LA-UR-04-3752

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Title: Controlled Thermonuclear Research at Los Alamos: The History of the Sherwood and Scyllac Buildings (TA-3-105 and TA-3-287)

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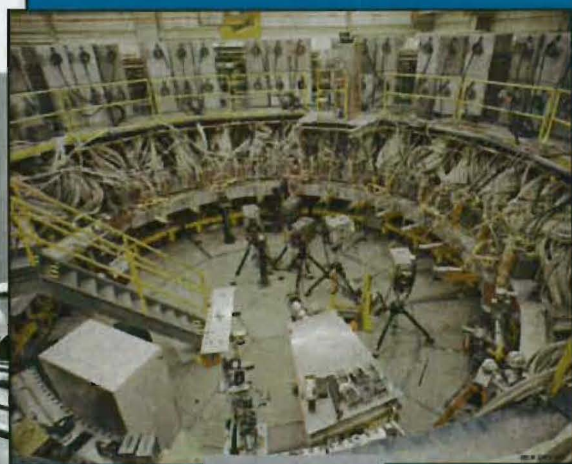
Submitted to: New Mexico State Historic Preservation Office in compliance with the National Historic Preservation Act of 1966 (As Amended)

Los Alamos
NATIONAL LABORATORY

LA-UR-04-

Controlled Thermonuclear Research at Los Alamos: The History of the Sherwood and Scyllac Buildings (TA-3-105 and TA-3-287)

Volume 1



Scyllac

Perhapsatron

RRES-ECO Heritage Resources and Environmental Policy Compliance Team
Risk Reduction and Environmental Stewardship Division
LOS ALAMOS NATIONAL LABORATORY

LA-UR-04-????

Controlled Thermonuclear Research at Los Alamos: The History of the Sherwood and Scyllac Buildings (TA-3-105 and TA-3-287)

Historic Building Report No. 225

Los Alamos National Laboratory

May 31, 2004
Survey No. 773

Prepared for the National Nuclear Security Administration,
Department of Energy (NNSA/DOE),
Los Alamos Site Office

prepared by

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RRES-ECO Heritage Resources and Environmental Policy Compliance (HREPC) Team
Risk Reduction and Environmental Stewardship Division
LOS ALAMOS NATIONAL LABORATORY

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Volume 1

Introduction

The following documentation fulfills the terms set forth in a memorandum of agreement (MOA) between the National Nuclear Security Administration, Department of Energy (NNSA/DOE), and the New Mexico Historic Preservation Division regarding the demolition of buildings 105 and 287 at Technical Area (TA) 3, Los Alamos National Laboratory (LANL) (Maps 1 and 2). As per the terms of the MOA, finalized on June 28, 2001, this report includes a history and description of the Sherwood and Scyllac Buildings (Volume 1). Appendices to Volume 1 include oral interview transcripts and other supplementary information (Appendices A-C); a listing of LANL drawings (Appendix D); and LANL historic building survey forms for both buildings (Appendix E). Indexed medium-format archival photographs are included in Volume 2 (the Sherwood Building) and in Volumes 3a and 3b (the Scyllac Building). Selected drawings are included with the historic building survey forms.

The Sherwood Building (TA-3-105) and the Scyllac Building (TA-3-287) were determined eligible for the National Register of Historic Places under Criterion A in correspondence between the New Mexico State Historic Preservation Officer (SHPO) and the NNSA/DOE's Los Alamos Site Office on January 30, 2001. The initial recommendations for eligibility were contained in a report written by LANL cultural resource managers on December 7, 2000 (*Sherwood and Scyllac Buildings, TA-3-105 and TA-3-287; An Eligibility Assessment Report*, Report No. 189, LA-UR-00-5888).

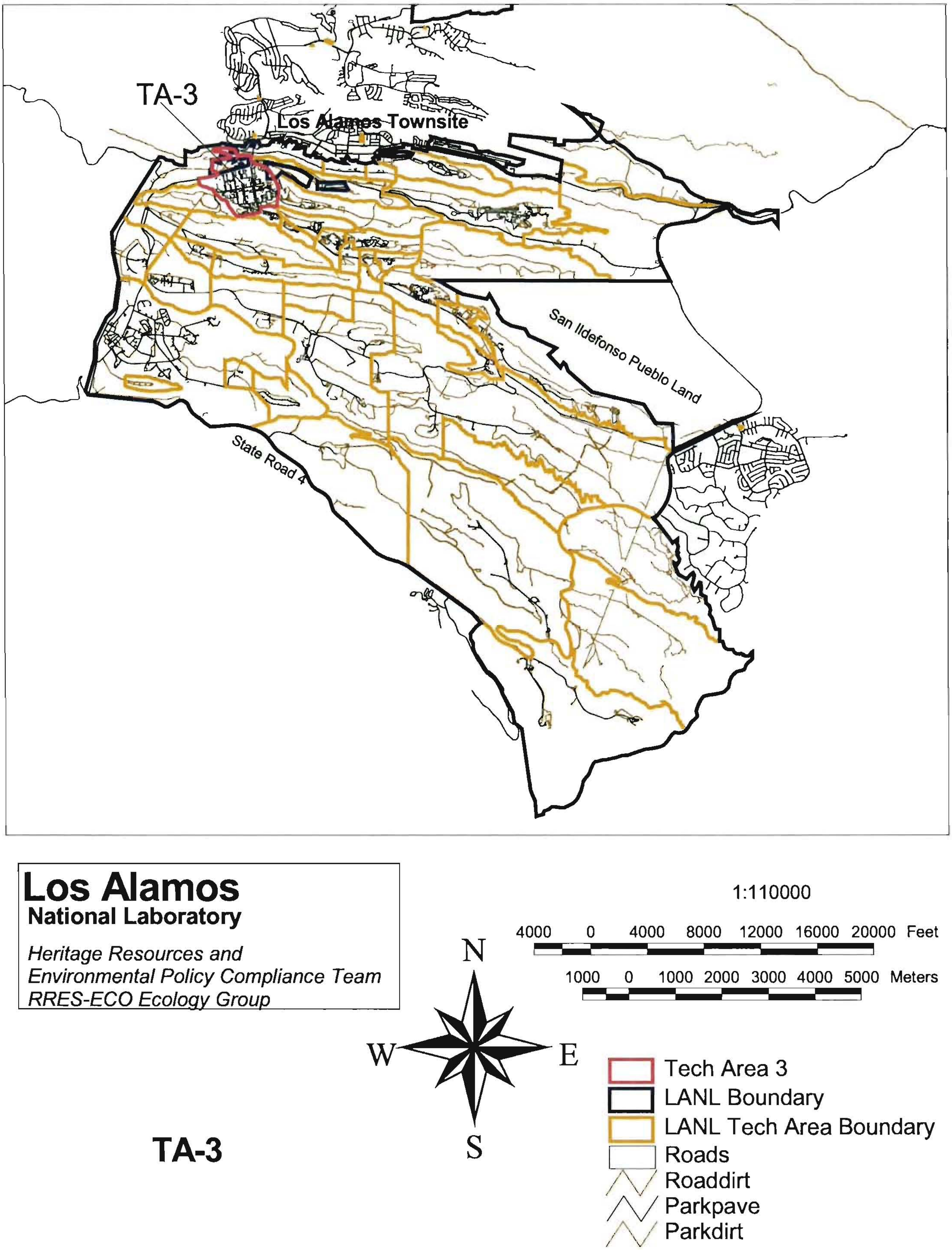
Building TA-3-105 was built from 1956 to 1959, and TA-3-287 was built from 1968 to 1970. Work processes conducted in both buildings supported "Project Sherwood," the DOE's controlled thermonuclear research program. Project Sherwood's mission was to develop an essentially inexhaustible source of energy from the controlled fusion of the nuclei of light atoms. Los Alamos researchers conducted experiments involving controlled thermonuclear reactions as early as 1951. In 1957, Los Alamos achieved the world's first controlled thermonuclear plasma using Scylla I, a theta pinch device located in the basement of the laboratory's main administration building.

Historical Overview

Manhattan Project (1942–1946)

In 1939, Albert Einstein wrote a letter to President Franklin Roosevelt warning him of a possible German atomic bomb threat (Rothman 1992). President Roosevelt, acting on Einstein's concerns, gave approval to develop the world's first atomic bomb and appointed Brigadier General Leslie Groves to head the "Manhattan Project." Groves, in turn, chose Robert Oppenheimer to coordinate the design of the bomb.

A single isolated and secret research facility was proposed. General Groves had several criteria: security, isolation, a good water supply, an adequate transportation network, a suitable climate, an available labor force, and a locale west of the Mississippi located "at least 200 miles from any international border or the West Coast" (Rothman 1992). In 1942, Oppenheimer, who had


TA-3
Los Alamos Townsite
San Ildefonso Pueblo Land
State Road 4
Los Alamos
National Laboratory
Heritage Resources and
Environmental Policy Compliance Team
RRES-ECO Ecology Group
TA-3
1:110000
4000 0 4000 8000 12000 16000 20000 Feet
1000 0 1000 2000 3000 4000 5000 Meters
N
W
E
S
Tech Area 3
LANL Boundary
LANL Tech Area Boundary
Roads
Roaddirt
Parkpave
Parkdirt

Map 1

Los Alamos
National Laboratory
Heritage Resources and
Environmental Policy Compliance Team
RRES-ECO Ecology Group

TA-3
Sherwood and Scyllac

1:6000

200 0 200 400 600 800 1000 Feet

60 0 60 120 180 240 300 Meters

N
W E
S

- LANL Tech Area Boundary
- LANL Boundary
- Buildings/Structures
- Drainage
- Township, Section, Range
- USGS 7.5 Minute Quad
- Trails
- Roads
- Roaddirt
- Parkpave
- Parkdirt
- Fences
- Buildings/Structures

Map 2

visited the Pajarito Plateau on a horseback trip, suggested the Los Alamos Ranch School.

Oppenheimer and his staff moved to Los Alamos in early 1943 to begin work. The recruitment of the country's "best scientific talent" and the construction of technical buildings were top priorities (LANL 1995:8). The University of California agreed to operate the site, code name "Project Y," under contract with the government (an arrangement that has continued to this day). Although the fission bomb was conceptually attainable, many difficulties stood in the way of producing a usable weapon. Technical problems included the timing of the release of energy from fissionable material and the engineering challenges of producing a deliverable weapon. Nuclear material and high explosive studies were of immediate importance (LANL 1995).

Two bomb designs appeared to be the most promising: a uranium "gun" device and a plutonium "implosion" device. The gun device involved shooting one subcritical mass of uranium-235 into another at sufficient speed to avoid pre-detonation. Together, the two subcritical masses form a supercritical mass that releases a tremendous amount of nuclear energy (Hoddeson *et al.* 1997). This method led to the development of the "Little Boy" device. Because it was conceptually simple, "Little Boy" was never tested before its use at Hiroshima. Scientists were less confident about the implosion design, which used shaped high explosives to compress a subcritical mass of plutonium-239. The symmetrical compression would increase the density of the fissionable material and cause a critical reaction.

In 1944, the uncertainties surrounding the plutonium device necessitated a search for an appropriate test site for the implosion design, later used in the "Fat Man" device. The Alamogordo Bombing Range in south-central New Mexico was selected. A trial run involving 100 tons of trinitrotolulene (TNT) was conducted at "Trinity Site" on May 7, 1945. This dress rehearsal provided measurement data and simulated the dispersal of radioactive products (LANL 1995). The Trinity test was planned for July and its objectives were "to characterize the nature of the implosion, measure the release of nuclear energy, and assess the damage" (LANL 1995:11). The world's first atomic device was successfully detonated in the early morning of July 16, 1945. Little Boy, the untested uranium gun device, was exploded over the Japanese city of Hiroshima on August 6, 1945. On August 9, 1945, Fat Man was exploded over Nagasaki, essentially ending the war with Japan.

Early Cold War Era (1946–1956)

The future of the early laboratory was in question after the end of WWII. Many scientists and site workers left Los Alamos and went back to their pre-war existences. Norris Bradbury had been appointed director of the laboratory following Oppenheimer's return to his pre-WWII duties (LANL 1993). Bradbury felt that the nation needed "a laboratory for research into military applications of nuclear energy" (LANL 1993:62). 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 the atmospheric testing program in the Pacific, dubbed "Operation Crossroads." Later, 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.

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 of 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 first 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 (now NTS) 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 1993). In short order, the Soviet Union responded with a successful demonstration of the use of fusion 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 early advancements in supercomputing, fundamental biomedical research and health physics issues, explosives research and development, early reactor technology, pioneering physics research, and the development of early 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 fundamental 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 townsite 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 NTS. In 1957, the first of many underground tests at NTS was conducted. Other defense mission undertakings during this time included treaty and test ban verification programs (such as using satellite sensors to detect nuclear explosions), research and development of space-based weapons, and continued involvement with stockpile stewardship issues. Non-weapons undertakings supported nuclear medicine, genetic studies, NASA collaborations, superconducting research, contained fusion reaction research, and other types of energy research (McGehee and Garcia 1999).

Controlled Thermonuclear Research

Fusion and Controlled Thermonuclear Reactions

Nuclear fusion occurs when the nuclei of lighter elements, such as hydrogen, are fused together at extremely high temperatures and pressures to form heavier elements, such as helium. Scientists have been trying for years to develop methods for harnessing fusion reactions in order to realize an environmentally acceptable and essentially inexhaustible energy source. Fusion experiments use two forms of hydrogen known as deuterium (H^2) and tritium (H^3). Deuterium appears in all water, and the interaction of neutrons with lithium nuclei makes tritium. The release of energy occurs when one, or both, of these types of heavier isotopes collide. The collision releases either a proton or a neutron, creating fusion energy.

Fusion reactions can only take place if the nuclei are brought close to one another; however, all nuclei repel each other because they carry a positive charge. A high temperature is ultimately required in order to get the positively charged nuclei to collide. Atoms in the gas become ionized when the temperatures increase, and the resulting gaseous mixture of ions and electrons (different from normal gas) is known as "plasma." For fusion to be an economically feasible source of energy, fusion reactions would have to be controlled on a large scale and would need to reach "critical ignition temperature," achieving a temperature where more energy is produced than is lost.

Controlled Thermonuclear Research Program at Los Alamos

The United States began its controlled thermonuclear research program, "Project Sherwood," in 1951 (Scyllac Dedication Program, April 25, 1974). Project Sherwood's mission was to develop a source of energy from the controlled fusion of the nuclei of light atoms. Controlled fusion research started at Los Alamos in 1951, and, in 1957, Los Alamos achieved the first controlled thermonuclear plasma using the Scylla theta pinch device (Los Alamos National Laboratory 1995). Work processes conducted in TA-3-105 and TA-3-287 were key components of the laboratory's controlled thermonuclear research program. Important Sherwood experiments included the Perhapsatron Series, the Columbus Series, Picket Fence, Ixion, the Hydromagnetic Plasma Gun, the Plasma Acceleration Machine, Plasma Shield Research, and the Scylla Series. Other experiments included the Reverse Field Pinch, the ZT-40, and the Compact Torus Facility. Work conducted at the Scyllac Building included the Scyllac Toroidal Sector, the Scyllac Full Torus, and the Fast Liner.

In the early days of controlled fusion research, there were two principal lines of inquiry: the steady state approach and the pulsed approach. The steady state approach used stellerators and mirrors. The pulsed approach made use of theta and z-pinch technology.[1] Los Alamos scientists

[1] See Appendix A, Siemon Interview

concentrated on the "pinch concept" developed by Willard Bennett in 1934. When pinch technology is used, an electric current is passed through the plasma creating a magnetic field that constricts or "pinches" the plasma, thus pulling the plasma away from the material walls. Magnetically-confined plasma presents two major problems. First, it is relatively unstable, causing the plasma to come in contact with material walls. Second, when the plasma contacts the material walls, it loses heat energy very quickly. These problems prompted a variety of configurations in an attempt to confine the plasma in an efficient way. At Princeton, Lyman Spitzer arranged his experiment into a figure-eight shape and named it "Stellarator." Richard Post from Livermore attempted to block the ends of the plasma with magnetic mirrors. The scientists at Los Alamos formed their experiments into a circle and named it "Perhapsatron," believing that "perhaps it would work or perhaps it wouldn't."

In 1958, "Project Sherwood" was presented at the second Atoms for Peace Conference in Geneva. Scientists from around the world came to share their ideas and discoveries. Los Alamos scientists displayed Scylla I (theta pinch), a version of the Marshall Plasma Gun, and a toroidal z-pinch Perhapsatron unit. Work continued at Los Alamos from 1959-1990 using theta and z-pinch technologies in the hope of developing an efficient fusion energy source that could be used commercially.

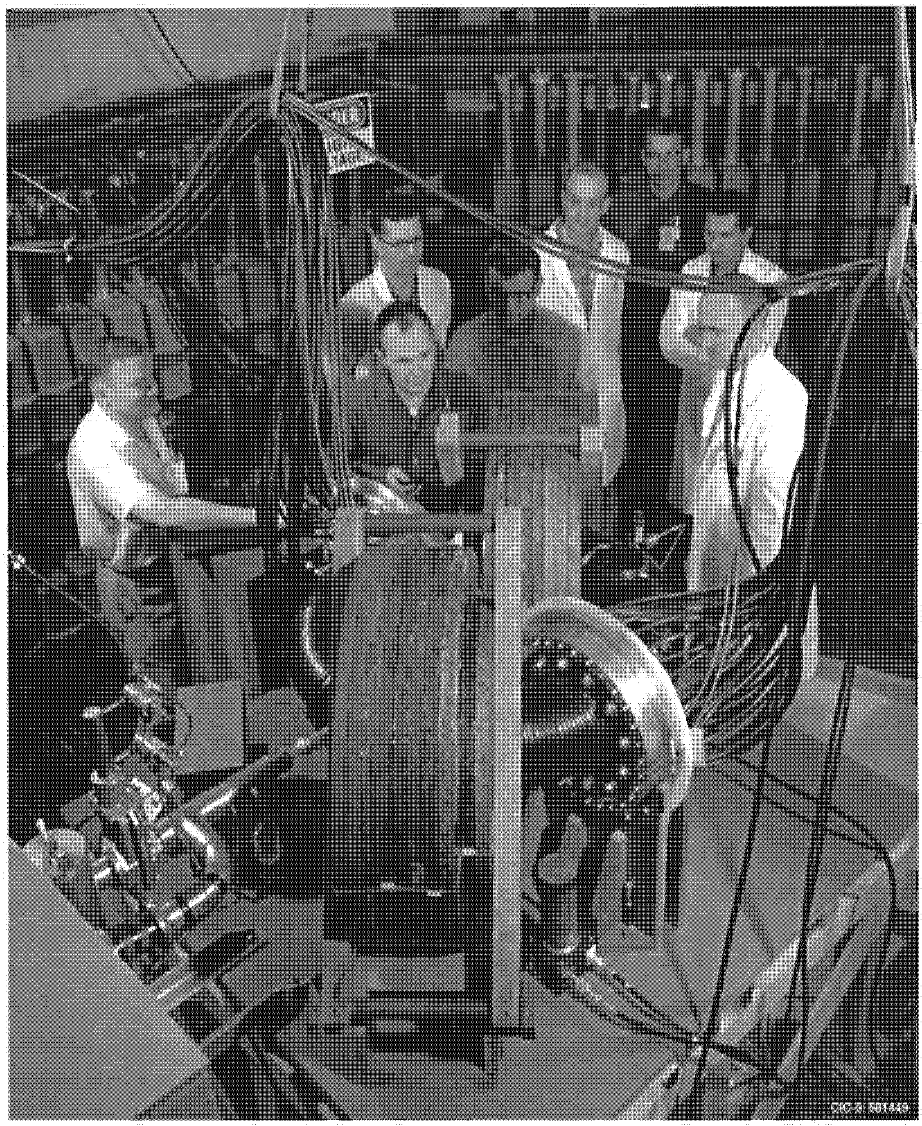


Fig. 1. Perhapsatron (Geneva Unit), circa 1958

In 1990, Congress reduced the budget for the Magnetic Energy Fusion Program for fiscal year 1991. DOE decided to focus primarily on the Tokamak (toroidal pinch) concept. As a result, funding was reduced for the development of alternative concepts, and the DOE chose to shut down CTR Division at LANL. Fusion work has continued at LANL but at reduced levels. Over the last few years, the economic feasibility of the Tokamak concept has been questioned because the fusion reaction units would need to be extremely large for it to work. The current trend appears to be heading toward concepts that evolved out of the original theta and z-pinch technologies developed at LANL.

Security: To Classify or Not to Classify

From the inception of the controlled fusion program, the laboratory debated whether the fusion research produced classified data. Security concerns arose because controlled thermonuclear fusion has the capability to produce a large source of neutrons. During the early years of Project Sherwood, very few countries had the technology to create neutrons, thus limiting the production of plutonium for weapons. The military applications of neutron production played an important role in the decision to conduct Project Sherwood research on a classified basis. However, one of the main arguments against classification was that the work would move at a much faster rate if the project was unclassified. From 1951 to 1955, Project Sherwood relied almost exclusively on work performed by associated laboratories and universities under contract with the Atomic Energy Commission (AEC). From 1955 to early 1958, industrial participation in the Sherwood program increased. In June of 1956, the AEC allowed companies or individuals access to Project Sherwood information if they met certain criteria. The applicant had to be substantially involved in efforts to develop, design, build, or operate a fusion power reactor, or had to meet research requirements related to the study of controlled thermonuclear reactions. On May 23, 1956, a special committee met to discuss the issue of classification. The members of the committee generally agreed that nothing of military significance had been developed at that time and, furthermore, would not likely be developed in the future. The committee agreed it would be appropriate and advantageous to declassify most of the work that had been completed in 1957. A classification guide was created that specified the release of basic aspects of the controlled thermonuclear fusion program. Declassification was completed in time for the second Atoms for Peace Conference in 1958.

Pinch Effect Experiments at Los Alamos

Scientists at Los Alamos concentrated on two processes—theta and z-pinch. During experiments with these processes, magnetic current was used to confine and shape the plasma. The terms theta and z-pinch describe the direction that the magnetic current travels around or through the plasma. Researchers conducted thousands of experiments during the course of the controlled thermonuclear program at Los Alamos. Most of the experiments were variations on these two technologies. To reach the goal of developing effective fusion, it was necessary to study the behavior of magnetically-confined plasma. This process required that properties such as temperature, pressure, electron and ion densities, electron and ion energies, magnetic field distribution, current strength, and the extent of thermonuclear reaction be measured. These measurements all fall under the heading of plasma diagnostics. Much of the work performed on the various configurations and units were separate diagnostic experiments. The status and progress reports, which address the outcome of these experiments, can be found in Appendix B.

TA-3-105 (Sherwood Building)

The Sherwood Building was built from 1956 to 1959, during the early Cold War years at Los Alamos. The laboratory's "Sherwood" Building and "Project Sherwood" (the national fusion program) were both named after J.L. Tuck, a British scientist who was associated with early controlled fusion research—Tuck was known as "Friar Tuck" of Sherwood Forest fame. While at Los Alamos during World War II, Tuck worked on the implosion dynamics of one of the first bomb designs. In England, Tuck had worked with shaped explosions; he applied that technology to his wartime work at Los Alamos.

In 1951, Tuck headed the Controlled Thermonuclear Research Program at LANL, which was originally established within the Physics Division. The purpose of the fusion experiments was to create technology that would effectively confine plasma at high temperatures to produce a cleaner and more efficient fusion energy source. LANL's fusion program conducted experiments pertaining to fusion energy and plasma physics. The controlled fusion program, although originating in P-Division, was associated with two other laboratory divisions in later years: fusion research was part of P-Division from 1959-1973, Q-Division from 1973-1974, and CTR Division from 1974-1990. Although the division names changed over the years, the facilities and researchers remained the same.

The Sherwood Experiments

In early 1952, J.L. Tuck started the small-scale <u>Perhapsatron</u> experiment in the basement of the laboratory's main administration building. Tuck purportedly named the unit in response to a skeptic who called it an "impossibilitron." The unit was a doughnut-shaped discharge chamber several feet in diameter. Tuck employed a capacitor bank to send a large pulse of electric current through the gas located in the chamber. The Perhapsatron was used to study the properties of plasma. Tuck used special cameras to document the plasma's inherent instability, the so-called kink instability. These cameras showed that when a constricted plasma formed a kink, the magnetic field on the inside of the kink was greater than the magnetic field on the outside. This difference in strengths caused the plasma to become unstable and thrash against the walls of the discharge tube, resulting in a rapid loss of heat energy. M.N. Rosenbluth's theory describing the formation of a "pinch" evolved out these Perhapsatron experiments. The "M-Theory" stated that an encircling magnetic field would form when a current was applied to the outside of the plasma, forcing the plasma to the center of the discharge tube. The molecular particles that make up the plasma would increase in velocity as the plasma was squeezed (or pinched) smaller and smaller. The M-Theory supplied important information regarding plasma heating. It indicated that increasing the voltage in the discharge tube could increase temperature. At this point in the program, Tuck and his associates decided to use a linear discharge tube because voltage gradients would be more easily obtained.

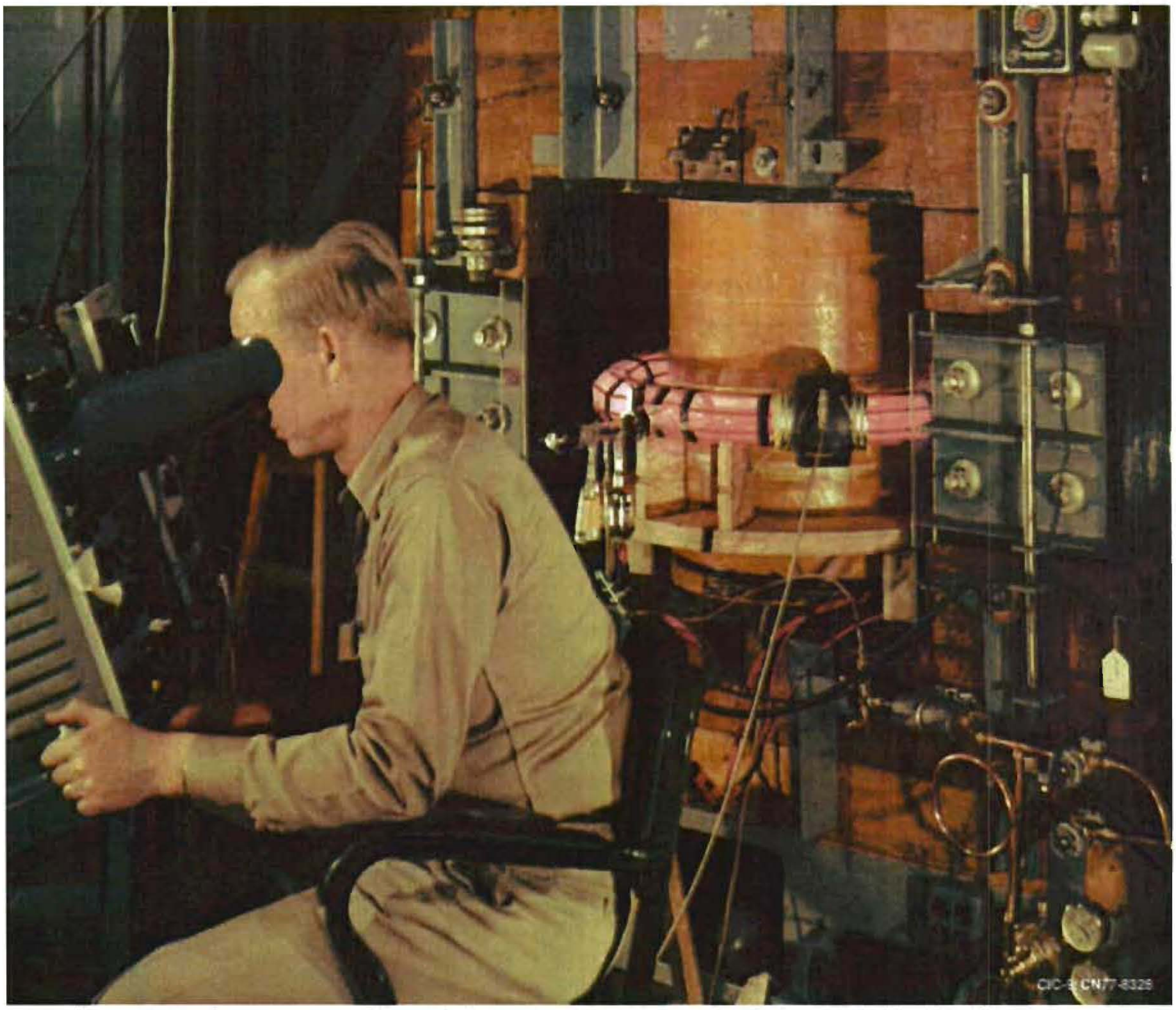


Fig. 2. Perhapsatron, circa 1957, Administration Building (TA-3-43), Basement

Perhapsatron S-3 was used for a diagnostic method called the probe technique. A series of small magnetic probes associated with the experiment measured variations of magnetic fields during a pinch discharge. Temperatures of several million degrees were reached. Neutrons were detected, but at this time the origin was not understood.

Perhapsatron S-4 was a toroidal z-pinch device. The S-4 was made of an aluminum torus and a quartz liner containing deuterium gas. Scientists used this unit to observe the behavior of high temperature plasmas in the presence of magnetic fields with the hope of providing insight on the problems of heating and confining the plasma. Built in the basement of the administration building, it was later moved to a bay in the Sherwood Building (TA-3-105).

Perhapsatron S-5 was a large toroidal discharge unit that utilized the Zeus capacitor unit.

Fig. 3. Perhapsatron S-5, circa 1960

Columbus I used a straight discharge tube with a potential of 100,000 volts applied at each end. Columbus I was the first in a series of experiments designed to look at plasma under high voltage conditions.

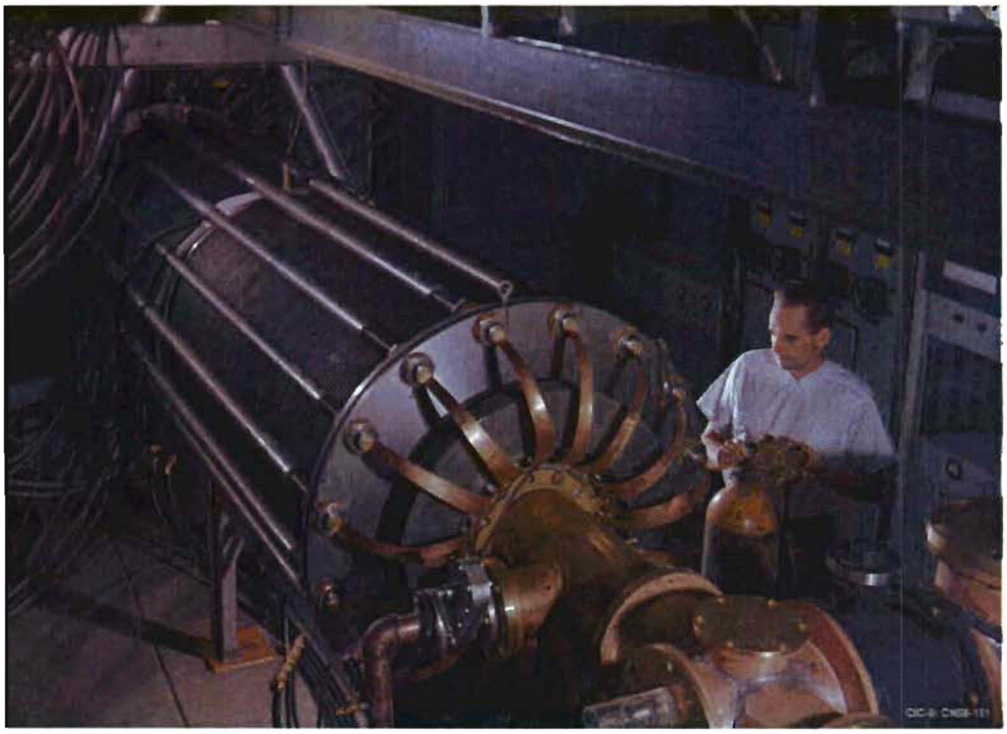


Fig. 4. Columbus Plasma Shield, circa 1958

The Columbus II studied the pinch effect under high power situations. Its main purpose was to assure that gas was fully ionized before applying the high voltage. Columbus II was designed to allow preheating of the plasma.

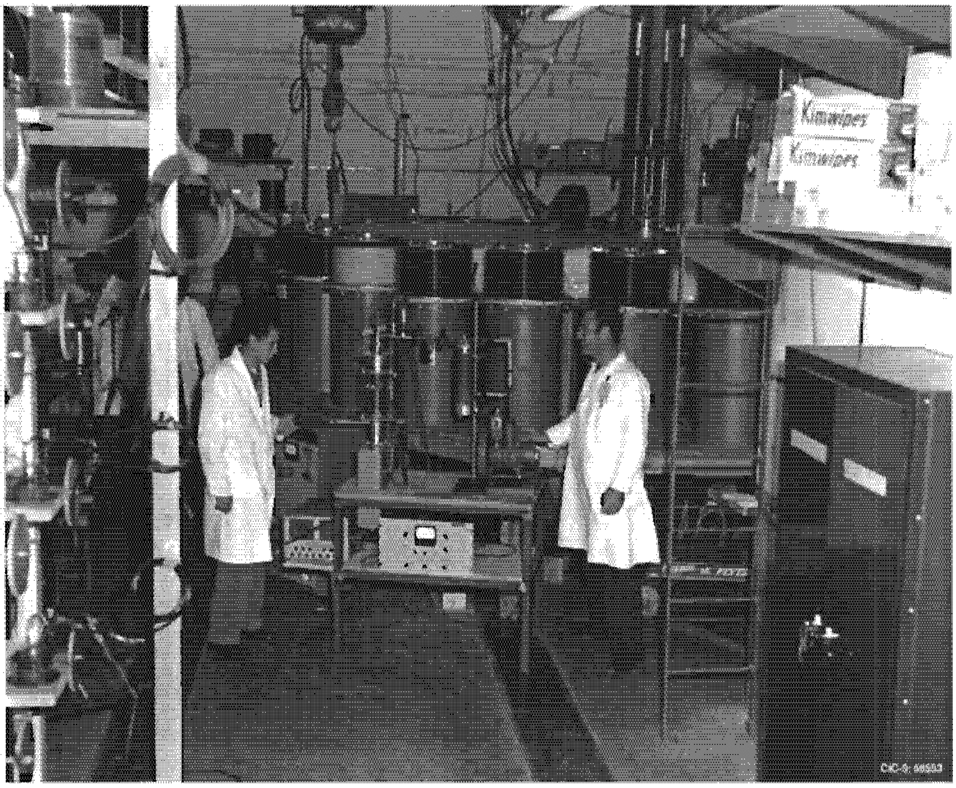


Fig. 5. Columbus II, circa 1958, TA-3-105, First Floor Bay, Room 160

Columbus S-4 was primarily used for diagnostic studies on the pinch configuration. The various properties studied included current and magnetic field distributions, plasma pressure, electric field distribution, electrical conductivity, and instabilities.

Columbus T-2 studied the behavior of pinched discharges in metal walled units.

Picket Fence was a concept proposed by J.L. Tuck in response to Edward Teller (of the University of California Livermore Laboratory) who had asked whether it would be possible to have an inherently stable method of plasma confinement. In the Picket Fence concept, current is passed through a group of conductors to produce a magnetic field. The magnetic lines bend away from the plasma, avoiding the kink instability and giving a stable configuration. Picket Fence did offer good stability, but particles could escape through small holes at the cusps of the magnetic field before fusion could occur. Other approaches seemed more likely to succeed, and work on this project was dropped at Los Alamos.

Ixion was a magnetic mirror that had a radial electric field. The Ixion apparatus was located in the middle of the Sherwood Building's Original Wing (Room 160) and was used for experiments with rotating plasma. Although, diagnostics illustrated that the electric field heated and spun the plasma as predicted, work on this unit was stopped when it was discovered that temperatures of the plasma were not high enough due to impurities from material in the discharge chamber walls. The Ixion unit was named after a king in Greek mythology who killed his father-in-law. For his punishment, Zeus bound King Ixion to a continuously-rotating, fiery wheel.

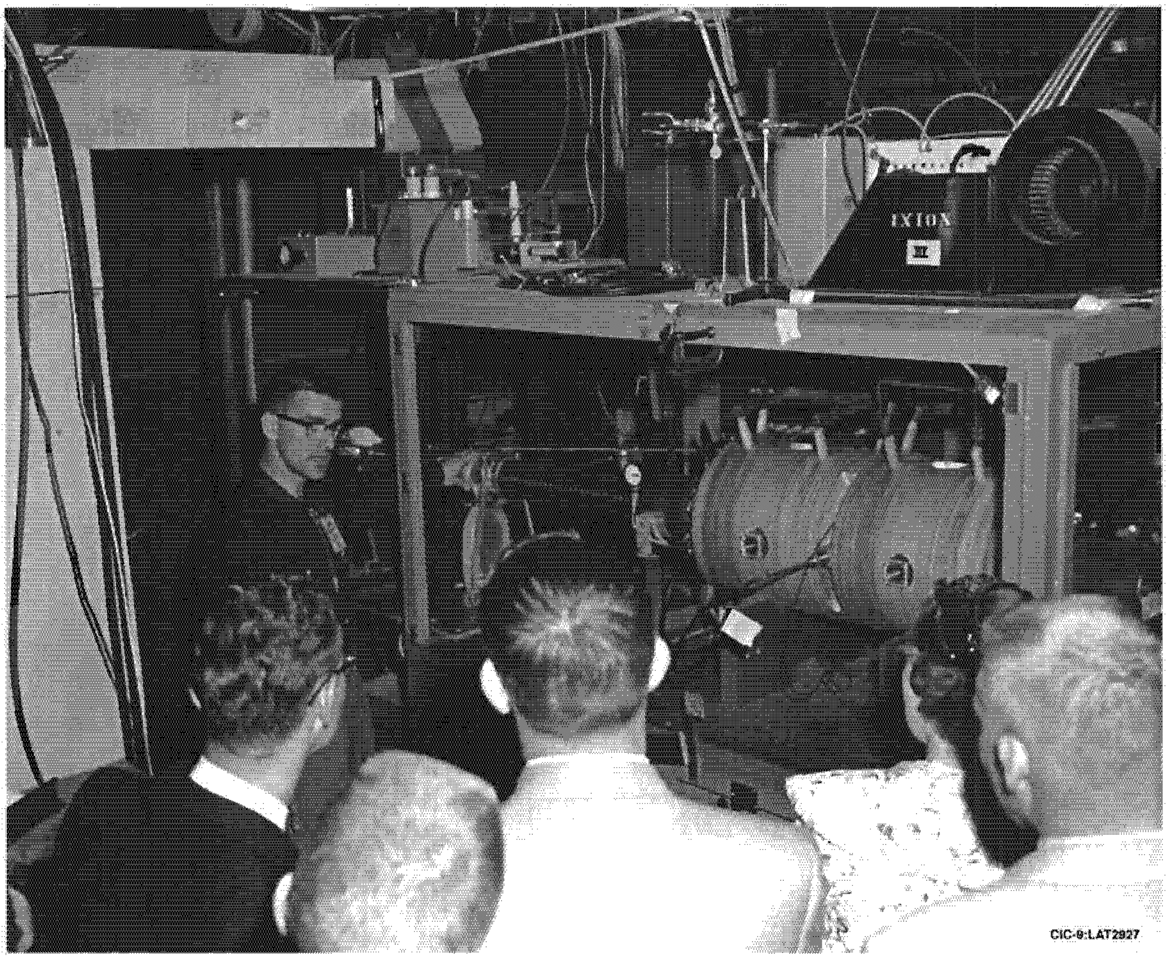


Fig. 6. Ixion, TA-3-105, First Floor, Original Wing

The Hydromagnetic Plasma Gun (1957) examined different acceleration methods related to charging a thermonuclear reactor. The plasma was formed from a blast of gas into a chamber by a fast mechanical valve. Electrode-less guns were developed to reduce the chance of contamination by the electrode to the plasma. Most of these types of guns were rejected in favor of coaxial guns. The coaxial-type gun, known as the Marshall Gun, was able to generate plasma more quickly. The gun program, championed by John Marshall, was located on the second floor of the administration building (TA-3-43). The Plasma Acceleration Machine experiment was associated with plasma gun research and was used to study methods of injecting ionized plasma into thermonuclear devices. A valve allowed a volume of gas into a empty tube. The gas was then ionized and accelerated through the use of magnetic fields. Optical diagnostic tests were used to measure the velocity of the plasma.

