ENGINEERS
ALBUQUERQUE, NEW MEXICO
LA-DA-1
LAB. JOB-1756 PHASE II DWG. NO. ENG-C 22766


ASSUMED NORTH FOR COLOR SCHEDULE
FLOOR PLAN - BUILDING WA-41
LABORATORY 105
LABORATORY 114
LABORATORY 104
LABORATORY 106
LABORATORY 110
CORRIDOR 100
JANITOR'S CLOSET
DRINKING FOUNTAIN
WATER CLOSET
URINAL
LAVATORY
VEST
EXIST. PUMP ROOM
EXIST. EQUIP. ROOM
31.09m (102'-0")
DETAIL 1
DETAIL 2
TYP INTERIOR WALL DETAIL
TYP DOOR DETAIL
HEAD (JAMB SIMILAR)
SILL
SECTION B
SECTION F
SECTION A
VINYL FLOOR TILE
NOTE: INSULATE ALL WALLS AND CEILING IN ATTIC SPACE. SUPPORT INSULATION IN ATTIC SPACE W/SOFT IRON WIRE.
SI METRIC DRAWING
MICROFILMED FROM BEST AVAILABLE MATERIAL
AS BUILT
REVISED FLOOR PLAN
UNITED STATES ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
LASER ISOTOPE SEPARATION
CIVIL: FLOOR PLAN, DETAILS
BLDG. WA-41
TA-46
LOS ALAMOS SCIENTIFIC LABORATORY
LA-QV-C2.1
C-2
3/19
558446
ENG-C43072

ROOM INFORMATION CHART

RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE
100	496	107	142	120	324
100A	77	108	75	120A	420
104	422	110	414	131	90
104A	149	112	804	132	90
106	548	114	570	—	—
108	415	114A	191	—	—

TOTAL ROOM NET SQUARE FOOTAGE (BUILDING) = 5,206

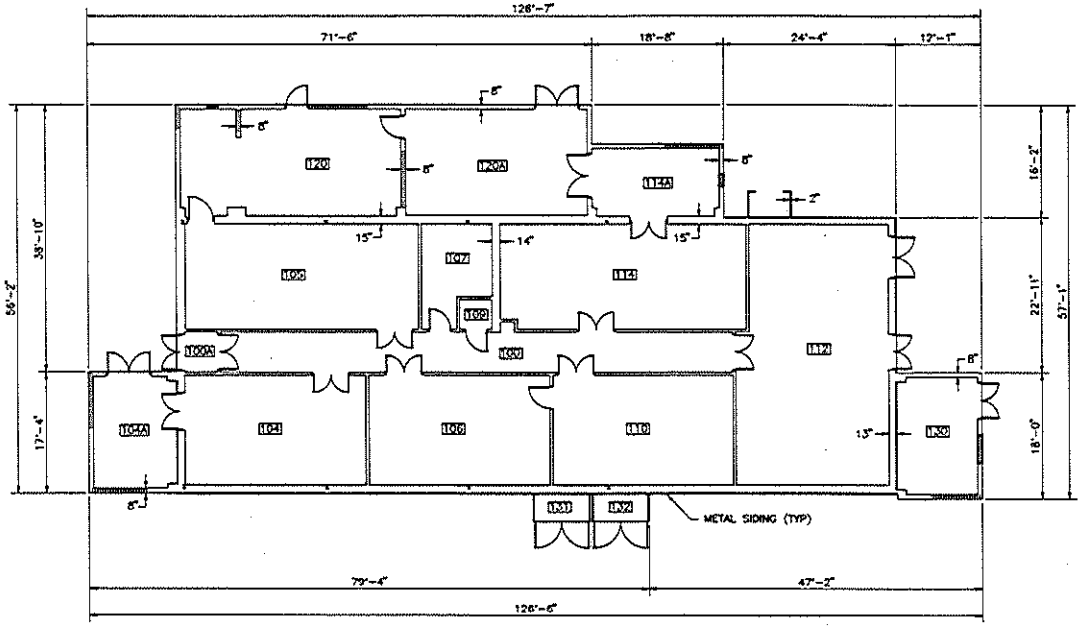
GROSS SQUARE FOOTAGE (BUILDING) = 5,739

LEGEND

CONCRETE BLOCK
LOUVER
WINDOW
WOOD OR METAL STUD
STEEL COLUMNS

NOTES

1. ALL EXTERIOR WALLS ARE 15" THICK UNLESS OTHERWISE NOTED.
2. ALL INTERIOR WALLS ARE 5" THICK UNLESS OTHERWISE NOTED.
3. REFERENCE DRAWING ENG-R3172.
4. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS. AREAS SHOWN ARE ROUNDED TO THE NEAREST SQUARE FOOT.
5. GROSS SQUARE FOOTAGE IS EQUAL TO ALL FLOOR AREA (INCLUDING ALL OPENINGS IN FLOOR SLABS) MEASURED TO THE OUTER SURFACES OF EXTERIOR OR ENCLOSING WALLS, AND INCLUDES ALL FLOORS, MEZZANINES, HALLS, VESTIBULES, STAIRWELLS, SERVICE AND EQUIPMENT ROOMS, PENTHOUSES, ENCLOSED PASSAGES AND WALKS, FINISHED USABLE SPACE WITH SLOPING CEILINGS (SUCH AS ATTIC SPACES) HAVING 5 FEET OR MORE HEADROOM, AND APPENDED COVERED SHIPPING OR RECEIVING PLATFORMS AT TRUCK OR RAILROAD CAR HEIGHT. ALSO INCLUDED IN GROSS FLOOR AREA, BUT CALCULATED ON ONE-HALF OF ACTUAL FLOOR AREA, ARE COVERED OPEN PORCHES, PASSAGES AND WALKS, WITH APPENDED UNCOVERED RECEIVING AND SHIPPING PLATFORMS AT TRUCK AND RAILROAD HEIGHT.
6. DIMENSIONS SHOWN ARE ROUNDED TO THE NEAREST INCH.



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

8 6 4 2 0 8 16 32
GRAPHIC SCALE

N

FIELD VERIFIED 06-17-94

NO	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	REL	SUB	REC	APP

JOHNSON CONTROLS WORLD SERVICES INC.

AS-BUILT RECORD FLOOR PLAN
LASER ISOTOPE SUPPORT FACILITY
ARCH: FIRST FLOOR PLAN

DRAWN J. MARTINEZ
VERIFIED
CHECKED
RELEASED
DATE 07-1-94

BLDG 41 TA-46

SUBMITTED JERRY FORTE
RECOMMENDED FRED THOMPSON 11/3/94
APPROVED FRED THOMPSON 11/3/94

Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

SHEET 1 OF 1

CLASSIFICATION U REVIEWER T. GUILDOFF DATE 11/4/94

PROJECT ID 7556
DRAWING NO AB303
REV

101-5 (01-93)

TA-46-41 Northwest side

TA-46-41 Southwest side

TA-46-41 Southeast side

TA-46-41 Northeast and Northwest sides

LANL TA- Building # 46-0059

Camera 894231

Frame #s P0002918 through P0002921

Surveyor(s) S. McCarthy, J. Ronquillo, N. Naranjo

Date 5/25/2006

Los Alamos National Laboratory
RMT Historic Building Survey Form

Building Name Laser Building UTMs easting 384267 northing 4E+06 zone 13

Legal Description: Map USGS Frijoles Quad 2002 tnsp 19N range 6E sec

Current Use/ Function Storage Original Use/ Function Rover Engineering Test building

Date (estimated) 1961 Date (actual) 1961 Property Type Laboratory/Processing

Type of Construction

Pre-Fabricated Metal ☐ Steel Frame ☐ Wood Frame ☐ CMU ☑ Reinforced Concrete ☐

Other Type of Construction Oversized one-story building. # of Stories 1

Foundation Concrete Slab

Exterior CMU-Exterior ☐ Reinforced Concrete-Exterior ☐ Steel (galvanized) ☐ Steel (corrugated) ☐

Wood Siding ☐ Asbestos Shingles-Exterior ☐ In-Fill Panels ☐ Other-Exterior Pumice Block

Exterior Treatment (painted, stuccoed, etc) Painted.

Exterior Features (docks, speakers, lights, signs, etc) Lights, speakers, conduit, signage, lightning rods, vent stacks.

Addition CMU-Addition ☑ Reinforced Concrete-Addition ☐ Steel (galvanized)- Addition ☐ Wood ☐

Steel (corrugated)-Addition ☐ Asbestos Shingles-Addition ☐ Other- Addition

Exterior Treatment-Addition Painted

Exterior Features-Addition Each addition contains a single door and a flat roof.

Roof Form Slanted/Shed ☐ Gable ☐ Other Roof Type Flat

Degree of Pitch/ Slope Slight

Roof Materials Corrugated Metal ☐ Rolled Asphalt ☐ Asbestos Shingles ☐ 4-Ply Built Up ☐

Other Roof Materials Steel decking covered by rigid insulation and built-up roof system.

Window Type Casement ☐ Single Hung Sash ☐ Double Hung Sash ☐ Fixed Window ☐

Other Window Type

# of Each Window Type/ Comments None

Glass Type Clear ☐ Wire Glass ☐ Opaque ☐ Painted Glass ☐ Glass Block ☐

Light Pattern

Door Type Personnel Door Types Exterior Fire Door ☐ Single ☑ Double ☐ Roll-up ☐ Sliding ☐

Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☑

Interior — Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Equipment Door Types — Exterior — Fire Door ☐ Single ☑ Double ☐ Roll-up ☑ Sliding ☐
Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☑

Interior — Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Metal ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

# of Each Door Type/Comments: Single roll-up door on north side, single personnel door on west and south sides, single access door into each of the two additions on south side.

Interior Wall Gypsum Board ☐ Reinforced Concrete- Interior ☐

CMU- Interior ☐ Plywood ☐ Other- Interior

In-Wall Electrical Wiring ☐ On-Wall Electrical Wiring ☐

Ceiling Drop Ceiling ☐

Interior Comments (Equipment, etc)

Degree of Remodeling Moderate

Condition Excellent ☐ Good ☑ Fair ☐ Deteriorating ☐ Contaminated ☐ Burned ☐

Associated Building ☑

If yes, list building names and #s Remainder of buildings within technical area.

Integrity Fair

Significance

Eligible Under Criterion A ☐ B ☐ C ☐ D ☐ Not Eligible ☑

DOE Themes

Nuclear Weapon Components and Assembly ☐
Nuclear Weapon Design and Testing ☐
Nuclear Propulsion ☑
Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science ☑
Energy and Environment: Research and Design Projects ☐

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support ☐ Super Computing ☐
Reactor Technology ☑ Biomedical/Health Physics ☐ Strategic and Supporting Research ☑
Environment/Waste Management ☐ Administration and Social History ☐ Architectural History ☐

Recommendations/ Additional Comments

Architectural Features (elevations)

TA-46-59 is an oversized, one-story rectangular-in-plan building measuring 20 ft by 30 ft with two small additions. The building is constructed with a concrete perimeter foundation, a 6 in. interior floor slab, 16-ft-high painted pumice block walls, and a flat roof. The roof is constructed with a 20-guage steel decking covered by 12 in. of rigid insulation, with a final built-up roof system of tar and gravel. The roof also contains a large vent stack, smaller stack, lightning rods, and a loud speaker. The walls are equipped with exterior conduit, signage, and lighting.