Plasma Shield Research tried to solve the problem of material wall impurities cooling the plasma.

Scylla Experiments - The Scylla theta-pinch experiments encompassed a series of controlled thermonuclear experiments that progressed from Scylla I to Scylla IV. The experiments derived their name from Greek mythology. Scylla was a beautiful nymph who was transformed into a sea monster by the jealous sorceress Circe. Below her waist, Scylla's body was changed into the heads and front legs of six dog-like creatures; each barking head had three rows of teeth. According to the Greek myth, Scylla lived under (or was eventually changed into) a dangerous rock on one side of the Strait of Messina, opposite the dangerous whirlpool-creature Charybdis. There, Scylla would devour any hapless sailors who had the misfortune to come within her reach, including several members of Odysseus's crew.

Scylla I (1958-1963) produced the world's first controlled thermonuclear reactions in 1957. A rebuild of Scylla I was taken to the 1958 Geneva Atoms for Peace Conference. Scylla I was originally built in the basement of the main administration building (TA-3-43). In 1958, the unit was rebuilt in the basement of the Sherwood Building. A number of the Scylla experiments were conducted in this area of the Sherwood Building known as "the pit" (Room 10, Mezzanine 1, and Mezzanine 2). The pit area was built with very thick concrete walls as a protection against potential radiation exposure resulting from the experiments. A civil defense shelter was originally located in the pit area; it was designated as a bomb shelter and stored emergency food supplies.

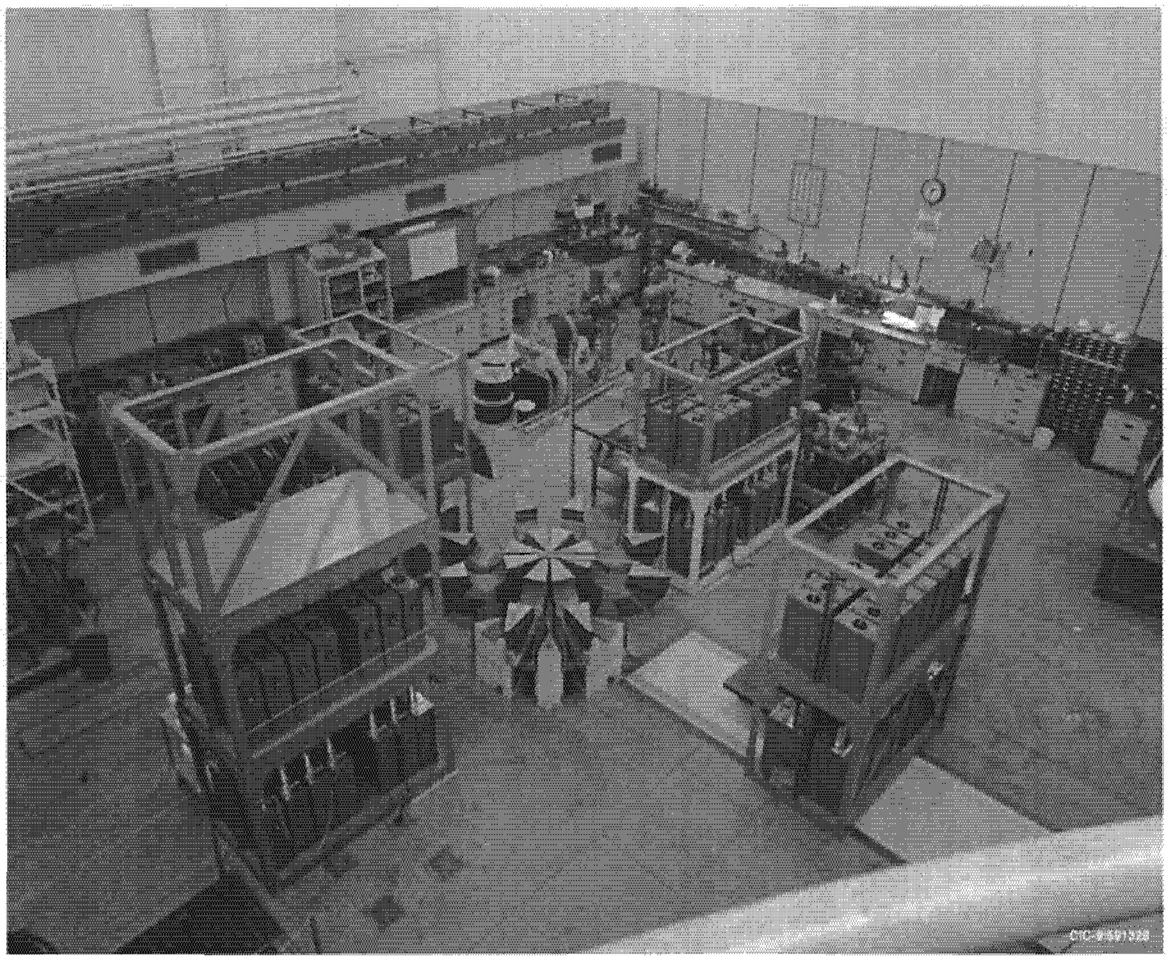


Fig. 7. Sherwood Pit, circa 1959, TA-3-105

Scylla II was a "crowbar" version of Scylla I. This unit was designed for the purpose of extending the initial fast-rising magnetic field in time by bringing on a second capacitor bank. This experiment was located in the basement of the main administration building.

Scylla III was the first Scylla unit built in the Sherwood pit.

Scylla IV (1962-1973) was built in building 105's West Wing addition. This experiment reached fusion ignition temperature; classical particle loss was also observed. Scylla IV reached the highest plasma temperature of the Scylla machines.

Scylla IV-P was the first experiment to show the possibility of a high-temperature plasma holding its pressure with solid mechanical end plugs. The plasma only lasted tens of microseconds, but the plugging principle was important. Scylla IV-P was located in the Sherwood pit (Level B).

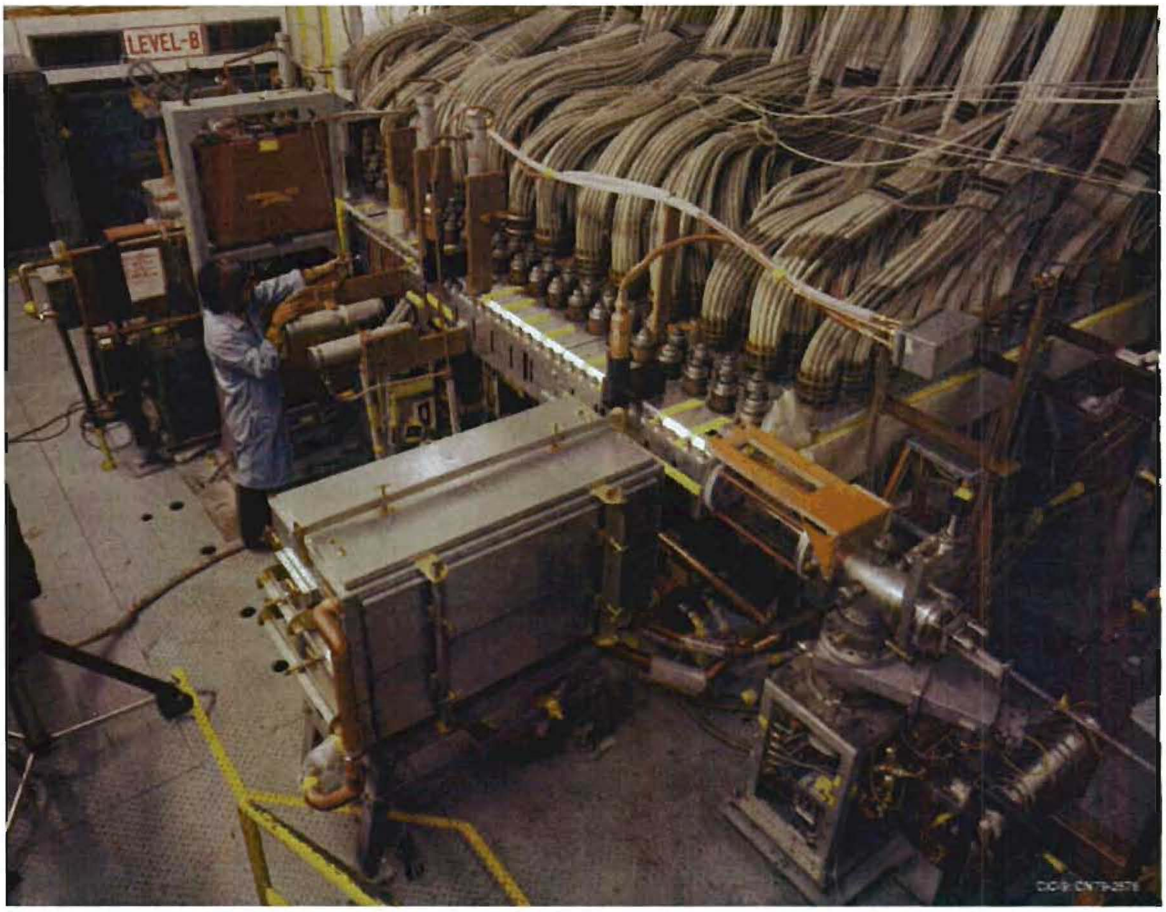


Fig. 8. Scylla IV-P, circa 1979, TA-3-105, Sherwood Pit, Level B

Scylla IV-3 was the last Scylla before Scyllac was built. Like Scylla IV, it was located in the West Wing addition.

Reverse Field Pinch started as a linear theta pinch with a magnetic field on the inside of the theta pinch—a magnetic field in the opposite direction from the compression magnetic field coming from the outer coil. This technology stopped the loss of particles from the ends of the linear configuration because the field lines turned back on themselves.

ZT-40 was a type of toroidal z-pinch or reverse field technology. ZT-40, a Perhapsatron unit, was operated in the large experimental bay on the first floor of building 105 (Room 160). The operation of the ZT-40 contributed to the debate over a proposed ZTH experiment. The ZTH would have been a large-scale toroidal z-pinch. A separate facility at TA-35 would have been designed for its operation. However, ZTH funding was cut in 1991 due to the precedence of Tokamak research.

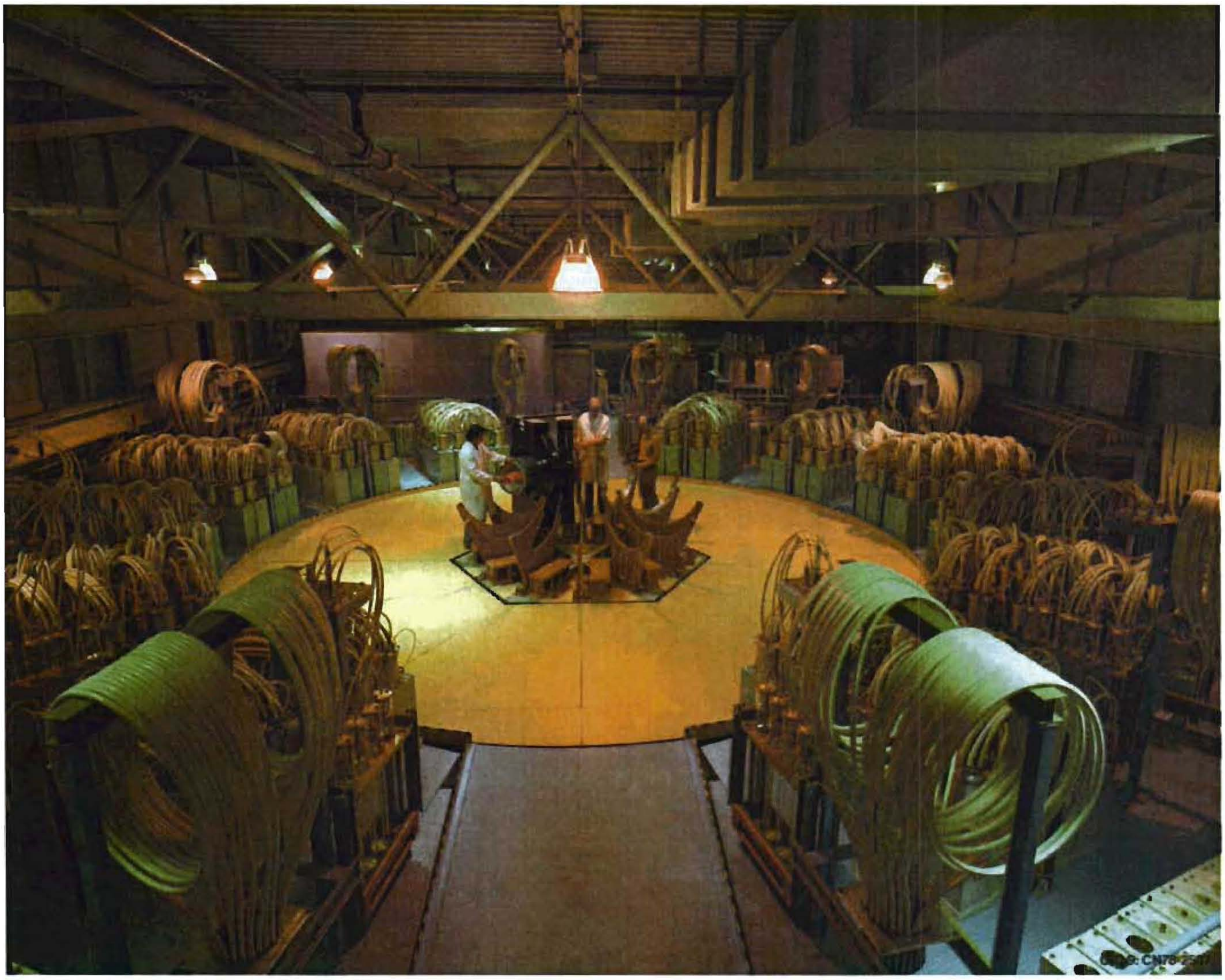


Fig. 9. ZT-40 Toroidal, circa 1978, TA-3-105, Room 160 (Original Wing)

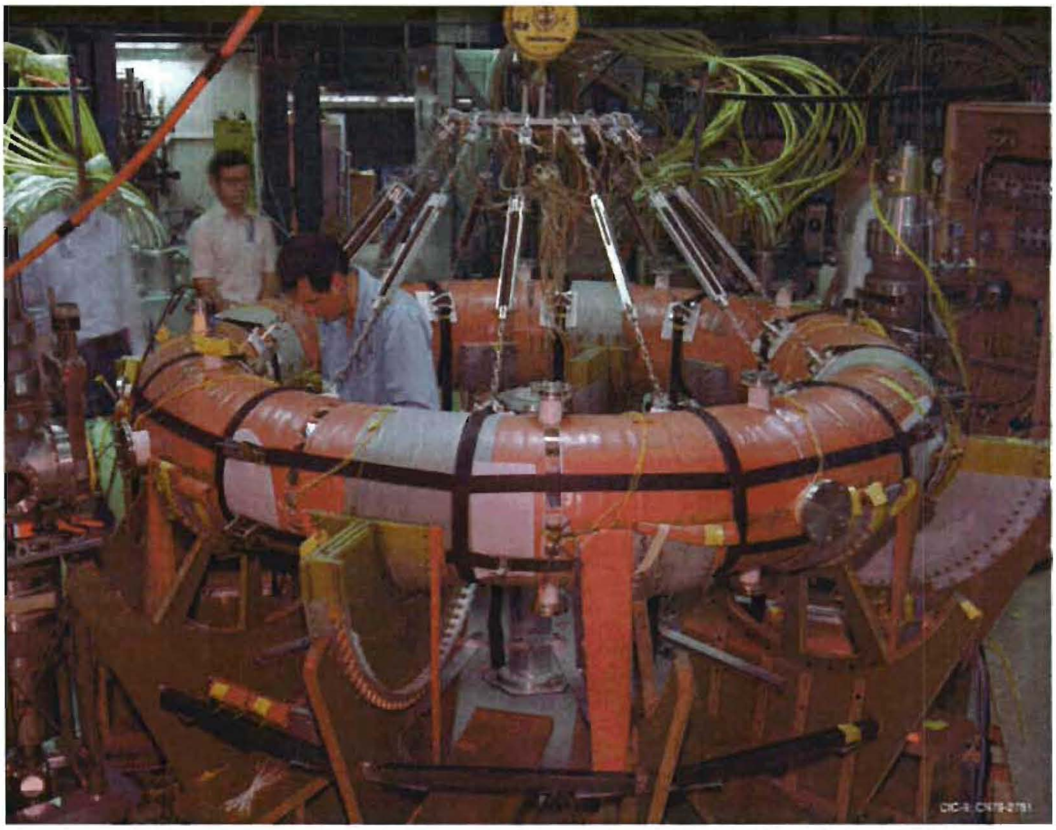


Fig. 10. ZT-40 Ceramic Torus, circa 1979, TA-3-105, Room 160

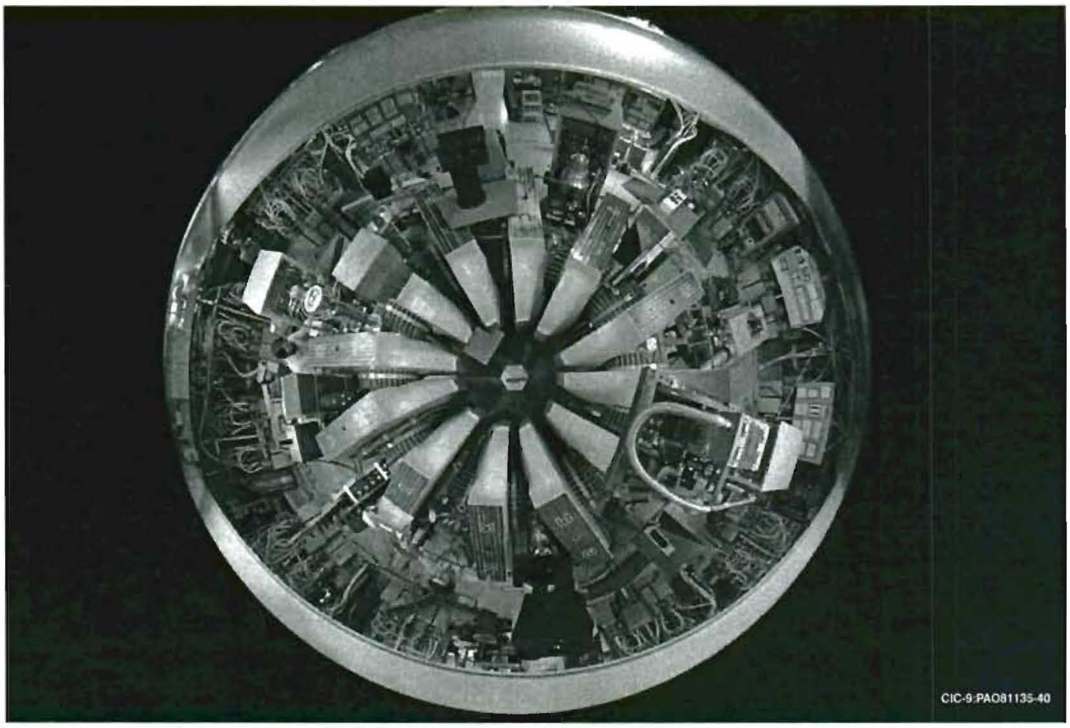


Fig. 11. ZT-40, Bird's Eye View

The Compact Torus Facility was the final group of experiments to deal with Self-Organized Plasma (Spheromak). Spheromak is a type of plasma that can stand by itself without having coils wrapped around it. The Field Reverse Configuration (FRXC) falls into this category. FRXC was a theta pinch that was modified to work with a reverse field (field-reverse configuration). The compact torus work was located in the West Wing addition of building 105 (Rooms 186&189) and was carried out from 1979-1989.

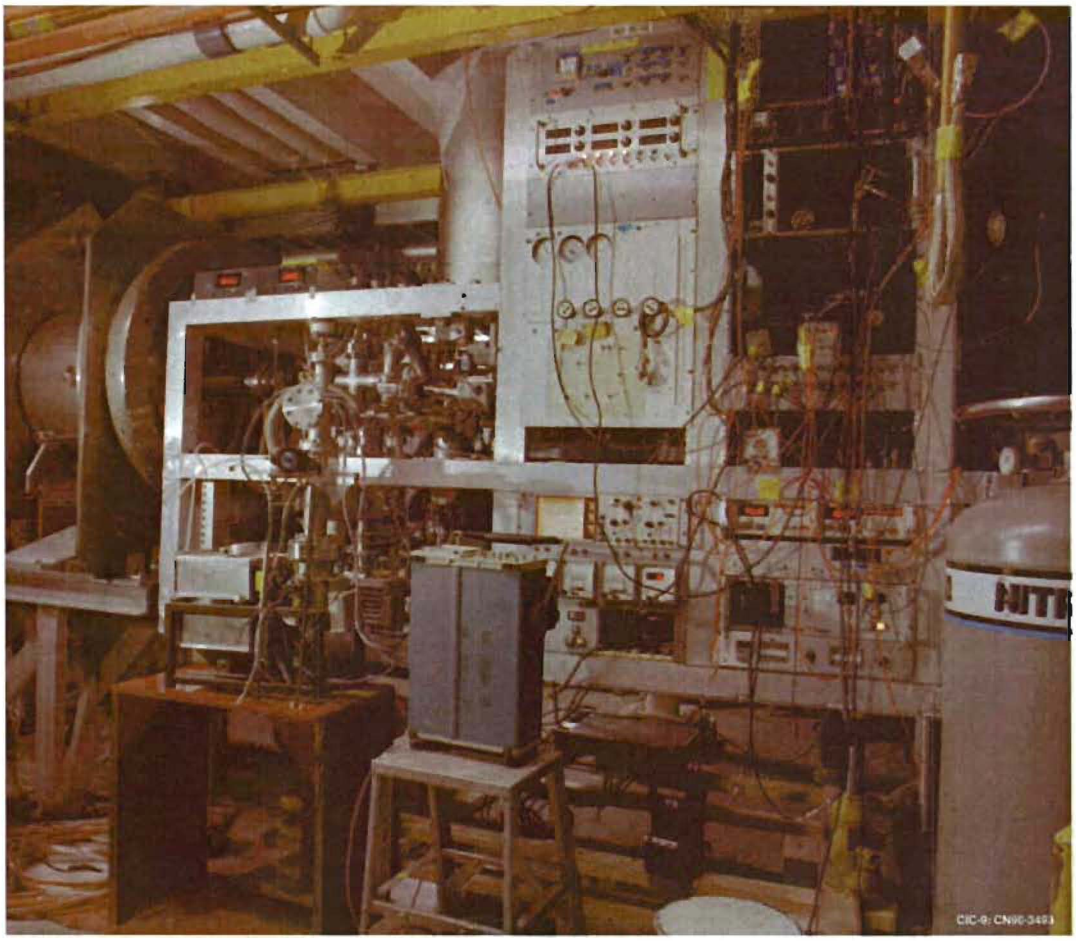


Fig. 12. FRX-C, circa 1990, TA-3-105 (West Wing)

Spheromak was a toroidal magnetic plasma unit. The plasma created closed magnetic flux surfaces similar to the Tokamak. The CTX, which was connected with Spheromak work, came to an end in 1988.

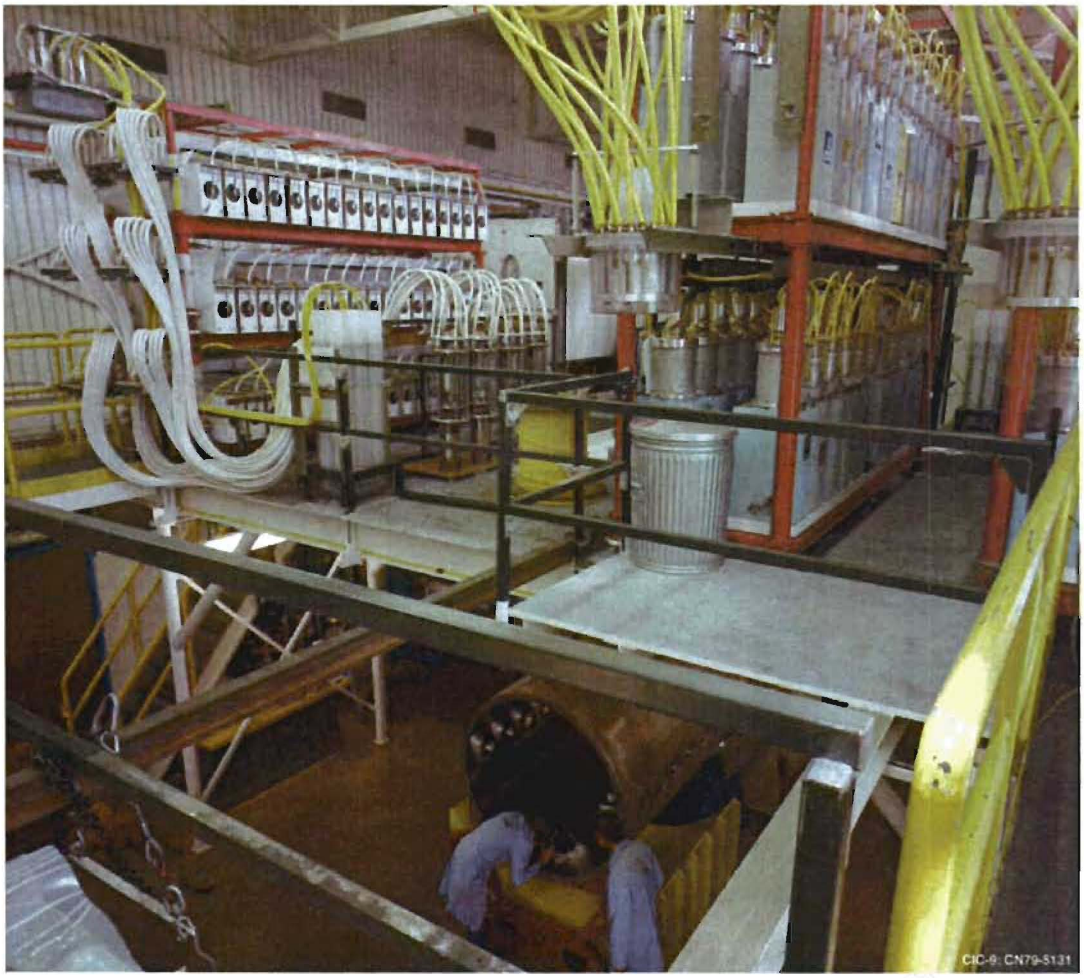


Fig. 13. Compact Torus (CTX), circa 1979, TA-3-105, Rooms 186&189 (West Wing)

TA-3-287 (Scyllac Building)

The Scyllac Building was built from 1968 to 1970, during the Cold War years at Los Alamos. In a continuation of research conducted in the Sherwood Building and in the main administration building, Scyllac experiments were associated with fusion energy and plasma physics. The purpose of the experiments was to create technology that would effectively confine toroidal theta-pinch plasma at high temperatures to produce a cleaner and more efficient fusion energy source. Controlled fusion equipment was moved out of the Scyllac Building by 1991.

The Scyllac Experiments

The Scylla experiments conducted in the Sherwood Building were the direct antecedents to the Scyllac experiments conducted in the new Scyllac Building. Scylla units had been successful in meeting plasma temperatures and densities required for a fusion reactor, but the containment times of the Scylla experiments were too short to produce a net power gain. Short containment times occurred because Scylla units were of a linear configuration and particles could escape from the ends. Therefore, an important research objective for the Scyllac unit was to test plasma-containment principles in a torus. The closed configuration eliminated the open ends and substantially increased confinement times.

“Scyllac” (an abbreviation for “Scylla Closed”) took up the entire high bay of the Scyllac Building (100 ft x 100 ft). Thousands of capacitors and complicated spark-gap switching circuits were used in order to produce the theta-pinch discharge. Reusing equipment from the predecessor Scylla series, capacitor banks from the Sherwood Building were moved to the Scyllac Building by floating them on a cushion of air.

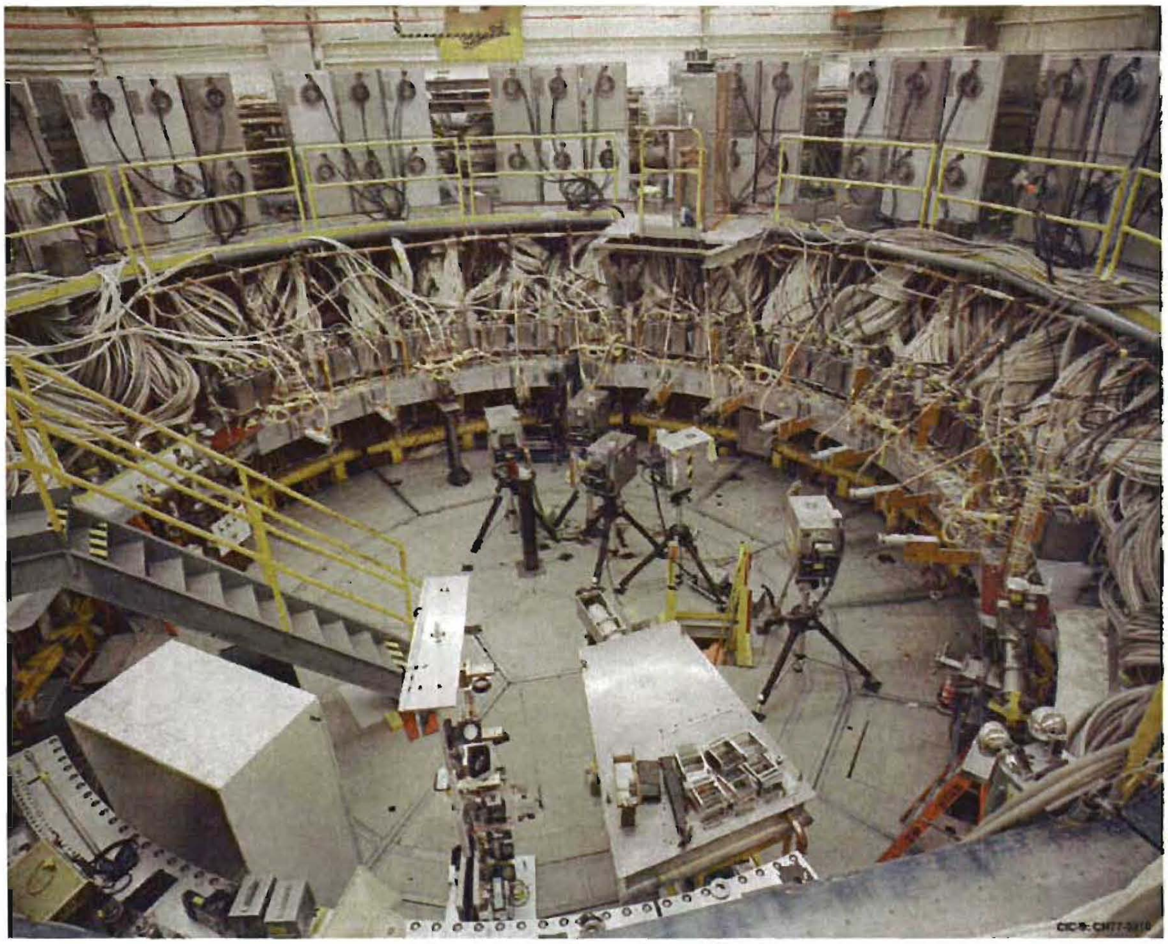


Fig. 14. Scyllac, circa 1977

The following is a brief summary of the Scyllac experiment from 1970 to 1977. First, the linear configuration was bent into a circle or torus. This new configuration showed elimination of loss of plasma from the open-ended linear configuration. The circular shape contributed to instability in the plasma, and the plasma went to the walls of the discharge tube, effectively quenching any heat energy.

Next, magnetic fields were added (high beta stellerators) that improved stability but did not solve the problem. The experiment was improved by machining flux surfaces, adding a helical quartz-discharge tube, and a fast "Jones" circuit to trim equilibrium. Given the size of the torus and the level of power available, there was no way to control the instability of the plasma in the theta pinch. Modifications were performed, and successful stabilization was demonstrated.

The Scyllac Toroidal Sector (1971-1973) confirmed the theoretical conditions for plasma equilibrium in toroidal geometry necessary for the Scyllac full torus. The Scyllac full torus (1974-1978) demonstrated the principles of toroidal plasma confinement necessary for a scientifically feasible Deuterium-Tritium burning experiment. The Scyllac experiment was terminated in 1978.

After the Scyllac project was completed, work was started on the Fast Liner experiment. This experiment was set up in the Scyllac Building in order to make use of the capacitor banks. The Fast Liner experiment involved taking an object about the size of a beer can, putting a large amount of current in it, and then crunching it so that the volume was squeezed. In principle, plasma could be placed in the can, and energy would then be released when the can was crushed.

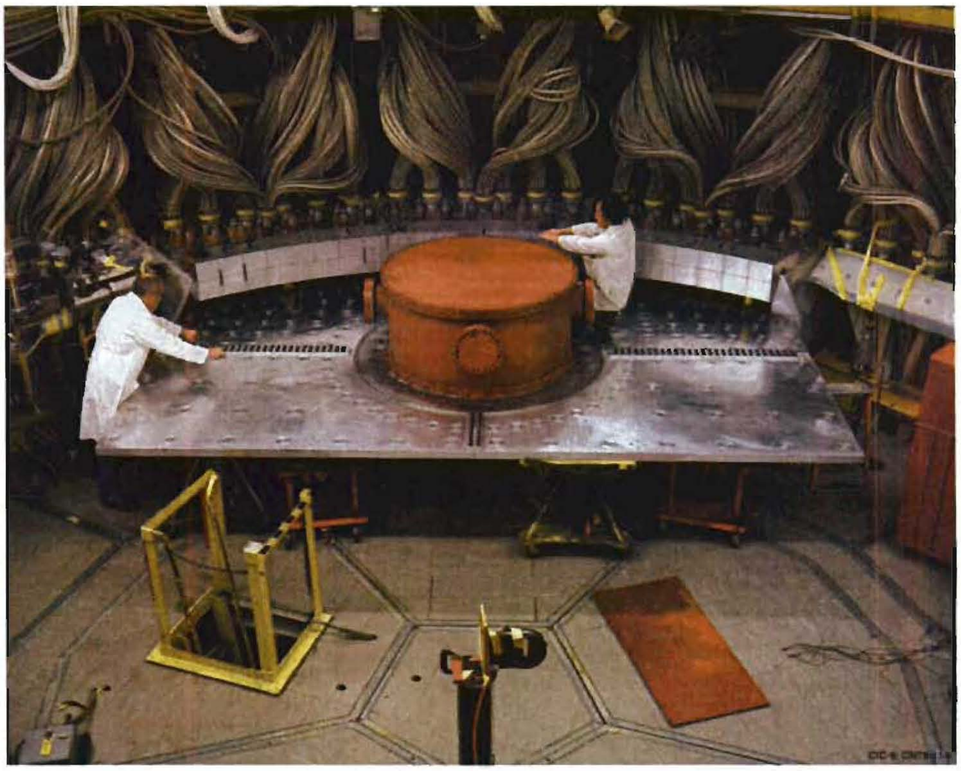


Fig. 15. Fast Liner, circa 1978

Art Sherwood conducted a series of minor explosion experiments in the Scyllac Building, and other experimenters tested capacitors and spark gaps in the building's side rooms. LANL researchers also conducted a fiber z-pinch experiment in the Scyllac Building. The focus of this experiment was to put a very large current through a thin fiber of deuterium ice.

A 4- to 6-inch concrete slab was poured over the floor of the high bay area when it was time to close out the building,. The concrete was poured because so much oil from the capacitors had spilled over the years that it kept seeping up through the original floor.

CTR Division's Effect on Current Fusion Research

The earliest controlled fusion experiments—Perhapsatron, ZT-40, and the Marshall Gun—were precursors to Reverse Field Pinch technology that is still being used today. The Compact Torus and the Field Reverse Configuration both evolved from Los Alamos's early theta pinch projects. Some of Los Alamos's fusion experiments continue to this day; for example, the University of Wisconsin conducts research related to the ZT-40's toroidal z-pinch or reverse field technology.

The United States and four other countries had planned to make the International Thermonuclear Experimental Reactor (ITER) the world's first experimental fusion reactor. In 1999, an influential appropriations officer for the U.S. said that the ITER project, which is based on the Tokamak concept, was costing too much, and if the other four nations involved were not going to contribute financially, then the U.S. would pull out of the program. The U.S.'s decision to cancel its support was made, in large part, because the amount of money it would take to develop the ITER project would not equal the profit from ITER's energy sales. Due to the lack of support for Tokamak technology, research attention has now shifted back to the pulsed approach, the very technology developed during the course of Los Alamos's Controlled Thermonuclear Research Program and carried out in the Sherwood and Scyllac Buildings.

Description of Buildings

TA-3-105 (Sherwood Building)

TA-3-105 was constructed from 1956 to 1959 and was originally used for fusion and magnetic energy research. Controlled thermonuclear research was conducted at the Sherwood Building from 1956 to 1990. After 1990, it was used as office space and for storage. In 2001 and 2002, TA-3-105 was decontaminated and demolished.

The 42,380 sq. ft. building was a grouping of rectangular structures joined by common walls and corridors. Architectural features included steel frame, masonry block and transite siding, and concrete foundations and sub-grade walls. The Sherwood Building was built in stages, culminating in a four-wing floor plan—the Original Wing, the West Wing Addition (used for experiments), the East Wing Addition (used for offices), and the South Wing Addition (used for experimental support).

The Original Wing was a structural steel building with a high bay and a 15-ton, overhead-bridge crane. It had a pit approximately 30 ft. deep and 55 ft. square in the north end, with reinforced concrete walls and two metal mezzanines. A service elevator abutted the south side of the pit. There was an access shaft on the west side of the pit with a removable slab on the first floor that was covered by the West Wing Addition. There were also removable members of the floor that allowed the overhead crane to lower items to the floor of the pit. Horizontal and vertical access shafts were provided below the first floor slab between the South Wing Addition and the pit. There was a canopy-covered walkway in front of the east side of the Original Wing with a doorway into the East Wing Addition's east-west corridor.

The West Wing Addition had a structural steel structure with a high bay and a two-ton crane on the west side, a full balcony on the east side, and a concrete block structure on the south side. The access to the balcony was from the Original Wing stairs, or from the outside on the south side. Access to the high bay was from a roll-up door on the north side and a personnel door built into the roll-up door. Access to the high bay was also possible through inside rooms below the balcony connecting with the Original Wing.

The South Wing Addition was a low-bay, concrete block structure with some metal siding on the west side. It had a concrete block office addition on the west side with a personnel door. Access to the low bay was by a roll-up door on the south side.

The East Wing Addition was a 10 ft-high concrete block structure designed for offices. It provided a personnel entrance into the Original Wing of building 105 from the east side and had a security portal into the East Wing of building TA-3-43. There were outside exits from the east-west corridor to the north and from the northern pod of the East Wing Addition to the west.

TA-3-287 (Scyllac Building)

The Scyllac Building, used in support of LANL's fusion and magnetic energy research program, was built from 1968 to 1970. The building originally housed the Scyllac Experiment, in operation from 1970 to 1978. Later, various controlled thermonuclear experiments were conducted at TA-3-287 from 1978 to 1990.

The 48,256 sq. ft. building is of steel frame construction and has three floors and a basement. The key feature of the Scyllac Building is the main bay core, approximately 100 ft x 100 ft in size with a 25-ton crane that reaches to the basement floor slab. The main bay core is surrounded on the north and east sides by offices, laboratory rooms, utility services, and shop space on all four levels. There are windows on the north and east sides where offices are located on the first, second, and third floors. The building has a flat built-up roof. There is a two-story, open structure, approximately 40 ft by 102 ft, appended to the south side for shops and experimental purposes with a mezzanine. Because of grading conditions, there is a retaining wall from the first floor to the second floor level on the west side with approximately 14 feet of clearance to the west wall of the first floor.

There is a freight elevator in the northeast corner; this elevator has an exterior roll-up door at the first-floor level that is accessible from the site road. There are roll-up doors on the south side of the building served by a site road for entry into the main structure and into the south-appended structure. There are personnel entries from the north at the first floor level and from the west at the second floor. An enclosed, exterior stairwell on the east side provides an emergency exit. Three other stairwells provide emergency exits and ease of personnel movement between the floors. There is a metal stairway and sidewalk on the north side that leads from the second-floor entrance sidewalk on the west side to the first-floor entrance on the north side.

A 40 ft. by 102 ft., two-story open-bay with mezzanine was constructed in 1974 on the south end of the building. A second and third floor addition was added in 1977 on the east side of the building; this addition matches the original construction.

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Appendix A: Interviews

Subject: TA-3 Sherwood/Scyllac – Fred Ribe Interview

Date: 8 June 1999
Location: Picnic tables outside badge office in TA-3
Interviewer: Brent Ziegler
Interviewee: Fred Ribe

The following is a transcription of a sixty minute interview with Mr. Fred Ribe relating to the Fusion work that was carried on in the Sherwood/Scyllac Buildings.

1. *When did you begin working at LANL?*

   I began work at LANL in 1951 but work on the Sherwood Project didn't start until 1956.

2. *What brought you to LANL?*

   I started in P-4 Division working with 14 MeV neutron research, fast neutron research. I did neutron research until around 1954. Then I worked on high energy accelerators (1954-1956). The accelerator led in to work at the P Division linear accelerator. Then I entered Controlled Thermonuclear Research working for Keith Boyer in P-Division.

3. *Which LANL group(s) did you work with?*

   I was division director for the CTR division from 1974-1977. I was the first CTR division leader and I succeeded J.L. Tuck who had been the head of this project. Prior to being division leader for CTR I worked on the Sherwood Project and Scyllac in P-Division (1956-1973) and Q-Division (1973-1974).

4. *What year(s) did you work at TA-3*

   1951-1977

5. *Where at the TA-3 building(s), or rooms did you work?*

   The Perhapsatron started out in the Administration Building and was later moved to a bay in the Sherwood building as the S4 Unit. The Marshall Gun and Scylla I experiments were in the Administration Building. The Scylla I was located in the basement. The picture of Scylla I that appears on the back of the Scyllac Dedication Program was reproduced and taken to the Geneva Convention in 1958. That unit was eventually moved to the pit in the Sherwood Building. The Administration Building was full of experiments. The Marshall Gun was on the second floor. The Marshall Gun was later moved to the basement of the Administration Building.

6. *What activities/responsibilities were you involved with in the building/structure you worked in?*

   Worked on various experiments dealing with Fusion and Magnetic Energy Research. I was the first division leader of the CTR Division.

7. *In the course of your work, what equipment was used and what processes were involved?*

   J.L. Tuck, Jim Phillips, George Sawyer, and John Osher worked with the Perhapsatron experiments (toroidal z-pinch). The ZT-40 was a Perhapsatron that led to the discussion of starting the ZTH. The ZTH didn't happen but the large generator that would have been one of its components is still being used at the laboratory for magnetic experiments. One of the earlier projects was called Ixion, it was a magnetic mirror which had electric field and the plasma rotated inside the mirror. We succeeded in getting the rotating plasma but it was obvious that we weren't going to get a very hot plasma so the work stopped on that project.

8. *What were the highlights of your work while at TA-3?*

   [Answered in number 15]

9. *Do you recall any significant developments associated with your work that should be noted?*

   The Scylla I produced the world's first controlled thermonuclear reactions in 1958. The Scylla IV (1962-1973) had the highest plasma temperature (reached fusion ignition temperature). Showed that the Scyllac Toroidal Sector confirmed the theoretical conditions for plasma equilibrium in toroidal geometry (circular configuration). There were many experiments that are being looked at again today for their usefulness in fusion research.

10. *Did any of the aspects of your work have connections with other programs/groups?*

    [Did not ask this question.]

11. *Were any publications, summary reports, or other media of you work written or recorded?*

    Numerous technical papers were produced. Also annual, semi-annual, and quarterly progress reports were generated at various periods throughout the project. In April of 1993 there was a talk given by Ron Davidson (Princeton) that summarized the work that LANL has done in the area of fusion research.

[Note: The talk Mr. Ribe referred to can be found at the Oppenheimer Study Library, call # Q 180.6.U62 L6ab 1993 volume 4. 50th Anniversary Seminar Series: Day One - Legacy to the Nuclear Age. Tape No. 4 of 16.]

12. *Did your work focus on weapons or non-weapons (or both) technology?*

Our work was always non-weapons related to fusion energy.

13. *Who were the people you worked with, what was their role during the project, and do you know if they still reside in the state or if they are deceased?*

I worked with John Marshall on one of his accelerator guns. J.L. Tuck (deceased) was instrumental in the Perhapsatron work. The main people on Scylla I were Keith Boyer, Warren Quinn, and Bill Elmore. I got in on Scylla I running diagnostics with George Sawyer and Tom Stratton. The diagnostics was run to prove that the plasma was thermonuclear.

14. *During your time at the Lab, what was the big picture of LANL's mission and the role of your group in that mission?*

There were two main P-Division groups. One was under Boyer and they worked with theta pinches. The other group concentrated on toroidal z-pinches. Even earlier work was done on linear z-pinches. John Marshall went his own way and worked on the Marshall Gun.

The main focus of the division was to create a fusion energy unit that would be a more efficient and safer energy source than fusion and more economic than coal or oil. Fusion has advantages over fission. For one thing it doesn't make fission products, it can't have a runaway reaction, or a loss of coolant calamity like Three Mile Island. It just burns hydrogen. Turning off the power can stop the reaction. The plasma will go to the wall and cool itself with no environmental disaster. It does use 14 MeV neutrons that have to be caught in a lithium blanket causing some radioactivity but it is orders of magnitudes less than fission.

15. *What would you consider the high points and low points of your career here?*

My major accomplishments were doing diagnostics on Scylla I. On spearheading as group leader Scylla IV, which generated the produced the best linear theta pinch work ever seen. Then taking that work on to the Scyllac experiment.

16. *Do you have any general comments and any additional information you would like to add?*

Research continues on fusion today. After the Scyllac project was shut down the Scyllac banks (capacitor) were used for fast liner implosions, field reverse configuration, linear theta pinches. The CTR progress report for 1977 covers some of these last experiments. The only experiment that was carried on in the Scyllac building after the Scyllac experiment was the fast liner experiment because they needed the capacitor banks. The other experiments were in the Sherwood Building.

In 1973 the Tokamak technology became the focus for fusion research. The T-3 Tokamak unit really started the focus on this type of technology. Then basically the emphasis in this country changed to Tokamaks except for at the Los Alamos Laboratory and the Livermore Laboratory. Los Alamos continued its work with Scyllacs and toroidal pinches. Livermore concentrated on the magnetic mirror experiments. The TFTR, Tokamak Fusion Test Reactor, was the largest Tokamak. Located in Princeton and based on the T-3. The TFTR has been shut down. This country is pulling out of the Tokamak program because it has been found not to be economic to build and uses the larger units.

The Stellerator was the Russian and Princeton approach to fusion research. Scyllac was a high beta Stellerator.

I loved doing work with fusion and the people that were involved. I feel that we succeeded in everything we set out to do. I am currently working with Dan Barnes in non-neutral plasmas. It is a different approach to fusion and the funding is rather small but I am very interested in the work.

Laser experiments are rapidly gaining on the Tokamak technology as far as funding for research goes. It is symbiotic with weapons research. This helps in the search for funding.

17. *How has the research that you participated in effected the research that is being carried on today?*

The whole notion of using high-density plasmas for fusion still lives and goes on today. The technology that we pioneered is still being used today in the Field Reverse Configuration. Also the work that Dick Siemon is part of, Pulsed High-Density experiments, can trace back to our work with theta pinches. I believe that if the work had been continued on the Scyllac it would have been competitive to the Tokamak regime.

18. *Do you feel that the theta pinch experiments were the most important experiments that were carried on here at Los Alamos as far as fusion goes?*

They were the main thrust for a long time but I wouldn't say that they were more important to fusion than the toroidal z-pinch. The toroidal z-pinch didn't get a chance at a scale the size of the Scyllac. The only chance it got basically failed because of administrative and funding problems. The ZTH would have been that chance at a really significant scale.

[Fred comments on key words from CTR progress reports.]

<u>Scyllac Fusion Test Reactor (SFTR)</u> - A theoretical engineering study of a large Scyllac type reactor which would produce fusion. Bob Krakowski and myself worked on this.

<u>Magnetic Energy Storage</u> - An essential part of the SRTR. I carried out work on that at the Westinghouse Research Laboratory in Pittsburgh.

<u>Reverse Field Pinch</u> - Started as a linear theta pinch which had a magnetic field on the inside of the theta pinch which was in the opposite direction to the compression magnetic field that came from the outer coil. The field lines turned around back on themselves.

<u>Spheromak</u> - Was an outgrowth of the ZT-40 toroidal z-pinch.

<u>Toroidal Theta Pinch</u> - Scyllac experiments.

Subject: TA-3 Sherwood/Scyllac – Warren Quinn Interview

Date: 15 June 1999
Location: Residence of Warren Quinn
Interviewer: Brent Ziegler
Interviewee: Warren Quinn

The following is a transcription of a taped interview with Mr. Warren Quinn relating to his work experience in the Sherwood/Scyllac Buildings.

1. *When did you begin working at LANL?*

   I came here September of 1957. I started work on Project Sherwood, which at that time was part of the Physics Division (P-Div).

   That's the very first project you worked on, Project Sherwood?

   Project Sherwood, but specifically in Project Sherwood. I worked on the Scylla I theta pinch experiment.

2. *What brought you to LANL?*

   I came more or less from graduate school after spending one year at Harvard as a post doc. It was the fusion work that brought me here.

3. *Which LANL group(s) did you work with?*

   I worked for P-Division, Q-Division, and CTR Division. I worked in P-Division until 1972 or 1973. I was in the same group all those years in P-Division, P-15. Then we went into Q-Division for a short time. Then CTR Division formed in 1974. I became deputy division director in 1979. Fred Ribe left for the University of Washington, then Harry Dreicer became division leader. I think that was 1977 or 1978.

   Who was the Division Director in the early years of P-Division?

   Jim Tuck headed the Sherwood Program within the physics division.

   And that was from?

   That was from the time that Project Sherwood started until the early 1970's.

4. *What year(s) did you work at TA-3*

   Project Sherwood occupied the Sherwood Building (TA-3-105) from the late 1950's when it was built until about 1991. To the best of my knowledge the building was used for storage after we moved out. The Scyllac Building (TA-3-287) was finished in 1970 and was used by our group until about 1991.

We moved—the division office moved to TA-35 to build a large toroidal z-pinch. But that experiment got shut down before we completed it (1991).

5. *Where at the TA-3 building(s), or rooms did you work?*

The division office was in the Administration Building and we performed our experiments in TA-3-105 and TA-3-287.

6. *What activities/responsibilities were you involved with in the building/structure you worked in?*

Originally, I worked on the Scylla I Theta Pinch experiment. I was in charge of developing the experiment. Later on I became the deputy division director. I was also group leader of the Scyllac Group.

7. *In the course of your work, what equipment was used and what processes were involved?*

Scylla I was the first device we built. There was a Scylla II that was a crow bar version of Scylla I. Tried to extend the initial fast rising magnetic field in time by bringing on a second capacitor bank. Both of these were originally built in the Administration Building. Scylla III was built in the pit of Building 105. Scylla IV was built in the West Wing of Building 105. Scylla IV produced the hottest plasma at Los Alamos about 5-6 million degrees. There was a Scylla IV-3 that was the last Scylla before we built Scyllac. Then we moved into Building 287 (1970) to house the Scyllac Experiment. The whole purpose of the Scyllac Building was to provide area for the Scyllac. I think the Building cost was originally around two million dollars. Oversaw the ZTH project until its demise in early 1990.

8. *What were the highlights of your work while at TA-3?*

The Scylla I was a very exciting thing. We produced the first laboratory thermonuclear plasma. But it took us a couple yeas of diagnostic work to confirm that it truly was a thermonuclear plasma. Basically the overall Project Sherwood was an exciting time. During the Scyllac days I received a letter of commendation from DOE for the Scyllac work.

9. *Do you recall any significant developments associated with your work that should be noted?*

The Scylla I produced the first laboratory thermonuclear plasma. It was originally located in the administration building (SM-43). First we had it in room 164, then we rebuilt it in 1958 in the pit located in the Sherwood Building. We rebuilt it to take it to Geneva for the Second Atoms for Peace Conference. There were three experiments that went from Los Alamos: Scylla I, Marshall Gun, and a toroidal z-pinch.

10. *Did any of the aspects of your work have connections with other programs/groups?*

It was pretty much all Los Alamos. There were some efforts from people in other divisions. The Russians came for a few short visits but they didn't really have any hands on work. In England, the Culham Laboratory provided us with Allen Newton for about one year.

11. *Were any publications, summary reports, or other media of you work written or recorded?*

The progress reports. There were many papers published over the years. In 1958-1960 there was a series of three papers produced on the Scylla I Theta Pinch. Covered many of the diagnostics run on Scylla I. Those were published in the Physical Review.

Are you familiar with a man by the last name of Bishop that might have written a history of the Sherwood Project?

Amasa Bishop headed the full program Sherwood. I think he may have written a little booklet.

12. *Did your work focus on weapons or non-weapons (or both) technology?*

It was all non-weapons work. The Sherwood Project was declassified in 1958 at the time of the Peace Conference.

13. *Who were the people you worked with, what was their role during the project, and do you know if they still reside in the state or if they are deceased?*

On Scylla I, I worked with Ed Little and Bill Elmore from Swathmore. I believe they are both still living. Ed Little lives in Los Alamos. In addition to that George Sawyer was very involved in diagnostics. Franz Jahoda performed optical diagnostics. Tom Straten was also involved in the diagnostics. Later on Dick Siemon (1966 or 1967) did a lot of diagnostic work. Tom Putnam, Charlie

Hammer and Ed Kemp were members of the engineering group. Worked on hardware type engineering. Robin Gribble was a physicist who worked on spark gap switching. Alan Rawcliffe did the control systems for the experiments. Dave Weldon and John Lillberg did computer data acquisition systems. Bill Ellis also was a big part.

14. *During your time at the Lab, what was the big picture of LANL's mission and the role of your group in that mission?*

Project Sherwood the goal was to produce energy from controlled fusion reactions. Basically taking the same reactions that go on in a hydrogen bomb and producing them in a controlled manner, to get a net energy production.

The laboratory's primary mission was in those days and probably still is today, was the nuclear weapons program. However to make a well rounded staff that could take on almost any problem or challenge I think Project Sherwood and the Magnetic Fusion Energy Program played an essential role in bringing in a lot of people who later transferred to other programs here at the laboratory. I think that played a key role in developing an excellent staff.

The administration changed over time. I mean administration by DOE. Initially the AEC had a small staff. Later that staff increased then of course DOE developed in to a very large staff.

15. *What would you consider the high points and low points of your career here?*

In the early days there were very little administrative requirements and you could focus all your effort into developing your experiment or task.

16. *Why did Project Sherwood and Project Scyllac come to an end in 1990?*

Primarily, Congress reduced the budget for the Magnetic Energy Fusion Program. For FY 1991 which began October 1990. DOE decided to focus primarily on the Tokamak concept. Therefore the other concepts had large reductions in funding. We were working on an alternate machine (ZTH reverse field pinch) that would have run about 70 million to complete. We had most of the hardware and were in the assembly process when the budget cuts happened late 1990. We were running on a budget 20 to 25 million per year. After the cuts the laboratory decided that the work CTR Division was doing didn't fit into the budget and the CTR Division was essentially shut down.

17. *Do you know if any chemicals or radiological hazards exist in the buildings?*

The PCB's in the Sherwood Building were cleaned up. We did not use PCB's in the Scyllac Building. We had some low level sources that were used for calibration of equipment. We had a beryllium neutron source that was used to test out neutron detectors.

18. *Were there any Radiological Survey performed in either of the two buildings?*

I think there were rad surveys performed when we closed the buildings out. I don't have that documentation but ESH probably would. There was nothing found as far as the surveys went.

19. *Do you have any general comments and any additional information you would like to add?*

I think that the Magnetic Fusion Program was very interesting from the point of research. It had spin-offs throughout the years and DOE is beginning to look at some of these spin-offs because it has decided that the Tokamak concept is not economically feasible. Reverse Field Pinch at the University of Wisconsin, looking at a very pulsed approach with magnetic confinement with implosion, it involves the field reverse configuration.

Are there any technologies that have evolved out of the work you performed at CTR?

Yes there are a couple the Compact Torus, Field Reverse Configuration, Field Reverse Pinch. Most of it came from the theta pinch work.

Subject: TA-3 Sherwood/Scyllac – Dick Siemon Interview

Date: 16 June 1999
Location: LANL Cafeteria
Interviewer: Brent Ziegler
Interviewee: Dick Siemon

1. *When did you begin working at LANL?*

   I first worked at LANL in 1962 as a nuclear engineer on the Rover Project. Then I went back to graduate school. I arrived at CTR Division in March of 1969.

2. *What brought you to LANL?*

   When I was a staff member in 1962 Glasstone gave a series of lectures to new staff members to acquaint them with the research going on at the Laboratory. The Rover Project was a nuclear rocket. At one of the lectures I listened to Jim Tuck talk about controlled thermonuclear research. He explained that if we didn't find another energy source other than fossil fuels and conventional nuclear the world would be in bad shape. His argument impressed me so when I went back to graduate school I enrolled for research in plasma physics. I met a professor there that was from Los Alamos by the name of Ralph Lovberg. I did research under him and so it was only natural that I go to see him about a job at the end of my graduate program. Fred Ribe and the Scylla Project interested me so I accepted a job offer here at the lab.

3. *Which LANL group(s) did you work with?*

   I worked in P-Division, Q-Division, and CTR Division during the time frame you are interested in.

4. *What year(s) did you work at TA-3*

   1969-1990

5. *Where at the TA-3 building(s), or rooms did you work?*

   Basically I worked in building 105 and 287. Sometimes our offices were in the administration building. In 1990 as our division was dissolving we moved to a building in TA-35.

6. *What activities/responsibilities were you involved with in the building/structure you worked in?*

I started as a staff member and worked as an experimentalist. I worked with Joe DiMarco performing diagnostics of a fast implosion z-pinch. Then I worked with Warren Quinn on a linear theta-pinch. Typically I was asked to perform some type of diagnostic work basically making measurements. Franz Jahoda in building 105 worked with holographic interferometry, use laser beams that pass through a plasma and measure the amount of light that is changed by the plasma. Later I became a group leader of 30-40 people. Next I became the assistant division leader. Now I am a program manager for fusion energy here at the lab.

7. *In the course of your work, what equipment was used and what processes were involved?*

Experimental plasma physics involves a lot of equipment and processes. So I will just name a few of the main ones that come to mind. First there was electrical pulse power which involved capacitors and spark gap switches. I was involved in the design in many sorts of equipment that used those. Then there is computer control, we were one of the first organizations in the 1970's that had our own computer dedicated to the control of our experiment. That was in building 287. It operated the experiment, accumulated data, analyzed it and displayed the results. George Sawyer and Dave Weldon played large roles in developing the computer system. Holography used lasers that were very elaborate. We used streak cameras that were electronic images that were framed in time. Also a wide variety of fast imaging cameras were used.

The Scyllac was a series of experiments where we arranged the equipment into different configurations. We had Scyllac sectors which were 5 meters long representing a third of a sector. There was also a linear Scyllac that was 5 or 7 meters long. We also had a full torus. In the basement we did a fiber z-pinch experiment where you put a lot of current through a thin fiber of deuterium ice. We also did fast liner experiments. Take a object about the size of a beer can, put a lot of current in it, then crunch the can so that a volume got squeezed. In principle you could put a plasma in it.

I didn't realize that there was a basement.

On the north side of the building is sort of a multifloor set of offices three floors and a basement. On the first floor is a optics lab. On the second floor were electronics, and offices and a screen room for Scyllac. Third floor was all offices. Underneath that was a basement. In the original full torus experiment in the basement the space was devoted to power supplies, things that charged the capacitors. Then as they reconfigured the experiment they didn't need so many power supplies at once. So some of that space was reconfigured for the high-density z-pinch that I mentioned (Fiber z-pinch). Jay Hammel (deceased) was the lead for the fiber z-pinch. David Scudder and Jack Shlachter were also involved and they are currently working here at the lab in group P-22.

In building 105 I worked with Joe DiMarco on a fast imploding z-pinch. Then I worked on Scylla IV 3 with Warren Quinn, which was a 3-meter long theta pinch. That was located on the south end of the building. Then I focused my work on the Scyllac experiment. After I became a group leader I came back we built a theta pinch in the pit of 105 called Scylla IV P. First one of the experiments that showed the possibility of a high temperature plasma holding its pressure with solid mechanical walls. It would only last tens of microseconds, but the principle was important. Then after that we received funding for compact torus work, any kind of plasma that can be by itself without having coils wrapped around it. Rulon Linford, Art Sherwood and myself all had a group that we worked on the compact torus work with. We build two experiments on the south side of 105. They were FRXC and CTX. FRXC was a theta pinch that was modified to work with a reverse field (field reverse configuration). This is not the same thing as a reverse field pinch or a z-pinch, which the ZT-40 was. While the compact torus work was going on in the south end of 105 the ZT-40 was operating in the large experimental bay in 105, on the first floor. Those compact torus experiments were very successful. That work was performed 1979-1989. The CTX, which was connected with the Spheromak probably, came to an end in 1988. Those were the major experiments that happened from 1970 to 1990.

8. *Do you recall any significant developments associated with your work that should be noted?*

[See question 7]

9. *Did any of the aspects of your work have connections with other programs/groups?*

Some of our technology that we used in diagnostics was imported from the defense program side. They recorded nuclear bomb events so they had access to the fast framing photography available. I spent 1978 as a professor at the university of Wisconsin. I taught plasma physics. What I realized during this experience how nice it is to work for a national laboratory and have the equipment and support you needed. High productivity could really be achieved. I enjoyed teaching but decided to return to research.

Groups in the physics division carried on most of the work. This did have drawbacks in that we would have times when it was hard to keep all the technicians busy. There wasn't a pool to pick from or send people to.

10. *Were any publications, summary reports, or other media of your work written or recorded?*

Many technical papers and progress reports.

11. *Did your work focus on weapons or non-weapons (or both) technology?*

CTR Division only worked in non-weapons research. It is true however that the physics of plasmas and the phenomena in pulse plasma all strongly overlap with nuclear weapons physics. So there was always a give and take between our people and the weapons divisions of the laboratory. Sometimes it was competitive in nature but most time it was just a good basis of collaboration.

There was one time in my life here at the lab that I was called behind the fence to go and help on a classified project. So I grabbed my laser, loaded up the truck and went off to a facility that I won't share that is still classified in some way. Spent a month offsite making measurements. That was sort of the old lab style, it didn't matter where you were funded if you were needed you they would do their best to get you to come help. I didn't mind on that particular occasion. Some people did take offense to stop what they were doing and go work on something else. Well anyway that was the old style.

12. *Who were the people you worked with, what was their role during the project, and do you know if they still reside in the state or if they are deceased?*

[Covers this question throughout the interview.]

13. *During your time at the Lab, what was the big picture of LANL's mission and the role of your group in that mission?*

All of us in that division saw our purpose as energy for the future. Unlike some organizations who have to wrestle with why am I doing what I am doing. That was never a problem in CTR division.

14. *What would you consider the high points and low points of your career here?*

[Covered in question 7.]

15. *The importance of what you did during the Fusion research, how is it still important today?*

Well that's what I told you I wanted to talk about.

Here is your opening.

The history of fusion energy research from my perspective started with the challenge, can we make controlled fusion energy happen? Whereby controlled, we mean as opposed to a hydrogen bomb, you definitely make energy happen from fission reactions but the initiation of that comes from an atomic bomb, and so you are multiplying the energy of an atomic bomb to make a hydrogen bomb. This is obviously uncontrolled in the sense that such a large explosion it is not easy to see how you can turn that into electricity. People have talked about that in a project about 20 years ago but from the environmental perspective and just a lot of reasons you wouldn't imagine that being very practical.

So the question was, can you do controlled fusion in the laboratory and make more energy than you put in? There are many ways to imagine doing that. Which is one of the dilemmas that government's face trying to support this type of work. If you talk to 10 scientists you will get 20 opinions on how this might best be done. So in the early days the issue was can it be done at all and if there was a way to do it we all assumed that then it could be made into a practical thing. Clearly if you could make more energy than you were putting in it was just an engineering exercise to make it practical.

In the early days there were two categories of approaches, there was the steady state approach and the pulsed approach. The steady state approach was stellerators and mirrors. The pulsed approach was Los Alamos theta and z-pinches. The way to make the system practical (to make more energy than you were putting in) seemed more difficult for the pulsed approach. The reason was if you were making a pulse—like a cylinder, like a diesel car—you had to recreate the plasma every time you pulsed it. The plasma usually took a lot of equipment to make it. So you were recreating it over and over and you had a lot of energy sloshing around, you were throwing all the energy into this pulsed thing and it was coming back out. You had to start over and do it all over again. That circulating energy cost money and it just doesn't seem at first glance to be the practical way to go. The mirror program and the stellerator program then discovered that the Russians had discovered a way to do the steady state way called the Tokamak. Basically all that previous work was set aside and they went to work on the Tokamak. While we kept working on the pulsed approach.

The Tokamak has been a tremendous scientific success and it has progressed to the place where we know you can make more energy out than you put in. They have demonstrated a return of between a half and one on what they put in, between 50 and 100 percent. This is a million times more than it was when I started in this business. Makes it an unqualified scientific success. But, the rules of mother nature turn out to say that to make a power source out of it takes a facility that can be designed and it has been on a international basis and its called ITER. Just this last year less than a year ago, [unclear on tape], an influential appropriator, basically said that ITER is a dead project, it costs too much money, involves working with four other nations that are not willing to put up the money for the ITER project. We are certainly not going to put up the 10 billion dollars for this big reactor so stop it we are through considering it. This is a harsh judgment as politicians are apt to do, but there is a legitimate point there. If the experiments cost 10 billion dollars then try to make a development process means a number of 10 billion dollar trial and error things. In the end if you are going to sell energy at 5 to 10 cents a kilowatt hour and you had to spend 30, 40, or 50 billion dollars before you could sell the first kilowatt hour you are going to have to sell electricity for 200 years before you make back the money. Now you could say that if the government pays for the development then some company sells the product. You have to ask yourself is this really the right thing for the taxpayer to do. Why should we let this plasma physicists billions and billions of dollars to sell a few 100 million dollars worth of energy. There is no logic to this.

There is a term in industry called net present value for projects where you calculate how much development you have to do before you can sell you product at a price and make a return on it. Many technologies suffer because their net present value is negative instead of positive; the amount of money it would take to develop it doesn't equal the profit when you sell it. That is the problem with steady state fusion, Tokamak's in particular.

Now we come back to the role of power research at Los Alamos and a different vision of the future. I mentioned briefly that in the 1970's there was a thing called the fast liner. At the time I didn't appreciate it, I thought it was kind of quirky because the idea was to take a "beer can," put plasma in it, crunch the can and you would get a burst of energy out. I thought at the time if it would work and the plasma would make energy then you didn't have to put it in the "beer can" you just take the plasma, make it bigger and make your energy with the plasma and not bother with the "beer can". So why would we want to put it in the "beer can"? The answer is the cost. We now have looked at this more closely and realized that if you put it in the "beer can" you can make that burst of energy for a couple of bucks. Instead of 10 billion dollars you can take a facility that costs 10 million dollars and pay a couple of dollars for the "beer can" and you would get twenty dollars of electricity out of it. The cost of development would be 10 to 100 times less for the pulsed facility to crunch the "beer can" than it is to put this big steady state plasma together that makes energy for you. The physical understanding of this possibility wasn't there in the 1970's, because we hadn't done the compact torus experiments. One of the whole problems of the compact torus at the time was that people assumed that it had to be steady state so that what we were studying a pulsed plasma that eventually we would learn how to make it steady state. Turns out that if you do that it is no better than a Tokamak. So you come out behind because of details of energy confinement. In the pulsed approach, which we weren't even thinking about in the 1980's, we were developing the understanding that this plasma (the smoke ring type) is the perfect thing to slip in the "beer can" and crunch.

Today we are trying to do the uphill battle of convincing an establishment that they are going down a blind alley, if they would just give us 7 million a year for three years we could accomplish the same thing as what multi hundred million dollar facilities used to do and for another 30 million or so we could have energy break even in 5 years and be on the fast track path to economical fusion energy. You can imagine all of the bureaucracy of DOE to the scientists who have invested their careers on Tokamak's and want to see them turn into an energy source. The resistance to this argument is very large. On the other hand, nobody has yet found anything with the technical argument and there is a ground swell of interest. We hope will grow into a chance to try this thing in a few years. All of the data that made these arguments convincing was generated out of the work in the 1970's and 1980's at Los Alamos National Lab. Whoops I overstated that, all the work was lead by Los Alamos National Laboratory. Because we were successful on these things, other people picked up what were doing around the country and duplicated our work. Even that is a slight exaggeration because a group in Russia also was working on this technology. When people first imagined fusion back in the 1950's, Enrico Fermi and Sakharov in Russia both noticed that there were two approaches, steady state and pulsed. They noticed the pulsed approach would make sense if you mixed with the fuel a magnetic field before you crunched it in the can. That's what we came to call later a compact torus, a thing that mixes a magnetic field with the fuel. In some ways we are talking about one of the very oldest ideas but it has been ignored for a long time and we are essentially trying to re-ignite interest in this approach.

I am going to a meeting of 300 plasma fusion researchers in Snowmass, Colorado; we are going to be making our argument and listening to the counter arguments and trying to see if we can generate a grass roots ground swell to put money into this. You understand we are asking for 7 million out of a budget of 230 million so the percentage we are talking about is quite small.

This idea of magnetized target fusion, this is what we call putting a compact torus in a can and crunching it, is a half-breed between inertial fusion, which is to squeeze plasma using a laser and make a tiny microbomb out of it, versus the steady state approach of conventional magnetic fusion like a Tokamak or Stellerator. It's sort of half way between, it uses plasma physics of magnetic confinement from the magnetic side and uses the pulse power approach like lasers from the inertial side. The power you need is not as expensive as laser power you can use electrical power, which is 1000 times less expensive then the lasers.

16. *Do you have any general comments and any additional information you would like to add?*

    No I think that about covers it for now.

Appendix B: Status and Progress Reports for the Controlled Thermonuclear Research Program

The Controlled Thermonuclear Research Program generated quarterly, semiquarterly, or annual status and progress reports. These reports give technical information related to the work that was being performed.

Glasstone, S., Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending May 20, 1960, LAMS-2444, July, 1960.

Glasstone, S., Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending August 20, 1960, LAMS-2464, September, 1960.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending November 20, 1960, LAMS-2488, December, 1960.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending February 20, 1961, LAMS-2529, March, 1961.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending May 20, 1961, LAMS-2570, June, 1961.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending August 20, 1961, LAMS-2619, September, 1961.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending November 20, 1961, LAMS-2681, January, 1962.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending February 20, 1962, LAMS-2682, March, 1962.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending May 20, 1962, LAMS-2721, June, 1962.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending August 20, 1962, LAMS-2754, October, 1962.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending November 20, 1962, LAMS-2816, December, 1962.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending February 20, 1963, LAMS-2874, March, 1963.

Physics Division, Quarterly Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending May 20, 1963, LAMS-2916, June, 1963.

Physics Division, Semiannual Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending October 20, 1963, LAMS-3004, November, 1963.

Physics Division, Semiannual Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending April 20, 1964, LA(MS)-3085, May, 1964.

Physics Division, Semiannual Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending October 20, 1964, LA-3202-MS, December, 1964.

Physics Division, Semiannual Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending April 30, 1965, LA-3320-MS, June, 1965.

Physics Division, Semiannual Status Report of the LASL Controlled Thermonuclear Research Program for Period Ending October 31, 1965, LA-3434-MS, December, 1965.

Physics Division, Review of Controlled Thermonuclear Research At Los Alamos, 1965, LA-3253-MS, August, 1965.

Physics Division, Status Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October 31, 1966, LA-3628-MS, December, 1966.

Physics Division, Status Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October 31, 1967, LA-3831-MS, December, 1967.

Physics Division, Status Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October 31, 1968, LA-4075-MS, January, 1969.

Physics Division, Status Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October, 1969, LA-4351-MS, February, 1970.

Physics Division, Status Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October, 1970, LA-4585-MS, February, 1971.

Motz, H.T., Progress Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October, 1971, LA-4888-PR, February, 1972.

Ribe, F.L., Progress Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October, 1972, LA-5250-PR, June, 1973.

Katz, M.J., Progress Report of the LASL Controlled Thermonuclear Research Program for 12 Month Period Ending October, 1973, LA-5656-PR, July, 1974.

Ribe, F.L., LASL Controlled Thermonuclear Research Program January-December, 1974, LA-6044-PR, August, 1975.

Sawyer, G., LASL Controlled Thermonuclear Research Program January-December, 1975, LA-6582-PR, December, 1976.

Thomas, K.S., LASL Controlled Thermonuclear Research Program January-December, 1976, LA-7082-PR, March, 1978.

Ribe, F.L., LASL Controlled Thermonuclear Research Program January-December, 1974, LA-6044-PR, August, 1975.

Sawyer, G., Thomas, K.S., LASL Controlled Thermonuclear Research Program January-December, 1977, LA-7474-PR, February, 1979.

Appendix C: Glossary

Beta - The ratio of plasma particle pressure to the magnetic field pressure. The value ranges from 0-1. High beta is usually 0.5 or more. Low beta is usually 0.2 or less.

Closed Magnetic Confinement - The system is a doughnut-shaped hollow chamber (torus). The magnetic field lines are closed and the charged particles cannot escape by traveling along the field lines.

Critical Ignition Temperature - The temperature where more energy is produced by fusion than is lost.

Deuterium - Isotope of hydrogen (H-2).

Energy Confinement Time - The time required for most of the heat to leak out of a hot plasma.

Field Line - An imaginary line denoting the direction of a magnetic field.

Fission - The splitting of heavy atomic nuclei (Uranium-235 and Plutonium) into lighter fragments which releases energy.

Flux Surface - An imaginary surface in a space mapped out by magnetic field lines inside a plasma containment device.

Fusion - The union of light atomic nuclei (hydrogen, deuterium, and tritium) to form a heavier nuclei and release energy.

Ion - An electrically charged atom. Positive ions have lost electrons; negative ions have gained electrons.

Ionized Gas - Consists of mostly positively charged nuclei and free negative electrons.

Inertial Fusion - Fusion energy produced by exploding tiny fuel pellets.

Magnetic Confinement - Use of a magnetic field to control the movement of charged particles in plasma.

Magnetic Mirror - Place a strong magnetic field on the ends of a open-ended confinement system which causes the charged particles to be reflected back to an area of lower magnetic strength

Open-ended Confinement - The shape of a cylinder, the magnetic lines run parallel to the length of the cylinder.

Pinch Effect - Pass an electric current through plasma, which produces a magnetic field that confines and compresses the plasma.

Plasma - A highly ionized gas formed by passing a high voltage current through a gas (deuterium or tritium).

Plasma Diagnostic Techniques - The study of the behavior of the plasma by determining properties such as temperature, pressure, densities, electron and ion energies, magnetic field distribution, current strength, magnetic field distribution, current strength, and the extent of the thermonuclear reaction.

Stellarator - A toroidal system shaped like a figure eight so that it no longer is in one plane or a race track configuration which uses confining coils and stabilizing windings which stops the field from closing upon itself.

Spheromak - A toroidal magnetic plasma device in which the plasma itself creates a closed magnetic flux surfaces like those of a Tokamak.

Thermonuclear Reactions - Fusion reaction brought about by means of high temperature.

Theta-Pinch - The electric current flows around the plasma column.

Tokamak - A z-pinch toroidal system with features of the Stellarator.

Toroidal Field - The magnetic field produced in a torus. The electric current is passed through the rings surrounding the torus.

Torus - A closed magnetic confinement system, which is shaped like a doughnut.

Tritium - Isotope of hydrogen (H-3).

Z-Pinch - The electric current flows along the plasma column.