The north side of the building contains a 10-ft-wide roll-up door and a drive-up ramp. A small grille and louver are set into the wall near the upper left corner of the overhead door opening. A metal, flush-panel, personnel door is located on the west side of the building near the north end. A second flush-panel personnel door is located on the south side of the building and sheltered by a metal awning. In front of the door is a 4-in.-thick concrete slab.

Total sq ft 585 Net

Architect/ Builder Los Alamos Scientific Laboratory Engineering Department

Alterations

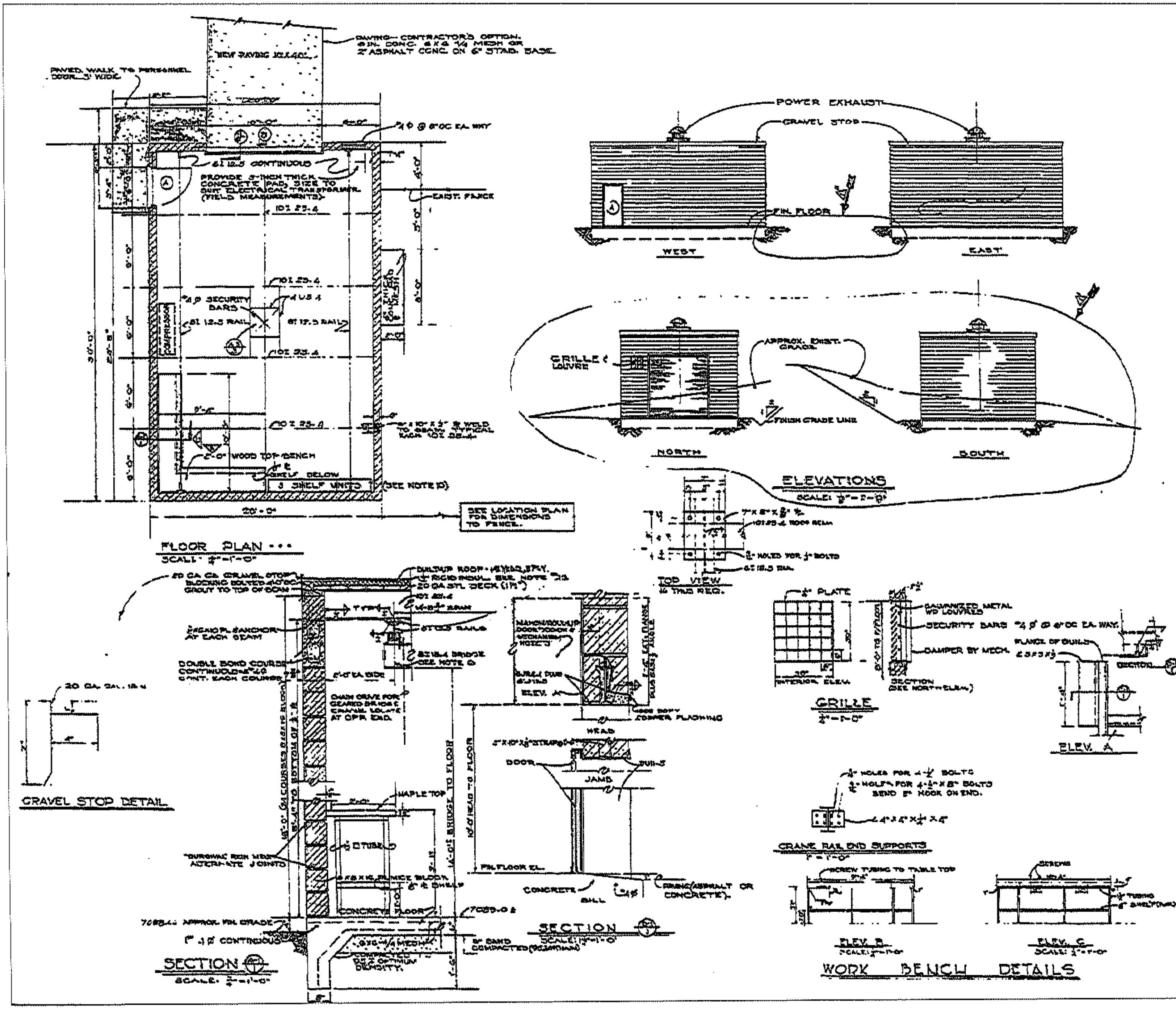
Located on the south side of the building, are two small one-story building additions. The west addition (the compressor room) was constructed in 1966. It measures 6-ft 4-in. wide by 3-ft 8-in. deep and is constructed with painted, concrete-block walls and a flat roof. A single flush-panel metal door with louvers is centered on the south wall. In front of the door is a 4-in.-thick concrete slab. Sometime after 1966, a second addition was constructed immediately to the east of the first addition. This addition is also constructed with painted, concrete-block walls and a flat roof. This addition has a single metal door as well. Mechanical equipment is located on the roof.

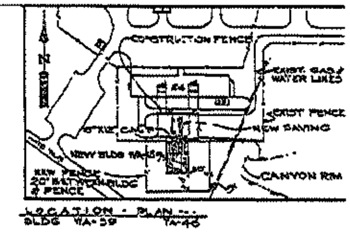
List of Drawings (Cntrl + Enter for para break)

ENG-C 23345
Sheet 1 of 5
Bldg. WA-59, TA-46 (TA-46-59)
Engineering Test Facility
Location Plans & General Notes
Floor Plan, Elevations, Arch. Details
April 10, 1961

ENG-C 32340
Sheet 1 of 3
Bldg. WA-59, TA-46 (TA-46-59)
Modifications to Building WA-59
Architectural Plans, Elevations & Notes
November 7, 1966

AB 467
Sheet 1 of 1
TA-46-59
Laser Lab
As-Built Record Floor Plan
July 12, 1995





GENERAL NOTES

1. ALL CONCRETE TO BE 3000 P.S.I. @ 28 DAYS.
2. WHERE PROPRIETARY NAMES ARE USED, APPROVED EQUALS MAY BE USED.
3. DOORS—"B" MAHON ROLL-UP NO. 700-CH, SIZE 10'X10' CLEAR OPENING. ALL PARTS GALVANIZED STEEL. INCLUDE RUBBER BOTTOM SEAL & GUIDE TRACK WEATHER SEAL.
4. DOORS—"A" 3'-0" X 7'-0" X 1¾" FLUSH HOLLOW METAL, WEATHER STRIPPED, AND STANDARD 16 GAGE HOLLOW METAL FRAME.
5. CONNECT BUILDING WITH EXISTING PAVING & 7'6 NEW 10'-0" WIDE ASPHALT CONCRETE STRIP. INCLUDE 3'-0" WALK TO PERSONNEL DOOR "A".
6. BRIDGE CRANE—CHISHOLM-MOORE, MODEL 8015, SINGLE I BEAM, GEARED, 1½ TON. PAINT "3000 LB. CAPACITY" ON BRIDGE, BRIGHT YELLOW, 4" HEIGHT.
7. ELECTRIC HOIST—CHISHOLM-MOORE, "METEOR" 7395-E, TWO (2) SPEED (6/18) WITH A MOTOR DRIVEN TROLLEY AT 30 FPM. BOTH MOTORS TO BE 220V, 3P, 60C & HOIST MOTOR IS 2HP. 10 FEET MINIMUM LIFT. (3000 LB. CAP.)
8. PAINT ALL METAL ONE (1) COAT GRAY "TOTRUST". PAINT EXTERIOR PUMICE BLOCK WITH "KENITEX" TEXTURED CEMENT PAINT ACCORDING TO MFG. SPEC. TO PRODUCE WEATHER-TIGHT SURFACE. MISSION GRAY. KENITEX CORP. OF LOS ANGELES, CALIFORNIA. DO NOT PAINT GALV. IRON OR ALUMINUM.
9. HARDWARE: 1 LOCKSET NO. A 1035⅝ OKS (PROCTOR) WITH "BEST" CYLINDER. 1½ PR. BUTTS, NO. A 86½, 4X4, ALUMINUM THRESHOLD. HARDWARE IS RUSSELL-ERWIN.
10. PROVIDE LYON SHELVING IN 3 UNITS, APPROX. 36" X 12" X 84", CLOSED UPRIGHTS AND BACKS. OLIVE GREEN COLOR.
11. RELOCATE FENCE TO PROVIDE MINIMUM OF 20 FEET BETWEEN BUILDING & FENCE. AND 130'-0" OF NEW FENCING REQUIRED.
12. CARRY FOOTINGS TO FIRM BEARING.
13. FASTEN INSULATION TO METAL DECK WITH METAL CLIPS OR A NON-FLAMMABLE CEMENT SUCH AS LUXSECO.
14. PROVIDE SECURITY EYELETS ON BOTH DOORS.

A. NO. 15 LAB. JOB NO. [illegible]

NO.	DATE	REVISIONS	BY	CHKD		
1	4-27-61	[illegible]				

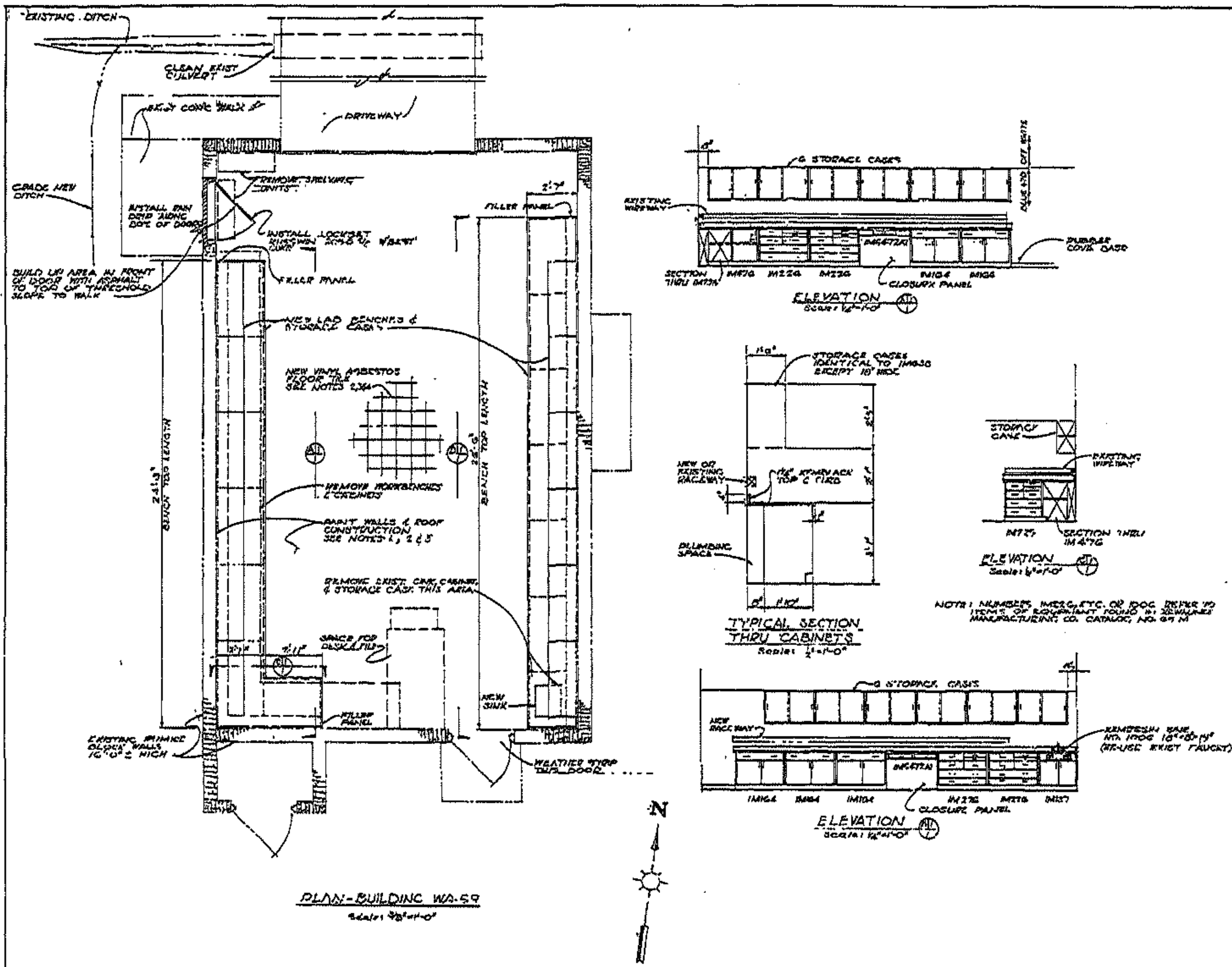
AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT., SEC.