Appendix D: LANL Drawings List

TA	BLDG	PREFIX	DRAWNUM	PAGE	REV	LOG_DATE	DOC_DATE	PROJID	DISC	TITLE
3	105	AB	60	2	0	26-Oct-92		11831		MECH; ROOF PLAN
3	105	AB	60	3	0	26-Oct-92		11831		MECH; 2ND. FLOOR PLAN COMPOSITE OF STORM DRAIN & SANITARY SEWER SYSTEM
3	105	AB	60	4	0	26-Oct-92		11831		MECH; 1ST. FLOOR PLAN COMPOSITE OF STORM DRAIN & SANITARY SEWER SYSTEM
3	105	AB	60	5	0	26-Oct-92		11831		MECH; BASEMENT FLOOR PLAN, COMPOSITE OF STORM DRAIN & SANITARY SEWER SYSTEM
3	105	AB	60	6	0	26-Oct-92		11831		MECH; STORM DRAIN ISOMETRIC
3	105	AB	60	7	0	26-Oct-92		11831		MECH; SANITARY SEWER ISOMETRIC
3	105	AB	60	8	0	26-Oct-92		11831		MECH; SANITARY SEWER DETAILS
3	105	AB	60	1	0	26-Oct-92		11831		AS-BUILT FAC. DRAIN PLAN SHERWOOD BLDG., CIVIL; SITE PLAN, STORM DRAIN & SANITAR
3	105	C	21944	14	0	24-Jun-59		1974	E	ELECTRICAL - RISER DIAGRAMS AND DETAILS
3	105	C	21943	13	0	24-Jun-59		1974	E	ELECTRICAL - SECOND FLOOR PLANS AND DETAILS
3	105	C	21942	12	0	24-Jun-59		1974	E	ELECTRICAL - FIRST FLOOR PLANS AND SCHEDULES
3	105	C	21941	11	0	24-Jun-59		1974	AC	HEATING AND VENTILATING - DETAILS
3	105	C	21940	10	0	24-Jun-59		1974	AC	HEATING AND VENTILATING - PLANS
3	105	C	21939	9	0	24-Jun-59		1974	A	ARCHITECTURAL - ELEVATIONS AND SECTIONS
3	105	C	21938	8	0	24-Jun-59		1974	A	ARCHITECTURAL - SECOND FLOOR PLAN AND DETAILS
3	105	C	21937	7	0	24-May-59		1974	A	ARCHITECTURAL - FIRST FLOOR PLAN AND DETAILS
3	105	C	21936	6	0	24-Jun-59		1974	S	STRUCTURAL - DETAILS
3	105	C	21935	5	1	24-Jun-59		1974	S	STRUCTURAL - FRAMING ELEVATIONS AND SECTIONS
3	105	C	21934	4	0	24-Jun-59		1974	S	STRUCTURAL - ROOF FRAMING PLAN
3	105	C	21933	3	1	24-Jun-59		1974	S	STRUCTURAL - SECOND FLOOR FRAMING PLAN
3	105	C	21932	2	0	24-Jun-59		1974	S	STRUCTURAL - FOOTING AND FOUNDATION PLAN
3	105	C	21931	1	0	24-Jun-59		1974	C	LAYOUT, UTILITIES, PAVING AND GRADING PLAN
3	105	C	21930	0	0	13-Oct-65		1974	T	SHERWOOD ADDITION SM-105 - TITLE AND INDEX
3	105	C	21915	1	0	16-Jul-63		2918	M	UTILITIES INSTALLATION, ROOM 109, BLDG. SM-105 - PLAN, DETAILS & SCHEM.
3	105	C	21898	5	0	28-Sep-59		2291	M	MECHANCICAL - ELEVATIONS & DETAILS
3	105	C	21897	4	0	28-Sep-59		2291	M	MECHANICAL - PIPING PLAN
3	105	C	21896	3	0	28-Sep-59		2291	M	MECHANICAL - DETAILS, PLAN & ELEVATION
3	105	C	21895	2	0	28-Sep-59		2291	M	MECHANICAL - PLAN, DETAIL & EQUIPMENT LIST
3	105	C	21894	1	0	28-Sep-59		2291	M	IGNITRON COOLING SYSTEM, BLDG. SM-105 - MECHANICAL - PLAN & NOTES
3	105	C	21800	3	0	08-Jan-64		2938	E	ELECTRICAL - PLAN
3	105	C	21799	2	0	08-Jan-64		2938	M	MECHANICAL - SECTION
3	105	C	21798	1	0	08-Jan-64		2938	M	CO2 SYSTEMS FOR SCYLLAC IV, BLDG. SM-105 - MECHANICAL - PLANS & SECTION
3	105	C	21781	8	1	28-Feb-61		2285	F	FIRE ALARM CONDUIT SYSTEM
3	105	C	21780	7	1	28-Feb-61		2285	E	ELEC. - CR19 CONNECTIONS
3	105	C	21779	6	1	28-Feb-61		2285	E	ELEC. - PNL. X-4 CONNECTIONS
3	105	C	21778	5	1	28-Feb-61		2285	E	ELEC. - RECT. PAD CONTROL CONN.
3	105	C	21777	4	1	28-Feb-61		2285	E	ELEC. - BLOCK DIAGRAM OF CONTROLS
3	105	C	21776	3	1	28-Feb-61		2285	E	ELECTRICAL PLAN
3	105	C	21775	2	1	28-Aug-61		2285	M	MECHANICAL - ELECTRICAL EQUIPMENT COOLING
3	105	C	21774	1	1	28-Feb-61		2285	G	2.5MW PWR SUPPLY, SHERWOOD BLDG SM-105, PHASE 'B'-BUS BAR SUPPORT DETAILS, LOCAT
3	105	C	21316	2	1	21-Aug-61		2605	S	DETAILS & SECTIONS
3	105	C	21315	1	1	21-Aug-61		2605	F	MONORAIL, HOIST & FIRE ESCAPE LADDER, BLDG. SM-105 - LOCATION PLAN, ELEVATION, D
3	105	C	23415	3	0	06-Oct-61		2622	E	ELECTRICAL - LAYOUT

3	105	C	23414	2	0	06-Oct-61		2622	M	MECHANICAL
3	105	C	23413	1	0	06-Oct-61		2622	A	HIGH VOLTAGE DEVELOPMENTAL FACILITY, BLDG. SM-105 - LOCATION PLAN, PLANS, SECTI
3	105	C	21135	2	0	30-Dec-59		2349	E	ELECTRICAL
3	105	C	21134	1	0	30-Dec-59		2349	M	HEATING & LIGHTING IMPROVEMENTS, RM. 111,112, BLDG. SM-105 - MECHANICAL
3	105	C	23756	3	0	17-Feb-60		2353	E	ELECTRICAL - PLAN
3	105	C	23755	2	0	17-Feb-60		2353	M	MECHANICAL
3	105	C	23754	1	0	17-Feb-60		2353	M	UTILITIES INSTALLATION, RM. 113, BLDG. SM-105 - MECHANICAL
3	105	C	23440	6	0	30-Nov-59		2321	E	ELECTRICAL - PLAN & DETAILS
3	105	C	23439	5	0	30-Nov-59		2321	M	MECH. PLAN, ELEVATIONS & DIAGRAM
3	105	C	23438	4	0	30-Nov-59		2321	M	MECH. ELEVATIONS & NOTES
3	105	C	23437	3	0	30-Nov-59		2321	M	MECH. ELEV. & EQUIPMENT LIST
3	105	C	23436	2	0	30-Nov-59		2321	M	MECH. PLAN & ARCH. DETAILS
3	105	C	23435	1	0	30-Nov-59		2321	M	ZEUS CONTROL ROOM MODIFICATIONS BLDG. SM-105 ANNEX - MECH. CONTROL RM. & LOCATIO
3	105	C	23116	1	0	21-Aug-62		2631	M	SYCLLA IV, BLDG. SM-105 - EQUIP. INSTALLATION, COMPRESSED AIR DRYER, MECH. ELEC.
3	105	C	23375	7	0	07-Oct-59		2299	E	ELECTRICAL - PLAN & NOTES
3	105	C	23374	6	0	07-Oct-59		2299	M	MECHANICAL - SOLDERING BENCH & HOOD
3	105	C	23373	5	0	07-Oct-59		2299	M	MECHANICAL - HEAT EXCHANGER, SECTION & DETAILS
3	105	C	23372	4	0	07-Oct-59		2299	M	MECHANICAL - PIPING, PLAN & DIAGRAMS
3	105	C	23371	3	0	07-Oct-59		2299	M	MECHANICAL - DETAILS, SECTIONS & ELEVATIONS
3	105	C	23370	2	0	07-Oct-59		2299	AC	MECHANICAL - VENTILATION PLAN, NOTES & LIST OF MATERIAL
3	105	C	23369	1	0	07-Oct-59		2299	S	BRIGHT DIP & DEGREASER INSTALLATION, BLDG. SM-105 - STRUCTURAL - PLANS & DETAILS
3	105	C	23368	1	0	18-Oct-62		2800	AC	VENTILATION MODIFICATIONS, ROOM 100-A, BLDG. SM-105 - PLAN & DETAILS
3	105	C	23366	1	0	11-Oct-62		2811	S	SCYLLA PIT SAFETY MODIFCATIONS, BLDG. SM-105 - LADDER CAGE IN PIPE CHASE CONTRO
3	105	C	37341	1	0	20-Feb-69	18-Feb-69	0	E	VOLTAGE REGULATOR COVERS, BLDG. SM-105
3	105	C	25969	1	0	21-Feb-61	16-Nov-60	2285	F	2.5 MW POWER SUPPLY, SHERWOOD BLDG. SM-105, PHASE 'A', FIRE PROTECTION SYSTEM
3	105	C	25967	2	0	23-Nov-60	22-Nov-60	2285	M	2.5 MW POWER SUPPLY, SHERWOOD BLDG. SM-105, PHASE 'A', MECHANICAL
3	105	C	25966	1	0	23-Nov-60	22-Nov-60	2285	S	2.5 M.W. POWER SUPPLY, SHERWOOD BLDG. SM-105, PHASE 'A', STRUCTURAL
3	105	C	26263	2	0	27-May-63		2285	E	FAN MOTOR REPLACEMENT, 2.5 MW POWER SUPPLY, BLDG. SM-105, ELECTRICAL
3	105	C	26262	1	0	27-May-63		2285	M	FAN MOTOR REPLACEMENT, 2.5 MW POWER SUPPLY, BLDG. SM-105, MECHANICAL
3	105	C	26152	3	0	04-May-61	01-May-61	2285	E	2.5 MV POWER SUPPLY, ELECTRICAL
3	105	C	26151	2	0	04-May-61	01-May-61	2285	M	2.5 MW POWER SUPPLY SHERWOOD, MECHANICAL
3	105	C	26150	1	0	04-May-61	01-May-61	2285	M	2.5 MW POWER SUPPLY, SHERWOOD BLDG., SM-105, PHASE 'C', MECHANICAL
3	105	C	25797	1	0	19-Sep-60		2453	G	STAIRWAY, BLDG. SM-105, LOC. PLAN, FLOOR PLAN, GENERAL NOTES, ARCH. DETS. & ELEC
3	105	R	2288	2	0	05-Apr-62	16-Dec-61	0	A	FALLOUT SHELTER SURVEY, BASEMENT, MEZZ. & SECOND FLOOR PLANS, SOUTH MESA SITE
3	105	R	2287	1	0	05-Apr-62	15-Dec-61	0	A	FALLOUT SHELTER SURVEY, FLOOR PLANS, SOUTH MESA SITE
3	105	C	38462	3	0	30-Apr-70		4411	E	ELECTRICAL
3	105	C	38461	2	0	30-Apr-70		4411	M	MECHANICAL; EQUIPMENT LIST & NOTES
3	105	C	38460	1	0	30-Apr-70		4411	M	AIR-COOLED CONDENSER INSTALLATION, BLDG; SM-105 - MECHANICAL; PLAN, ELEVATIONS
3	105	R	1752	2	0	11-Jan-63	05-Mar-59	0	F	FIRE ALARM EQUIPMENT, BUILDING SM-105, BASEMENT, MEZZANINE & SECOND FLOOR PLANS
3	105	R	1751	1	2	11-Jan-63		0	F	FIRE ALARM EQUIPMENT, BUILDING SM-105, FIRST FLOOR PLAN
3	105	C	32381	21	0	23-Feb-66		3069	F	AUTOMATIC SPRINKLER INSTALLATION FY 1964, BLDG. SM-105
3	105	C	46354	1	0	23-Sep-92	16-Jun-92	13063	E	MATERIALS SALVAGE PREP., ELEC; POWER PLAN
3	105	C	32360	7	1	24-Mar-66		3317	F	ELECTRICAL - PLANS - FIRE DETECTION, TELEPHONE PAGING & GROUNDING
3	105	C	32359	6	1	24-Mar-66		3317	G	ELECTRICAL - PLAN SCOPE OF WORK - BILL OF MATERIAL - GENERAL NOTES - LEGEND

3	105	C	32358	5	1	24-Mar-66		3317	M	MECHANICAL - DETAILS, NOTES & EQUIPMENT LIST
3	105	C	32357	4	1	24-Mar-66		3317	M	MECHANICAL - PLAN & SECTION
3	105	C	32356	3	1	24-Mar-66		3317	A	ARCHITECTURAL
3	105	C	32355	2	1	24-Mar-66		3317	A	ARCHITECTURAL
3	105	C	32354	1	1	24-Mar-66		3317	A	SHERWOOD OFFICE ADDITION BLDG. SM-105 - ARCHITECTURAL
3	105	C	48755	21	0	04-Mar-93		0	UN	SHERWOOD BLDG. SM-105
3	105	C	46354	2	0	23-Sep-92	16-Jun-92	13063	E	MATERIALS SALVAGE PREP., ELEC; GENERAL NOTES, BILL OF MATERIAL, NAMEPLATE & PANELB
3	105	C	42862	2	0	17-Sep-76		5555	E	ELEC; PLAN, CONN. DIAGRAMS, NOTES, NAMEPLATES AND BILL OF MATERIAL
3	105	C	42862	1	0	17-Sep-76		5555	C	AIR CURTAIN INSTAL., BLDG. SM-105, TA-3. CIVIL; ELEC., MECH. PLAN SECT., DETS.,
3	105	C	42815	4	0	06-Aug-75		5399	E	ELECTRICAL
3	105	C	42815	3	0	06-Aug-75		5399	M	MECH; EQUIP. LIST AND NOTES
3	105	C	42815	2	0	06-Aug-75		5399	C	MECHANICAL AND CIVIL DETAILS
3	105	C	42815	1	0	06-Aug-75		5399	AC	SCREEN ROOM AIR CONDITIONING, PIT ROOM, SM-105, TA-3. MECH; PLAN AND DETAILS
3	105	C	45336	6	0	22-Sep-87	27-Aug-87	9156	F	FRX-C UPGRADE, ROOM MODIFICATIONS, FIRE PROTECTION PLAN
3	105	C	45336	5	0	22-Sep-87	20-Aug-87	9156	S	FRX-C UPGRADE, ROOM MODIFICATIONS, STRUCT., COLUMN AND BASE PLATE DETAILS
3	105	C	45336	4	0	22-Sep-87	20-Aug-87	9156	S	FRX-C UPGRADE, ROOM MODIFICATIONS, STRUCT., RAILING DETAILS
3	105	C	45336	3	0	22-Sep-87	20-Aug-87	9156	S	FRX-C UPGRADE, ROOM MODIFICATIONS, STRUCT., FLOOR EXTENSION SECTION
3	105	C	45336	2	1	22-Sep-87	19-Oct-87	9156	S	FRX-C UPGRADE, ROOM MODIFICATIONS, STRUCT., BEAM REPLACEMENT DETAILS
3	105	C	45336	1	1	22-Sep-87	19-Oct-87	9156	S	FRX-C UPGRADE, ROOM MODIFICATIONS, STRUCT., UPPER LEVEL
3	105	C	37396	1	0	16-May-69		4096	M	ROOF DRAINAGE MODS. BLDG. SM-105
3	105	C	26318	1	0	28-Dec-62		2853	A	INSTALLATION OF MONORAILS, BLDG. SM-105, PARTIAL FLOOR PLAN- PIECE PARTS - HARDW
3	105	C	45266	3	0	28-Jul-87		9034	E	ELEC; ONE LINE DIAGRAM BILL OF MATERIAL AND NAMEPLATE SCHEDULE
3	105	C	45266	2	0	28-Jul-87		9034	E	ELEC; ELECTRICAL PLAN, REMOVAL PLAN AND ELEVATION
3	105	C	45266	1	0	28-Jul-87		9034	E	RELOCATION OF ELECTRICAL SERVICES TO POWER SUPPLIES RM.-184,ELEC; NOTES SCOPE OF
3	105	C	48517	4	0	12-Dec-92		0	C	LOT-2, TA-3-105 ROOF PLAN-EXISTING FEATURES, SITE PLAN, ELEVATIONS
3	105	C	26730	1	0	02-Feb-62		2710	S	ELEVATOR PIT ESCAPE LADDER, BLDG. SM-105, LOCATION PLAN, PLAN, SECTIONS & DETAI
3	105	C	18530	2	0	18-Aug-59		2298	S	RACK BASE BEARING PLATE DETAILS
3	105	C	18529	1	0	18-Aug-59		2298	A	CAPACITOR RACK INSTALLATION, BLDG. SM-105 - LOCATION PLAN, FLOOR PLAN, DETAILS
3	105	PL	140	2	0	25-May-61		2285	A	EQUIPMENT LAYOUT - ROOM NO. 104
3	105	PL	142	4	0	25-May-61		2285	UN	RECTIFIER INSTALLATION, 13.2 KV FEEDER LAYOUT
3	105	PL	143	5	0	25-May-61		2285	E	RECTIFIER INSTALLATION, ELECTRICAL, SINGLE LINE DIAGRAM
3	105	PL	139	1	0	25-May-61		2285	E	2.5 MW POWER SUPPLY, SHERWOOD - BLDG. SM-105 - PROPOSED COOLING TOWER & TRANSFO
3	105	R	3981	1	0	19-Jan-68	05-Oct-67	3586	A	AUTIO SYSTEM EQUIP. LOCATION (INTERCOM), BASEMENT FLOOR PLAN
3	105	R	3983	3	0	19-Jan-68	05-Oct-67	3586	A	AUDIO SYSTEM EQUIP. LOCATION, SECOND FLOOR PLAN
3	105	R	3984	1	0	28-Dec-67	06-Sep-67	3586	M	INTERCOM SYSTEM BLOCK DIAGRAM
3	105	R	3693	1	1	27-Sep-66	15-Sep-66	3546	M	EQUIPMENT SURVEILLANCE SYSTEMS, FIRST FLOOR PLAN
3	105	R	3698	2	1	27-Sep-66	15-Sep-66	3546	M	EQUIPMENT SURVEILLANCE SYSTEMS, INFORMATION SHEET
3	105	R	3363	1	0	17-May-89	19-Jul-73	0	A	SHERWOOD BUILDING, BASEMENT FLOOR PLAN
3	105	R	3364	2	7	23-Jan-63	30-Mar-84	0	A	FIRST FLOOR PLAN, SHERWOOD BUILDING
3	105	R	3365	3	7	23-Jan-63	30-Mar-84	0	A	SECOND FLOOR PLAN, SHERWOOD BUILDING
3	105	R	356	1	0	16-Mar-66	04-Feb-66	0	A	NEW ROOM NUMBERS, NOW INCLUDES FORMER BLDGS.
3	105	R	357	2	0	16-Mar-66	04-Feb-66	0	A	NEW ROOM NUMBERS, NOW INCLUDES FORMER BLDGS.
3	105	C	49038	4	1	16-Dec-92	30-Aug-83	0	C	TA-3 CONDENSATE SYSTEM REPLACEMENT, CIVIL, PLAN & PROFILE, SCOPE OF WORK, MANHOLE
3	105	C	49038	1	1	16-Dec-92	30-Aug-83	0	T	TA-3 CONDENSATE SYSTEM REPLACEMENT FY-83, TITLE SHEET, INDEX TO DRAWINGS & LOCATI

3	105	C	48768	47	0	10-Feb-93		0	UN	TA-3-SM-105 SHERWOOD BLDG. -SITE & UTILITY PLAN
3	105	C	48768	48	0	10-Feb-93		0	UN	TA-3-SM-105 SHERWOOD BLDG. -FLOOR AREA PLAN
3	105	C	48768	49	0	10-Feb-93		0	UN	TA-3-SM-105 SHERWOOD BLDG. -ELEVATIONS
3	105	C	48768	50	0	10-Feb-93		0	S	TA-3-SM-105 SHERWOOD BLDG. -ROOF STRUCTURAL PLAN
3	105	C	48768	51	0	10-Feb-93		0	UN	TA-3-SM-105 SHERWOOD BLDG. -HEATING PLAN-INFORMATION
3	105	C	48768	52	0	10-Feb-93		0	UN	TA-3-SM-105 SHERWOOD BLDG. -ALARM SYSTEM PLAN
3	105	C	48024	1	0	24-Sep-92		0	S	SUPPLEMENTARY STRUCT. STEEL DETAILS TO CLARIFY LASL DWG. NO. ENG-C-43004 RE-SM-1
3	105	C	48024	3	0	24-Sep-92		0	UN	SHEET 3 OF 3 IS NOT INCLUDED IN SET
3	105	C	47987	1	0	07-Nov-92	08-May-81	0	F	FIRE SPRINKLER SYSTEM MODS RM-189
3	105	C	47987	2	0	07-Nov-92	08-May-81	0	F	FIRE SPRINKLER SYSTEM MODS RM-190
3	105	C	47978	1	0	14-Nov-92		0	UN	SHEET 1 OF 3 NOT INCLUDED IN SET
3	105	C	47978	2	0	14-Nov-92		0	UN	SHEET 2 OF 3 NOT INCLUDED IN SET
3	105	C	47843	1	0	20-Sep-92		5262	UN	STAIRWELL PLATFORM INSTALN., PLAN & SECTIONS
3	105	C	47549	1	0	16-Sep-92		0	F	SPRINKLER PIPING MODIFICATION RM-190
3	105	C	47378	1	0	19-Sep-92		0	F	SPRINKLER MODIFICATIONS, REMOVAL PLAN
3	105	C	47378	2	0	19-Sep-92		0	UN	INSTALLATION
3	105	C	47078	4	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTEM SCYLLA IV-P-PIT AREA PLAN-LEVEL-'C'
3	105	C	47078	5	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTEM SCYLLA IV P-PIT AREA ELEVATION & RISER DET.
3	105	C	47078	7	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTM SCYLLA IV-P-PIT AREA SECTIONS & DETAILS
3	105	C	47078	8	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTEM SCYLLA IV-P-PIT AREA FIRE ALARM-NOTES-MATERIAL
3	105	C	47078	1	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTEM SCYLLA IV-P-PIT AREA LOCAITON & PLOT PLAN, SM-1
3	105	C	47078	3	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTEM SCYLLA IV-P-PIT AREA PLAN-LEVEL 'B'
3	105	C	45539	4	0	03-Oct-88		9317	E	ELECTRIAL; MCC -A,B AND 1 DEMOLITION
3	105	C	45539	5	0	03-Oct-88		9317	E	ELECTRICAL; MCC-A,B AND 1 CONSTRUCTION
3	105	C	45539	6	0	03-Oct-88		9317	E	ELECTRICAL; REVISED ONE-LINE DIAGRAM
3	105	C	45539	8	0	03-Oct-88		9317	E	ELECTRICAL; 'MCC-A' WIRING DIAGRAM
3	105	C	45539	9	0	03-Oct-88		9317	E	ELECTRICAL; 'MCC-A' WIRING DIAGRAM
3	105	C	45539	10	0	03-Oct-88		9317	E	ELECTRICAL; 'MCC-A' WIRING DIAGRAM
3	105	C	45539	11	0	03-Oct-88		9317	E	ELECTRICAL; 'MCC-A' WIRING DIAGRAM
3	105	C	45539	1	0	03-Oct-88		9317	G	RESTORE ELECTRICAL DISTRIBUTION SYSTEMS - ELECTRICAL; GENERAL NOTES
3	105	C	45539	2	0	03-Oct-88		9317	E	ELECTRICAL; NAMEPLATE SCHEDULE
3	105	C	45539	3	0	03-Oct-88		9317	E	ELECTRICAL; BILL OF MATERIALS
3	105	C	47843	2	0	20-Sep-92		5262	UN	STEEL CUT SHEET
3	105	C	47978	3	0	14-Nov-92		0	S	SUPPLEMENTARY STRUCT. STEEL DETAILS TO CLARIFY LASL DWG. NO. ENG-C-43004 RE-SM-1
3	105	C	48024	2	0	24-Sep-92		0	S	SUPPLEMENTARY STRUCT. STEEL DETAILS TO CLARIFY LASL DWG. NO. ENG-C-43004 RE-SM-1
3	105	C	44756	5	0	03-Apr-85	22-May-85	8077	M	COOLING WATER SYSTEM, F-0 PUMPING EXPERIMENT, MECH; SPECIFICATIONS
3	105	C	44756	6	0	03-Apr-85	03-Apr-85	8077	E	CCOLING WATER SYSTEM, F-0 PUMPING EXPERIMENT, ELECT; PLAN & DETAILS
3	105	C	44756	1	0	03-Apr-85	03-Apr-85	8077	M	COOLING WATER SYSTEM, F-0 PUMPING EXPERIMENT BLDG. 105, TA-3 MECH; PIPING PLAN
3	105	C	44756	2	0	03-Apr-85	03-Apr-85	8077	M	COOLING WATER SYSTEM, F-0 PUMPING EXPERIMENT, MECH; PIPING ELEVATIONS
3	105	C	44756	3	0	03-Apr-85	03-Apr-85	8077	M	COOLING WATER SYSTEM, F-0 PUMPING EXPERIMENT, 1ST & 2ND FLOOR SECTION VIEW
3	105	C	44434	1	2	15-May-84	06-Apr-83	7712	E	HALON INSTALLATION, STRUCT., ZT-40 SCREEN ROOM, FLOOR PLAN, PIPING DETAIL, EQUIPMENT
3	105	C	44434	1	2	15-May-84	06-Apr-83	7712	M	HALON INSTALLATION, STRUCT., ZT-40 SCREEN ROOM, FLOOR PLAN, PIPING DETAIL, EQUIPMENT
3	105	C	44434	1	2	15-May-84	06-Apr-83	7712	S	HALON INSTALLATION, STRUCT., ZT-40 SCREEN ROOM, FLOOR PLAN, PIPING DETAIL, EQUIPMENT
3	105	C	43882	4	1			6452	C	CIVIL; SITE AND REMOVAL PLAN

3	105	C	43882	6	1			6452	C	CIVIL; PLAN AND PROFILE
3	105	C	43882	7	1			6452	C	CIVIL; MANHOLE SM-1274 PLAN, SECTION, DETAIL
3	105	C	43882	8	1			6452	C	CIVIL; MANHOLE SM-1274 PLAN, SECTION DETAIL
3	105	C	43882	10	1			6452	C	CIVIL; SECTIONS AND LADDER DETAILS
3	105	C	43882	11	1			6452	C	CIVIL; DETAILS
3	105	C	43882	12	1			6452	E	ELEC; SITE PLAN
3	105	C	43882	13	1			6452	E	ELEC; ONE LINE DIAGRAM, NOTES, NAMEPLATE AND BILL OF MATERIAL
3	105	C	43882	1	1			6452	T	11 MVA, 13.2KV UNDERGROUND FEEDER BLDG. SM-105 TA-3 TITLE SHEET AND INDEX TO DR
3	105	C	43882	2	1			6452	G	SUBMITTALS, LEGEND
3	105	C	43882	3	1			6452	G	CIVIL; GENERAL NOTES
3	105	C	43834	1	0	24-Jul-80		6151	M	5MW POWER SUPPLY INSTALLATION BLDG. 105 TA-3 PHASE B MECH; LOCATION PLAN AND
3	105	C	43834	2	0	24-Jul-80		6151	M	MECH; SECTION
3	105	C	43834	4	0	24-Jul-80		6151	E	ELEC; SITE PLAN BLDG. SM-105, 136 AND 163
3	105	C	43834	5	0	24-Jul-80		6151	E	ELEC; PUMP CONTROL MODIFICATIONS
3	105	C	43834	6	0	24-Jul-80		6151	E	ELEC; PARTIAL PLAN BLDG. SM-105
3	105	C	43826	1	0	19-Jun-80		6452	E	11MVA, 13.2KV UNDERGROUND FEEDER CRITERIA BLDG. 105 TA-3
3	105	C	43743	1	0	23-Apr-80		6353	AC	CTX EXPER. AIR CONDIT. BLDG. SM-105 TA-3 MECH; PARITAL PLAN EQUIP. LAYOUT, LOC.
3	105	C	43743	3	0	23-Apr-80		6353	M	MECH; NOTES
3	105	C	43743	4	0	23-Apr-80		6353	M	MECH; EQUIPMENT LIST
3	105	C	43743	5	0	23-Apr-80		6353	E	ELEC; PARTIAL PLAN AND CONNECTION DIAGRAM
3	105	C	43724	1	0	29-Apr-80		6151	C	5MW POWER SUPPLY INSTALLATION BLDG. SM-105 TA-3, CIVIL; NOTES, LOCATION PLAN AN
3	105	C	43724	2	0	29-Apr-80		6151	C	CIVIL; SITE PLAN, DETAILS AND SECTION
3	105	C	43724	3	0	29-Apr-80		6151	M	MECH; SITE PLAN, SECTIONS, AND DETAIL
3	105	C	43724	4	0	29-Apr-80		6151	M	MECH; NOTES AND EQUIPMENT LIST
3	105	C	43724	6	0	29-Apr-80		6151	E	ELEC; ONE LINE DIAGRAM, NOTES, BILL OF MATERIAL AND SITE PLAN
3	105	C	43491	1	1	14-Jul-78	14-Jul-78	5827	S	CTR-1 EXPERIMENT RELOCATION,; PLATFORM, SECTION
3	105	C	43491	2	1	14-Jul-78	14-Jul-78	5827	S	CTR-1 EXPERIMENT RELOCATION; DETAILS AND DOOR SCHEDULE
3	105	C	43491	3	1	14-Jul-78	14-Jul-78	5827	M	CTR-1 EXPERIMENT RELOCATION; PLAN AND NOTES
3	105	C	43491	4	1	14-Jul-78	14-Jul-78	5827	E	CTR-1 EXPERIMENTAL RELOCATION; PLANS
3	105	C	43491	5	1	14-Jul-78	14-Jul-78	5827	E	CTR-1 EXPERIMENTAL RELOCATION; BILL OF MATERIAL, NAMEPLATE SCHED., AND NOTES
3	105	C	43482	1	1	17-Apr-78	17-Apr-78	5736	C	ZT 40 COMPRESSOR INSTALLATION, CIVIL; PLOT PLAN LOCATION PLAN
3	105	C	43482	2	1	17-Apr-78	18-Apr-78	5736	A	ZT-40 COMPRESSOR INSTALLATION ARCH; FLOOR PLAN ELEVATION AND DOOR SCHEDULE
3	105	C	43482	3	0	17-Jul-78	17-Apr-78	5736	A	ZT 40 COMPRESSOR INSTALLATION ARCH; SECTIONS AND DETAILS
3	105	C	43482	4	0	17-Jul-78	17-Apr-78	5736	M	ZT 40 COMPRSSOR INSTALLATION MECH; PLAN
3	105	C	43482	5	0	17-Jul-78	17-Apr-78	5736	M	ZT 40 COMPRESSOR INSTALLATION MECH; DETAIL, ELEVATION AND SCHEMATIC
3	105	C	43482	6	0	17-Apr-78	18-Apr-78	5736	M	ZT 40 COMPRESSOR INSTALLATION MECH; DETAIL AND SECTIONS
3	105	C	43482	7	1	17-Apr-78	17-Apr-78	5736	M	ZT 40 COMPRESSOR INSTALLATION MECH; SECTIONS, DETAILS
3	105	C	43482	8	0	17-Apr-78	09-Mar-78	5736	M	ZT 40 COMPRESSOR INSTALLATION MECH; EQUIPMENT LIST
3	105	C	43482	10	1	17-Apr-78	17-Apr-78	5736	E	ZT 40 COMPRESSOR INSTALLATION ELEC; POWER AND LIGHTING PLAN SECTION AND DETAIL
3	105	C	43472	1	0	05-Apr-78	05-Apr-78	5827	A	CTR EXPERIMENT RELOCATION PHASE A, FLOOR PLAN, SECTIONS
3	105	C	43383	1	1	10-Mar-78		5742	AC	SCREEN ROOM AIR CONDITIONING, BLDG. SM-105, TA-3 MECH; PARTIAL PLAN
3	105	C	43383	2	1	10-Mar-78		5742	M	MECH; SECTION, PIPING ISOMETRIC
3	105	C	43383	4	1	10-Mar-78		5742	E	ELECT; FLOOR PLAN
3	105	C	43383	5	1	10-Mar-78		5742	E	ELECT; NOTES, EQUIPMENT LIST

3	105	C	43376	1	0	26-Aug-77		5736	M	ZT-40 COMPRESSOR INSTALLATION, BLDG. SM-105, TA-3 MECH; PLAN
3	105	C	43376	2	0	26-Aug-77		5736	C	CIVIL; DETAILS; MECH; ELEVATION AND SCHEMATIC
3	105	C	43376	3	0	26-Aug-77		5736	M	MECH; NOTES AND EQUIPMENT LIST
3	105	C	43359	1	1	30-Nov-77		5721	E	ZT 40 POWER SUPPLY, BLDG. SM-105 ELEC; PLOT PLAN AND LOCATION PLAN
3	105	C	43359	3	1	30-Nov-77		5721	E	ELEC; FLOOR PLAN AND SUBSTATION PLAN
3	105	C	43359	4	1	30-Nov-77		5721	E	ELEC; NAMEPLATE SCHEDULE AND BILL OF MATERIAL
3	105	C	43359	5	1	30-Nov-77		5721	E	ELEC; ONE LINE DIAGRAM
3	105	C	43039	1	0	19-Aug-76		5619	C	SOLDERING ROOM RELOCATION, SM-105, TA-3. CIVIL; PLAN AND NOTES
3	105	C	43039	2	0	19-Aug-76		5619	M	MECH; PLANS, DETAILS, ELEVATIONS AND SECTIONS
3	105	C	43039	3	0	19-Aug-76		5619	M	MECH; PLANS, SECTION AND DETAILS
3	105	C	43039	4	0	19-Aug-76		5619	M	MECH; NOTES AND EQUIPMENT LIST
3	105	C	43039	5	0	19-Aug-76		5619	E	ELEC. PLAN AND DETAILS
3	105	C	43004	1	1	07-Sep-76		5583	C	CORRIDOR REMODELIND AND NOW PASSAGEWAY, BLDG. SM-105, TA-3. PLANS, NOTES AND S
3	105	C	42917	1	1	03-Oct-75		5491	C	PLASMA GUN PROTOTYPE PLATFORM, BLSG. SM-105, TA-3. CIVIL; SECOND FLOOR-SECTIONS-
3	105	C	42917	2	1	03-Oct-75		5491	C	CIVIL; THIRD AND TOP LEVEL AND DETAILS
3	105	C	42917	4	0	03-Nov-76		5491	S	SHOP DETAILS - STAIRS
3	105	C	42917	6	0	03-Nov-75		5491	S	SHOP DETAILS - MISC.
3	105	C	42917	7	0	03-Nov-75		5491	S	SHOP DETAILS - CHANNEL BEAMS
3	105	C	42917	8	0	03-Nov-75		5491	S	SHOP DETAILS - CHANNEL BEAMS
3	105	C	42917	9	0	03-Nov-75		5491	S	SHOP DETAILS - CHANNEL BEAMS
3	105	C	42917	10	0	03-Nov-75		5491	S	SHOP DETAILS - CHANNEL BEAMS
3	105	C	42917	12	0	03-Nov-75		5491	S	SHOP DETAILS - BEAMS
3	105	C	42917	13	0	03-Nov-75		5491	S	SHOP DETAILS - X-BRACING
3	105	C	42917	14	0	03-Nov-75		5491	S	SHOP DETAILS - X-BRACING
3	105	C	42917	15	0	03-Nov-75		5491	S	SHOP DETAILS - COLUMNS
3	105	C	42917	17	0	03-Nov-75		5491	S	SHOP DETAILS
3	105	C	42917	3	0	03-Nov-75		5491	S	ERECTION PLAN
3	105	C	42902	18	1	01-Apr-77		5472	E	FIRE PROTECTION IMPROVEMENTS, ELEC; SECOND FLOOR PLAN
3	105	C	42902	18	0	01-Jul-76	01-Jul-76	5472	C	FIRE PROTECTION IMPROVEMENTS PLOT PLAN BLDG. SM-105, TA-3. TITLE I PACKAGE
3	105	C	42902	19	1	01-Apr-77		5472	E	FIRE PROTECTION IMPROVEMENTS, ELEC. - BASEMENT PLAN
3	105	C	42902	19	0	01-Jul-76	01-Jul-76	5472	A	FIRE PROTECTION IMPROVEMENTS, BASEMENT FLOOR PLAN
3	105	C	42902	20	1	01-Apr-77		5472	E	FIRE PROTECTION IMPROVEMENTS, ELEC. - PARTIAL PLANS, A WING
3	105	C	42902	21	0	01-Jul-76	01-Jul-76	5472	A	FIRE PROTECTION IMPROVEMENTS, SECOND FLOOR PLAN
3	105	C	42902	0	2	01-Apr-77		5472	T	FIRE PROTECTION IMPROVEMENTS. PACKAGE I TITLE SHEET
3	105	C	42902	1	1	01-Apr-77		5472	T	FIRE PROTECTION IMPROVEMENTS, TITLE SHEET, BLDG. SM-105, TA-3
3	105	C	42902	2	0	01-Apr-77		5472	C	FIRE PROTECTION IMPROVEMENTS, CIVIL; PLOT PLAN
3	105	C	42902	3	0	01-Apr-77		5472	C	FIRE PROTECTION IMPROVEMENTS, CIVIL; DETAILS
3	105	C	42902	4	0	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PIPING DETAILS
3	105	C	42902	5	1	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PARTIAL FLOOR PLAN
3	105	C	42902	6	1	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; SECTIONS
3	105	C	42902	7	1	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PARTIAL PLANS AND SECTIONS
3	105	C	42902	8	1	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PARTIAL FLOOR PLANS AND SECTIONS
3	105	C	42902	9	0	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PARTIAL PLAN AND SECTION
3	105	C	42902	10	0	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PARTIAL FLOOR PLAN AND SECTIONS

3	105	C	42902	11	0	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PARTIAL FLOOR PLAN
3	105	C	42902	12	0	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; SECTIONS
3	105	C	42902	13	0	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; PARTIAL FLOOR PLANS
3	105	C	42902	14	0	01-Apr-77		5472	M	FIRE PROTECTION IMPROVEMENTS, MECH; SECTIONS
3	105	C	42902	15	1	01-Apr-77		5472	E	FIRE PROTECTION IMPROVEMENTS, ELEC. - NAMEPLATES, BILL OF MATERIAL AND NOTES
3	105	C	42902	20	0	01-Jul-76		5472	A	FIRE PROTECTION IMPROVEMENTS, FIRST FLOOR PLAN
3	105	C	42902	16	1	01-Apr-77		5472	E	FIRE PROTECTION IMPROVEMENTS, ELEC. - BLOCK DIAGRAM
3	105	C	42902	17	1	01-Apr-77		5472	E	FIRE PROTECTION IMPROVEMENTS, ELEC. - PLAN AND FIRST FLOOR
3	105	C	42767	1	0	19-May-75		5344	C	DRIVEWAY PAVING, BLDG. SM-105
3	105	C	42726	1	0	18-Dec-74		5307	F	FIRE PROTECTION SPRINKLER SYSTEM - PIT AREA - CRITERIA. MECH; PLAN AND DETAILS
3	105	C	42726	2	0	18-Dec-74		5307	M	MECH; ELEVATION AND NOTES
3	105	C	42699	2	0	10-Mar-75		5284	E	ONE LINE DIAGRAM AND PANEL LAYOUTS
3	105	C	42699	3	0	10-Mar-75		5284	E	PLANS AND ELEVATIONS AND DETAILS
3	105	C	42699	4	0	10-Mar-75		5284	E	POWER PLAN LOWER (C) AND MIDDLE (B) AND TOP (A) LEVELS
3	105	C	42699	5	0	10-Mar-75		5284	E	LIGHTING PLAN - BOTTOM LEVEL 'C'
3	105	C	42699	6	0	10-Mar-75		5284	E	LIGHRING PLAN - BOTTOM LEVEL 'B'
3	105	C	42699	7	0	10-Mar-75		5284	E	PLANS AND ELEVATION AND CONNECTION DIAGRAM
3	105	C	42698	2	0	20-Feb-75		5283	C	CIVIL; SECTIONS AND DETAILS
3	105	C	42698	3	0	20-Feb-75		5283	C	CIVIL; SECTION AND DETAILS
3	105	C	42698	4	0	20-Feb-75		5283	M	MECH; PLAN AND DETAILS AND NOTES AND EQUIP LIST
3	105	C	42698	5	0	20-Feb-75		5283	E	ELECTRICAL
3	105	C	42699	1	0	10-Mar-75		5284	E	ELEC. MODS., PIT AREA, BLDG. SM-105, TA-3. BILL OF MATL,NAMEPLATES,NOTES, SCOPE
3	105	C	42665	1	1	25-Oct-74		5262	C	STAIRWELL PLATFORM INSTALLATION, SM-105, TA-3 CIVIL; PLANS AND SECTIONS
3	105	C	42665	3	1	25-Oct-74		5262	E	ELECTRICAL - PLAN, BILL OF MATERIAL, NOTES, AND SCOPE OF WORK
3	105	C	41539	1	1	21-Mar-73		4887	T	COOLING WATER SYSTEMS 2.5 MW RECTIFIERS TITLE SHEET
3	105	C	41540	2	1	21-Mar-73		4887	M	MECHANICAL - CHILLED WATER PLAN
3	105	C	41541	3	1	21-Mar-73		4887	M	MECH; CHILLED WATER PLAN AND SECTION
3	105	C	41542	4	1	21-Mar-73		4887	M	MECH; REFRIG. PIPING PLAN
3	105	C	41543	5	1	21-Mar-73		4887	M	MECHANICAL - SECTIONS
3	105	C	41544	6	1	21-Mar-73		4887	M	MECHANICAL - PIPING SCHEMATICS
3	105	C	41545	7	1	21-Mar-73		4887	M	MECHANICAL EQUIPMENT LIST
3	105	C	41546	8	1	21-Mar-73		4887	E	ELECTRICAL - PLANS & ONE LINE
3	105	C	41547	9	1	21-Mar-73		4887	E	ELECTRICAL - WIRING DIAGRAM
3	105	C	41548	10	1	21-Mar-73		4887	E	ELECTRICAL DETAILS, BILL OF MATERIAL
3	105	C	41474	13	1	20-Dec-72	20-Dec-72	4152	C	UTILITY SYSTEM IMPROVEMENTS & REHABILITATION, CIVIL, STEAM DISTRIBUTION PLAN TO NEW
3	105	C	41474	13	1	20-Dec-72	20-Dec-72	4152	M	UTILITY SYSTEM IMPROVEMENTS & REHABILITATION, CIVIL, STEAM DISTRIBUTION PLAN TO NEW
3	105	C	40366	9	1	15-May-72	09-Nov-71	4712	T	COOLING WATER SYSTEM, BLDG. SM-105, SITE LOCATION PLAN - INDEX OF DRAWINGS
3	105	C	40091	1	0	20-Jan-71		4763	M	LN-2 SERVICE REVISIONS - PLAN AND NOTES SM-105
3	105	C	40092	2	0	20-Jan-71		4763	M	LN-2 SERVICE REVISIONS - BLDG. SM-105 - DETAILS
3	105	C	40037	1	1	15-May-72	14-Sep-71	4712	C	COOLING WATER SYSTEM, BLDG. SM-105 - SITE PLAN
3	105	C	40038	2	1	15-May-72	14-Sep-71	4712	M	COOLING WATER SYSTEM, MEC/ELECTRICAL; PLAN
3	105	C	40039	3	1	15-May-72	14-Sep-71	4712	M	COOLING WATER SYSTEM, MECHANICAL; SECTIONS & DETAILS
3	105	C	40040	4	1	15-May-72	14-Sep-71	4712	M	COOLING WATER SYSTEM, MECHANICAL; DETAILS
3	105	C	40041	5	1	15-May-72	14-Sep-71	4712	M	COOLING WATER SYSTEM, MECHANICAL; EQUIPMENT LIST