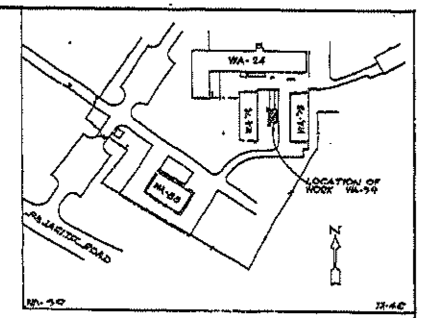
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO

ENGINEERING TEST FACILITY
FLOOR PLAN, ELEVATIONS, ARCH. DETAILS
LOCATION PLANS & GENERAL NOTES

BLDG. WA-39 TA-46

CHECKED | RECOMMENDED | APPROVED
DESIGNER | DATE APRIL [illegible] | DRAWING NO.
SCALE AS NOTED | SHEET 1 OF 3 | ENG-C23345





LOCATION PLAN

ARCHITECTURAL NOTES:

1. BUILDING ROOF TO BE COMPLETELY ... ARE PAINTED OF NEW TILE FLOOR INSTALLED.
2. PAINT WALLS, DOORS, ROOF CONSTRUCTION, ETC. AFTER ELECTRICAL & MECHANICAL MODIFICATIONS HAVE BEEN MADE. PAINT ROOF CONSTRUCTION, WALLS DOWN TO TOP OF STORAGE CASES, INCLUDING PIPING & CONDUITS IN THOSE AREAS, OFF WHITE ITEM 10 ... PAINT WALLS BELOW TOPS OF STORAGE CASES, INCLUDING EXPOSED PIPING & CONDUITS IN THAT AREA BLUE ...
3. BEFORE PAINTING LOWER PORTION OF WALLS CLEAN FLOOR WITH A 10% SOLUTION OF MURIATIC ACID. AFTER CLEANING FLOOR RINSE FLOOR WITH WATER.
4. AFTER CLEANING FLOOR LAY NEW FLOOR "AZROCK" ... WHITE VINYL ASBESTOS TILE. LAY TILE OVER ENTIRE FLOOR AREA INCLUDING AREA UNDER CABINETS. PROVIDE BROWN RUBBER COVE BASE AT EXPOSED WALLS.
5. LAB BENCHES & STORAGE CASES TO BE KEWAUNEE CATALOG NO'S AS SHOWN, COMPLETE WITH ALL ACCESSORIES NECESSARY FOR A NORMAL INSTALLATION. UNITS TO BE FACTORY PAINTED NO. 39 LIGHT GREEN. TOPS & CURBS TO BE 1/4" KEMBLACK.
6. PATCH ALL CRACKS & HOLES IN BLOCK WALLS BEFORE PAINTING. ALSO REMOVE LOOSE PAINT & BE SURE WALLS ARE DRY.
7. PATCH & REPAIR ALL AREAS DISTURBED DURING CONSTRUCTION TO MATCH EXISTING ADJACENT AREAS.
8. WHERE BRAND NAMES OR PROPRIETARY ITEMS ARE SPECIFIED, ITEMS OF EQUAL QUALITY, FUNCTION, SIMILAR APPEARANCE AND SIZE MAY BE SUBSTITUTED IN LIEU THEREOF PROVIDED SUCH SUBSTITUTION IS APPROVED BY AUTHORIZED ENG. DEPT. PERSONNEL PRIOR TO INSTALLATION.

THIS JOB MUST BE INSPECTED, AND ANY CHANGES APPROVED BY ENG-4
McMILLAN PHONE 7-7308

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA—LOS ALAMOS, NEW MEXICO

MODIFICATIONS TO BUILDING WA-59

ARCHITECTURAL PLANS, ELEVATIONS & NOTES

BLDG. WA-59 — TA-40

AUTHORIZED FOR: H-DO, H-7, ENG-5 N/A

Nov. 7, 1962 — SHEET 1 OF 3 — SCALE AS SHOWN

ENG-C 32340

C.A. NO. ____ R. A. NO. ____ L. J. NO. 3557-40

Prefix	Drawing number	Sheet number	Sheet suffix	Number of sheets	Revision number
C	32340	1		3	0

ROOM INFORMATION CHART

RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE
100	543	101	17	102	25

TOTAL ROOM NET SQUARE FOOTAGE (BUILDING) = 585

GROSS SQUARE FOOTAGE (BUILDING) = 651

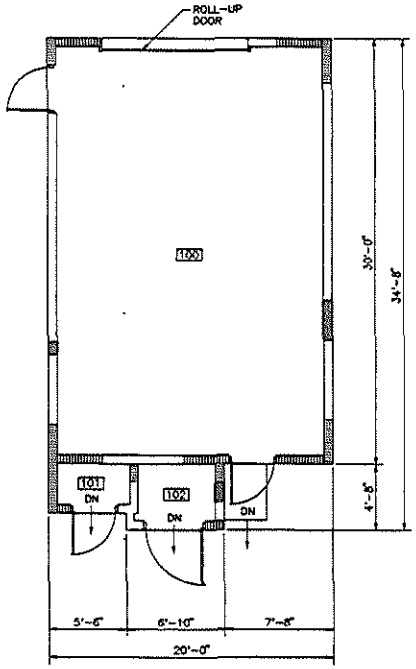
LEGEND

CONCRETE BLOCK

LOUVER

NOTES

1. ALL EXTERIOR WALLS ARE 8" THICK UNLESS OTHERWISE NOTED.
2. REFERENCE DRAWING ENG-R3175.
3. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS. AREAS SHOWN ARE ROUNDED TO THE NEAREST SQUARE FOOT.
4. GROSS SQUARE FOOTAGE IS EQUAL TO ALL FLOOR AREA (INCLUDING ALL OPENINGS IN FLOOR SLABS) MEASURED TO THE OUTER SURFACES OF EXTERIOR OR ENCLOSING WALLS, AND INCLUDES ALL FLOORS, MEZZANINES, HALLS, VESTIBULES, STAIRWELLS, SERVICE AND EQUIPMENT ROOMS, PENTHOUSES, VAULTS, AND ENCLOSED PASSAGES.
5. DIMENSIONS SHOWN ARE ROUNDED TO THE NEAREST INCH.



RECORD FLOOR PLAN

SCALE: 1/4" = 1'-0"

GRAPHIC SCALE 4 3 2 1 0 4 8 16

N

RECD ___ LOGGED ✓ TO VAULT

FIELD VERIFIED 6-5-95

NO	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP

JOHNSON CONTROLS

AS-BUILT RECORD FLOOR PLAN
LASER LAB
ARCH: RECORD FLOOR PLAN

DRAWN J. Gurule / T. Gurule

VERIFIED 7/6/95

CHECKED

DATE 7-12-95

BLDG 59 TA-46

SUBMITTED JERRY FORTE

APPROVED FOR RELEASE FRED THOMPSON Thompson 8/10/95

Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

SHEET 1 OF 1

CLASSIFICATION U REVIEWER T. GUSDORF DATE 8-1-95

PROJECT ID 7556

DRAWING NO AB467

REV

JCI NO 91-011

TA-46-59 North and East sides

TA-46-59 West and South sides

TA-46-59 South and East sides

TA-46-59 East and North sides

LANL TA- Building # 46-0074

Camera 984231

Frame #s P0002938 through P0002939

Surveyor(s) S. McCarthy, J. Ronquillo, N. Naranjo

Date 5/25/2006

Los Alamos National Laboratory
RMT Historic Building Survey Form

Building Name Test Facility UTMs easting 384436 northing 4E+06 zone 13

Legal Description: Map USGS Frijoles Quad 2002 tnsp 19N range 6E sec

Current Use/ Function Storage Original Use/ Function Rover Test Facility

Date (estimated) 1961 Date (actual) 1961 Property Type Laboratory/Processing

Type of Construction

Pre-Fabricated Metal ☑ Steel Frame ☑ Wood Frame ☐ CMU ☐ Reinforced Concrete ☐

Other Type of Construction Oversized 1-story # of Stories 1

Foundation Concrete Slab

Exterior CMU-Exterior ☐ Reinforced Concrete-Exterior ☐ Steel (galvanized) ☐ Steel (corrugated) ☑

Wood Siding ☐ Asbestos Shingles-Exterior ☐ In-Fill Panels ☐ Other-Exterior

Exterior Treatment (painted, stuccoed, etc)

Exterior Features (docks, speakers, lights, signs, etc) Signage

Addition CMU-Addition ☐ Reinforced Concrete-Addition ☐ Steel (galvanized)- Addition ☐ Wood ☐

Steel (corrugated)-Addition ☐ Asbestos Shingles-Addition ☐ Other- Addition

Exterior Treatment-Addition

Exterior Features-Addition

Roof Form Slanted/Shed ☑ Gable ☐ Other Roof Type

Degree of Pitch/ Slope Slight

Roof Materials Corrugated Metal ☐ Rolled Asphalt ☐ Asbestos Shingles ☐ 4-Ply Built Up ☐

Other Roof Materials

Window Type Casement ☐ Single Hung Sash ☐ Double Hung Sash ☐ Fixed Window ☐

Other Window Type

# of Each Window Type/ Comments None

Glass Type Clear ☐ Wire Glass ☐ Opaque ☐ Painted Glass ☐ Glass Block ☐

Light Pattern

Door Type Personnel Door Types Exterior Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐

Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Interior Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Equipment Door Types Exterior Fire Door ☐ Single ☐ Double ☑ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Interior Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Metal ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

# of Each Door Type/Comments: A pair of full-width steel doors on north side.

Interior Wall Gypsum Board ☐ Reinforced Concrete- Interior ☐

CMU- Interior ☐ Plywood ☐ Other- Interior

In-Wall Electrical Wiring ☐ On-Wall Electrical Wiring ☐

Ceiling Drop Ceiling ☐

Interior Comments (Equipment, etc)

Degree of Remodeling Minor

Condition Excellent ☐ Good ☐ Fair ☑ Deteriorating ☐ Contaminated ☐ Burned ☐

Associated Building ☑

If yes, list building names and #s Remainder of buildings within technical area.