3	105	C	40042	6	1	15-May-72	14-Sep-71	4712	M	COOLING WATER SYSTEM, MECHANICAL; SPECIFICATIONS
3	105	C	40043	7	1	15-May-72	14-Sep-71	4712	E	COOLING WATER SYSTEM, PLOT PLAN, NOTES, BILL OF MATERIAL & NAMEPLATES
3	105	C	40044	8	1	15-May-72	14-Sep-71	4712	E	COOLING WATER SYSTEM, PUMP HOUSE PLAN AND DETAILS
3	105	C	38642	1	0	25-Aug-70	25-Aug-70	3564	S	SERVICE PLATFORMS, STRUCT., EQUIPMENT LIST, NOTES, LOCATION PLAN
3	105	C	37104	1	1	13-Jan-69		4013	F	FIRE SPRINKLER SYSTEM, BLDG. SM-105, SHERWOOD POWER REGULATION, MECH; PLAN-DETA
3	105	C	36548	3	3	25-Jun-68		3564	E	PLAN - ELEVATIONS & LOCATION
3	105	C	36549	4	3	25-Jun-68		3564	E	REGULATION - POWER CONNECTION
3	105	C	36550	5	3	25-Jun-68		3564	E	REGULATION - PLAN - ELEVATIONS
3	105	C	36551	6	3	25-Jun-68		3564	E	REGULATION - WIRING DIAGRAM
3	105	C	36552	1	0	25-Jun-68		3564	E	REGULATION - JUNCTION BOXES
3	105	C	36553	2	0	25-Jun-68		3564	E	REGULATION - JUNCTION BOX
3	105	C	36546	1	3	16-Apr-68		3564	S	SHERWOOD POWER SUPPLY, SM-105, PHASE C, REGULATION - STRUCTURAL
3	105	C	36547	2	3	15-Jul-68		3564	M	MECH; ELEC; PLANS, REGULATION- DETAILS & SECTION
3	105	C	36297	1	4	21-Mar-68		3564	M	SHERWOOD POWER SUPPLY REGULATION, BLDG. SM-105, PHASE 'B', MECHANICAL - REGULATO
3	105	C	36279	1	0	01-Mar-68		0	M	MOD. OF PIPING FOR INSULATING OIL PUMP, MECH. - ELEVATIONS & ISOMETRIC, BLDG. SM
3	105	C	36203	1	0	09-Feb-70		4197	F	FIRE ESCAPE MODS. ROOMS 201 & 215, BLDG. SM-105, PLANS, SECTIONS, DETAILS
3	105	C	35888	1	0	10-Nov-67		3766	AC	RELAY RACK VENTILATION ROOM 108, BLDG. SM-105, TA-3, PLAN & DETAILS
3	105	C	35840	1	0	26-Aug-68		3756	M	LOW TEMPERATURE COOLING BLDG. SM-105, MECH. ALTERNATE PROPOSAL #1, CRITERIA
3	105	C	35841	2	0	26-Aug-68		3756	M	LOW TEMPERATURE COOLING BLDG. SM-105, MECH. ALTERNATE PROPOSAL #2, CRITERIA
3	105	C	35830	1	1	27-Sep-67		3752	E	UTILITY TRENCHES ROOM 101, BLDG. SM-105, STRUCTURAL & ELECTRICAL
3	105	C	35833	1	0	13-Oct-67		3753	E	ADDITIONAL POWER OUTLETS, RM. 101, BLDG. SM-105, ELECTRICAL
3	105	C	35787	2	0	04-Nov-71		4741	E	ELECTRICAL DETAILS
3	105	C	35803	1	0	19-Aug-70		4516	M	MODS. TO MAGNET COOLING SUPPLY & INSTALL. OF SECOND REG. SHERWOOD
3	105	C	35776	2	0	27-Sep-67		3564	M	SHERWOOD POWER SUPPLY REGULATION & PHASE 'A', BLDG. SM-105, STRUCTURAL, MECHANIC
3	105	C	35786	1	0	04-Nov-71		4741	E	ELECTRICAL - PLAN & ONE LINE DETAIL FILAMENT POWER FOR SCYLLAC IV, BLDG. SM-105
3	105	C	35622	1	0	15-Aug-67		3699	M	COMPRESSED AIR DRYER INSTAL. PIT RM. 10, BLDG. SM-105, MECHANICAL & ELECTRICAL
3	105	C	35530	1	0	01-Nov-68		3990	E	100 KVA TRNASFORMER INSTALLATION, BLDG. SM-105, ELEC.-PLAN, DETAILS, SCOPE, NAME
3	105	C	35093	2	0	16-May-67	05-Apr-67	3669	A	SCYLLAC PROTOTYPE POWER DUCT, EAST WALL ELEVATION
3	105	C	35094	3	0	16-May-67	05-Apr-67	3669	E	SCYLLAC PROTOTYPE POWER DUCT AND LIGHTING NORTH WALL ELEVATION
3	105	C	35095	4	0	16-May-67	05-Apr-67	3669	E	SCYLLAC PROTOTYPE POWER DUCT AND LIGHTING CAPACITOR RACK ELEVATION
3	105	C	34977	4	1	17-Mar-67	06-Mar-67	3525	M	OFFICE ADDITION, MECHANICAL; PLAN, SECTIONS, DETAILS, EQUIPMENT LIST & NOTES
3	105	C	34978	5	1	17-Mar-67	06-Mar-67	3525	M	OFFICE ADDITION, MECHANICAL; SECTIONS AND DETAILS
3	105	C	34979	6	1	17-Mar-67	06-Mar-67	3525	E	OFFICE ADDITION, ELECTRICAL, POWER AND LIGHTING, SCOPE OF WORK, NOTES
3	105	C	34980	7	1	17-Mar-67	06-Mar-67	3525	E	OFFICE ADDITION, ELECTRICAL, PLAN FIRE DETECTION AND TELEPHONE, PARTIAL GROUNDING
3	105	C	34974	1	1	17-Mar-67	06-Mar-67	3525	A	OFFICE ADDITION, ARCHITECTURAL, PLOT PLAN, ELEVATIONS, WALL SECTION
3	105	C	34975	2	1	17-Mar-67	06-Mar-67	3525	A	OFFICE ADDTION, ARCHITECTURAL, FLOOR PLAN, DETAILS, CROSS SECTION,
3	105	C	34976	3	1	17-Mar-67	06-Mar-67	3525	S	OFFICE ADDITION, FOUNDATION PLAN & STRUCTURAL
3	105	C	34948	1	1	14-Feb-67	10-Feb-67	3564	E	SHERWOOD POWER SUPPLY REGULATION, ONE LINE DIAGRAM, ELEVATION
3	105	C	34949	1	0	09-Mar-67	09-Feb-67	3619	A	WEATHERPROOF DOOR INSTALLATION,
3	105	C	34650	1	0	17-Nov-66		3571	S	SHERWOOD PROJECT, BLDG. SM-105 - POWER SUPPLY PLATFORM MODIFICATION, SCYLLAC PR
3	105	C	34605	1	0	27-Sep-66		3514	M	COOLING WATER SYSTEM INSTRUMENTATION, BLDG. SM-105 - MECHANICAL & ELECTRICAL - P
3	105	C	34491	2	1	12-Aug-66		3474	E	SHERWOOD PROJECT, POWER SUPPLY PLATFORM. BLDG. SM-105 - ELECTRICAL MODIFICATIONS
3	105	C	34492	1	0	14-Feb-67		3525	A	OFFICE BUILDING ADDITION, BLDG. SM-105 - CRITERIA DRAWING
3	105	C	31590	1	1	13-Jul-66		3474	S	SHERWOOD PROJECT-SCYLLAC-POWER SUPPLY PLATFORMS, SHERWOOR BLDG.

3	105	C	31318	1	0	03-Feb-67		3317	A	SHERWOOD OFFICE ADDITION #2, BLDG. SM-105
3	105	C	31319	2	0	03-Feb-67		3317	A	SHERWOOD OFFICE ADDITION, BLDG. SM-105
3	105	C	29897	1	0	30-Oct-62		2762	AC	VENTILATION MODS., FALLOUT SHELTER, BLDG. SM-105- CIRCULATING FAN, GATE & SAFETY
3	105	C	29668	5	0	27-Mar-63		2495	E	ELECTRICAL - CONNECTION DIAGRAM, 2400V., SWGR., EXIST UNIT #1
3	105	C	29669	6	0	27-Mar-63		2495	E	ELEC. - SCHEM. DIAG. FOR EXCITER STARTER & 720 HP SYNC MOTOR STARTER
3	105	C	29670	7	1	27-Mar-63		2495	E	ELECTRICAL - WIRING MODS. FOR 720 HP SYNC. MOTOR STARTER
3	105	C	29671	8	0	27-Mar-63		2495	E	BKR. CONT. SCHEM. & CONN. DIAG. - 1500 & 750 KVA SUBSTATIONS
3	105	C	29665	2	0	27-Mar-63		2495	E	ELECTRICAL - ONE LINE DIAGRAM
3	105	C	29666	3	0	27-Mar-63		2495	E	ELECTRICAL - PLAN & DETAILS
3	105	C	29667	4	0	27-Mar-63		2495	E	ELECTRICAL - SECTION B-1 OVER 4, AND DETAILS
3	105	C	28852	1	0	18-Feb-66		3360	E	HEAT DETECTOR RELOCATION, BLDG. SM-105 - ELECTRICAL
3	105	C	27954	1	1	11-Aug-61		2631	S	CABLE TRENCH, BLDG. SM-105, ANNEX, STRUCTURAL - PLAN & DETAILS
3	105	C	27577	2	0	20-Mar-64		3003	E	EXPERIMENTAL EPOXY FAC., ROOM 1010, BLDG. SM-105, DETS., NAMPLT. SCH., LEGEND, L
3	105	C	27578	3	0	20-Mar-64		3003	E	EXPERIMENTAL EPOXY FACILITY, ROOM 101, BLDG. SM-105, ELEC.-PLANS, ELEV.-DETAILS
3	105	C	20770	28	1	10-Apr-57	20-Dec-55	1733	E	SHERWOOD PROJECT, LIGHTNING PROTECTION & SCHEDULES
3	105	C	20771	28	0	10-Apr-57	16-Jan-56	1733	E	SHERWOOD PROJECT, POWER DISTRIBUTION & DIAGRAMS
3	105	C	20751	9	1	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, STAIR & BEAM DETAILS
3	105	C	20752	10	1	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, PIT DETAILS
3	105	C	20753	11	2	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, DETAILS
3	105	C	20755	13	1	10-Apr-57	20-Dec-55	1733	A	SHERWOOD PROJECT, ELEVATIONS & SECTIONS
3	105	C	20756	14	2	10-Apr-57	20-Dec-55	1733	A	SHERWOOD PROJECT, SECTIONS & DETAILS
3	105	C	20761	19	2	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, EVAPORATIVE CHILLED WATER SYSTEM
3	105	C	20764	22	0	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, DIFFUSION PUMP CHILLED WATER PLAN, DIAGRAMS & SCHEDULES
3	105	C	20767	25	1	10-Apr-57	20-Dec-55	1733	E	SHERWOOD PROJECT, FLOOR PLAN LIGHTING
3	105	C	20768	26	2	10-Apr-57	20-Dec-55	1733	E	SHERWOOD PROJECT, FLOOR PLAN POWER
3	105	C	20743	1	2	10-Apr-57	20-Dec-55	1733	C	SHERWOOD PROJECT, PLOT PLAN, LAYOUT & UTILITIES
3	105	C	20744	2	1	10-Apr-57	20-Dec-55	1733	C	SHERWOOD PROJECT, GRADING, DRIVEWAY & DRAINAGE PLAN
3	105	C	20746	4	0	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, FOUNDATION PLANS
3	105	C	20748	6	1	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, ROOF FRAMING PLAN & DETAILS
3	105	C	20749	7	1	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, FRAMING ELEVS. & DETAILS
3	105	C	20523	8	4	30-Dec-57		1977	E	ELECTRICAL - SECTIONS & DETAILS
3	105	C	20524	9	3	30-Dec-57		1977	E	ELECTRICAL - DETAILS & NAMEPLATES
3	105	C	20525	10	1	30-Dec-57		1977	E	ELECTRICAL - ELEVATION
3	105	C	20526	11	1	30-Dec-57		1977	E	ELECTRICAL - DETAIL
3	105	C	20527	12	3	30-Dec-57		1977	E	ELECTRICAL - 480V, S.W.B.D., ITEM #2, CONNECTION DIAGRAM
3	105	C	20528	13	2	30-Dec-57		1977	E	ELECTRICAL - 480V, SUBSTA. CONTROL PANEL, PARTIAL WIRING DIAGRAM
3	105	C	20529	14	1	30-Dec-57		1977	E	ELECTRICAL - CONTROL ROOM, WIRING DIAGRAM
3	105	C	20530	15	4	30-Dec-57		1977	E	ELECTRICAL - 750 KVA SUBSTATION, WIRING DIAGRAMS
3	105	C	20531	16	3	30-Dec-57		1977	E	ELECTRICAL - 480 V, DIST. WIRING DIAGRAM
3	105	C	20514	1	1	23-Jul-57	15-Mar-57	1977	S	SHERWOOD EQUIP. INSTALLATION, PHASE 'B' - MAGNET TRACK INSTALLATION
3	105	C	20516	1	1	30-Dec-57		1977	M	MECHANICAL - 125# CHILLED WATER, PIPING PLAN
3	105	C	20517	2	1	30-Dec-57		1977	M	MECHANIAL - EQUIPMENT ROOM, PLANS & DIAGRAM
3	105	C	20518	3	3	30-Dec-57		1977	E	ELECTRICAL - MATERIAL, SCOPE & NOTES
3	105	C	20520	5	4	30-Dec-57		1977	E	ELECTRICAL - CONDUIT PLANS, EQUIPMENT ROOM, SUB-STATION

3	105	C	20521	6	1	30-Dec-57		1977	E	ELECTRICAL - CONDUIT PLAN, MACHINE ROOM
3	105	C	20522	7	1	30-Dec-57		1977	E	ELECTRICAL - CONDUIT PLAN, PIT ROOM
3	105	C	19532	2	0	19-Oct-60		2285	E	SECTIONS & DETAILS
3	105	C	19287	1	1	07-Oct-57		2040	S	COLUMBUS II INSTALLATION, BLDG. SM-105 - STRUCTURAL - PLANS & DETAILS
3	105	C	19288	2	0	07-Oct-57		2040	S	STRUCTURAL - SECTIONS & DETAILS
3	105	C	19289	3	0	07-Oct-57		2040	AC	MECHANICAL - VENTILATION, CONTROL AREA & RACKS
3	105	C	19085	6	0	23-May-57	13-May-57	1974	C	SHERWOOD BLDG. ADDITION - PLOT PLAN
3	105	C	19086	7	0	23-May-57	13-May-57	1974	A	SHERWOOD BLDG. ADDITION, ELEVATIONS
3	105	C	19087	8	0	23-May-57	13-May-57	1974	A	SHERWOOD BLDG. ADDITION, FLOOR PLAN RECTIFIER
3	105	C	19088	9	0	23-May-57	13-May-57	1974	E	SHERWOOD BLDG. ADDITION, CONDUIT & GROUNDING LAYOUT
3	105	C	19089	10	0	23-May-57	13-May-57	1974	A	FIRST FLOOR PLAN, ADDN.
3	105	C	19090	11	0	23-May-57	13-May-57	1974	A	SHERWOOD BLDG. ADDITION, SECOND FLOOR PLAN
3	105	C	18853	16	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, 48 KW GEN. DIST. & CONT. SCHEM.
3	105	C	18855	18	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, DETAIL, 48 KW GEN. CONT. PNL WIRING
3	105	C	18856	19	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, DETAILS, WIRING DIAGRAM
3	105	C	18857	20	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, BILL OF MATERIAL
3	105	C	18838	1	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, SM-105, LOCATION PLAN, SCOPE, NOTES, & IND
3	105	C	18839	2	0	11-Mar-57	28-Feb-57	1858	M	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, EQUIP. RM SM-105 CONDUIT LAYOUT, SHUNT C
3	105	C	18840	3	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, ELEVATION
3	105	C	18843	6	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, MACH. RM SM-105 CONDUIT LAYOUT
3	105	C	18844	7	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, SECTIONS
3	105	C	18845	8	1	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, CONDUIT LAYOUT
3	105	C	18847	10	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, DETAIL
3	105	C	18849	12	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, DETAILS & NAMEPLATES
3	105	C	18850	13	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, 48 KW CONT CONSOLE ITEM 24, DETAILS
3	105	C	18769	1	1	06-Dec-63		2988	E	SHERWOOD LIGHTING MODIFICATIONS, BLDG. SM-105 - ELECTRICAL
3	105	C	17852	1	0	20-May-60		2407	M	COMPRESSED AIR & CHILLED WATER EXTENSION, RM. 113, BLDG. SM-105
3	105	C	43724	5	0	29-Apr-80		6151	E	ELEC; EQUIPMENT GROUNDING PLAN AND ELEVATIONS
3	105	C	43743	2	0	23-Apr-80		6353	M	MECH; DETAILS AND SECTION
3	105	C	43743	6	0	23-Apr-80		6353	E	ELEC; NOTES, BILL OF MATERIAL AND NAMEPLATE SCHEDULE
3	105	C	18841	4	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, ELEVATIONS & DETAILS
3	105	C	18848	11	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, GEN. CONT. CUBICAL 67 DETAIL
3	105	C	20515	2	1	23-Jul-57	15-Mar-57	1977	M	SHERWOOD EQUIP. INSTALLATION, PLAN, ELEVATIONS & DETAILS
3	105	C	20532	1	0	06-Mar-58		1977	E	ELECTRICAL - WIRING DIAGRAMS
3	105	C	24084	1	0	10-Aug-59		0	M	SHERWOOD PROJECT BLDG. SM-105 - JOHNSON SERVICE CO.
3	105	C	27576	1	0	20-Mar-64		3003	S	EXPERIMENTAL EPOXY FACILITY, ROOM 101, BLDG. SM-105, PLAN, ELEVATION, DETAILS &
3	105	C	43882	9	1			6452	C	CIVIL; PLAN AND SECTIONS
3	105	C	45539	7	0	03-Oct-88		9317	E	ELECTRICAL; REVISED ONE-LINE DIAGRAM
3	105	C	44756	4	0	03-Apr-85	03-Apr-85	8077	M	COOLING WATER SYSTEM, F-0 PUMPING EXPERIMENT, MECH; SECTION VIEWS
3	105	C	19531	1	0	19-Oct-60		2285	E	13.2KV FEEDER FOR SHERWOOD 2.5 MW RECTIFIER, BLDG. SM-105 - PLANS, MATERIALS &
3	105	C	43834	3	0	24-Jul-80		6151	M	MECH; EQUIPMENT LIST AND NOTES
3	105	C	43834	7	0	24-Jul-80		6151	E	ELEC; DETAIL, DIAGRAMS AND BILL OF MATERIAL
3	105	C	29664	1	0	27-Mar-63		2495	E	STARTER REPL, 720 HP SYNC MTR, BLDG SM-105-ELEC-LOC PLAN, BILL OF MATL, NAMEPLAT
3	105	C	20747	5	0	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, FLOOR FRAMING PLAN

3	105	C	20754	12	1	10-Apr-57	20-Dec-55	1733	A	SHERWOOD PROJECT, FLOOR PLANS
3	105	C	20759	17	0	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, HOT WATER, COLD WATER & NATURAL GAS, PLUMBING
3	105	C	20762	20	0	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, COLD WATER, HOT WATER & HOT WATER CIRCULATING DIARAMS
3	105	C	49608	1	0	13-Dec-94	24-Aug-94	15504	S	EQUIPMENT ROOM ACCESS STAIRWAY, ROOF PLAN AND SECTION
3	105	C	49608	2	0	13-Dec-94	24-Aug-94	15504	S	EQUIPMENT ROOM ACCESS STAIRWAY, ELEVATION AND SECTION
3	105	C	49608	3	0	13-Dec-94	24-Aug-94	15504	S	EQUIPMENT ROOM ACCESS STAIRWAY, GENERAL NOTES
3	105	SK	7079	1	0	27-Mar-98	16-Jan-85		C	LOCATION OF FORKLIFT DRIVE, PARTIAL PLAN
3	105	SK	7103	1	0	31-Mar-98	19-Mar-82	6922	E	CTX ISOLATED POWER
3	105	C	43482	11	0	17-Apr-78	17-Apr-78	5736	E	ZT 40 COMPRESSOR INSTALLATION ELEC; BILL OF MATERIALS, NOTES AND NAMEPLATE SCHE
3	105	C	43482	9	1	17-Apr-78	17-Apr-78	5736	F	ZT 40 COMPRESSOR INSTALLATION MECH; FIRE PROTECTION FLOOR PLAN AND SECTIONS
3	105	C	43376	4	0	26-Aug-77		5736	E	ELEC; PLAN AND DETAIL
3	105	C	43383	3	1	10-Mar-78		5742	M	MECH; NOTES, EQUIPMENT LIST
3	105	C	43359	2	1	30-Nov-77		5721	E	ELEC; FLOOR PLAN
3	105	C	43004	2	1	07-Sep-76		5583	C	SECTION
3	105	C	42917	11	0	03-Nov-75		5491	S	SHOP DETAILS - BEAMS
3	105	C	42917	16	0	03-Nov-75		5491	S	SHOP DETAILS - COLUMNS
3	105	C	42917	5	0	03-Nov-75		5491	S	SHOP DETAILS - HANDRAIL
3	105	C	42665	2	1	25-Oct-74		5262	C	CIVIL; DETAILS
3	105	C	35775	1	0	27-Sep-67		3564	M	SHERWOOD POWER SUPPLY REGULATION & PHASE 'A', BLDG. SM-105, STRUCTURAL, MECHANIC
3	105	C	35092	1	0	16-May-67	05-May-67	3669	E	SCYLLAC PROTOTYPE, POWER DUCT AND LIGHTING LAYOUT
3	105	SK	4687	1	0	17-Sep-99	13-May-57	1974	T	SHERWOOD BUILDING ADDITION INDEX AND SITE LOCATION PLAN
3	105	SK	4688	2	0	17-Sep-99	13-May-57	1974	A	SHERWOOD BUILDING ADDITION, ARCHITECTURAL SCHEDULE
3	105	R	3982	2	0	19-Jan-68	05-Oct-67	3586	A	AUDIO SYSTEM EQUIP. LOCATION, FIRST FLOOR PLAN
3	105	C	18852	15	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, 500 KW GEN. DIST. & CONT. SCHEM.
3	105	C	20758	16	0	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, SANITARY SOIL, WASTE & VENT & STORM SEWER, TRANSF. OIL PIPING
3	105	C	20765	23	0	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, HEATING & VENTILATING - PLAN & DETAILS
3	105	C	52399	1	0	07-Jan-00	07-Jan-00		E	2 1/2 MW RECTIFIER POWER SUPPLY, ELEC., THREE LINE DIAGRAM
3	105	C	52399	2	0	07-Jan-00	07-Jan-00		E	2 1/2 MW RECTIFIER POWER SUPPLY, ELEC., LOCATION PLAN & ELEVATION, RECTIFIER TRANSF(
3	105	C	18842	5	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, ELEVATIONS & DETAILS
3	105	C	18846	9	1	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, SECTIONS
3	105	C	18851	14	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, AC DIST. SINGLE LINE DIAGRAM
3	105	C	18854	17	0	11-Mar-57	28-Feb-57	1858	E	D.C. POWER & CONT. SM-105, MD.C. DIST. SM-43, DETAILS 500 KW GEN. CONT. PNL WIRING
3	105	C	19091	12	0	23-May-57	13-May-57	1974	A	SHERWOOD BLDG. ADDITION, SECTION - SM-105 ADDITION
3	105	C	20760	18	0	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, 40 P.S.I. & 100 P.S.I. COMPR. AIR
3	105	C	20766	24	0	10-Apr-57	20-Dec-55	1733	M	SHERWOOD PROJECT, HEATING & VENTILATING - SECTIONS & DETAILS
3	105	C	20769	27	1	10-Apr-57	20-Dec-55	1733	E	SHERWOOD PROJECT, SECTIONS & DETAILS
3	105	C	47078	6	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTEM SCYLLA IV-P-PIT AREA SECTIONS & DETAILS
3	105	C	47078	2	1	02-Sep-92		0	F	FIRE PROTECTION-SPRINKLER SYSTEM SCYLLAIV P-PIT AREA PLAN LEVEL 'A' & HIGH BAY A
3	105	C	43882	5	1			6452	C	CIVIL; PLAN AND PROFILE
3	105	C	43376	5	0	26-Aug-77		5736	E	ELEC; PLAN AND NOTES
3	105	C	43004	3	1	07-Sep-76		5583	M	ELECTRICAL AND MECHANICAL PLANS
3	105	C	42698	1	0	20-Feb-75		5283	C	MECHANICAL MODS. PIT AREA - BLDG. SM-105, TA-3. CIVIL; LOCATION AND PART. FL PL
3	105	C	20750	8	0	10-Apr-57	20-Dec-55	1733	S	SHERWOOD PROJECT, FRAMING DETS.
3	105	C	20519	4	3	30-Dec-57		1977	E	ELECTRICAL - SINGLE LINE DIAGRAM

3	105	C	52399	3	0	07-Jan-00	07-Jan-00		E	2 1/2 MW RECTIFIER POWER SUPPLY, ELEC., DATA SHEET, PROTECTIVE DEVICES
3	105	C	25968	3	0	23-Nov-60	22-Nov-60	2285	E	2.5 MW POWER SUPPLY, SHERWOOD BLDG. SM-105, PHASE 'A', ELECTRICAL
3	105	SK	7532	1	1	11-Jun-01	23-Nov-87	9156		FRX-C UPGRADE SPRINKLER SYSTEM ADDITION
3	105	C	52484	1	0	13-Jun-01	13-Jun-00		C	DESIGN UTILITIES REROUTE SHERWOOD, CIVIL, REMOVAL PLAN
3	105	C	52484	2	0	13-Jun-01	13-Jun-00		C	DESIGN UTILITIES REROUTE SHERWOOD, CIVIL, GENERAL NOTES
3	105	C	52484	3	0	13-Jun-01	13-Jun-00		M	DESIGN UTILITIES REROUTE SHERWOOD, MECH, DEACTIVATION OF MECHANICAL UTILITIES IN PI
3	105	C	52484	4	0	13-Jun-01	13-Jun-00		M	DESIGN UTILITIES REROUTE SHERWOOD, MECH, DEACTIVATION OF MECHANICAL UTILITIES IN PI
3	105	C	52484	5	0	13-Jun-01	13-Jun-00		M	DESIGN UTILITIES REROUTE SHERWOOD, MECH, DEACTIVATION OF MECHANICAL UTILITIES IN PI
3	105	C	52484	6	0	13-Jun-01	13-Jun-00		E	DESIGN UTILITIES REROUTE SHERWOOD, ELEC, PARTIAL FLOOR PLAN, REMOVAL AND INSTALLA
3	105	C	52614	1	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., TITLE SHEET
3	105	C	52614	2	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, GENERAL NOTES
3	105	C	52614	3	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, GENERAL NOTES CONTINUED
3	105	C	52614	4	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, GENERAL NOTES AND UTILITY PIPING NOTES
3	105	C	52614	5	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, UTILITY PIPING NOTES
3	105	C	52614	6	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, SANITRARY SEWER UTILITY REMOVAL PLAN
3	105	C	52614	7	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, STORM DRAIN UTILITY REMOVAL PLAN
3	105	C	52614	8	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, GAS UTILITY REMOVAL PLAN
3	105	C	52614	9	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, WATER UTILITY REMOVAL PLAN
3	105	C	52614	10	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, NEW CONSTRUCTION SITE PLAN
3	105	C	52614	11	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, SANITARY SEWER PLAN AND PROFILE
3	105	C	52614	13	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, SANITARY SEWER LIFT STATION DETAIL AND SECTI
3	105	C	52614	14	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, UTILITY TRENCH SECTION AND MISCELLANEOUS DE
3	105	C	52614	15	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, DRAINAGE INLET DETAILS AND SECTION
3	105	C	52614	16	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, CONSTRUCTION AND SECURITY FENCING PLAN
3	105	C	52614	17	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, FENCING DETAILS AND NOTES
3	105	C	52614	18	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., ELEC., PARTIAL FLOOR PLAN DETAILS AND SECTIONS
3	105	C	52614	20	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., ELEC., EXHAUST VENT PLANS AND ELEVATIONS
3	105	C	52614	21	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., ELEC., TELEPHONE UTILITY REMOVAL PLAN
3	105	C	52614	12	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., CIVIL, GRADING AND DRAINAGE PLAN
3	105	C	52614	19	0	13-Jun-01	06-Mar-01	100184		DESIGN SUPPORT FOR SM-105 DEMO., ELEC., STEAM, CONDENSATE, CHILLED WATER, MINERAL

TA	BLDG	PREFIX	DRAWNUM	PAGE	REV	LOG_DATE	DOC_DATE	PROJID	DISC	TITLE
3	287	AB	175	1	0	15-Nov-93	10-Aug-93	7556	A	AS-BUILT RECORD FLOOR PLAN LAB/OFFICE BLDG, BASEMENT FLOOR PLAN
3	287	AB	175	2	0	15-Nov-93	10-Aug-93	7556	A	AS-BUILT RECORD FLOOR PLAN LAB AND OFFICE BLDG. , FIRST FLOOR PLAN
3	287	AB	175	3	0	15-Nov-93	07-Sep-93	7556	A	AS-BUILT RECORD FLOOR PLAN LAB AND OFFICE BLDG., SECOND FLOOR PLAN
3	287	AB	175	4	0	15-Nov-93	10-Aug-93	7556	A	LAB AND OFFICE BLDG., THIRD FLOOR PLAN
3	287	AB	58	2	0	26-Oct-92	07-Aug-92	11831	M	MECH; BASEMENT FLOOR STORM DRAIN PLAN, SYLLAC LAB AND OFFICE BLDG.
3	287	AB	58	3	0	26-Oct-92	07-Aug-92	11831	M	MECH; 1ST FLOOR STORM DRAIN PLAN, SYLLAC LAB AND OFFICE BLDG.
3	287	AB	58	4	0	26-Oct-92	07-Aug-92	11831	M	MECH; 2ND FLOOR STORM DRAIN PLAN, ;SYLLAC LAB AND OFFICE BLDG.
3	287	AB	58	5	0	26-Oct-92	07-Aug-92	11831	M	MECH; 3RD FLOOR STORM DRAIN PLAN, SYLLAC LAB AND OFFICE BLDG.
3	287	AB	58	6	0	26-Oct-92	07-Aug-92	11831	M	MECH; ROOF DRAIN PLAN, SYLLAC LAB AND OFFICE BLDG.
3	287	AB	58	8	0	26-Oct-92	07-Aug-92	11831	M	MECH; SANITARY SEWER PIPING ISOMETRIC, SYLLAC LAB AND OFFICE BLDG.
3	287	AB	58	9	0	26-Oct-92	07-Aug-92	11831	M	MECH; ISOMETRIC DETAILS SANITARY SEWER, SYLLAC LAB AND OFFICE BLDG.
3	287	AB	58	1	0	26-Oct-92	07-Aug-92	11831	C	AS-BUILT FAC. DRAIN PLAN SYLLAC LAB/OFFICE BLDG., CIVIL; SITE PLAN, STORM DRAIN
3	287	AB	58	10	0	26-Oct-92	07-Aug-92	11831	M	MECH; ISOMETRIC DETAILS SANITARY SEWER, SYLLAC LAB AND OFFICE BLDG.
3	287	C	42946	15	0	27-Jun-74	27-Jun-74	5159	M	MECH.- HEATING AND VENTILATING
3	287	C	42946	17	0	27-Jun-74	27-Jun-74	5159	E	ELECT.- ELECTRICAL DIAGRAMS AND DETAILS
3	287	C	42946	16	0	27-Jun-74	27-Jun-74	5159	E	ELECT.- ELECTRICAL FLOOR PLAN
3	287	C	42944	2	0	25-Feb-76		5502	E	ELEC; PARTIAL FLOOR PLAN, ELEC. NOTES, SCOPE OF WORK AND NAMEPLATES
3	287	C	42946	13	0	27-Mar-74	27-Jun-74	5159	M	MECH.- FIRE PROTECTION
3	287	C	42946	4	0	27-Jun-74	27-Jun-74	5159	A	ARCH.- BASEMENT, FIRST FLOOR AND ROOF PLANS
3	287	C	42946	10	0	27-Jun-74	27-Jun-74	5159	S	STRUCT. - DETAILS
3	287	C	42946	6	0	27-Jun-74	27-Jun-74	5159	A	ARCH. - ELEVATION, SECTION AND DETAILS
3	287	C	42946	11	0	27-Jun-74	27-Jun-74	5159	S	STRUCT.- ELEVATIONS AND DETAILS
3	287	C	42946	8	0	27-Jun-74	27-Jun-74	5159	S	STRUCT.- FOUNDATION AND FRAMING PLANS
3	287	C	42946	9	0	24-Jun-74	27-Jun-74	5159	S	STRUCT.- GENERAL NOTES AND STAIR DETAILS
3	287	C	42946	3	0	27-Jun-74	27-Jun-74	5159	C	CIVIL - GRADING PLAN AND SITE DETAILS
3	287	C	42946	2	0	27-Jun-74	27-Jun-74	5159	C	CIVIL - MAPS, LAYOUT AND PAVING PLANS
3	287	C	42946	5	0	27-Jun-74	27-Jun-74	5159	A	ARCH.- MEZZANINE, ELEVATIONS, AND SCHEDULES
3	287	C	42946	12	1	27-Jun-74	27-Jun-74	5159	M	MECH.- OUTSIDE UTILITIES AND LEGEND
3	287	C	42946	14	0	27-Jun-74	27-Jun-74	5159	M	MECH.- PLUMBING
3	287	C	42946	7	0	27-Jun-74	27-Jun-74	5159	A	ARCH. - SECTION, INTERIOR ELEVATIONS AND DETAILS
3	287	C	42944	1	0	25-Feb-76		5502	C	MACHINE SHOP ROOM EXPANSION BRANCH SHOP 48, BLD.G SM-287. CIVIL; PARTIAL FLOOR
3	287	C	42946	1	0	20-Nov-75	27-Jun-74	5159	T	TITLE - STAGING AREA ADDITION FOR CTR BUILDING SM-287, TA-3. INDEX TO DRAWINGS
3	287	C	37222	2	0	27-Feb-69		3703	M	SITE PREPARATION, SCYLLAC, BLDG. SM-287, PHASE 'C', MECH. & ELECT.
3	287	C	37221	1	0	27-Feb-69		3703	A	SITE PREPARATION, BLDG. SM-287, SCYLLAC, PHASE 'C', FIRST & SECOND FLOOR MODIFI
3	287	C	40932	2	0			4735	E	SECTION - DETAIL & NAMEPLATE
3	287	C	40931	1	0			4735	F	ROOM 21, BLDG. SM-287 PLAN, LIST OF EQUIPMENT AND ADDITION FIRE PROTECTION; NOT
3	287	C	40900	1	0	30-Jun-72		0	C	SIDEWALK FROM SM-287 TO CAFETERIA PARKING LOT CIVIL; PLOT PLAN AND NOTES
3	287	C	38447	1	0	20-Mar-70		3704	E	PHASE D - ELECTRICAL - EMERGENCY LIGHTING
3	287	C	38446	1	0	19-Mar-70		3704	M	OCCUPANCY MODIFICATIONS LABORATORY & ENERGY STORAGE FAC-SCYLLAC - ELECTRICAL-MEC
3	287	C	38293	10	0	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	38292	9	0	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	38291	8	0	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	38290	7	0	23-Jun-70		3057	UN	SCYLLAC - MOTOR CONTROL CENTERS

3	287	C	38289	6	0	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	38287	4	0	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	38286	3	0	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	38285	2	1	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	38284	1	1	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	R	1983	1	0	03-Feb-70	10-Sep-69	3057	G	LAB & ENERGY STORAGE FACILITY - SCYLLAC - REVISED SCHEDULE, BLDG. SM-287
3	287	R	1905	4	1	16-Dec-83	24-Aug-83	0	A	SYLLAC LAB-OFFICE BUILDING, THIRD FLOOR PLAN, BLDG. SM-287
3	287	R	1904	3	5	16-Dec-83	23-Sep-83	0	A	SYLLAC LAB-OFFICE BUILDING, SECOND FLOOR PLAN & PASSAGEWAY
3	287	R	1903	2	4	16-Dec-83	23-Sep-76	0	A	SYLLAC LAB-OFFICE BUILDING, FIRST FLOOR PLAN & PASSAGEWAY
3	287	R	1902	1	4	16-Dec-83	23-Sep-76	0	A	SYLLAC LAB-OFFICE BUILDING, BASEMENT FLOOR PLAN, BLDG. SM-287
3	287	C	38160	1	0	18-Aug-70		3704	M	LIQUID NITROGEN SYSTEM
3	287	C	38159	2	0	09-Feb-70		3704	M	MECHANICAL - HOT WATER TANK
3	287	C	38158	1	0	09-Feb-70		3704	M	OCCUPANCY MOD LAB AND ENERGY STORAGE FAC-SCY, BLDG - MECH - STAINLESS STEEL TANK
3	287	C	40795	3	1	04-Aug-72	04-Aug-72	4788	E	FILAMENT POWER SCYLLAC BILL OF MATERIAL NAMEPLATES & DETAILS
3	287	C	40794	2	1	04-Aug-72	04-Aug-72	4788	E	FILAMENT POWER SCYLLAC DETAILS & NOTES
3	287	C	40793	1	1	04-Aug-72		4788	E	FILAMENT POWER SCYLLAC ELECTRICAL PLAN & ONE LINE DIAGRAM, BLDG. SM-287
3	287	C	40769	2	0	20-Apr-72		4844	M	CCW SYSTEM MODS., SCYLLAC IV TO SCYLLAC, SM-287
3	287	C	40768	1	0	20-Apr-72		4844	M	CCW SYSTEM MODS., SCYLLAC IV TO SCYLLAC, SM-287
3	287	C	43633	20	0	02-Sep-77	02-Sep-77	5633	E	SECOND AND THIRD FLOOR ADDITION LEGEND AND SCHEDULES
3	287	C	43633	19	0	02-Sep-77	02-Sep-77	5633	E	SECOND AND THIRD FLOOR ADDITION POWER RISER DIAGRAM AND MISC. DETAILS
3	287	C	43633	18	0	02-Sep-77	02-Sep-77	5633	E	SECOND AND THIRD FLOOR ADDITION BASEMENT AND ROOF POWER PLANS
3	287	C	43633	17	0	02-Sep-77	02-Sep-77	5633	E	SECOND AND THIRD FLOOR ADDITION ELECTRICAL POWER AND SPECIAL SYSTEMS PLANS
3	287	C	43633	16	0	02-Sep-77	02-Sep-77	5633	E	SECOND AND THIRD FLOOR ADDITION ELECTRICAL LIGHTING PLANS
3	287	C	43633	15	1	02-Sep-77	08-Dec-77	5633	M	SECOND AND THIRD FLOOR ADDITION MECHANICAL DETAILS AND CONTROLS
3	287	C	43633	14	0	02-Sep-77	02-Sep-77	5633	M	SECOND AND THIRD FLOOR ADDITION MECHANICAL PLANS
3	287	C	43633	13	0	02-Sep-77	02-Sep-77	5633	M	SECOND AND THIRD FLOOR ADDITION MECHANICAL PLANS AND SCHEDULE
3	287	C	43633	12	1	02-Sep-77	08-Dec-77	5633	F	SECOND AND THIRD FLOOR ADDITION MECHANICAL FIRE PROTECTION SYSTEM
3	287	C	43633	11	0	02-Sep-77	02-Sep-77	5633	S	SECOND AND THIRD FLOOR ADDITION DETAILS
3	287	C	43633	10	0	02-Sep-77	02-Sep-77	5633	S	SECOND AND THIRD FLOOR ADD. STRUCTURAL ROOF FRAMING PLAN
3	287	C	43633	9	0	02-Sep-77	02-Sep-77	5633	S	SECOND AND THIRD FLOOR ADD. THIRD FLOOR FRAMING PLAN
3	287	C	43633	8	0	02-Sep-77	02-Sep-77	5633	S	SECOND AND THIRD FLOOR ADD. SECOND FLOOR FRAMING PLAN
3	287	C	43633	7	0	02-Sep-77	02-Sep-77	5633	A	SECOND AND THIRD FLOOR ADD. DOOR SCHEDULE AND DETAILS
3	287	C	43633	6	0	02-Sep-77	02-Sep-77	5633	A	SECOND AND THIRD FLOOR ADDITION STAIR DETAILS AND INTERIOR ELEVATIONS
3	287	C	43633	5	0	02-Sep-77	02-Sep-77	5633	A	SECOND AND THIRD FLOOR ADDITION DETAILS
3	287	C	43633	4	1	02-Sep-77	08-Dec-77	5633	A	SECOND AND THIRD FLOOR ADDITION SECTION AND ELEVATIONS
3	287	C	43633	3	1	02-Sep-77	08-Dec-77	5633	A	SECOND AND THIRD FLOOR ADDITION ARCHITECTURAL THIRD FLOOR PLAN AND ROOF PLAN
3	287	C	43633	2	1	02-Sep-77	02-Sep-77	5633	A	SECOND AND THIRD FLOOR ADDITION ARCHITECTURAL SECOND FLOOR PLAN AND SCHEDULE
3	287	C	43633	2	0	10-Apr-81	24-Feb-78	5633	F	SECOND AND THIRD FLOOR ADDITION, FIRE SPRINKLER PLAN
3	287	C	43633	1	0	02-Sep-77	02-Sep-77	5633	C	SECOND AND THIRD FLOOR ADDITION, VICINITY MAP, LAYOUT AND SITE PLAN
3	287	C	43633	1	0	10-Apr-81	20-Feb-78	5633	F	SECOND AND THIRD FLOOR ADDITION, FIRE SPRINKLER PLAN
3	287	C	43633	0	0	06-Mar-79	02-Sep-77	5633	T	SECOND AND FLOOR ADDITION, INDEX OF DRAWINGS
3	287	C	37462	1	0	07-Apr-70		4647	A	ACCESS MODIFICATIONS, BUILDING SM-287
3	287	SK	8753	1	0	03-Nov-98	22-Sep-98	18397	F	ROOM 203A MODIFICATIONS. FIRE PROTECTION.
3	287	PL	3712	1	0	25-Sep-80	18-Oct-76	5633	T	SECOND & THIRD FLOOR ADDITION, TITLE SHEET, INDEX & LOCATION