Integrity Fair

Significance None

Eligible Under Criterion A ☐ B ☐ C ☐ D ☐ Not Eligible ☑

DOE Themes

Nuclear Weapon Components and Assembly ☐ Nuclear Weapon Design and Testing ☐ Nuclear Propulsion ☑

Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science ☑ Energy and Environment: Research and Design Projects ☐

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support ☐ Super Computing ☐

Reactor Technology ☑ Biomedical/Health Physics ☐ Strategic and Supporting Research ☑

Environment/Waste Management ☐ Administration and Social History ☐ Architectural History ☐

Recommendations/ Additional Comments

Architectural Features (elevations) TA-46-74 is an oversized one-story building that is approximately square in plan measuring 12 ft by 10 ft. The building is constructed with a concrete slab foundation, steel frame structure sheathed with corrugated metal wall panels,

and a slightly sloped shed roof also covered with corrugated metal panels. The north side of the building contains a pair of full-width metal doors.

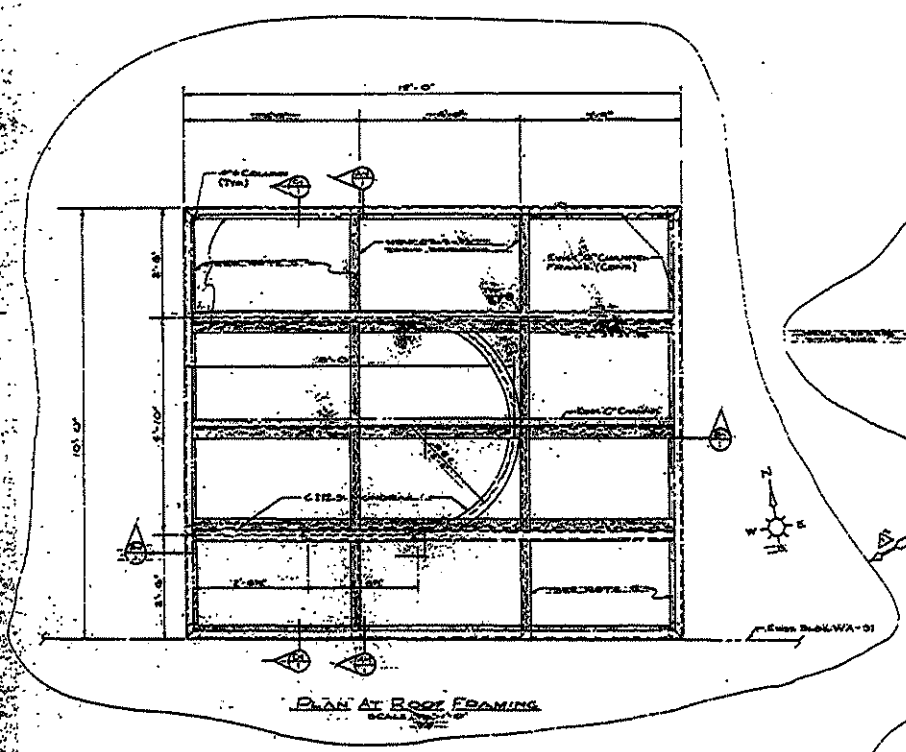
Total sq ft 115 Net **Architect/ Builder** Los Alamos Sceintific Laboratory Engineering Department

Alterations In 1964 a monorail was installed in the building. The original accordion-type doors were changed to the current full-width doors sometime after 1983.

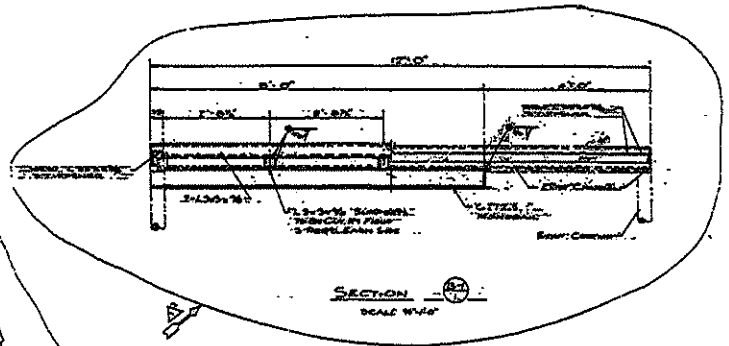
List of Drawings (Cntrl + Enter for para break)

ENG-C 28437
Sheet 1 of 1
Bldg WA-74, TA-46 (TA-46-74)
Monorail Installation
Structural: Plans & Sections
May 25, 1964

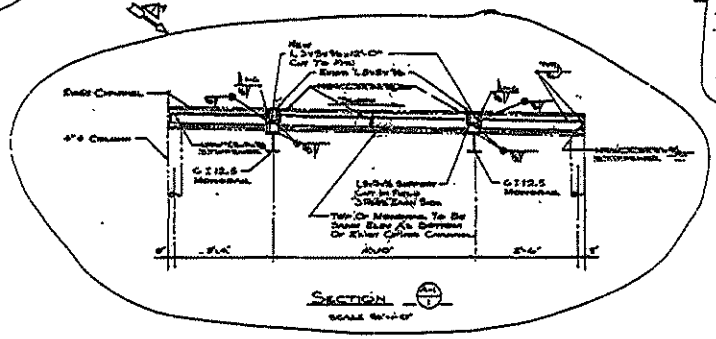
ENG-R 2904
Sheet 1 of 1
Bldg. WA-74, TA-46 (TA-46-74)
Test Facility
Floor Plan
October 24, 1983



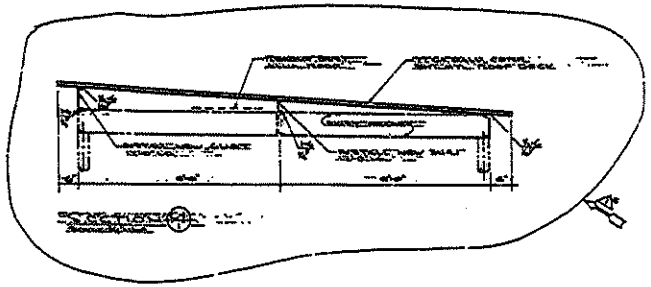
PLAN AT ROOF FRAMING

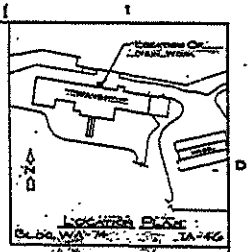


SECTION



SECTION





LOCATION PLAN

GENERAL NOTES:

1. [illegible]
2. [illegible]
3. [illegible]

THIS JOB DONE IN CONFORMITY AND ANY CHANGES APPROVED BY ENGR. PROJECT ENGR. [illegible]

AUTHORIZED FOR CONSTRUCTION

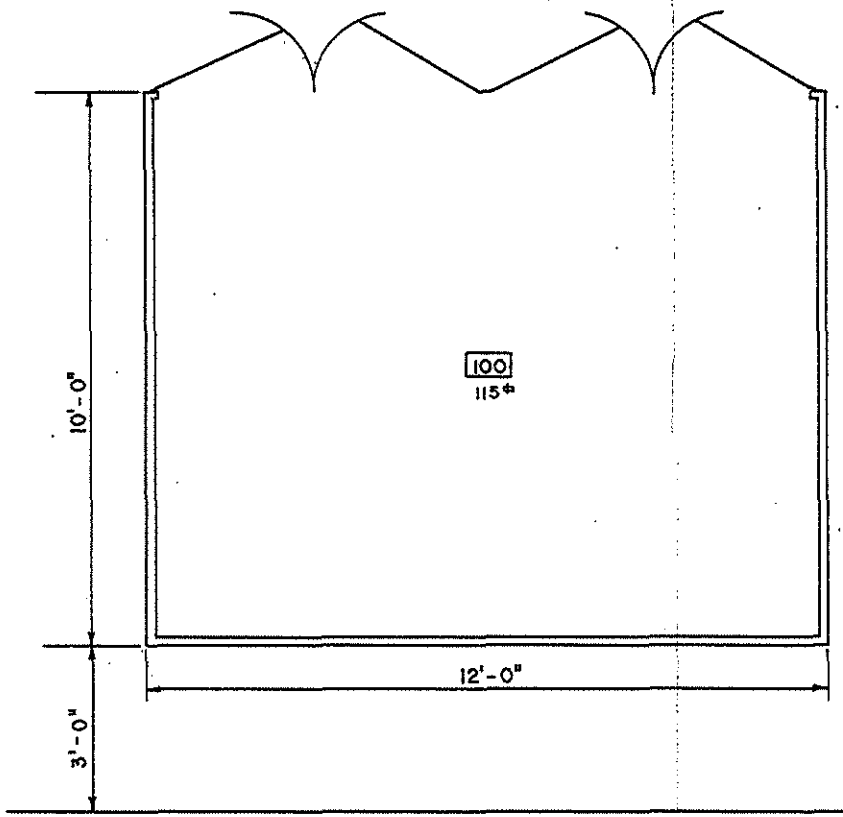
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA—LOS ALAMOS, NEW MEXICO

MOTORAL INSTALLATION

STRUCTURAL PLANS / SECTIONS

BLDG WA-74 TA-46

DRAWN		SHEET 13
TRACED		
CHECKED		
APPROVED	MAY 25, 1964	DRG-C 28437
C.A. NO.	B. A. NO.	L. J. NO.



BLDG. WA-31

1/2" = 1'-0"

0 1 2 3 4 5

GRAPHIC SCALE

BUILDING CONSTRUCTION:

STEEL FRAMEWORK WITH CORRUGATED METAL FOR ROOF AND SIDES.

TOTAL $\frac{11^2}{115}$

REV.	DATE	REVISION	BY	CKD.	APP.
1	7-27-83	REDRAWN & REVISED TO STATUS OF 7-27-83	H&N		

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

TEST FACILITY
FLOOR PLAN

BLDG. WA-74 TA-46

SEC. CLASSIFICATION: CLASS. U
REVIEWER
DATE 10-24-83

SUBMITTED	RECOMMENDED	APPROVED
E. Tapia	D. Ryan	

DRAWN	CHECKED	DATE	SHEET NO.	DRAWING NO.
PENNING. H&N	HUMBLE H&N	7-27-83	1 OF 1	ENG-R2904

REC'D ___ LOGGED ✓ TO [illegible] 11-30-83

TA-46-74 East and North sides

TA-46-74 North and West sides

LANL TA- Building # 46-0075

Camera OI-IP Group Camera

Frame #s IMG_0095 through IMG_0099

Surveyor(s) K. Towery and K. Honig

Date 6/5/2014

Los Alamos National Laboratory
RMT Historic Building Survey Form

Building Name Warehouse UTMs easting 384250 northing 4E+06 zone 13

Legal Description: Map USGS Frijoles Quad 2002 tnsp 19N range 6E sec

Current Use/ Function Miscellaneous Operations (storage, gym space, laser work space) Original Use/ Function Rover Program Warehouse

Date (estimated) 1963 Date (actual) 1963 Property Type Support

Type of Construction

Pre-Fabricated Metal ☑ Steel Frame ☐ Wood Frame ☐ CMU ☐ Reinforced Concrete ☐

Other Type of Construction Steel frame & galvanized steel, formed/corrugated, extedrior roof and wall panels. # of Stories 1

Foundation Concrete Slab

Exterior CMU-Exterior ☐ Reinforced Concrete-Exterior ☐ Steel (galvanized) ☑ Steel (corrugated) ☑

Wood Siding ☐ Asbestos Shingles-Exterior ☐ In-Fill Panels ☐ Other-Exterior

Exterior Treatment (painted, stuccoed, etc) Soft gray patina color

Exterior Features (docks, speakers, lights, signs, etc) Flat skylights, lightning protection, and barrel type ridge vents on roof. A rain gutter and downspout system is also incorporated into the building. Other building features include panel boxes, lighting, and alarm bells.