3	287	PL	3712	2	0	25-Sep-80	18-Oct-76	5633	A	SECOND AND THIRD FLOOR ADDITION, FLOOR PLANS & SECTION
3	287	PL	3616	1	1	18-Apr-74	18-Jan-74	5159	A	STAGING AREA ADDITION FOR CTR, BLDG. SM-287
3	287	PL	1748	31	0	27-Sep-67	19-May-67	3057	G	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SPECIAL REQUIREMENTS
3	287	PL	1749	32	0	27-Sep-67	19-May-67	3057	G	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SPECIAL REQUIREMENTS
3	287	PL	1750	33	0	27-Sep-67	19-May-67	3057	G	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SPECIAL REQUIREMENTS
3	287	PL	1751	1	0	27-Sep-67	30-Aug-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECT. RACK & TRAY DETAILS
3	287	PL	1732	15	0	27-Sep-67	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELEV., FURN. LAYOUTS
3	287	PL	1733	16	0	27-Sep-67	19-May-67	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, BASEMENT SERVICES
3	287	PL	1734	17	0	27-Sep-67	19-May-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, FIRST FL. SERVICES
3	287	PL	1735	18	0	27-Sep-67	19-May-67	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SECOND FL. SERVICES
3	287	PL	1736	19	0	27-Sep-67	19-May-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, THIRD FL. SERVICES
3	287	PL	1738	21	0	27-Sep-67	19-May-67	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MEC. FLOW DIAGRAM
3	287	PL	1739	22	0	27-Sep-67	19-May-67	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECH. DETAILS
3	287	PL	1740	23	0	19-May-67	19-May-67	3057	E	LAB & ENERGY STORAGE FACILITY SCYLLAC ELEC ONE LINE DIAGRAM
3	287	PL	1742	25	0	27-Sep-67	19-May-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL DETAILS
3	287	PL	1743	26	0	27-Sep-67	19-May-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL DETAILS
3	287	PL	1744	27	0	27-Sep-67	19-May-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELEC. NAMEPLATE DETAILS
3	287	PL	1745	28	0	27-Sep-67	19-May-67	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, GRAPHIC SYMBOLS
3	287	PL	1746	29	0	27-Sep-67	19-May-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, GRAPHIC SYMBOLS
3	287	PL	1747	30	0	27-Sep-67	19-May-67	3057	G	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SCHEDULES
3	287	PL	1718	1	0	27-Sep-87	19-May-67	3057	T	LAB & ENERGY STORAGE FACILITY - SCYLLAC, BLDG. SM-287
3	287	PL	1719	2	0	27-Sep-67	19-May-67	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, BLDG. SM-287
3	287	PL	1720	3	0	27-Sep-67	19-May-67	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, BLDG. SM-287
3	287	PL	1721	4	0	27-Sep-67	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, BASEMENT FLOOR PLAN
3	287	PL	1722	5	0	19-May-67	19-May-67	3057	A	LAB & ENERGY STORAGE FACILITY SCYLLAC PLAN FIRST FLOOR
3	287	PL	1723	6	0	27-Sep-67	29-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SECOND FLOOR
3	287	PL	1724	7	0	27-Sep-67	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, THIRD FLOOR PLAN
3	287	PL	1726	9	0	27-Sep-87	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELEVATIONS
3	287	PL	1727	10	0	27-Sep-67	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELEVATIONS
3	287	PL	1728	11	0	27-Sep-67	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SECTIONS
3	287	PL	1729	12	0	27-Sep-67	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, FURNITURE LAYOUT, BASEMENT
3	287	PL	1730	13	0	27-Sep-67	19-May-67	3057	A	LABORATORY ENERGY STORAGE FACILITY - SCYLLAC, FURNITURE LAYOUT, FIRST FL.
3	287	PL	1731	14	0	27-Sep-67	19-May-67	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, FURNITURE LAYOUTS
3	287	C	45195	0	0			8924	UN	OIL TANK INSTALLATION, BLDG. SM-287, TA-3
3	287	C	40372	1	0	20-Jan-71		1992	M	TEMPERATURE CONTROL, RM. 214B, PLAN & DETAILS - BLDG. SM-287
3	287	C	36763	1	0	03-May-71		3704	A	OCCUP. MODS. PHASE 'J' LCH & ENERGY STORAGE FAC. (SCYLLAC) SM-287
3	287	C	68503	103	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - PLANS & PROFILES
3	287	C	68504	104	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - PLANS & PROFILES
3	287	C	68505	105	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - PLANS & PROFILES
3	287	C	68506	106	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - MANHOLE DETAILS & O
3	287	C	68507	107	0	14-Jan-71		3057	A	LABORATORY & ENERGY STORAGE FACILITY- SCYLLAC, AS BUILT DRAWINGS
3	287	C	68508	108	0	14-Jan-71		3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, AS BUILT DRAWINGS
3	287	C	68509	109	0	14-Jan-71		3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECT. - REVISIONS TO PANEL 'ILB
3	287	C	68510	1	0	14-Jan-71		3057	E	FIELD SKETCH #112 - CHANGE TO ELECT. OUTDOOR SUBSTATION FLOORING - SHEET 98 LAB

3	287	C	68491	91	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - MOTOR CONTROL CENTE
3	287	C	68492	92	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL MOTOR CONTROL CENTERS
3	287	C	68493	93	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SWITCHBOARDS
3	287	C	68494	94	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - DIAGRAMS
3	287	C	68495	95	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - ONE LINE POWER DIAG
3	287	C	68496	96	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILTIY - SCYLLAC, ELECTRICAL - GROUNDING SYSTEM
3	287	C	68497	97	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - LIGHTNING PROTECTIO
3	287	C	68498	98	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - OUTDOOR SUBSTATION
3	287	C	68499	99	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - MANHOLE DETAILS
3	287	C	68500	100	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SITE PLAN AND DUCT
3	287	C	68501	101	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - PLANS & PROFILES
3	287	C	68502	102	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - PLANS & PROFILES
3	287	C	68479	79	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - THIRD FLOOR PLAN -
3	287	C	68480	80	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY- SCYLLAC, ELECTRICAL - THIRD FLOOR PLAN -
3	287	C	68481	81	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - BASEMENT FLOOR PLAN
3	287	C	68482	82	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - BASEMENT FLOOR PLAN
3	287	C	68483	83	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECOND FLOOR PLAN-
3	287	C	68485	85	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECTIONS
3	287	C	68486	86	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECTIONS
3	287	C	68487	87	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECTIONS
3	287	C	68488	88	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SCHEDULES & LEGEND
3	287	C	68489	89	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - MOTOR CONTROL CENTE
3	287	C	68467	67	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - ENLARGED PLUMBING P
3	287	C	68468	68	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - PLUMING DETAILS
3	287	C	68469	69	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - BASEMENT FLOOR PLAN
3	287	C	68470	70	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - BASEMENT FLOOR PLAN
3	287	C	68471	71	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - BASEMENT FLOOR PLAN
3	287	C	68472	72	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - FIRST FLOOR PLAN -
3	287	C	68473	73	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - FIRST FLOOR PLAN -
3	287	C	68475	75	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECOND FLOOR PLAN -
3	287	C	68476	76	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECOND FLOOR PLAN -
3	287	C	68477	77	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECOND FLOOR PLAN -
3	287	C	68478	78	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - THIRD FLOOR PLAN -
3	287	C	68455	55	0	14-Jan-71	01-May-68	3057	AC	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - SECOND FLOOR AIR CO
3	287	C	68456	56	0	14-Jan-71	01-May-68	3057	AC	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - THIRD FLOOR AIR CON
3	287	C	68457	57	1	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - MECHANICAL ROOM PLA
3	287	C	68458	58	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - MECHANICAL DETAILS
3	287	C	68459	59	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILTIY - SCYLLAC, MECHANICAL - MECHANICAL DETAILS
3	287	C	68460	60	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - MECHANICAL DETAILS
3	287	C	68461	61	1	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - BASEMENT PLUMBING P
3	287	C	68462	62	2	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - FIRST FLOOR PLUMBIN
3	287	C	68463	63	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - SECOND FLOOR PLUMBI
3	287	C	68464	64	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - THIRD FLOOR PLUMBIN
3	287	C	68465	65	0	14-Jan-71	01-May-68	3057	F	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - C02 FIRE EXTINGUISH

3	287	C	68466	66	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - PLUMBING FIXTURES S
3	287	C	68443	43	0	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL - FRAMING ELEVATIONS
3	287	C	68444	44	1	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL DETAILS
3	287	C	68445	45	0	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL DETAILS
3	287	C	68446	46	0	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL DETAILS
3	287	C	68447	47	0	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL FLOOR SLAB SECTIONS
3	287	C	68448	48	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - FLOW DIAGRAMS
3	287	C	68449	49	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - FLOW DIAGRAMS
3	287	C	68450	50	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - EQUIPMENT SCHEDULE
3	287	C	68451	51	0	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - EQUIPMENT SCHEDULE
3	287	C	68452	52	0	14-Jan-71		3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - EQUIPMENT & CONTROL
3	287	C	68453	53	1	14-Jan-71	01-May-68	3057	M	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - BASEMENT AIR DONDIT
3	287	C	68454	54	1	14-Jan-71	01-May-68	3057	AC	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, MECHANICAL - FIRST FLOOR AIR CON
3	287	C	68431	31	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL DETAILS
3	287	C	68432	32	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL DETAILS
3	287	C	68433	33	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL DETAILS
3	287	C	68434	34	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL DETAILS
3	287	C	68435	35	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - FURNITURE LAYOUT
3	287	C	68436	36	2	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - FURNITURE ELEVAT
3	287	C	68437	37	1	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILTIY - SCYLLAC, STRUCTURAL - FOOTING & FOUNDATIO
3	287	C	68440	40	1	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL - THIRD FLOOR FRAMING
3	287	C	68441	41	0	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL - ROOF FRAMING PLAN
3	287	C	68442	42	1	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL - FRAMING ELEVATIONS
3	287	C	68419	19	2	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - SECTION
3	287	C	68420	20	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL SECTION
3	287	C	68421	21	0	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL SECTION
3	287	C	68422	22	0	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL SECTION - INTERIOR
3	287	C	68423	23	2	14-Jan-71	01-May-98	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCH. - INTERIOR ELEVATION
3	287	C	68424	24	0	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCH. - INTERIOR ELEVATION
3	287	C	68425	25	2	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCH.- CORRIDOR, STAIRWAY
3	287	C	68426	26	3	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - CORRIDOR DETAILS
3	287	C	68427	27	2	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCH. STAIRWAY & ELEVATION
3	287	C	68428	28	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - CORRIDOR DETAILS
3	287	C	68430	30	0	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - STAIRWAY PLANS &
3	287	C	68407	7	1	14-Jan-71	01-May-68	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, PLOT PLAN - UTILIITES REMOVALS
3	287	C	68408	8	2	14-Jan-71	01-May-68	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, PLOT PLAN - UTILITIES REVISIONS
3	287	C	68409	9	2	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILTIY - SCYLLAC, PLOT PLAN - ELECTRICAL LAYOUT PL
3	287	C	68410	10	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - BASEMENT FLOOR P
3	287	C	68411	11	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - FIRST FLOOR PLAN
3	287	C	68412	12	0	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - SECOND FLOOR PLA
3	287	C	68413	13	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - THIRD FLOOR PLAN
3	287	C	68414	14	0	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - EXTERIOR ELEVATI
3	287	C	68416	16	2	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - SCHEDULES
3	287	C	68417	17	2	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - DOOR DETAILS

3	287	C	68418	18	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - WINDOW DETAILS
3	287	C	68400	0	0	14-Jan-71	01-May-68	3057	T	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, COVER SHEET
3	287	C	68401	1	0	14-Jan-71	01-May-68	3057	T	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, INDEX
3	287	C	68402	2	3	14-Jan-71	01-May-68	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, PLOT PLAN - LAYOUT & PAVING PLAN
3	287	C	68403	3	4	14-Jan-71	01-May-68	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, PLOT PLAN - GRADING PLAN
3	287	C	68404	4	0	14-Jan-71	01-May-68	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SITE DETAILS
3	287	C	68405	5	0	14-Jan-71	01-May-68	3057	B	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, BORING LOG GRAPHS
3	287	C	68406	6	0	14-Jan-71	01-May-68	3057	C	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, SECTIONS & PROFILES
3	287	C	48958	1	0	19-Jan-93		0	S	TA-3, BLDG. SM-287, PIPE RELOCATION
3	287	C	47690	1	0	20-Sep-92		0	UN	COMPRESSOR AIR SYSTEM MODIFICATIONS EQUIPMENT & PIPING PLAN
3	287	C	47573	1	0	19-Sep-92		0	F	INSTALL PARTITIONS, SPRINKLER REMOVAL PLAN
3	287	C	47573	2	0	19-Sep-92		0	F	SPRINKLER RELOCATION PLAN
3	287	C	47536	3	0	17-Sep-92		0	UN	PLANS & ELEVATION AT 'B'
3	287	C	47536	4	0	17-Sep-92		0	UN	PLANS & ELEVATION AT 'C'
3	287	C	47536	5	0	17-Sep-92		0	UN	PLAN & ELEVATION AT 'D'
3	287	C	47536	6	0	17-Sep-92		0	UN	DETAILS
3	287	C	47536	7	0	17-Sep-92		0	UN	FAB. DETAILS
3	287	C	47536	1	0	17-Sep-92		0	UN	HALON CONTAINER PLATFORMS MASTER PLAN-ROOM 21
3	287	C	47536	2	0	17-Sep-92		0	UN	PLANS & ELEVATION AT 'A'
3	287	C	47335	1	0	15-Sep-92		0	F	MANUAL CEILING SPRINKLER SYSTEM SM-287, TA-3, ROOM 21, TITLE SHEET & SITE LOCATI
3	287	C	47335	3	0	15-Sep-92		0	F	THIRD FLOOR SPRINKLER PLAN
3	287	C	47335	4	0	15-Sep-92		0	UN	ROOF FRAMING PLAN
3	287	C	47335	5	0	15-Sep-92		0	UN	WEST INTERIOR ELEVATION
3	287	C	47335	6	0	15-Sep-92		0	UN	SECTIONS & DETAILS
3	287	C	46253	2	0	10-Dec-92	20-Aug-92	12809	C	CONDENSATE LINE REPLACEMENT, CIVIL & MECH; NOTES
3	287	C	46253	2	0	10-Dec-92	20-Aug-92	12809	M	CONDENSATE LINE REPLACEMENT, CIVIL & MECH; NOTES
3	287	C	46253	3	0	10-Dec-92	20-Aug-92	12809	G	CONDENSATE LINE REPLACEMENT, GEN; SUBMITTALS, TEST AND INSPECTION PLAN
3	287	C	46164	1	0	24-Jul-91	18-Jul-91	12093	F	SYLLAC TIGER TEAM REMODEL, F.P.; PLAN, ISOMETRIC NOTES AND LEGEND
3	287	C	44088	1	0	22-Jun-82		6446	F	MANUAL CEILING SPRINKLERS FOR RM. 21, SM-287, TA-3. UNDERGROUND PLOT PLAN (AS B
3	287	C	44088	2	0	22-Jun-82		6446	F	MANUAL CEILING SPRINKLERS
3	287	C	44088	3	0	22-Jun-82		6446	F	MANUAL CEILING SPRINKLERS
3	287	C	43789	4	0			6446	UN	ROOF FRAMING PLAN
3	287	C	43789	5	0			6446	UN	WEST INTERIOR ELEVATION
3	287	C	43789	6	0			6446	UN	SECTIONS AND DETAILS
3	287	C	43789	1	0			6446	F	MANUAL CEILING SPRINKLER SYSTEM SM-287 TA-3 ROOM 21 TITLE SHEET AND SITE LOCATIO
3	287	C	43789	3	0			6446	F	THIRD FLOOR SPRINKLER PLAN
3	287	C	43423	39	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #3
3	287	C	43423	40	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #4
3	287	C	43423	41	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #5
3	287	C	43423	52	1	25-Jun-76		5181	UN	PRE ALARM LOGIC
3	287	C	43423	35	1	26-Jun-76		5181	UN	SYSTEM CONTROL
3	287	C	43423	53	1	25-Jun-76		5181	UN	FIRING LOGIC
3	287	C	43423	54	1	25-Jun-76		5181	UN	INITIAL DISCHARGE ZONES 1 AND 2
3	287	C	43423	55	1	25-Jun-76		5181	UN	INITIAL DISCHARGE 3 AND 4

3	287	C	43423	57	1	25-Jun-76		5181	UN	INITIAL DISCHARGE ZONE # 7
3	287	C	43423	58	1	25-Jun-76		5181	UN	TROUBLE CIRCUITRY
3	287	C	43423	59	1	25-Jun-76		5181	UN	DISCHARGE ANNUNICIATION AND ALARM SIGNLA
3	287	C	43423	36	1	26-Jun-76		5181	UN	SYSTEM CONTROL
3	287	C	43423	60	1	25-Jun-76		5181	AC	VENTILATION INTERLOCK
3	287	C	43423	62	1	25-Jun-76		5181	AC	VENTILATION AND OVERHEAD DOOR INTERLOCK
3	287	C	43423	63	1	29-Oct-76		5181	F	HALON 1301 FIRE SUPPRESSION SYSTEM, ERDA SCYLLAC PROJECT
3	287	C	43423	64	1	29-Oct-76		5181	UN	BUILDING SM-287
3	287	C	43423	37	1	25-Jun-76		5181	UN	ERDA - SCYLLAC PROJECT BLDG. SM-287. DETECTION MODULES RACK #1
3	287	C	43423	38	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #2
3	287	C	43423	5	1	27-Jun-76		5181	E	ELECTRICAL BILL OF MATERIAL
3	287	C	43423	6	1			5181	UN	HALON SYSTEM CONTROL PANEL
3	287	C	43423	7	1	26-Jun-76		5181	UN	CONTROL PANEL INTERIOR
3	287	C	43423	8	1	27-Jun-76		5181	UN	ASC PIPE AND CONDUIT
3	287	C	43423	9	1	26-Jun-76		5181	UN	ASC PIPE AND CONDUIT
3	287	C	43423	65	1	29-Oct-76		5181	UN	PLAN ROOM 21A AND B
3	287	C	43423	67	1	29-Oct-76		5181	F	HALON 1301 FIRE SUPPRESSION SYSTEM, ERDA SCYLLAC PROJECT
3	287	C	43423	69	1	29-Oct-76		5181	UN	CONTROL PANEL
3	287	C	43423	43	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #7
3	287	C	43423	44	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK # 8
3	287	C	43423	45	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK # 9
3	287	C	43423	47	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #11
3	287	C	43423	49	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #13
3	287	C	43423	50	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #14
3	287	C	43423	19	1	26-Jun-76		5181	UN	ERDA SCYLLAC PROJECT - ISOMETIC PIPING DIAGRAMS
3	287	C	43423	2	1	27-Jun-76		5181	UN	ERDA - SCYLLAC PROJECT, LOS ALAMOS, N.M. - INDEX
3	287	C	43423	20	1	26-Jun-76		5181	UN	INTERLOCK AND ALARM CONDUIT
3	287	C	43423	21	1	26-Jun-76		5181	UN	INTERLOCK AND ALARM CONDUIT
3	287	C	43423	22	1	26-Jun-76		5181	UN	PLAN 2ND FLOOR ALARM AND INTERLOCK CONDUIT
3	287	C	43423	23	1	26-Jun-76		5181	UN	REV. B - REVISE WIRE NOS.
3	287	C	43423	24	1	26-Jun-76		5181	UN	INTERLOCK AND ALARM CONDUIT
3	287	C	43423	25	1	26-Jun-76		5181	UN	THERMAL DETECTION CONDUIT RUN
3	287	C	43423	27	1	26-Jun-76		5181	UN	THERMAL DETECTION CONDUIT RUN
3	287	C	43423	28	1	26-Jun-76		5181	UN	THERMAL DETECTION CONDUIT RUN
3	287	C	43423	29	1	26-Jun-76		5181	UN	THERMAL DETECTION CONDUIT RUN
3	287	C	43423	3	1	27-Jun-76		5181	M	MECHANICAL BILL OF MATERIAL
3	287	C	43423	32	1	26-Jun-76		5181	UN	THERMAL DETECTION RACH - # (TYPICAL)
3	287	C	43423	33	1	26-Jun-76		5181	AC	HEATING AND VENTILATION DETAILS
3	287	C	43423	4	1	27-Sep-76		5181	E	ELECTRICAL BILL OF MATERIAL
3	287	C	43423	10	2	31-May-79	31-May-79	5181	E	DETECTION MODULES RACK #1
3	287	C	43423	10	1	26-Jun-76		5181	UN	ASC PIPE AND CONDUIT
3	287	C	43423	11	1	26-Jun-76		5181	UN	ASC PIPE AND CONDUIT
3	287	C	43423	12	1	26-Jun-76		5181	UN	ASC PIPE AND CONDUIT
3	287	C	43423	13	1	26-Jun-76		5181	UN	DETAIL 'A'

3	287	C	43423	46	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #10
3	287	C	43423	15	1	26-Jun-76		5181	UN	DETAILS 'C'
3	287	C	43423	16	0	26-Jun-76		5181	UN	DETAIL 'D'
3	287	C	43423	18	1	26-Jun-76		5181	UN	ISOMETRIC PIPING DIAGRAM
3	287	C	43348	1	0			5712	C	ADDITION OF SIDE WALK AND STEPS, BLDG. SM-287, TA-3 CIVIL; LOC. PLOT PLAN, PROF
3	287	C	42968	1	0	24-Jun-76		5534	M	HEAT EXCHANGER INSTALLATION, ROOM B-11, SM-287. MECH; PLAN AND SECTION
3	287	C	42968	2	0	24-Jun-76		5534	M	MECH; - DETAILS - NOTES AND EQUIPMENT LIST
3	287	C	42956	1	0			4908	UN	GRINNELL FPS, CO., INC. SITE WORK, PHASE II, BLDG. SM-287, TA-3
3	287	C	42955	13	0			4908	UN	PAINTING, BLDG. SM-287, TA-3
3	287	C	42955	14	0			4908	UN	PANTING BLDG. SM-287, TA-3
3	287	C	42955	15	0			4908	UN	PAINTING BLDG. SM-287, TA-3
3	287	C	42955	16	0			4908	UN	PAINTING BLDG. SM-287, TA-3
3	287	C	42955	18	0			4908	F	GRINNELL FIRE PROTECTION SYSTEMS COMPANY, INC. CONTRACT 45.040A1. PAINTING, BLD
3	287	C	42955	20	0			4908	UN	PAINTING, BLDG. SM-287, TA-3
3	287	C	42778	1	0	19-Feb-75		5188	F	SUPERVISORY & CONTROL HOOK-UP SCYLLAC FIRE PROTECTION. SPRINKLER SYS.-SITE PLAN
3	287	C	42778	2	0	19-Feb-75		5188	UN	BASEMENT
3	287	C	42778	3	0	19-Feb-75		5188	UN	FIRST FLOOR
3	287	C	42778	4	0	19-Feb-75		5188	UN	SECOND FLOOR
3	287	C	42739	1	2	24-Jan-75		5096	F	SCYLLAC, FIRE SPRINKLER INST., BLDG. SM-287,TA-3. PLOT PLAN - AS BUILT DRAWINGS
3	287	C	42739	2	1	24-Jan-75		5096	UN	BASEMENT - SOUTH HALF
3	287	C	42739	3	1	24-Jan-75		5096	UN	BASEMENT - NORTH HALF
3	287	C	42739	4	1	24-Jan-75		5096	UN	FIRST FLOOR AND NORTH HALF
3	287	C	42739	6	1	24-Jan-75		5096	UN	SECOND FLOOR
3	287	C	42739	7	1	24-Jan-75		5096	UN	THIRD FLOOR NORTH HALF
3	287	C	42739	8	1	24-Jan-75		5096	UN	SECOND FLOOR AND SOUTH HALF
3	287	C	42739	9	1	24-Jan-75		5096	UN	RISER SECTION
3	287	C	42728	1	0	30-Jan-75		5181	F	SCYLLAC FIRE PROTECTION, BLDG. SM-287. MECH; BSMT FLR. PLAN AND SITE PLANS, LEG
3	287	C	42728	2	1	30-Jan-75		5181	M	MECH; SECTION - DESIGN CRITERIA; BLDG. AM-287
3	287	C	42728	3	0	24-Apr-75		5181	M	MECHANICAL; PLOT PLAN
3	287	C	42663	1	0	11-Mar-75		5180	F	SCYLLAC FIRE PROTECTION ALARM SYSTEM MODIFICATIONS, SM-287, TA-3 ELECTRICAL FIR
3	287	C	42663	2	0	11-Mar-75		5180	F	ELECTRICAL FIRE ALARM SYSTEM
3	287	C	42663	3	0	11-Mar-75		5180	E	ELECTRICAL - BASEMENT FLOOR PLAN
3	287	C	42663	4	0	11-Mar-75		5180	E	ELECTRICAL - FIRST FLOOR PLAN
3	287	C	42663	5	0	11-Mar-75		5180	E	ELECTRICAL - SECOND FLOOR PLAN
3	287	C	42663	6	0	11-Mar-75		5180	E	ELECTRICAL - THIRD FLOOR PLAN
3	287	C	42663	7	0	11-Mar-75		5180	E	ELECTRICAL - ROOM 21, CEILING PLAN AND DETAIL
3	287	C	42663	8	0	11-Mar-75		5180	M	MECH; ADDITIONAL CO2 HOSE REEL STATIONS DETAIL AND SITE PLAN, NOTES, EQUIPMENT
3	287	C	42609	1	1	24-Jul-74		5189	UN	INSTALL CABLE TRAY FLAME SHIELDS, BLDG. SM-287, TA-3 LOCATION PLAN, BASEMENT PL
3	287	C	42371	1	0	22-Mar-74		5179	UN	LADDER INSTALLATION, RM. 21, BLDG. SM-287 LOCATION PLAN, PLANS, ELEVATIONS, SEC
3	287	C	42337	1	0	08-Mar-74		5096	F	MISC. FIRE SAFETY PROJECTS - SPRINKLER INSTALLATION, SM-287 MECH; BSMT FL. PLA
3	287	C	42338	2	1	08-Mar-74		5096	M	MECH; FIRST FLOOR PLAN, UTILITIES SITE PLAN & DETAIL
3	287	C	42339	3	0	08-Mar-74		5096	M	MECH; SECOND FLOOR PLAN & DETAIL
3	287	C	42340	4	1	08-Mar-74		5096	M	MECH; THIRD FLOOR PLAN & NOTES
3	287	C	41240	12	1	12-Feb-73		4881	M	MECH; NEW EQUIPMENT PLAN

3	287	C	41241	13	1	12-Feb-73		4881	M	MECH; NEW EQUIPMENT ELEVATION
3	287	C	41242	14	1	12-Feb-73		4881	M	MECHANICAL SPECIFICATIONS
3	287	C	41243	15	1	12-Feb-73		4881	E	ELECTRICAL
3	287	C	41229	1	1	12-Feb-73		4880	T	SCYLLAC FEEDBACK COOLING, 15 M. SYSTEM, BLDG. SM-287, COMPRESSED AIR SYSTEM MODS
3	287	C	41230	2	1	12-Feb-73		4880	UN	SITE PLAN
3	287	C	41231	3	1	12-Feb-73		4880	M	MECHANICAL PLAN
3	287	C	41232	4	1	12-Feb-73		4880	M	MECHANICAL PLAN
3	287	C	41233	5	1	12-Feb-73		4880	M	MECHANICAL SECTIONS
3	287	C	41234	6	1	12-Feb-73		4880	M	MECHANICAL DETAILS
3	287	C	41235	7	1	12-Feb-73		4880	UN	EQUIPMENT LIST
3	287	C	41236	8	1	12-Feb-73		4880	E	ELECTRICAL
3	287	C	41237	9	1	12-Feb-73		4881	M	COMPRESSED AIR SYSTEM MODS., BLDG. SM-287 MECHANICAL SITE PLAN
3	287	C	41238	10	1	12-Feb-73		4881	M	MECHANICAL PIPING SCHEMATIC
3	287	C	41239	11	1	12-Feb-73		4881	M	MECH; EQUIPMENT REMOVAL PLAN
3	287	C	41098	3	2	12-Feb-73		4882	E	ELECTRICAL DETAILS
3	287	C	41099	4	2	12-Feb-73		4882	E	ELECTRICAL DETAILS, BLDG. SM-287
3	287	C	41096	1	2	12-Feb-73		4882	T	FILAMENT POWER, SCYLLAC - BLDG. SM-287 15M. SYSTEM - TITLE SHEET
3	287	C	41097	2	2	12-Feb-73		4882	UN	PLAN AND ONE LINE
3	287	C	41071	1	1	15-Nov-72		4870	M	EXHAUST SYSTEM, RM. 16, BLDG. SM-287 PLAN, SECTION, EQUIPMENT LIST
3	287	C	40054	1	0	04-Nov-71		0	M	DUCT DETECTOR MODIFICATION, RM. 214-A - PLAN, DETAILS, NOTES
3	287	C	40021	1	1	20-Jan-71		4713	M	ADDITIONAL CO2 HOSE REELS - SM-287 - PLAN
3	287	C	40022	2	1	20-Jan-71		4713	A	ELEVATION & DETAILS
3	287	C	39912	1	0	14-Jul-71		0	M	TEMPERATURE CONTROL, RM. 111, BLDG.SM-287 - EXHAUST FAN INSTALLATION & DETAIL
3	287	C	38857	1	1	26-Oct-71		0	S	SCYLLAC CO2 MODIFICATIONS STORAGE TANK PLATFORM - PLAN, ELEVATION & DETAILS, BL
3	287	C	38858	2	1	26-Oct-71		0	G	LIST OF EQUIPMENT & GENERAL NOTES, BLDG. SM-287 & 289
3	287	C	38823	1	1	14-Jun-71		3704	C	OCCUPANCY MODS. LAB AND ENERGY STORAGE FACILITY, SM-287 - PARKING MODS. - CIVIL;
3	287	C	38637	1	0	21-Aug-70		3704	M	OCCUPANCY MODS. LABORATORY & ENERGY STORAGE FACILITY-SCYLLAC, SM-287 - ARCH., ME
3	287	C	38620	3	0	06-Aug-70		3704	E	ELECTRICAL
3	287	C	38616	1	0	25-Aug-70		3704	M	OCCUPANCY MODIFICATIONS LABORATORY AND ENERGY STORAGE FACILITY-SCYLLAC, BLDG. SM
3	287	C	38617	2	0	25-Aug-70		3704	E	OCCUPANCY MODIFICATIONS LABORATORY AND ENERGY STORAGE FACILITY - SCYLLAC, BLDG.
3	287	C	38618	1	0	06-Aug-70		3704	M	MECHANICAL PLAN
3	287	C	38619	2	0	06-Aug-70		3704	M	MECHANICAL ELEVATIONS & NOTES
3	287	C	38288	5	0	23-Jun-70		3057	E	SCYLLAC - MOTOR CONTROL CENTERS
3	287	C	37132	1	0	25-Oct-68		3703	A	SITE PREPARATION, SCYLLAC, BLDG. SM-287, PHASE 'B', THIRD FLOOR SECURITY SCREEN
3	287	C	36764	2	0	03-May-71		3704	A	OCCUP. MODS. PHASE 'J' LCH & ENERGY STORAGE FAC. (SCYLLAC) SM-287
3	287	C	36765	3	0	03-May-71		3704	M	OCCUP. MODS. PHASE 'J' LCH & ENERGY STORAGE FAC. (SCYLLAC) SM-287
3	287	C	36766	4	0	03-May-71		3704	M	OCCUP. MODS. PHASE 'J' LCH & ENERGY STORAGE FAC. (SCYLLAC) SM-287
3	287	C	36700	1	0	22-Sep-70	22-Sep-70	3704	C	OCCUP. MODS., LAB & ENERGY STORAGE FAC., SYLLAC, CIVIL & MECH.
3	287	C	36701	2	0	03-Aug-99	22-Sep-70	3704	E	OCCUP. MODS., LAB & ENERGY STORAGE FAC., SCYLLAC, PHASE I
3	287	C	36341	1	1	12-Mar-68		3703	C	SITE PREPARATION, SCYLLAC, BLDG. SM-287 - PHASE 'A', SECURITY FENCE RELOCATION
3	287	C	36342	2	1	12-Mar-68		3703	M	MECHANICAL
3	287	C	36343	3	1	12-Mar-68		3703	M	MECHANICAL
3	287	C	43789	2	0			6446	UN	PLOT PLAN LOCATION PLAN
3	287	C	47335	2	0	15-Sep-92		0	UN	PLOT PLAN, LOCATION PLAN

3	287	C	46253	1	0	10-Dec-92	20-Aug-92	12809	C	CONDENSATE LINE REPLACEMENT, CIVIL; STEAM AND CONDENSATE LINE PLAN & PROFILE, SCOPE (
3	287	SK	7842	1	0	02-Dec-91	09-Oct-91	12093	F	SCYLLAC TIGER TEAM REMODEL, BLDG. 287
3	287	SK	7845	2	0	22-May-92	16-Mar-92	12509	E	REPLACE PCB TRANSFORMERS, ELEC; NOTES AND SCOPE OF WORK
3	287	SK	7845	3	0	22-May-92	16-Mar-92	12509	E	REPLACE PCB TRANSFORMERS, ELEC, SITE PLAN
3	287	SK	7873	1	0	05-Aug-92		12170	S	CONSTRUCT OUTSIDE STAIRWAY, BLDG. 287, PLAN, SECTIONS & DETAILS
3	287	SK	7910	16	0	30-Aug-93	09-Aug-93	14751	E	REPLACE PCB TRANSFORMERS, ELEC; TA-3, BLDG. 287 SITE PLAN
3	287	SK	7910	17	0	30-Aug-93	09-Aug-93	14751	E	REPLACE PCB TRANSFORMER, ELEC; SUBSTATION TA-3-290 'SUS-A' ONE LINE DIAGRAM
3	287	SK	7910	18	0	30-Aug-93	09-Aug-93	14751	E	REPLACE PCB, ELEC; SUBSTATION TA-3-290 'SUS-B' AND 'SUS-C' ONE LINE DIAGRAM
3	287	SK	7910	19	0	30-Aug-93	09-Aug-93	14751	E	ELEC; SUBSTATION TA-3-290 'SUS-A, 'SUS-B' AND 'SUS-C' REMOVAL LAYOUT
3	287	SK	7910	20	0	30-Aug-93	09-Aug-93	14751	E	ELEC; SUBSTATION TA-3-290 'SUS-A', 'SUS-B' AND 'SUS-C' INSTALLATION LAYOUT
3	287	SK	7910	21	0	30-Aug-93	09-Aug-93	14751	E	REPLACE PCB, ELEC; SUBSTATION TA-3-290 'SUS-A', 'SUS-B' AND 'SUS-C' PLAN
3	287	SK	7910	22	0	30-Aug-93	09-Aug-93	14751	E	REPLACE PCB, ELEC; SUBSTATION TA-3-290 'SUS-A', 'SUS-B' AND 'SUS-C' ELEVATION
3	287	C	49402	1	0	17-Nov-93	05-Nov-93	14606	T	SST-9 BUILDING MODIFICATIONS, TITLE SHEET AND INDEX OF DRAWINGS
3	287	C	49402	2	0	17-Nov-93	05-Nov-93	14606	G	SST-9 BUILDING MODIFICATIONS, GEN; SUBMITTALS
3	287	C	49402	3	0	17-Nov-93	05-Nov-93	14606	M	SST-9 BUILDING MODIFICATIONS, MECH; GENERAL NOTES
3	287	C	49402	7	0	17-Nov-93	05-Nov-93	14606	M	SST-9 BUILDING MODIFICATIONS, MECH; DETAILS, EQUIPMENT SCHEDULE & SEQUENCE OF OPERAT
3	287	C	49402	8	0	17-Nov-93	05-Nov-93	14606	E	SST-9 BUILDING MODIFICATIONS, ELEC; SYMBOL LEGEND, GENERAL NOTES AND ONE-LINE DIAGRAN
3	287	C	49402	9	0	17-Nov-93	05-Nov-93	14606	E	SST-9 BUILDING MODIFICATIONS, ELEC; PARTIAL BASEMENT FLOOR PLAN - POWER, SCHEDULES, N(
3	287	C	49520	2	0	23-Jun-94	20-Jun-94	12170	C	ENGINEERING SERVICES STORM DRAIN REPLACEMENT, CIVIL; PLAN & PROFILE
3	287	C	49520	3	0	23-Jun-94	20-Jun-94	12170	C	ENGINEERING SERVICES STORM DRAIN REPLACEMENT, CIVIL; GENERAL NOTES
3	287	SK	7945	1	0	20-Mar-95	23-Feb-95	16197	S	HVAC EQUIPMENT ROOM RELOCATION, STAIR PLAN
3	287	SK	7945	2	0	20-Mar-95	23-Feb-95	16197	M	HVAC EQUIPMENT ROOM RELOCATION, MECH; PLAN
3	287	AB	58	7	0	26-Oct-92	07-Aug-92	11831	M	DRAINS; STORM DRAIN ISOMETRIC, SYLLAC LAB AND OFFICE BLDG.
3	287	SK	7910	15	0	30-Aug-93	09-Aug-93	14751	E	REPLACE PCB TRANSFOMERS, ELEC; TA-3, BLDG. 287 NOTES AND SCOPE OF WORK
3	287	C	43423	26	1	26-Jun-76		5181	UN	THERMAL DETECTION CONDUIT RUN
3	287	C	43423	31	1	26-Jun-76		5181	UN	L.H. DETECTION CABLE - 5 RACKS
3	287	C	43423	34	1	26-Jun-76		5181	UN	POWER SUPPLY
3	287	C	43423	42	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #6
3	287	C	43423	48	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #12
3	287	C	43423	51	1	25-Jun-76		5181	UN	DETECTION MODULES - RACK #15
3	287	C	43423	56	1	25-Jun-76		5181	UN	INITIAL DISCHARGE ZONE 5 AND 6
3	287	C	43423	61	1	25-Jun-76		5181	AC	VENTILATION INTERLOCK
3	287	C	43423	66	1	29-Oct-76		5181	F	HALON 1301 FIRE SUPPRESSION SYSTEM, ERDA SCYLLAC PROJECT
3	287	C	43423	1	0	26-Jun-76		5181	F	HALON 1301 FIRE PROTECTION SYSTEM BLDG. SM-287, TA-3
3	287	C	43423	17	1	26-Jun-76		5181	UN	DETAILS 'F' AND 'E'
3	287	C	42955	19	0			4908	UN	PAINTING, BLDG. SM-287, TA-3
3	287	C	42778	5	0	19-Feb-75		5188	UN	THIRD FLOOR
3	287	C	42739	5	1	24-Jan-75		5096	UN	FIRST FLOOR AND SOUTH HALF
3	287	C	49402	6	0	17-Nov-93	05-Nov-93	14606	F	SST-9 BUILDING MODIFICATIONS, MECH; PARTIAL PLUMBING AND FIRE PROTECTION PLAN, ENLARGI
3	287	C	49402	6	0	17-Nov-93	05-Nov-93	14606	M	SST-9 BUILDING MODIFICATIONS, MECH; PARTIAL PLUMBING AND FIRE PROTECTION PLAN, ENLARGI
3	287	C	68415	15	3	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - EXTERIOR ELEVATI
3	287	C	68429	29	1	14-Jan-71	01-May-68	3057	A	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ARCHITECTURAL - STAIRWAY PLANS &
3	287	C	68438	38	2	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL - FIRST FLOOR FRAMING
3	287	C	49854	1	1	10-Jan-00	15-May-97	16854	T	WASTE STREAM CORRECTIONS, FMU-77, TITLE SHEET, DRAWING LIST

3	287	C	49854	2	1	10-Jan-00	15-May-97	16854	G	WASTE STREAM CORRECTIONS, FMU-77, GEN., SPECIFICATIONS AND SCOPE OF WORK
3	287	C	49854	9	1	10-Jan-00	15-May-97	16854	M	WASTE STREAM CORRECTIONS, FMU-75, MECH., FLOOR PLAN
3	287	C	49008	1	2	17-Dec-92		0	C	TA-3 CONDENSATE LINE REPLACEMENT MANHOLE #1032 TO SM-287
3	287	C	43423	68	1	29-Oct-76		5181	F	HALON 1301 FIRE SUPPRESSION SYSTEM, ERDA SCYLLAC PROJECT
3	287	C	43423	30	1	26-Jun-76		5181	UN	R.H. DETECTION CABLE - 10 RACKS
3	287	PL	1741	24	0	27-Sep-67	19-May-67	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECT. SYSTEMS
3	287	C	43423	14	1	26-Jun-76		5181	UN	DETAILS 'B' AND 'G'
3	287	C	42955	17	0			4908	UN	PANTING BLDG. SM-287, TA-3
3	287	C	49854	1	0	06-Apr-00	08-Oct-96	16854	T	WASTE STREAM CORRECTIONS, FMU-77, TITLE SHEET AND DRAWING LIST
3	287	C	49854	2	0	06-Apr-00	08-Oct-96	16854	G	WASTE STREAM CORRECTIONS, FMU-77, GEN., SPECIFICATIONS AND SCOPE OF WORK
3	287	C	49854	18	0	06-Apr-00	08-Oct-96	16854	M	WASTE STREAM CORRECTIONS, FMU-77, MECH., DETAILS, FLOOR DRAIN, SPILL COLLAR
3	287	C	49854	18	1	06-Apr-00	15-May-97	16954	M	WASTE STREAM CORRECTIONS, FMU-77, MECH., DRAIN PLUG, CONTAINMENT CURB, SPILL COLLAR I
3	287	C	49854	19	0	06-Apr-00	08-Oct-96	16854	M	WASTE STREAM CORRECTIONS FMU-77, MECH., CORRECTIVE ACTION SUMMARY
3	287	C	49854	19	1	06-Apr-00	15-May-97	16854	M	WASTE STREAM CORRECTIONS, FMU-77, MECH., CORRECTIVE ACTION SUMMARY
3	287	C	49520	4	0	23-Jun-94	20-Jun-94	12170	C	ENGINEERING SERVICES STORM DRAIN REPLACEMENT, CIVIL; SUBMITTAL SHEET
3	287	SK	7945	3	0	20-Mar-95	23-Feb-95	16197	M	HVAC EQUIPMENT ROOM RELOCATION, MECH; CONTROL DIAGRAM & EQUIPMENT LIST
3	287	C	49854	9	0	06-Apr-00	08-Oct-96	16854	M	WASTE STREAM CORRECTIONS, FMU-77, MECH., FIRST FLOOR PLAN
3	287	C	68439	39	1	14-Jan-71	01-May-68	3057	S	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, STRUCTURAL - SECOND FLOOR FRAMIN
3	287	C	68474	74	0	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - FIRST FLOOR PLAN -
3	287	C	68484	84	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - SECTIONS
3	287	C	68490	90	1	14-Jan-71	01-May-68	3057	E	LABORATORY & ENERGY STORAGE FACILITY - SCYLLAC, ELECTRICAL - MOTOR CONTROL CENTE
3	287	C	49402	4	0	17-Nov-93	05-Nov-93	14606	M	SST-9 BUILDING MODIFICATIONS, MECH; GENERAL NOTES
3	287	C	49402	5	0	17-Nov-93	05-Nov-93	14606	M	SST-9 BUILDING MODIFICATIONS, MECH; GENERAL NOTES & SYMBOL LEGEND
3	287	C	49520	1	0	23-Jun-94	20-Jun-94	12170	C	ENGINEERING SERVICES STORM DRAIN REPLACEMENT, CIVIL; SITE PLAN, LEGEND, SCOPE OF WOR

Appendix E: Historic Building Survey Forms
(including selected building drawings)

LANL TA- Building # 03-0105

Camera 984183

Frame #s P0000717 through P0000792

Surveyor(s) B. Ziegler, K. Garcia, E. McGehee

Date 12/01/2000

Los Alamos National Laboratory CRMT
Historic Building Survey Form

Building Name: Sherwood Building | UTMs easting: 380433 | northing: 3970678 | zone: 13

Legal Description: Map: Guaje Mountain Quad 1984 and Frijoles Quad 1984 | tnsp: 19N | range: 6E | sec: 14

Current Use/ Function: Office space, storage, & vacant space | Original Use/ Function: Fusion and Magnetic Energy Research

Date (estimated): | Date (actual): 1959 | Property Type: Laboratory/Processing

Type of Construction

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

Other Type of Construction: | # of Stories: 5

Foundation Reinforced Concrete.

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

Wood Siding ☐ Asbestos Shingles-Exterior ☐ In-Fill Panels ☑ Other-Exterior: Transite Siding.

Exterior Treatment (painted, stuccoed, etc): Painted siding.

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

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

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

Exterior Treatment-Addition: Painted CMU and steel siding.

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: Metal deck with steel columns.

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

Other Window Type: Awning

# of Each Window Type/ Comments:

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:

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: TA-3-287 Scyllac Building.

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 _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 original portion of the building has a high bay with 15-ton overhead bridge crane. In the north end of the building there is a "pit" with three below-ground levels (two of which are metal mezzanines). A service elevator and stairs are used to access the "pit" area. The main floor of the building has removable slab floor units that will allow crane access to lower equipment to the floor of the "pit."

Total sq ft 33,743 **Architect/ Builder** W.C. Kruger and Associates

Alterations

Additions were added to the west, south, and east sides of the building. The western addition consists of a high bay with a two-ton crane. The southern addition is a low-bay along with office space. The eastern addition is solely office space. From this addition there is access into the east wing of the administration building through a security portal (turnstile).

List of Drawings (Cntrl + Enter for para break)

ENG-C 20755
Sheet 13 of 28
Sherwood Project TA-3
Bldg SM-105 (TA-3-105)
Architectural - Elevations and Section
December 20, 1955

ENG-C 20754
Sheet 12 of 28
Sherwood Project TA-3
Bldg SM-105 (TA-3-105)
Architectural - Floor Plans
December 20, 1955

ENG-C 21939
Sheet 9 of 14
Sherwood Addition, TA-3
Bldg SM-105 (TA-3-105)
Architectural - Elevations and Sections
March 11, 1958

ENG-C 21937
Sheet 7 of 14
Sherwood Addition, TA-3
Bldg SM-105 (TA-3-105)
Architectural - First Floor Plan and Details
March 11, 1958

ENG-C 21938
Sheet 8 of 14
Sherwood Addition, TA-3
Bldg SM-105 (TA-3-105)
Architectural - Second Floor Plan and Details
March 11, 1958

ENG-C 32354
Sheet 1 of 7
Sherwood Office Addition
Bldg SM-105, TA-3
Architectural - Elevations
March 14, 1966

ENG-C 32355
Sheet 2 of 7
Sherwood Office Addition
Bldg SM-105, TA-3
Architectural - Floor Plan
March 14, 1966

Drawing List Continued on Next Page

ENG-C 32374
Sheet 1 of 7
Bldg SM-105, TA-3
Office Addition
Architectural - Elevations
March 6, 1967

ENG-C 32975
Sheet 2 of 7
Bldg SM-105, TA-3
Office Addition
Architectural - Floor Plan
March 6, 1967

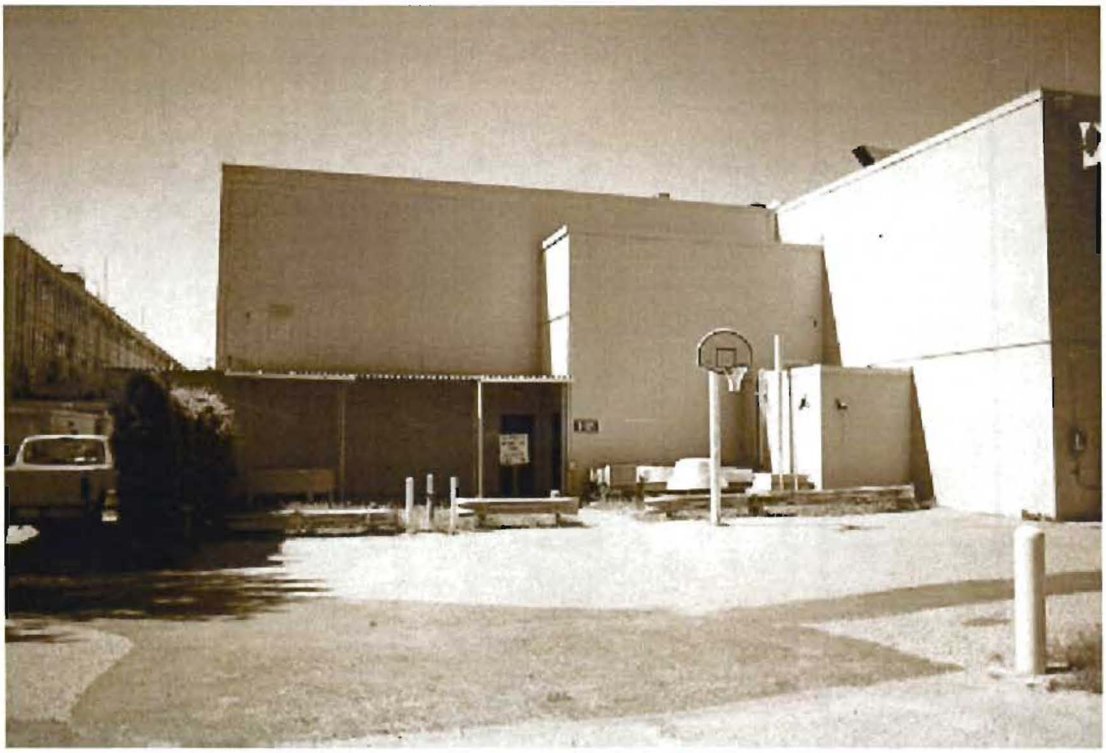
ENG-R 3363
Sheet 1 of 3
Sherwood Building
Bldg SM-105, TA-3
Basement Floor Plan
July 19, 1973

ENG-R 3364
Sheet 2 of 3
Sherwood Building
Bldg SM-105, TA-3
First Floor Plan
June 5, 1973

ENG-R 3365
Sheet 3 of 3
Sherwood Building
Bldg SM-105, TA-3
Second Floor Plan
July 20, 1973

Sherwood Building, TA-3-105, east side (front), direction west

Sherwood Building, TA-3-105, east side, direction southwest

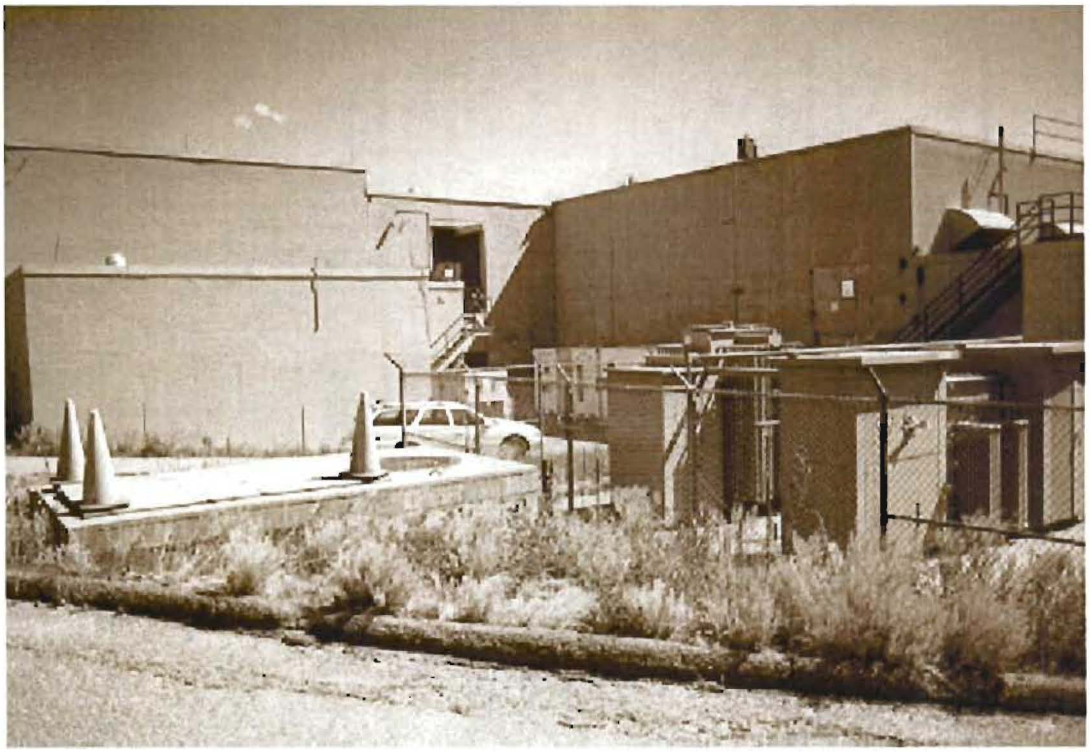


Sherwood Building, TA-3-105, north side, east half, direction south

Sherwood Building, TA-3-105, north side, west half, direction south

Sherwood Building, TA-3-105, west side, direction northeast

Sherwood Building, TA-3-105, west side, direction northeast

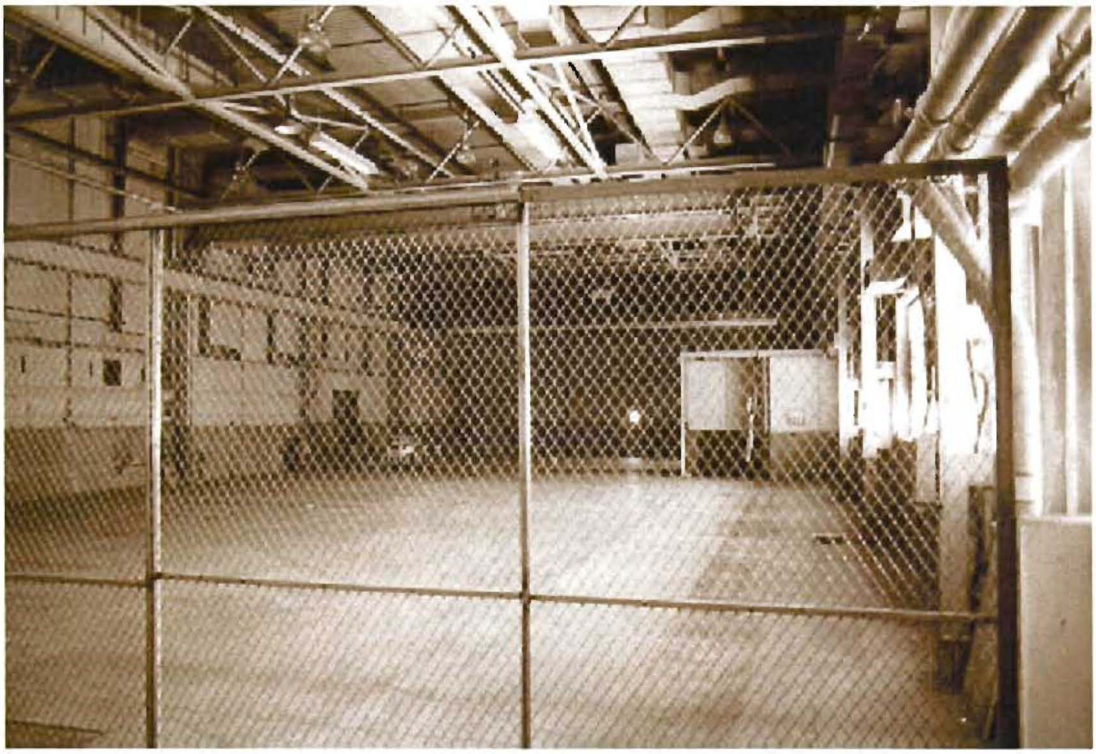


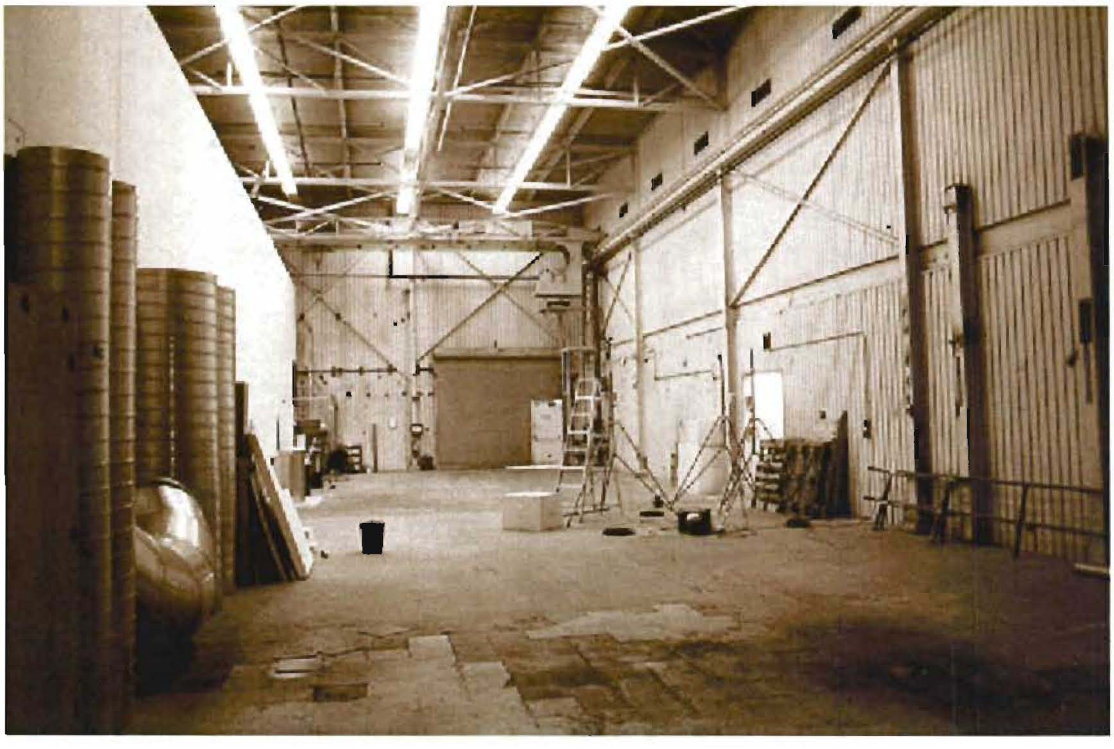
Sherwood Building, TA-3-105, south and west sides, direction northwest

Sherwood Building, TA-3-105, south side, direction north

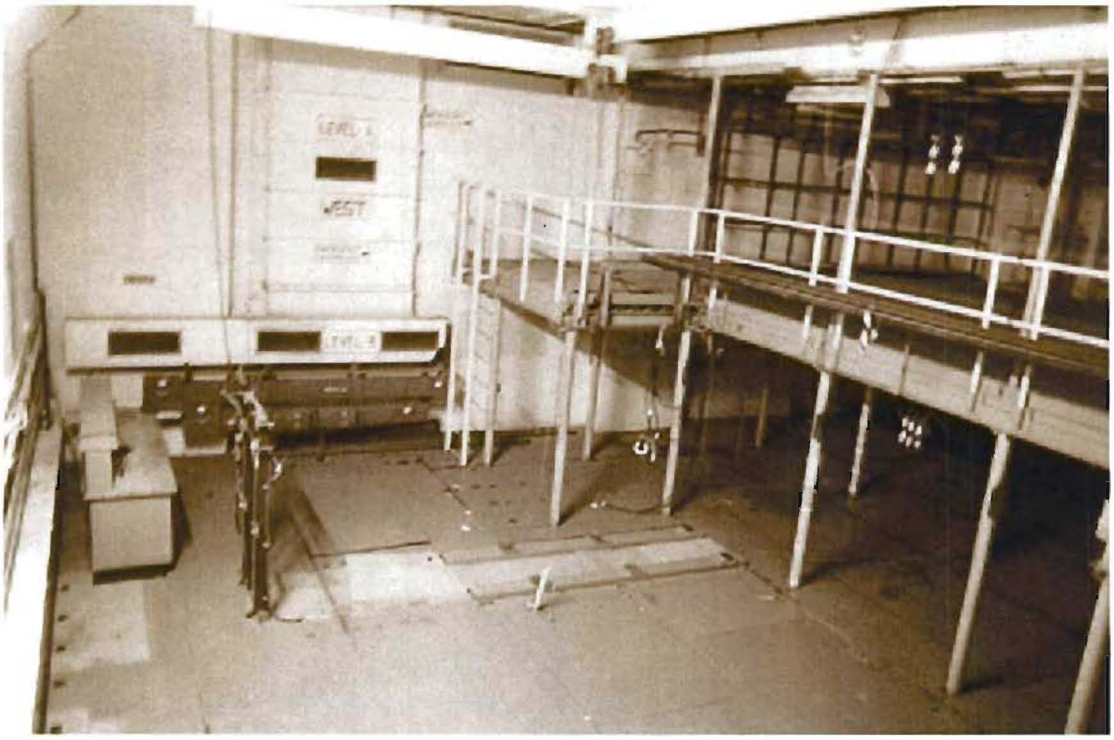
Sherwood Building, TA-3-105, south side, direction north northeast

Sherwood Building, TA-3-105, south side, direction north

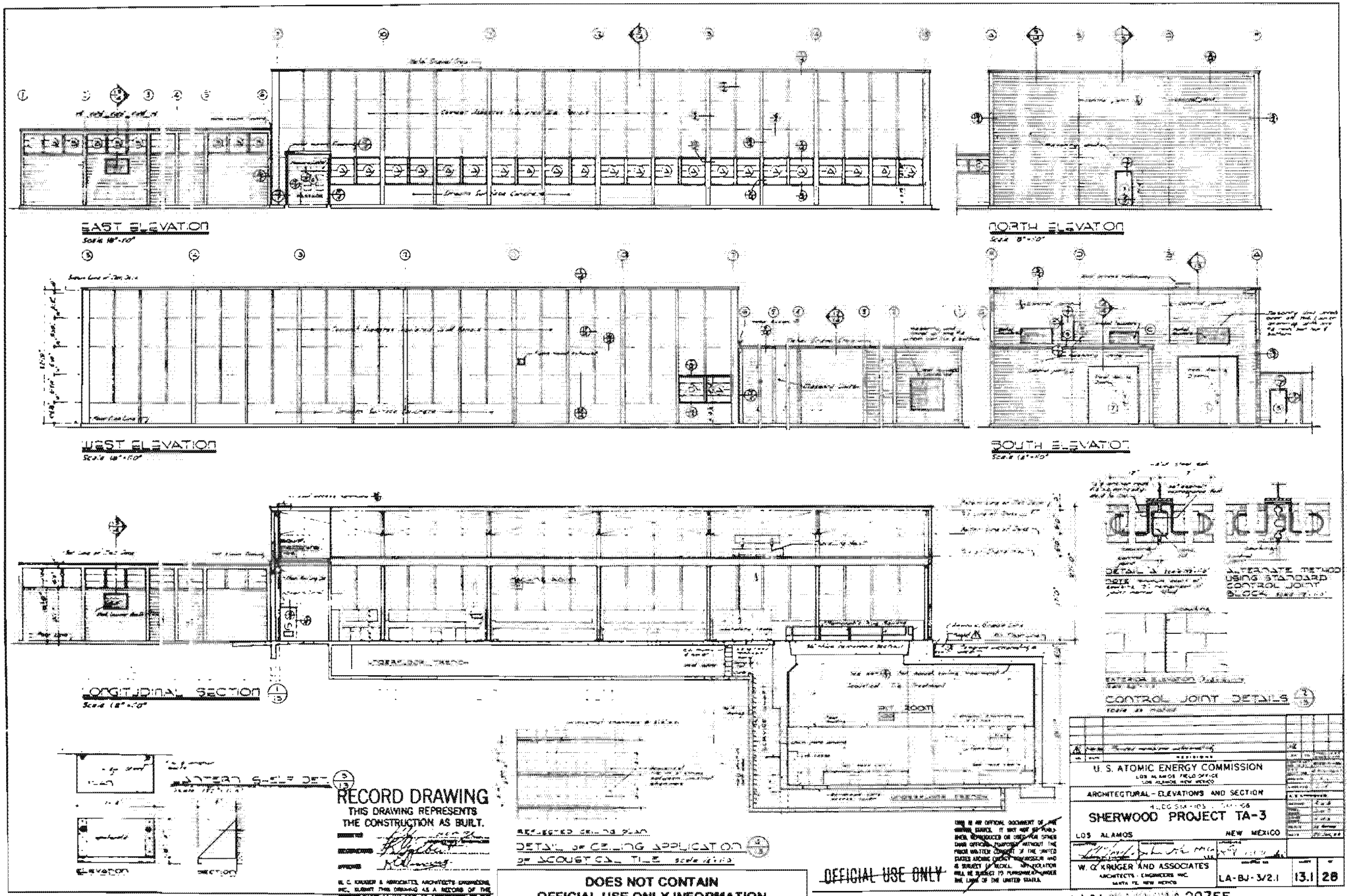

Sherwood Building, TA-3-105, main east bay, room 160, direction northwest


Sherwood Building, TA-3-105, main west bay, room 189, direction north

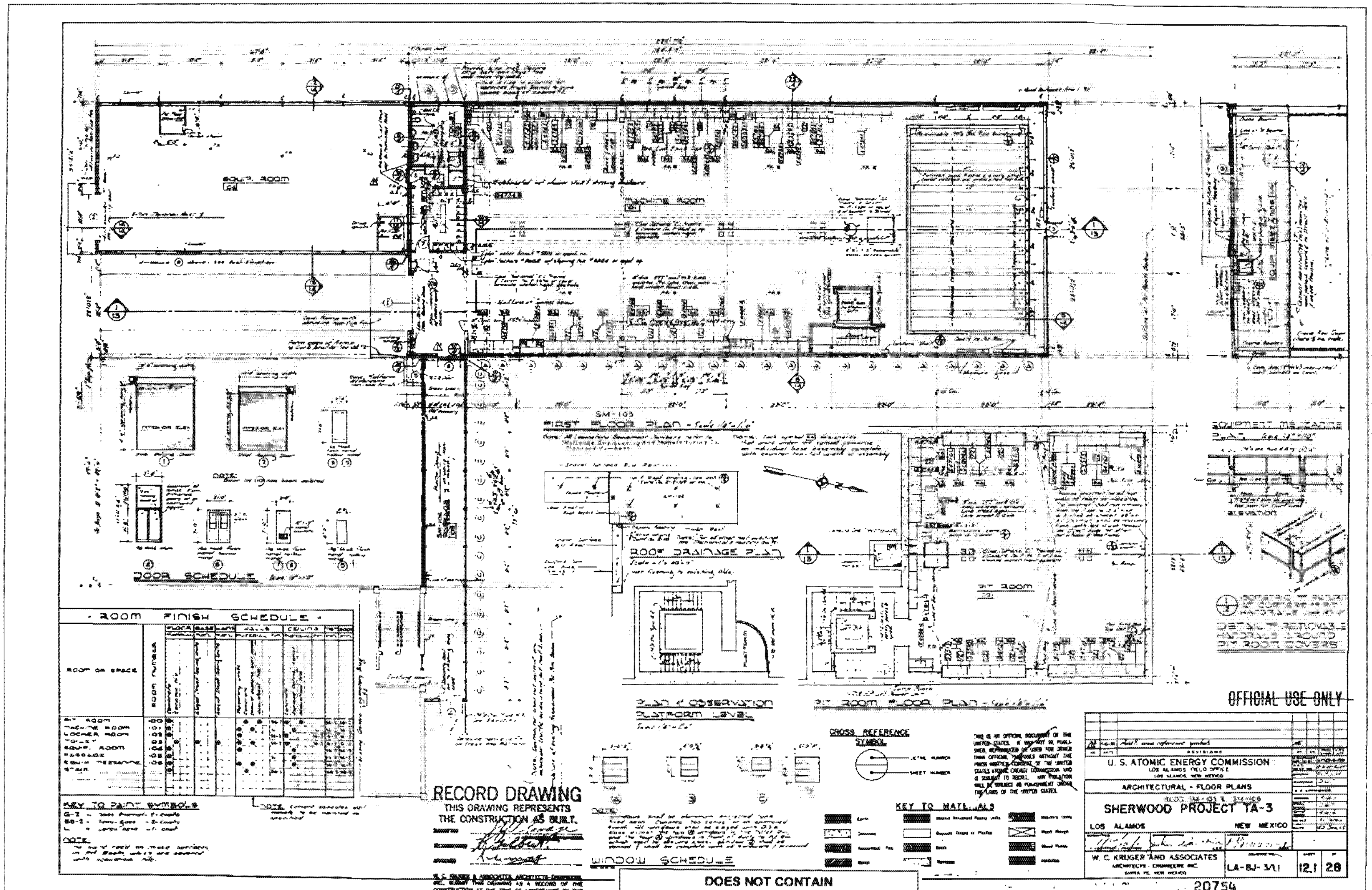
Sherwood Building, TA-3-105, "the pit", mezzanine 1, direction southeast



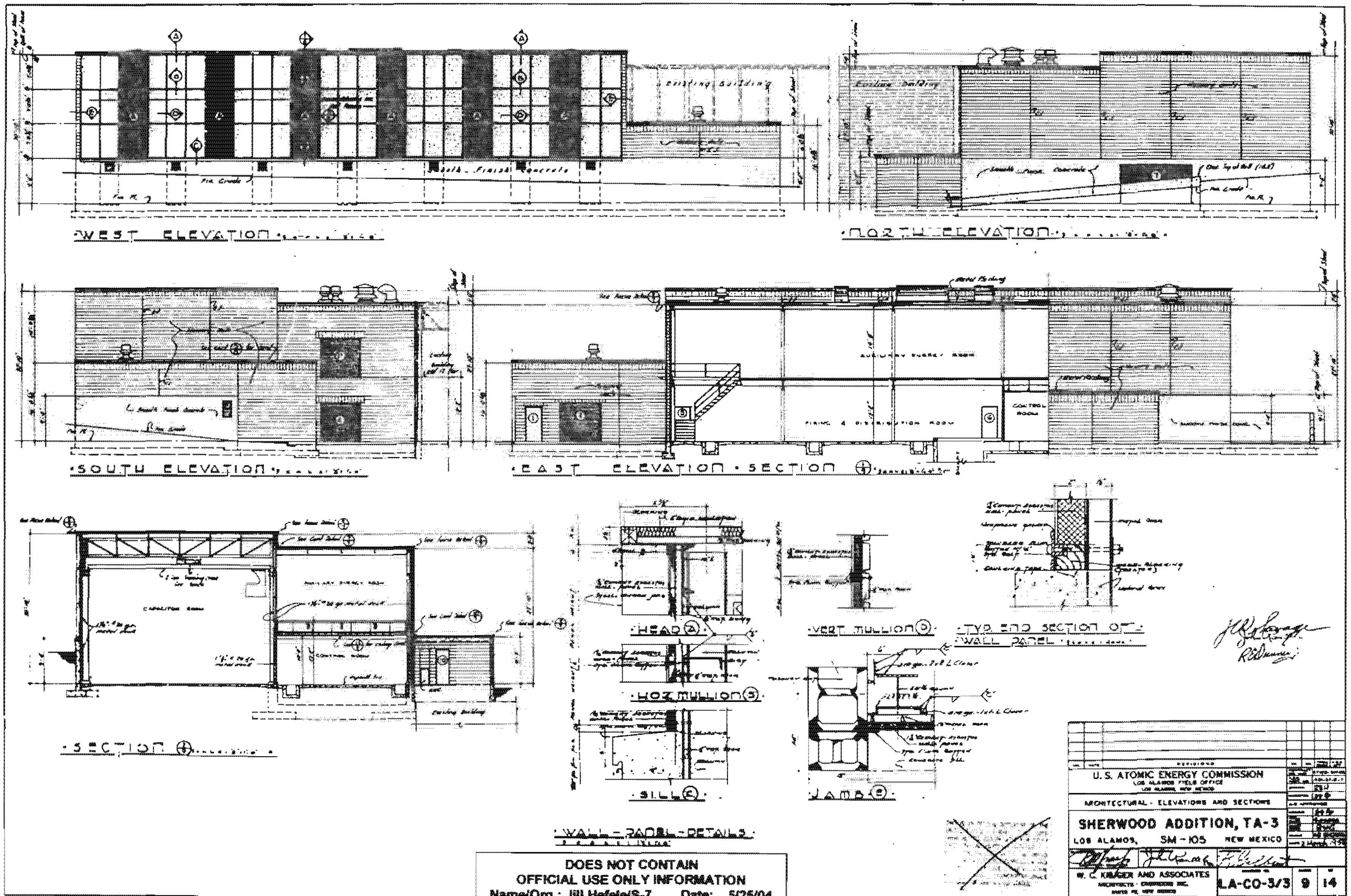
Sherwood Building, TA-3-105, "the pit", mezzanine 1, direction northwest



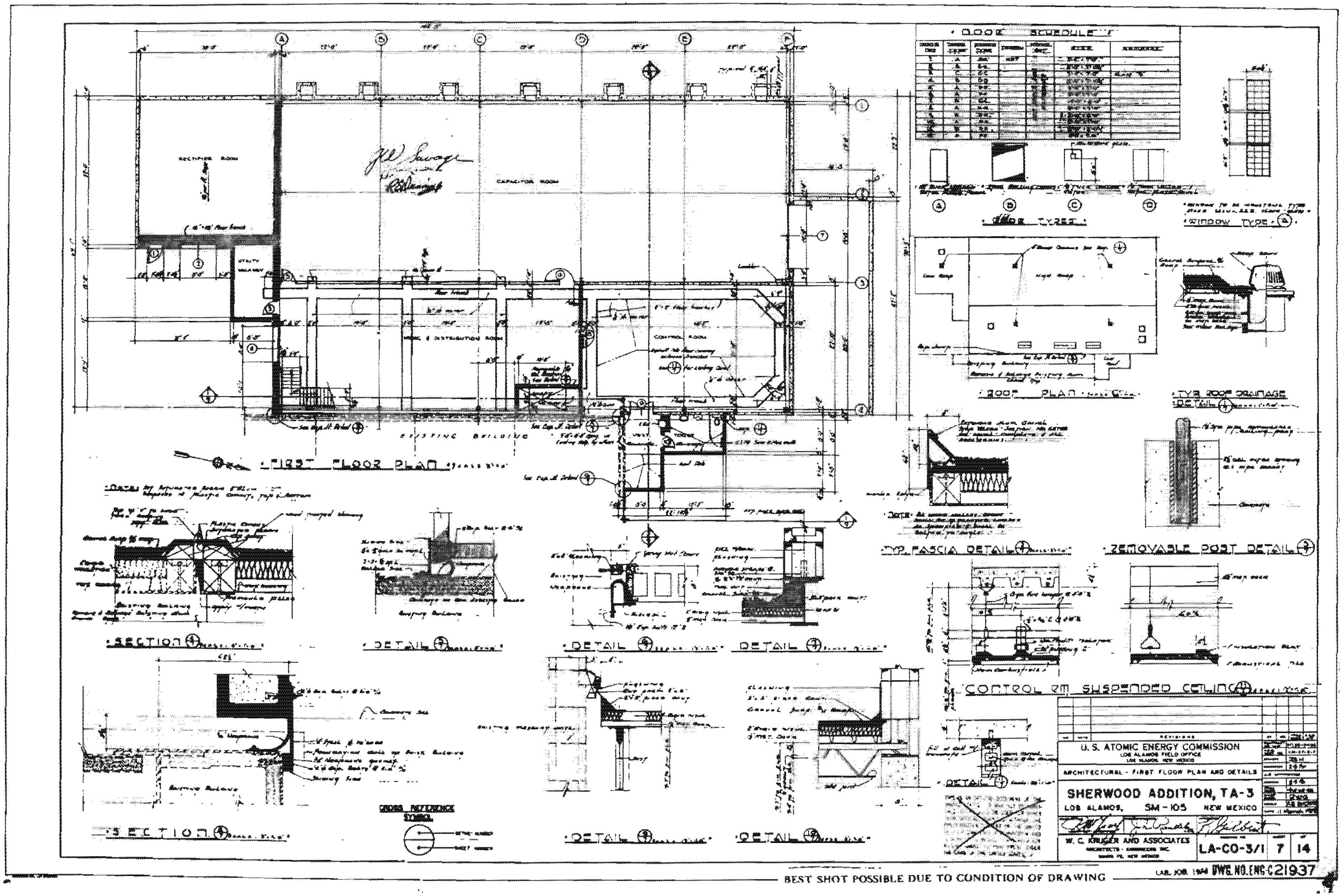
DOES NOT CONTAIN
OFFICIAL USE ONLY INFORMATION
Name/Org.: Jill Hefele/S-7 Date: 5/25/04



DOES NOT CONTAIN
OFFICIAL USE ONLY INFORMATION
Name/Org.: Jill Hefele/S-7 Date: 5/25/04