Addition CMU-Addition ☐ Reinforced Concrete-Addition ☐ Steel (galvanized)- Addition ☑ Wood ☐

Steel (corrugated)-Addition ☐ Asbestos Shingles-Addition ☐ Other- Addition

Exterior Treatment-Addition 2 lean-to type structures have been added one on the north side and the other on the east side.

Exterior Features-Addition

Roof Form Slanted/Shed ☐ Gable ☑ Other Roof Type

Degree of Pitch/ Slope Moderate

Roof Materials Corrugated Metal ☑ Rolled Asphalt ☐ Asbestos Shingles ☐ 4-Ply Built Up ☐

Other Roof Materials

Window Type Casement ☐ Single Hung Sash ☐ Double Hung Sash ☐ Fixed Window ☐

Other Window Type

# of Each Window Type/ Comments None

Glass Type Clear ☐ Wire Glass ☐ Opaque ☐ Painted Glass ☐ Glass Block ☐

Light Pattern

Door Type

Personnel Door Types — Exterior: Fire Door ☐ Single ☑ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☑ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Personnel Door Types — Interior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Equipment Door Types — Exterior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☑
Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☑
Louvered ☐ Painted ☐

Equipment Door Types — Interior: Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Metal ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

# of Each Door Type/Comments: Two, 2-panel sliding steel doors and 4 single hollow metal personnel doors.

Interior Wall Gypsum Board ☐ Reinforced Concrete- Interior ☐

CMU- Interior ☐ Plywood ☐ Other- Interior

In-Wall Electrical Wiring ☐ On-Wall Electrical Wiring ☐

Ceiling Drop Ceiling ☐

Interior Comments (Equipment, etc)

Degree of Remodeling Moderate

Condition Excellent ☐ Good ☑ Fair ☐ Deteriorating ☐ Contaminated ☐ Burned ☐

Associated Building ☑

If yes, list building names and #s Remainder of buildings within technical area.

Integrity Good

Significance None

Eligible Under Criterion A ☐ B ☐ C ☐ D ☐ Not Eligible ☑

DOE Themes

Nuclear Weapon Components and Assembly ☐
Nuclear Weapon Design and Testing ☐
Nuclear Propulsion ☑
Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science ☑
Energy and Environment: Research and Design Projects ☐

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support ☐ Super Computing ☐

Reactor Technology ☑ Biomedical/Health Physics ☐ Strategic and Supporting Research ☑

Environment/Waste Management ☐ Administration and Social History ☐ Architectural History ☐

Recommendations/ Additional Comments

Architectural Features (elevations)

The building is laid out on a general north/south orientation. The end elevations of the building are similar, in that each end consists of an 8 ft x 10 ft, two panel sliding steel door and a 3 ft x 7 ft personnel door. The side elevations have one 3 ft by 7 ft personnel door each. Several wall penetrations have been cut into the side walls in which small air conditioning units have been installed.

Total sq ft 4003 Net

Architect/ Builder Neuner & Cabaniss Architect Engineers, Albuquerque, New Mexico

Alterations

Over the years, two lean-to type structures, approximately 10 ft by 10 ft, have been added to the north end and to the southeast corner of the building. Typically, these additions contain fire protection valve systems and mechanical equipment, such as air compressors.

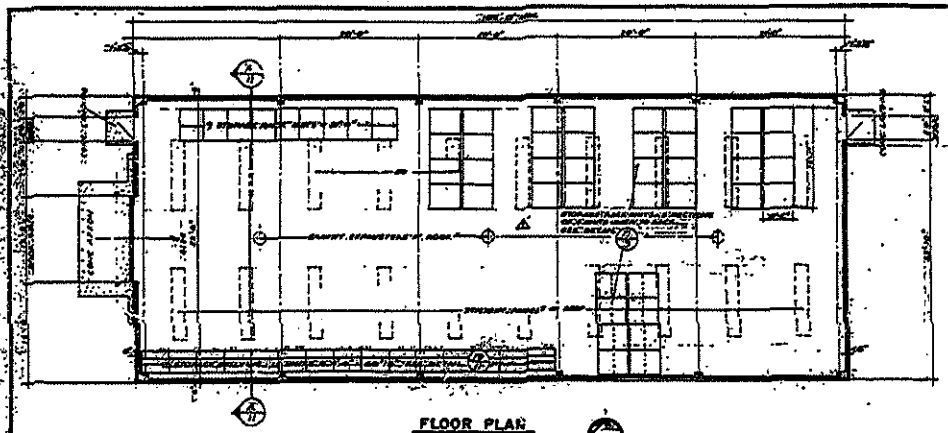
In 1975, a wood stud partition wall was added dividing the building into two interior spaces. A sliding door with a built-in pass door was installed in the new wall. This modification supported the building's changing function to isotope storage. In 1983, the larger space was subdivided into three areas. At some unknown date, a small addition was added on the north side of the building. In 1995, additional subdividing of the building's interior resulted in the addition of two more rooms. Another small exterior room was also added.

List of Drawings (Cntrl + Enter for para break)

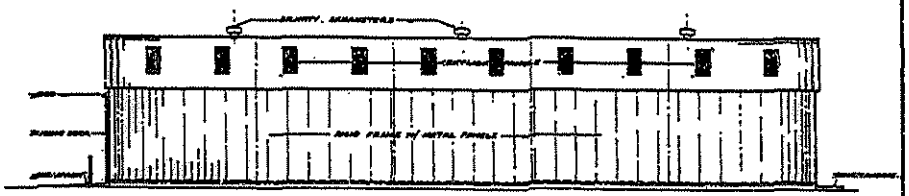
ENG-C 30931
Building WA-75, TA-46 (TA-46-75)
Rover Program - Storage Facilities
TA-3, TA-18, TA-46
Architectural
Plans, Elevations & Details
August 27, 1963

ENG-C 42777
Sheet C-1 (1 of 4)
Bldg. WA-75, TA-46 (TA-46-75)
TA-46-75
Isotope Storage
Civil: Plans, Sections, Dets.
March 13, 1975

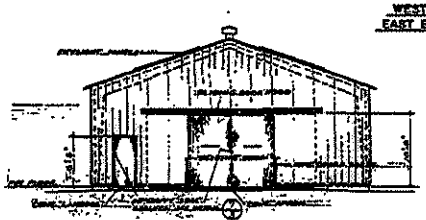
AB 390
Sheet 1 of 1
TA-46-75
As-built Record Floor Plan
Laboratory Storage
June 7, 1995



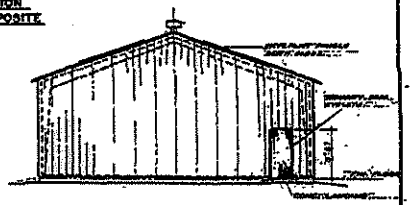
FLOOR PLAN



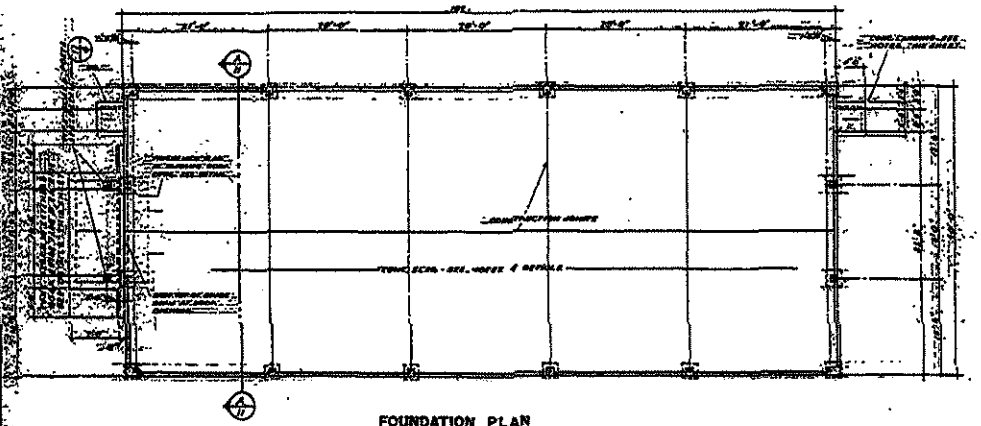
WEST ELEVATION
EAST ELEV. OPPOSITE



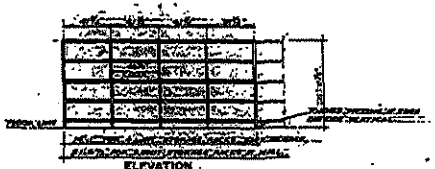
NORTH ELEVATION



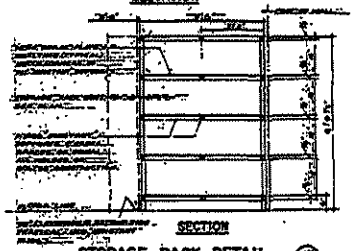
SOUTH ELEVATION



FOUNDATION PLAN



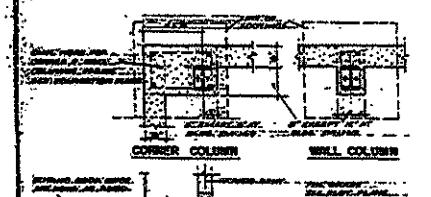
ELEVATION



SECTION

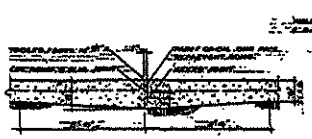
STORAGE RACK DETAIL

METAL BUILDING NOTES:

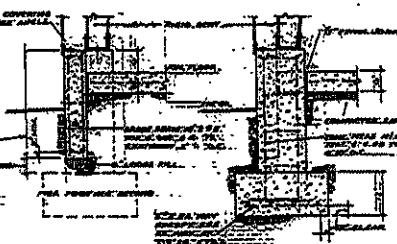


CORNER COLUMN

WALL COLUMN

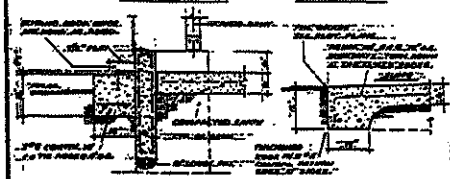


CONSTRUCTION JOINT

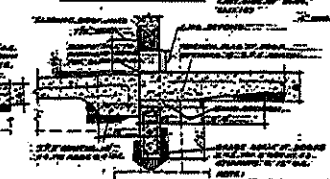


GRADE BEAM

PIER & FOOTING



SLIDING DOOR GUIDE PAD



APRON @ DOOR OPENING

FOUNDATION & SLAB DETAILS

NOTES:

AS BUILT DRAWING

U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS, NEW MEXICO

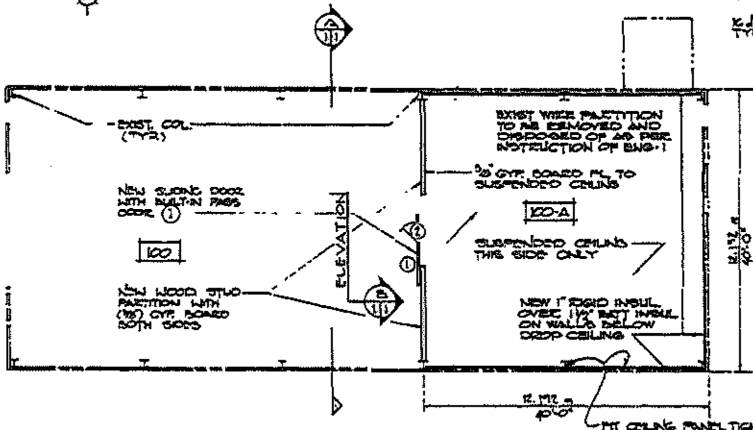
ROVER PROGRAM-STORAGE FACILITIES
TA-2, TA-18, TA-46
BUILDING WA-75, TA-46
ARCHITECTURAL
PLANS, ELEVATIONS & DETAILS

NEUNER & CABANISS
ARCHITECT ENGINEERS

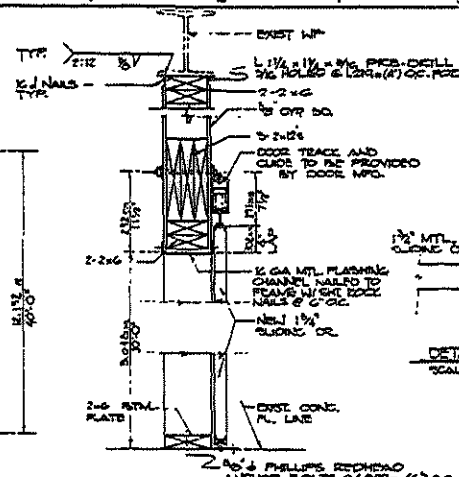
LA-FP-303.1 | 9.1.23

LAS JOB 2772 LASL DWG NO. ENG-C 30931

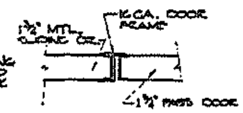
SI METRIC DRAWING



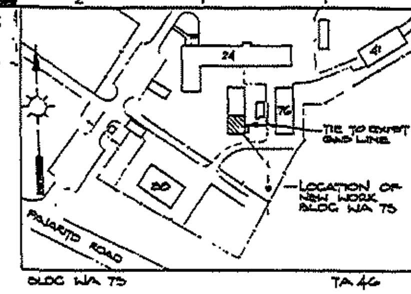
FLOOR PLAN
SCALE 1:96 (1/8" = 1'-0")



DOOR DETAIL ③
SCALE 1:8 (1½" = 1'-0")



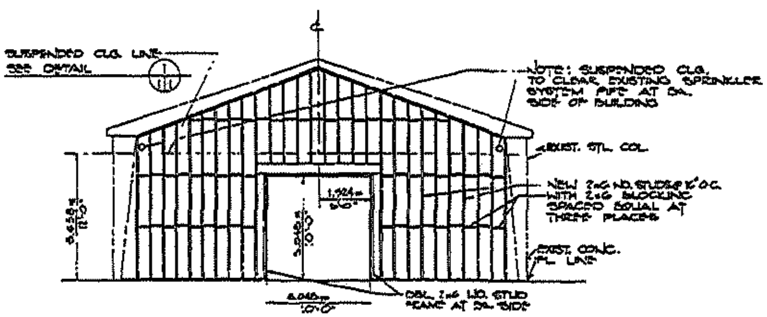
DETAIL ②
SCALE 1:4 (3" = 1'-0")



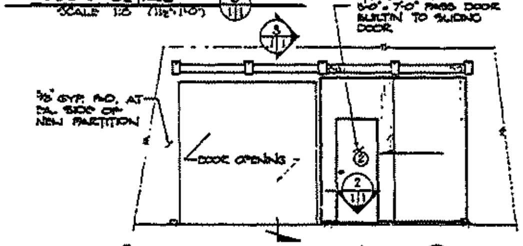
LOCATION PLAN

GENERAL NOTES

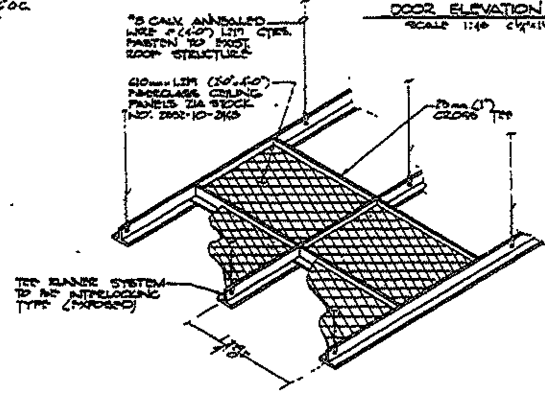
1. PATCH AND REPAIR ALL AREAS DISTURBED DURING CONSTRUCTION TO MATCH EXIST. ADJACENT AREAS.
2. FIELD VERIFY DIMENSIONS BEFORE STARTING CONSTRUCTION OR FABRICATION.
3. DO NOT SCALE THIS DRAWING FOR CONSTRUCTION DIMENSIONS.
4. ALL ITEMS REMOVED TO BE STORED OR DISPOSED OF ACCORDING TO DIRECTIONS FROM ENG-1.
5. CLEANUP - THE CONTRACTOR SHALL KEEP ALL WORK AREAS FREE FROM ACCUMULATIONS OF WASTE MATERIALS, SLUSH, TRASH OR RUBBISH AND PRIOR TO COMPLETION OF WORK, REMOVE ALL SUCH ACCUMULATIONS FROM AND ABOUT THE PREMISES, REMOVE ALL TOOLS, SCAFFOLDING EQUIPMENT AND OTHER ITEMS USED DURING CONSTRUCTION AND LEAVE THE JOB SITE IN A NEAT, ORDERLY AND SAFE CONDITION TO THE SATISFACTION OF THE CONTRACTING OFFICER AT THE TIME OF FINAL INSPECTION.
6. WHERE BRAND NAMES OR PROPRIETARY ITEMS ARE SPECIFIED, ITEMS OF EQUAL QUALITY, FUNCTION, SIMILAR APPEARANCE AND SIZE MAY BE SUBSTITUTED IN LIEU THEREOF PROVIDED SUCH SUBSTITUTION IS APPROVED BY AUTHORIZED ENGINEERING PERSONNEL PRIOR TO INSTALLATION.



SECTION Ⓐ
SCALE 1:64 (3/16" = 1'-0")



DOOR ELEVATION Ⓑ
SCALE 1:48 (1/4" = 1'-0")



SUSPENDED CEILING DETAIL ①
NTS

LEGEND

NEW CONSTRUCTION
EXIST. CONSTRUCTION

DOOR SCHEDULE

SYMB.	DESCRIPTION	HARDWARE	REMARKS	LOCKS
①	3.200m x 3.251m (10'-4" x 10'-8") SLIDING MTL. DOOR WITH 914mm x 2.134m (3'-0" x 7'-0") PASS DOOR. BY R.L. SAND MFG. CO.		TRACKS, BRACKETS, HANGERS AND ALL ACCESSORIES NECESSARY FOR ASSEMBLY TO BE PROVIDED BY MFG	HOOK: CYL. ZIA STOCK NO. 2178-38-0021 (?) MOUNTED 1067mm (42") ABOVE FLOOR
②	914mm x 2.134m (3'-0" x 7'-0") PASS DOOR	1½ PAIR OF HINGES AND MORTISED LIGHT SET		LOCK, SET-CYLINDER MORTISE, ZIA STOCK NO. 2347-16-0003 LH

THIS JOB MUST BE CERTIFIED AND ANY CHANGES APPROVED BY ENG-1

AUTHORIZED FOR: NA

ISOTOPE STORAGE
CIVIL: PLANS, SECTIONS, DETS.

BLDG. WA 75 TA 46

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
ENGINEERING DEPT. LOS ALAMOS, N.M.

A. E. APPROVED
SCALE: NOTED

C-1 1/4

5224-46 ENG-C 42777

ROOM INFORMATION CHART

RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE
100	768	100C	47	102	45
100A	1577	101	555	103	40
100B	782	101A	267		

TOTAL ROOM NET SQUARE FOOTAGE (BUILDING) = 4,003

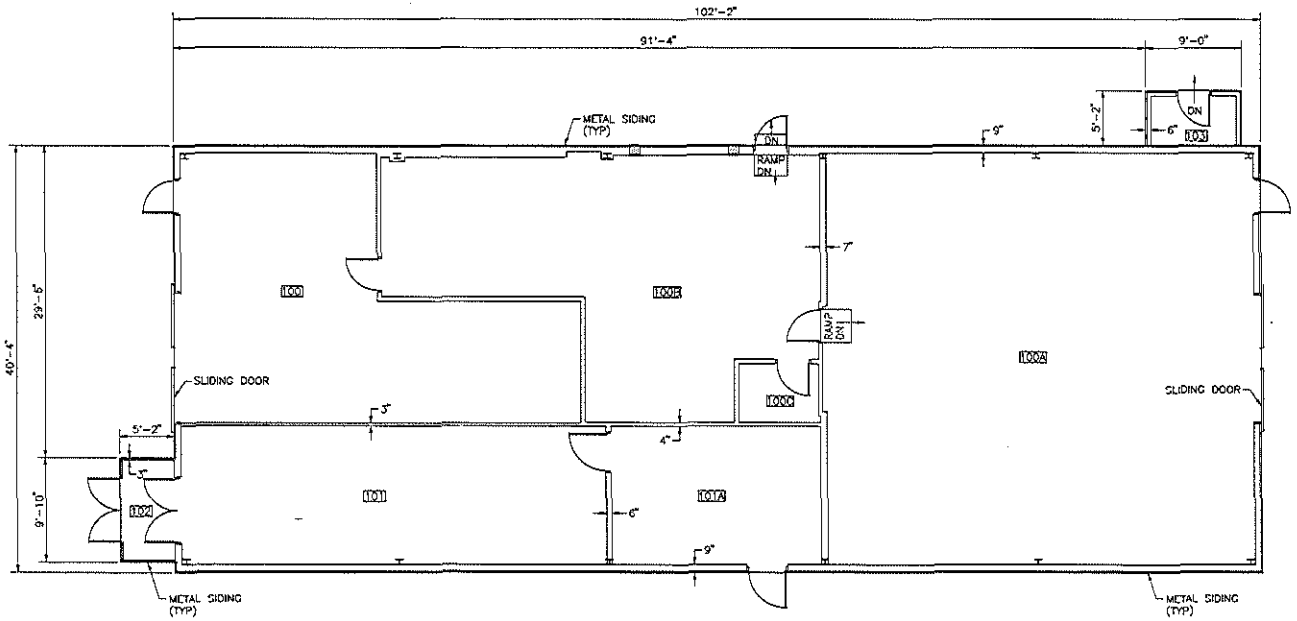
GROSS SQUARE FOOTAGE (BUILDING) = 4,218

LEGEND

LOUVER
WOOD OR METAL STUD
COLUMNS

NOTES

1. ALL EXTERIOR WALLS ARE 8" THICK UNLESS OTHERWISE NOTED.
2. ALL INTERIOR WALLS ARE 6" THICK UNLESS OTHERWISE NOTED.
3. REFERENCE DRAWING ENG-R3177.
4. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS. AREAS SHOWN ARE ROUNDED TO THE NEAREST SQUARE FOOT.
5. GROSS SQUARE FOOTAGE IS EQUAL TO ALL FLOOR AREA (INCLUDING ALL OPENINGS IN FLOOR SLABS) MEASURED TO THE OUTER SURFACES OF EXTERIOR OR ENCLOSING WALLS, AND INCLUDES ALL FLOORS, MEZZANINES, HALLS, VESTIBULES, STAIRWELLS, SERVICE AND EQUIPMENT ROOMS, PENTHOUSES, VAULTS, AND ENCLOSED PASSAGES.
6. DIMENSIONS SHOWN ARE ROUNDED TO THE NEAREST INCH.



RECORD FLOOR PLAN

SCALE: 3/16" = 1'-0"

GRAPHIC SCALE 6 4 2 0 6 12 24

N

FIELD VERIFIED 03-23-95

RECD: ___ LOGGED ___ TO VAULT

NO	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	RDL	SUB	RDC	APP

JOHNSON CONTROLS WORLD SERVICES INC.

AS-BUILT RECORD FLOOR PLAN
LABORATORY STORAGE
ARCH: RECORD FLOOR PLAN

DRAWN
VERIFIED
CHECKED
RELEASED
DATE 08-07-95

BLDG 75 TA-46

SUBMITTED JERRY FORTE

RECOMMENDED FRED THOMPSON 7/6/95

APPROVED FRED THOMPSON 7/6/95

Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

SHEET 1 OF 1

CLASSIFICATION U REVIEWER T. GUSDORF DATE 7-5-95

PROJECT ID 7556

DRAWING NO AB390

REV

JCI NO 91-011

TA-46-75 East and North sides

TA-46-75 North and West sides

TA-46-75West side

TA-46-75 South and East sides

LANL TA- Building # 46-0076

Camera OI-IP Group Camera

Frame #s IMG_0087 through IMG_0094

Surveyor(s) K. Towery and K. Honig

Date 6/5/2014

Los Alamos National Laboratory
RMT Historic Building Survey Form

Building Name Laser Laboratory UTMs easting 384284 northing 4E+06 zone 13

Legal Description: Map USGS Frijoles Quad 2002 tnsp 19N range 6E sec

Current Use/ Function Laser Chemistry Laboratory Original Use/ Function Rover Program Warehouse

Date (estimated) 1963 Date (actual) 1963 Property Type Support

Type of Construction

Pre-Fabricated Metal ☑ Steel Frame ☐ Wood Frame ☐ CMU ☐ Reinforced Concrete ☐

Other Type of Construction Steel frame & galvanized steel framed/corrugated exterior roof and wall panels # of Stories 1

Foundation Concrete Slab

Exterior CMU-Exterior ☐ Reinforced Concrete-Exterior ☐ Steel (galvanized) ☑ Steel (corrugated) ☑

Wood Siding ☐ Asbestos Shingles-Exterior ☐ In-Fill Panels ☐ Other-Exterior

Exterior Treatment (painted, stuccoed, etc) Soft gray patina color

Exterior Features (docks, speakers, lights, signs, etc) Flat skylights, lightning protection, and barrel type ridge vents, & four exhaust fans are on roof. A partial rain gutter and downspout system is also incorporated into the building. Other building features include panel boxes, lighting, and alarm bells.

Addition CMU-Addition ☑ Reinforced Concrete-Addition ☐ Steel (galvanized)- Addition ☑ Wood ☐

Steel (corrugated)-Addition ☐ Asbestos Shingles-Addition ☐ Other- Addition

Exterior Treatment-Addition

Exterior Features-Addition Metal panel lean-to additions on each side of the building, a CMU addition on the south side.

Roof Form Slanted/Shed ☐ Gable ☑ Other Roof Type

Degree of Pitch/ Slope Moderate

Roof Materials Corrugated Metal ☑ Rolled Asphalt ☐ Asbestos Shingles ☐ 4-Ply Built Up ☐

Other Roof Materials

Window Type Casement ☐ Single Hung Sash ☐ Double Hung Sash ☐ Fixed Window ☐

Other Window Type

# of Each Window Type/ Comments None

Glass Type Clear ☐ Wire Glass ☐ Opaque ☐ Painted Glass ☐ Glass Block ☐

Light Pattern

Door Type

Personnel Door Types — Exterior

Fire Door ☐ Single ☐ Double ☑ Roll-up ☐ Sliding ☐
Hollow Metal ☑ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Interior

Fire Door ☐ Single ☑ Double ☑ Roll-up ☐ Sliding ☐
Hollow Metal ☑ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☑

Equipment Door Types — Exterior

Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Wood ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

Interior

Fire Door ☐ Single ☐ Double ☐ Roll-up ☐ Sliding ☐
Hollow Metal ☐ Solid Metal ☐ 1/2 Glazed ☐ Paneled ☐
Louvered ☐ Painted ☐

# of Each Door Type/Comments: 5 pairs of exterior double pedestrian doors.

Interior Wall Gypsum Board ☑ Reinforced Concrete- Interior ☐

CMU- Interior ☐ Plywood ☐ Other- Interior

In-Wall Electrical Wiring ☐ On-Wall Electrical Wiring ☐

Ceiling Drop Ceiling ☐

Interior Comments (Equipment, etc)

Degree of Remodeling Moderate

Condition Excellent ☐ Good ☑ Fair ☐ Deteriorating ☐ Contaminated ☐ Burned ☐

Associated Building ☑

If yes, list building names and #s: Remainder of buildings within technical area.

Integrity Good

Significance Eligible

Eligible Under Criterion A ☑ B ☐ C ☐ D ☐ Not Eligible ☐

DOE Themes

Nuclear Weapon Components and Assembly ☐
Nuclear Weapon Design and Testing ☐
Nuclear Propulsion ☑
Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science ☑
Energy and Environment: Research and Design Projects ☐

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support ☐ Super Computing ☐
Reactor Technology ☑ Biomedical/Health Physics ☐ Strategic and Supporting Research ☑
Environment/Waste Management ☐ Administration and Social History ☐ Architectural History ☐

Recommendations/ Additional Comments

Architectural Features (elevations)

The building is laid out on a general north/south orientation. The north end of the building has double-panel personnel doors creating a 6-ft-wide by 7-ft-high opening. A metal panel equipment lean-to has also been added. A subsequent elevated HVAC equipment stand plus the equipment has been added. A metal lean-to has been added to the east elevation of the structure. Typically, these additions contain fire protection valve systems and mechanical equipment, such as air compressors. The south elevation of the building shows several additions, including; an 8 ft by 16 ft concrete block addition, which contains the fire protection equipment; and an 8 ft by 8 ft metal lean-to addition that is attached to the block addition. The west elevation also contains two mechanical equipment lean-to type structures which appear to have contained mechanical equipment. Other typical building systems are located on the exterior of the building, including panel boxes, lighting, and alarm bells.

Total sq ft 4537 Net

Architect/ Builder Neuner & Cabaniss, Architect Engineers, Albuquerque, New Mexio

Alterations

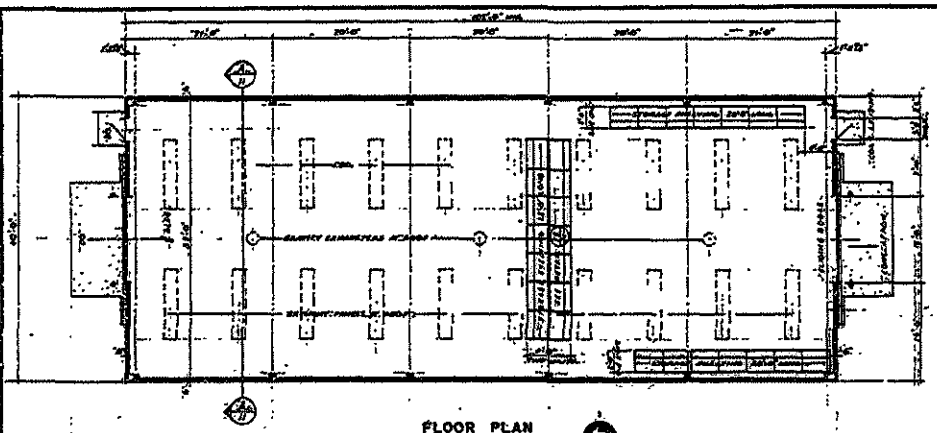
In 1975, dedicated laboratory rooms were added along with a shop, an equipment room, a restroom, and a janitor's room. The building's large warehouse doors were removed and their former openings were infilled. Pedestrian doors were installed on the north and south ends of the building to support the new laboratory function. Vacuum pump sheds (enclosures) were added on the east and west sides of the building in 1976, and, in 1977, air lock enclosures were added on the north and south sides. By 1983, the large laboratory space on the southeast side of the building had been subdivided into two rooms.

List of Drawings (Cntrl + Enter for para break)

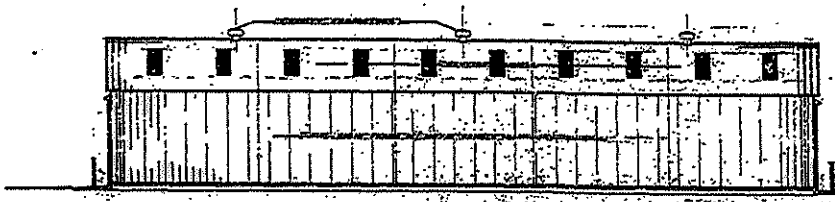
ENG-C 30933
Building WA-76, Ta-46 (TA-46-76)
Rover Program - Storage Facilities
TA-3, TA-18, TA-46
Architectural Plans, Elevations & Details
August 27, 1963

ENG-C 42906
Sheet C-1 (2 of 16)
Bldg. WA-76, TA-46 (TA-46-76)
Laser Laboratory Modifications
Civil: Plans, Details & Sections
Novermber 7, 1975

AB 464
Sheet 1 of 1
Bldg 76, TA-46 (TA-46-76)
As-Built Record Floor Plan
Laser Laboratory
July 12, 1995

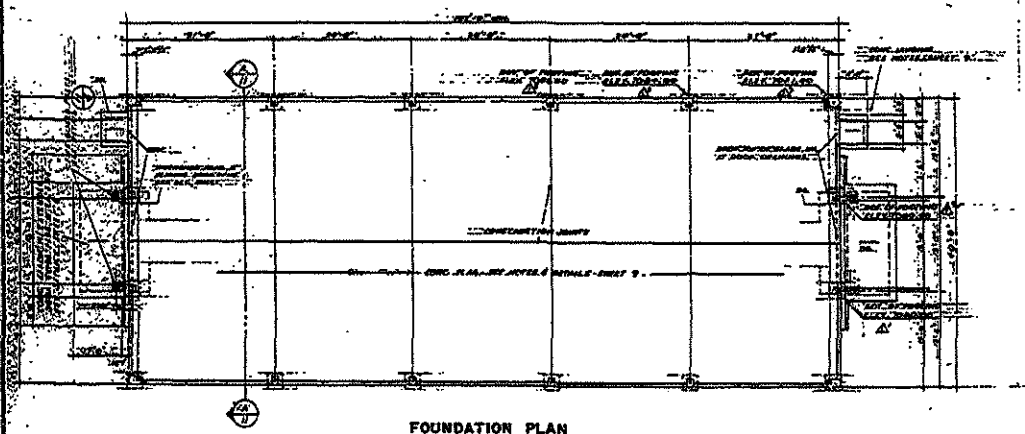


FLOOR PLAN



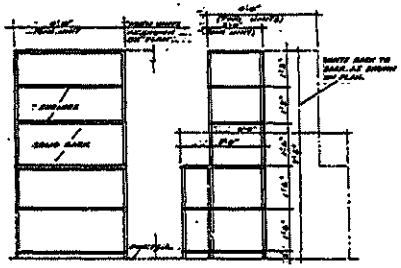
WEST ELEVATION
EAST ELEVATION

SOUTH ELEVATION
NORTH ELEVATION OPPOSITE



FOUNDATION PLAN

SECTION



ELEVATION SECTION

TYPICAL STORAGE SHELVING DETAIL

AS BUILT DRAWING

U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS, NEW MEXICO

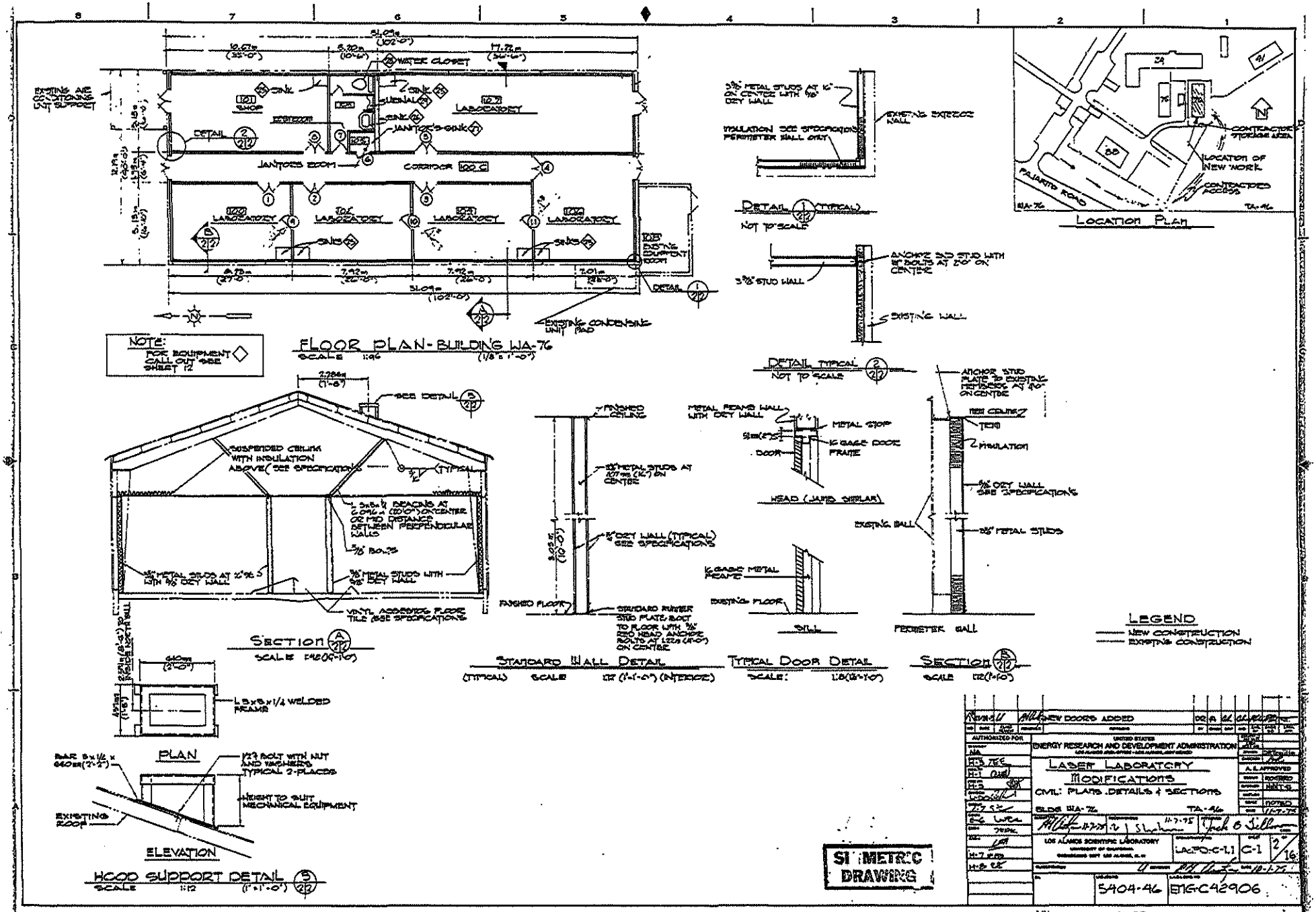
ROVER PROGRAM STORAGE FACILITIES
TA-8, TA-16, TA-46

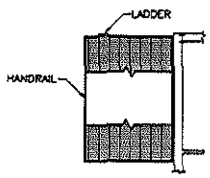
BUILDING WA-76, TA-46
ARCHITECTURAL
PLANS, ELEVATIONS, SECTION & DETAIL

NEUNER & CABANISS
ARCHITECT ENGINEERS

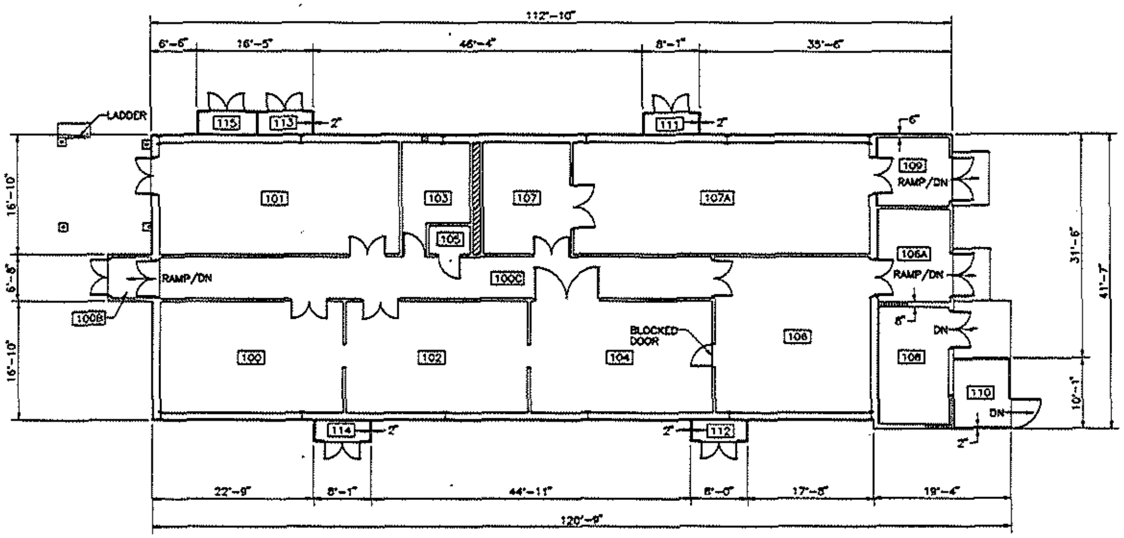
LA-FF-40.1 | 11 | 23

LAB JOB 2772 LASL DWG NO. ENG-C 30933


FLOOR PLAN - BUILDING WA-76
SCALE 1:96 (1/8" = 1'-0")
NOTE: FOR EQUIPMENT CALL OUT SEE SHEET 12
LOCATION PLAN
NOT TO SCALE
DETAIL (TYPICAL)
NOT TO SCALE
DETAIL TYPICAL
NOT TO SCALE
SECTION
SCALE
STANDARD WALL DETAIL
(TYPICAL) SCALE
TYPICAL DOOR DETAIL
SCALE:
SECTION
SCALE
PERIMETER WALL
SILL
HEAD (JAMB SIMILAR)
PLAN
ELEVATION
HOOD SUPPORT DETAIL
SCALE
LEGEND
NEW CONSTRUCTION
EXISTING CONSTRUCTION
SI METRIC DRAWING
NEW DOORS ADDED
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
LASER LABORATORY MODIFICATIONS
CIVIL: PLANS, DETAILS & SECTIONS
BLDG WA-76 TA-46
LOS ALAMOS SCIENTIFIC LABORATORY
LACPO-C-1.1
C-1
2/16
5404-46
ENG-C42906



EXTERIOR MEZZANINE



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

8 6 4 2 0 8 16 32
GRAPHIC SCALE

N

ROOM INFORMATION CHART					
RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE	RM NO	NET SQ FOOTAGE
100	416	105	27	110	78
100B	39	106	505	111	26
100C	489	106A	147	112	26
101	548	107	202	113	28
102	417	107A	677	114	26
103	131	108	180	115	30
104	417	109	105	UTILITY(-)	23

TOTAL ROOM NET SQUARE FOOTAGE (BUILDING) = 4,537

GROSS SQUARE FOOTAGE (BUILDING) = 4,808

LEGEND

- CONCRETE BLOCK
- WINDOW
- WOOD OR METAL STUD
- LOUVER
- UTILITY SPACE
- COLUMNS

NOTES

1. ALL EXTERIOR WALLS ARE 14" THICK UNLESS OTHERWISE NOTED.
2. ALL INTERIOR WALLS ARE 5" THICK UNLESS OTHERWISE NOTED.
3. REFERENCE DRAWING ENG-R3178.
4. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS. AREAS SHOWN ARE ROUNDED TO THE NEAREST SQUARE FOOT.
5. GROSS SQUARE FOOTAGE IS EQUAL TO ALL FLOOR AREA (INCLUDING ALL OPENINGS IN FLOOR SLABS) MEASURED TO THE OUTER SURFACES OF EXTERIOR OR ENCLOSING WALLS, AND INCLUDES ALL FLOORS, MEZZANINES, HALLS, VESTIBULES, STAIRWELLS, SERVICE AND EQUIPMENT ROOMS, PENTHOUSES, VAULTS, AND ENCLOSED PASSAGES.
6. DIMENSIONS SHOWN ARE ROUNDED TO THE NEAREST INCH.

MF	NO	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP

JOHNSON CONTROLS

AS-BUILT RECORD FLOOR PLAN
LASER LABORATORY
ARCH: FIRST AND MEZZANINE FLOOR PLAN

BLDG 76 TA-46

DRAWN J. Gurule / F. GURULE
VERIFIED FG/JMT
CHECKED SANDOVAL
DATE 7-12-95

SUBMITTED JERRY FORTE
APPROVED FOR RELEASE FRED THOMPSON 8/10/95

Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

SHEET 1 — 1 of 1

CLASSIFICATION U REVIEWER T. GUSDORF DATE 8-9-95

PROJECT ID 7556 DRAWING NO AB464 REV

RECD ___ LOGGED ✓ TO VAULT ___

FIELD VERIFIED 5-30-95

JCI NO 91-0111

TA-46-76 North side

TA-46-76 North and West sides

TA-46-76 West side

TA-46-76 South side

TA-46-76 South and East sides

TA-46-76 East and North sides