BEST SHOT POSSIBLE DUE TO CONDITION OF DRAWING LAB. JOB. 1974 DWG. NO. ENG-C 21939



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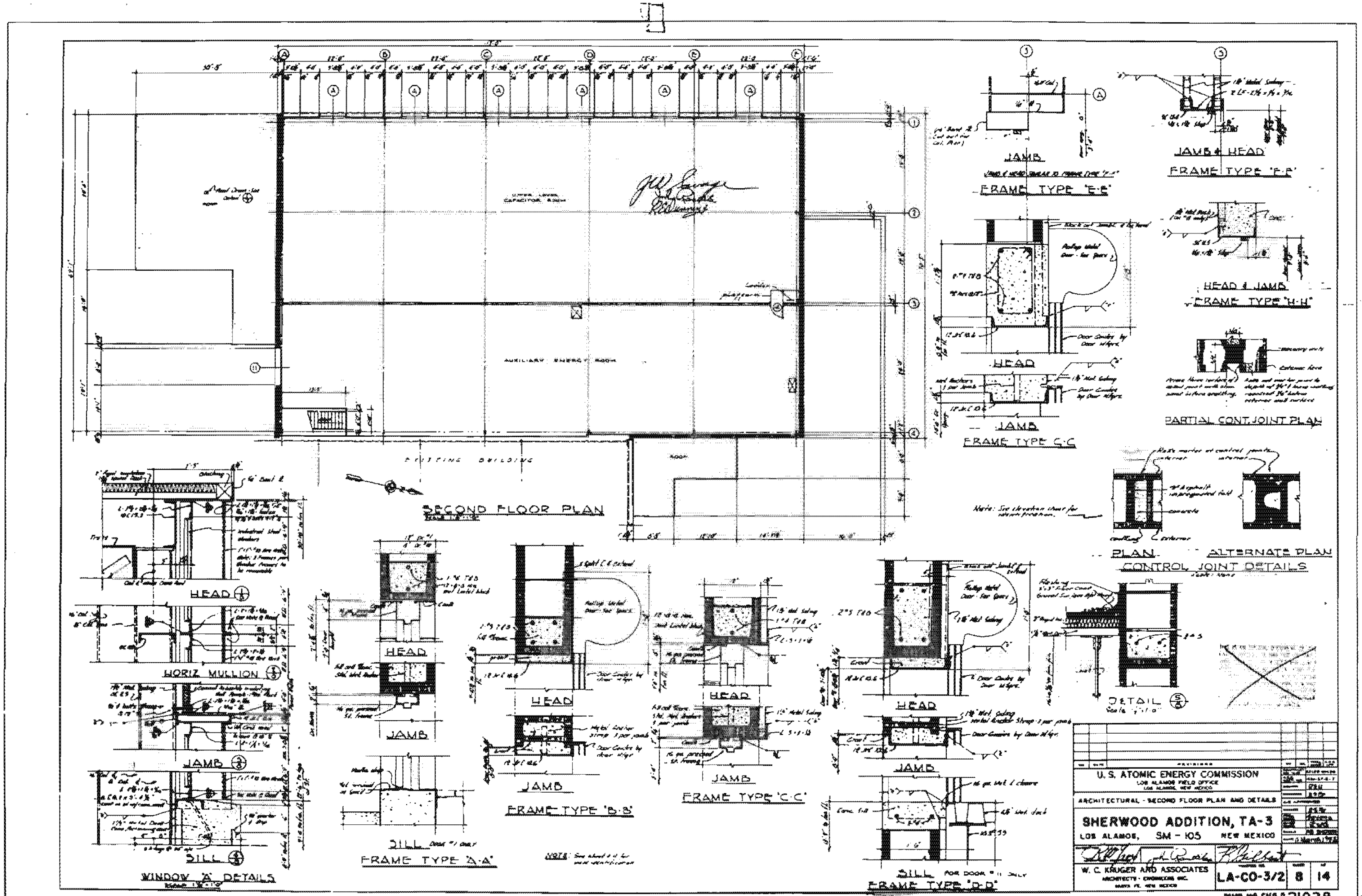
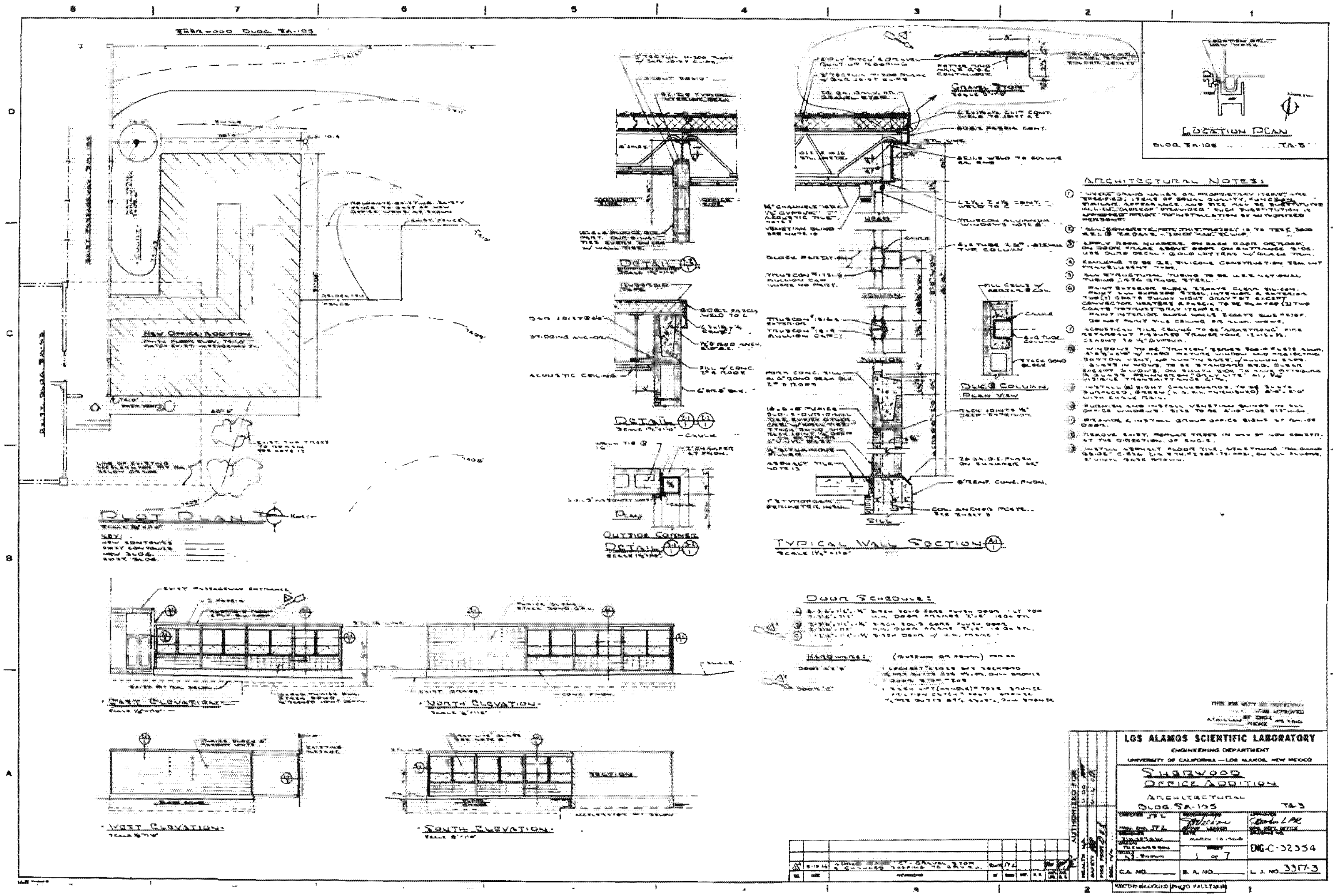
Name/Org.: Jill Hefele/S-7 Date: 5/25/04



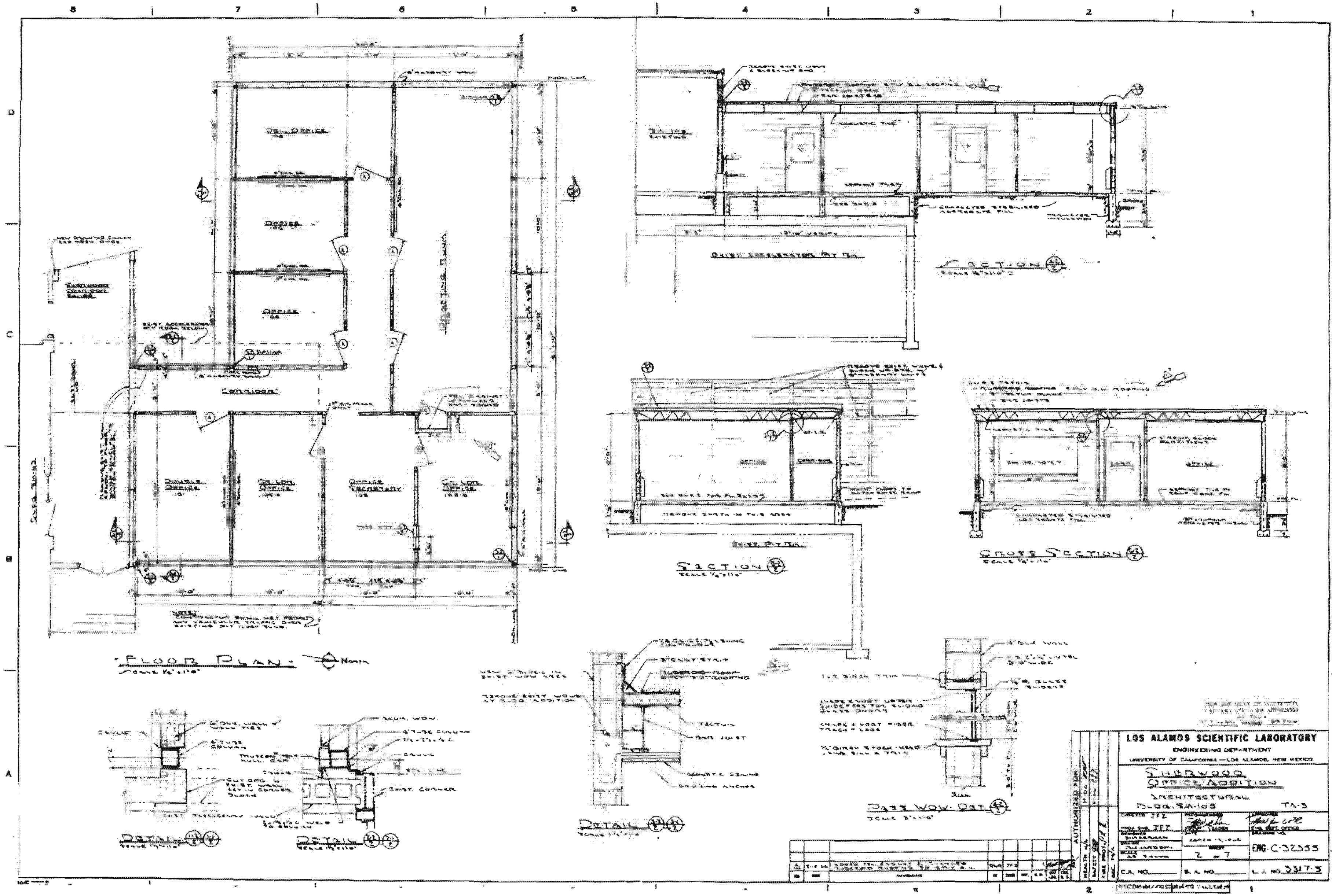
BEST SHOT POSSIBLE DUE TO CONDITION OF DRAWING

LAD. JOB. 1974 DWG. NO. ENG-C 21938

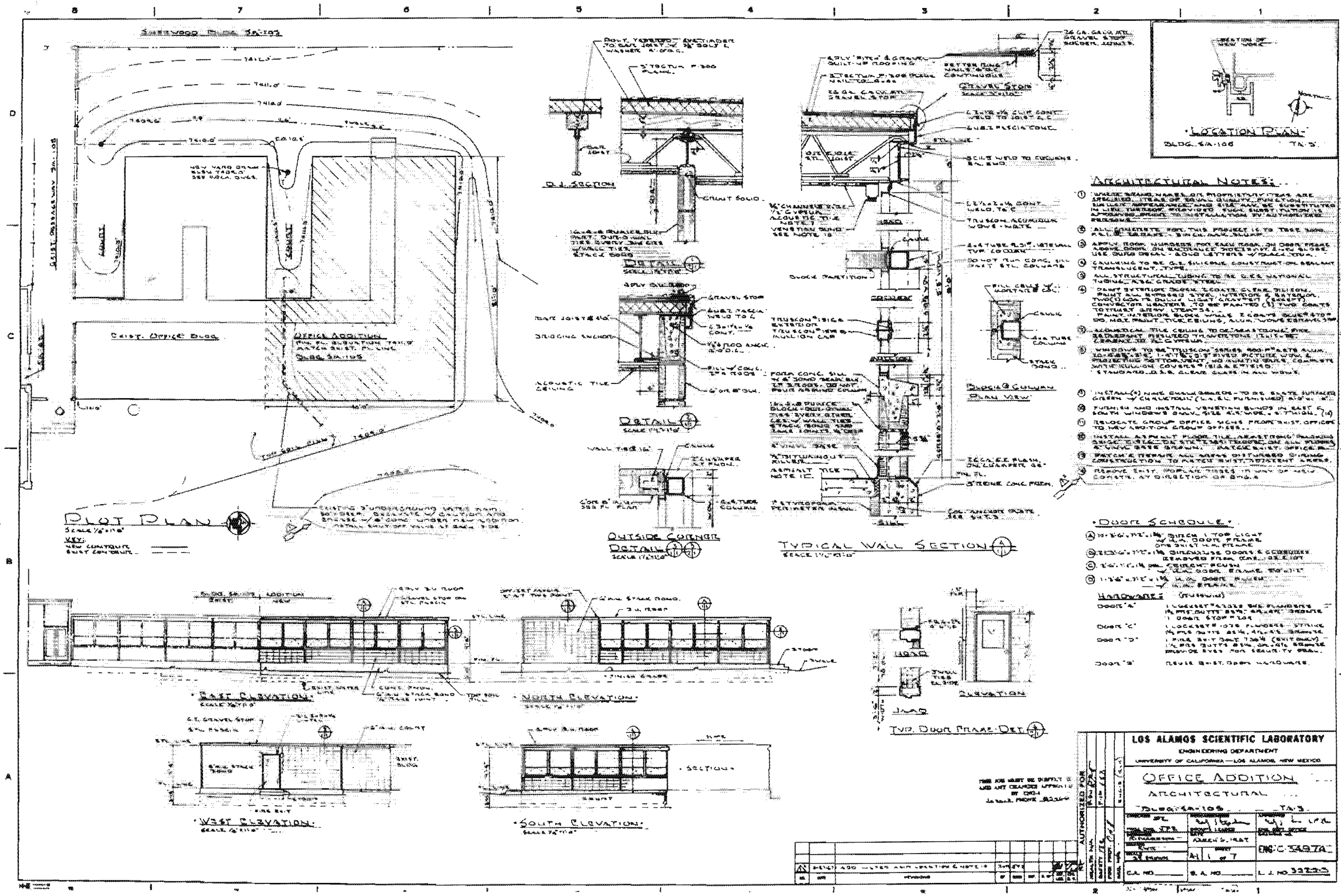
DOES NOT CONTAIN
OFFICIAL USE ONLY INFORMATION
Name/Org.: Jill Hefele/S-7 Date: 5/25/04

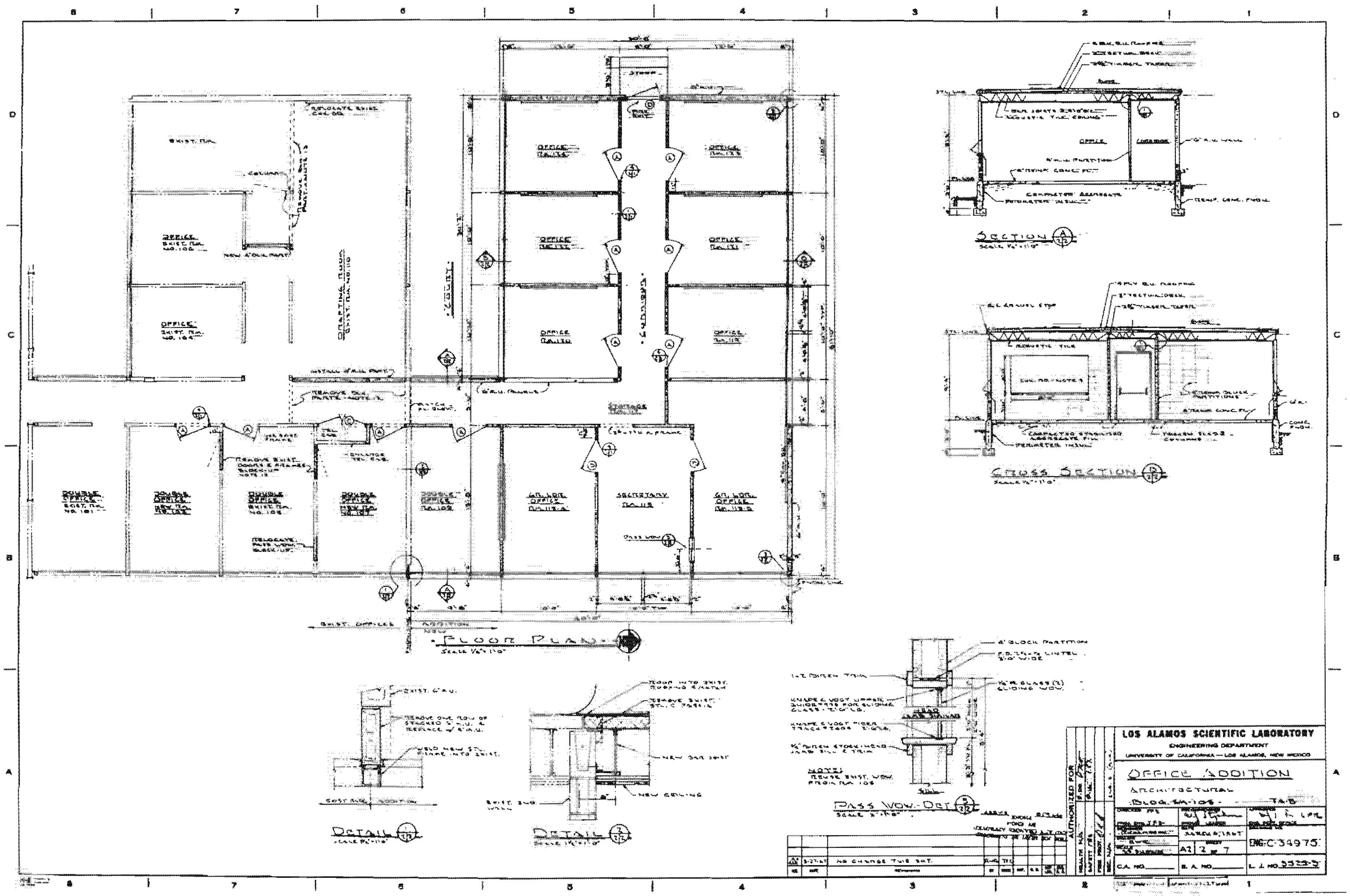


PLOT PLAN
NEW OFFICE ADDITION
DETAIL
TYPICAL WALL SECTION
GRAVEL STOP
LOCATION PLAN
ARCHITECTURAL NOTES:
DOOR SCHEDULE:
HARDWARE:
EAST ELEVATION
NORTH ELEVATION
WEST ELEVATION
SOUTH ELEVATION
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO
SHERWOOD OFFICE ADDITION
ARCHITECTURAL
BLDG. SA-105
TA-3
1 OF 7
ENG-C-32354
C.A. NO.
B.A. NO.
L.J. NO. 3317-3
AUTHORIZED FOR

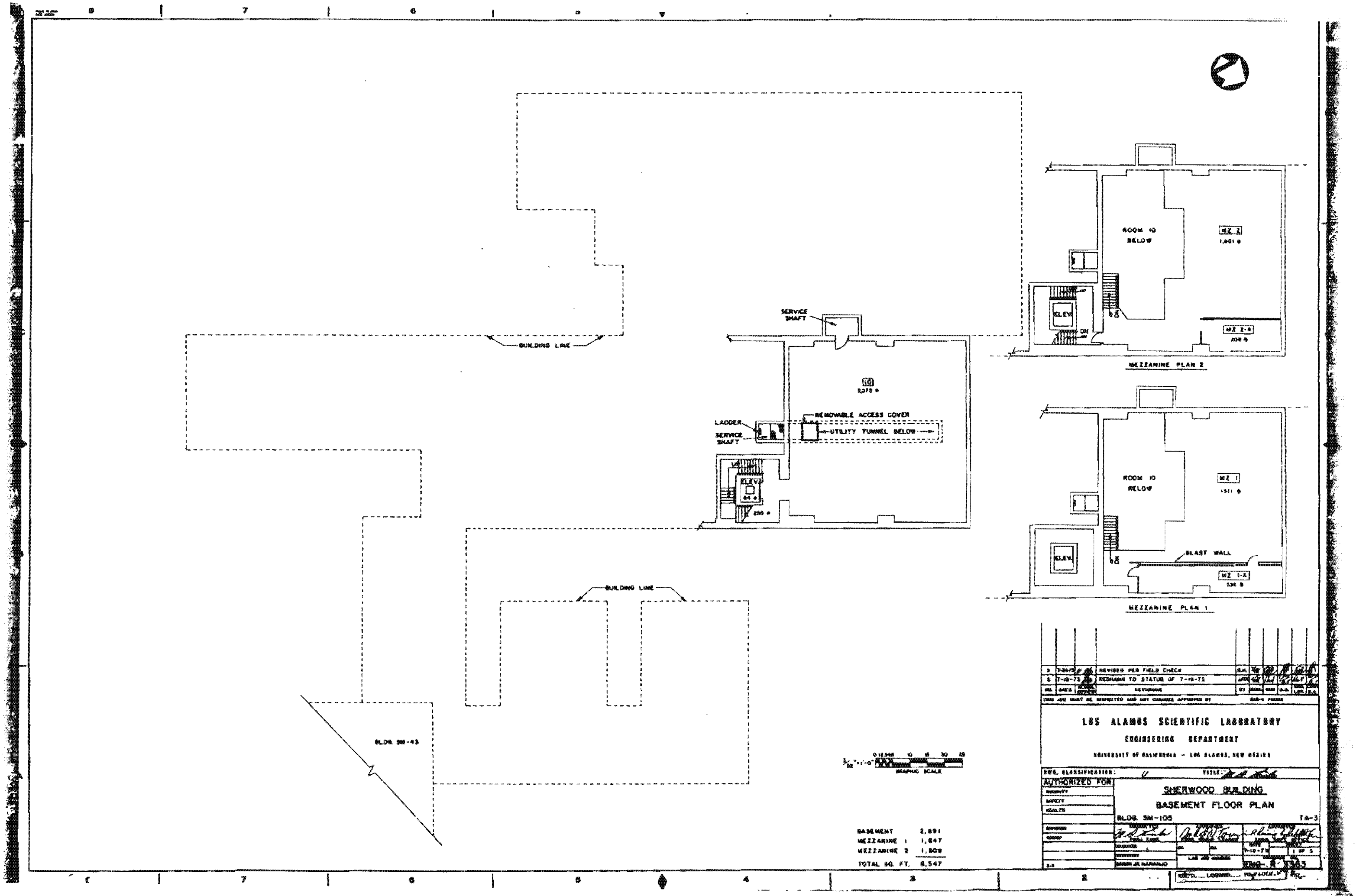


FLOOR PLAN
CORRIDOR
DOUBLE OFFICE
OFFICE
SECRETARY
SECTION
CROSS SECTION
DETAIL
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO
SHERWOOD
OFFICE ADDITION
ARCHITECTURAL
BLDG. SM-103
TA-3
ENG-C-32355
2 of 7
C.A. NO.
S. A. NO.

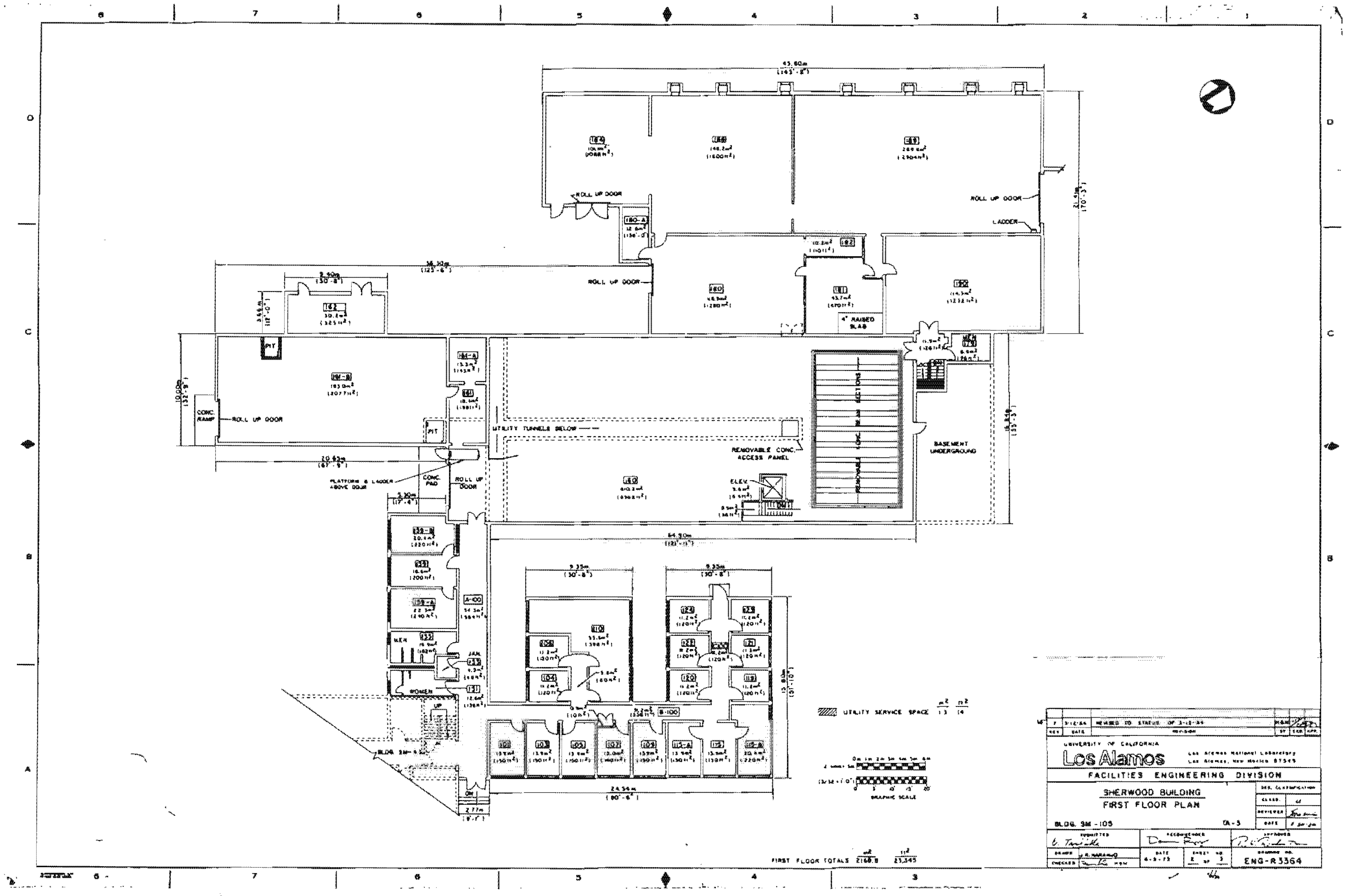

PLOT PLAN
OFFICE ADDITION
LOCATION PLAN
ARCHITECTURAL NOTES:
DETAIL
O.J. SECTION
OUTSIDE CORNER DETAIL
TYPICAL WALL SECTION
BLOCK & COLUMN PLAN VIEW
DOOR SCHEDULE
HARDWARE
EAST ELEVATION
NORTH ELEVATION
WEST ELEVATION
SOUTH ELEVATION
TYP. DOOR FRAME DET.
ELEVATION
HEAD
JAMB
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO
OFFICE ADDITION
ARCHITECTURAL
AUTHORIZED FOR
1 of 7
ENG-C-34974



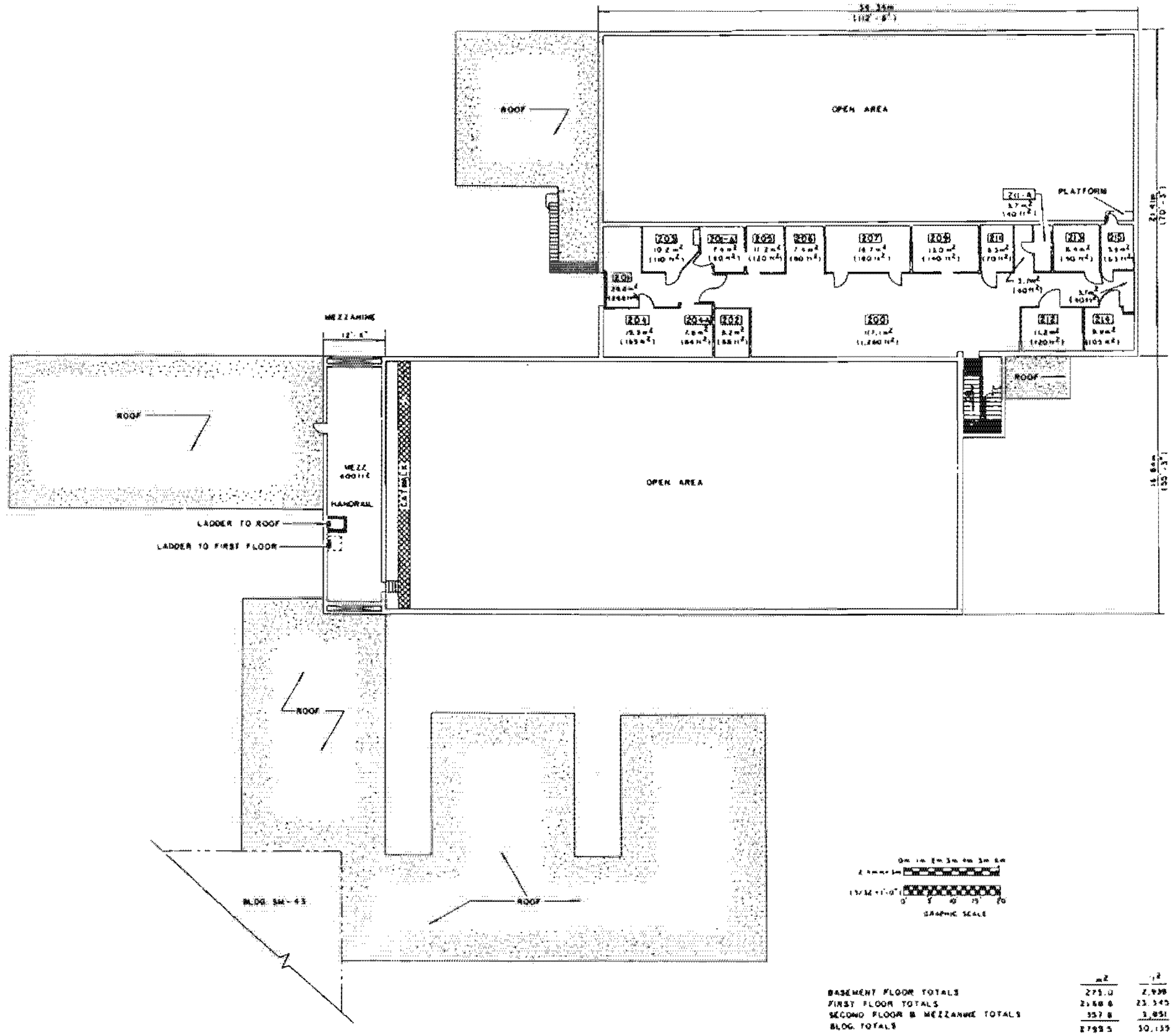
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO
OFFICE ADDITION
ARCHITECTURAL
FLOOR PLAN
SECTION
CROSS SECTION
PASS WDW. DET.
DETAIL
AUTHORIZED FOR
A2 2 of 7
ENG-C-34975



SERVICE SHAFT
BUILDING LINE
LADDER
SERVICE SHAFT
REMOVABLE ACCESS COVER
UTILITY TUNNEL BELOW
ELEV.
BLDG. SM-43
ROOM 10 BELOW
MZ 2
MZ 2-A
MEZZANINE PLAN 2
MZ 1
MZ 1-A
BLAST WALL
MEZZANINE PLAN 1
GRAPHIC SCALE
BASEMENT 2,891
MEZZANINE 1 1,847
MEZZANINE 2 1,809
TOTAL SQ. FT. 6,547
REVISED PER FIELD CHECK
REDRAWN TO STATUS OF 7-19-73
REVISIONS
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA - LOS ALAMOS, NEW MEXICO
DWG. CLASSIFICATION:
TITLE:
AUTHORIZED FOR
SHERWOOD BUILDING
BASEMENT FLOOR PLAN
BLDG. SM-105
TA-3
1 OF 3



ROLL UP DOOR
LADDER
4" RAISED SLAB
PIT
CONC. RAMP
UTILITY TUNNELS BELOW
REMOVABLE CONC. ACCESS PANEL
BASEMENT UNDERGROUND
PLATFORM & LADDER ABOVE DOOR
CONC. PAD
ELEV.
MER
JAN.
WOMEN
UP
UTILITY SERVICE SPACE
GRAPHIC SCALE
FIRST FLOOR TOTALS
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
SHERWOOD BUILDING
FIRST FLOOR PLAN
BLDG. SM -105
ENG-R3364



	m^2	ft^2
BASEMENT FLOOR TOTALS	275.0	2,938
FIRST FLOOR TOTALS	2168.6	23,343
SECOND FLOOR & MEZZANINE TOTALS	357.8	3,851
BLDG. TOTALS	2795.5	30,133

REV	DATE	REVISION	BY	CKD.	APP.
7	3-12-84	REVISED TO STATUS OF 3-12-84			

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

FACILITIES ENGINEERING DIVISION

SHERWOOD BUILDING
SECOND FLOOR PLAN

BLDG. SM-105 TA-3

SEC. CLASSIFICATION
CLASS. U
REVIEWER
DATE

SUBMITTED / RECOMMENDED / APPROVED

DRAWN: J.R. NARANJO
CHECKED
DATE: 7-20-73
SHEET NO. 2 OF 2
DRAWING NO. ENG-R3365

LANL TA- Building # 03-0287

Camera

Frame #s

Surveyor(s) B. Ziegler, K. Garcia, E. McGehee

Date 12/01/2000

Los Alamos National Laboratory CRMT
Historic Building Survey Form

Building Name: Scyllac Building | UTMs easting: 380437 | northing: 3970599 | zone: 13

Legal Description: Map: Frijoles Quad 1984 | tnsp: 19M | range: 6E | sec: 17

Current Use/ Function: Office and Storage Space | Original Use/ Function: Magnetic Fusion and Energy Research

Date (estimated): | Date (actual): 1970 | Property Type: Laboratory/Processing

Type of Construction

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

Other Type of Construction: | # of Stories: 4

Foundation: Reinforced Concrete.

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): Painted siding.

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

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

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

Exterior Treatment-Addition: Painted steel siding.

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:

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

Other Window Type: Awning

# of Each Window Type/ Comments:

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: Glass personnel doors lead into the walkway connecting the Scyllac Building to the Administration Building.

Interior Wall Gypsum Board ☑ Reinforced Concrete- Interior ☐
CMU- Interior ☐ Plywood ☐ Other- Interior: Metal siding.
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: TA-3-105 Sherwood Building.

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 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 main portion of the building is a main bay core that is open the entire height of the building from basement level to roof. This bay has a 25-ton crane with over a 45 foot hook height that reaches to the basement floor slab. This bay is surrounded on the north and east sides by offices and laboratories, shop space, and utility rooms on all four levels.

Total sq ft Gross 82,420 **Architect/ Builder** Neuner & Cabaniss Architect Engineers

Alterations

In 1974 a two-story open-bay with mezzanine was constructed on the south side of the building. Second and third story office space was added in 1977 along the east side of the building above the original office space on the first floor, matching the original construction.

List of Drawings (Cntrl + Enter for para break)

ENG-C 68414
Sheet 14 of 106
Laboratory and Energy Storage Facility – Scyllac
Bldg. SM-287, TA-3
Architectural – Exterior Elevations and Roof Plan
May 1968

ENG-C 68415
Sheet 15 of 106
Laboratory and Energy Storage Facility – Scyllac
Bldg. SM-287, TA-3
Architectural – Exterior Elevations
May 1968

ENG-C 68410
Sheet 10 of 106
Laboratory and Energy Storage Facility – Scyllac
Bldg. SM-287, TA-3
Architectural - Basement Floor Plan
May 1968

ENG-C 68411
Sheet 11 of 106
Laboratory and Energy Storage Facility – Scyllac
Bldg. SM-287, TA-3
Architectural - First Floor Plan
May 1968

ENG-C 68412
Sheet 12 of 106
Laboratory and Energy Storage Facility – Scyllac
Bldg. SM-287, TA-3
Architectural - Second Floor Plan
May 1968

ENG-C 68413
Sheet 13 of 106
Laboratory and Energy Storage Facility – Scyllac
Bldg. SM-287, TA-3
Architectural – Third Floor Plan
May 1968

ENG-C 42946
Sheet 4 of 17
Staging Area Addition for CTR
Bldg. SM-287, TA-3
Basement, First Floor & Roof Plans
June 27, 1974

Drawing List Continued on Next Page

ENG-C 42946
Sheet 5 of 17
Staging Area Addition for CTR
Bldg. SM-287, TA-3
Mezzanine, Elevations & Schedules
June 27, 1974

ENG-C 42946
Sheet 6 of 17
Staging Area Addition for CTR
Bldg. SM-287, TA-3
Elevation, Section & Details
June 27, 1974

ENG-C 43633
Sheet 2 of 20
Second and Third Floor Addition
Bldg SM-287, TA-3
Architectural – Second Floor Plan and Schedule
September 2, 1977

ENG-C 43633
Sheet 3 of 20
Second and Third Floor Addition
Bldg SM-287, TA-3
Architectural – Third Floor Plan and Roof Plan
September 2, 1977

ENG-C 43633
Sheet 4 of 20
Second and Third Floor Addition
Bldg SM-287, TA-3
Architectural – Section and Elevations
September 2, 1977

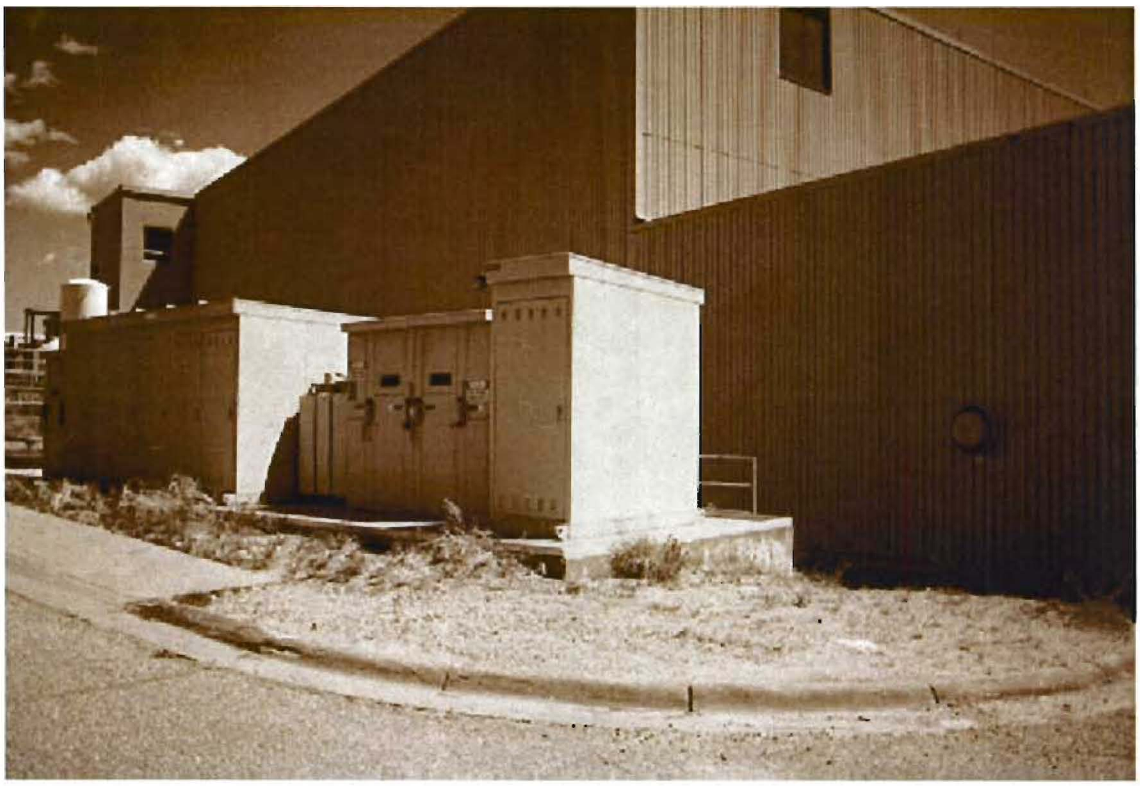
ENG-AB 175
Sheet 1 of 4
Lab/Office Bldg.
Bldg 287, TA-3
Arch: Basement Floor Plan
August 10, 1993

ENG-AB 175
Sheet 2 of 4
Lab/Office Bldg.
Bldg 287, TA-3
Arch: First Floor Plan
August 10, 1993

ENG-AB 175
Sheet 3 of 4
Lab/Office Bldg.
Bldg 287, TA-3
Arch: Second Floor Plan
August 10, 1993

ENG-AB 175
Sheet 4 of 4
Lab/Office Bldg.
Bldg 287, TA-3
Arch: Third Floor Plan
August 10, 1993

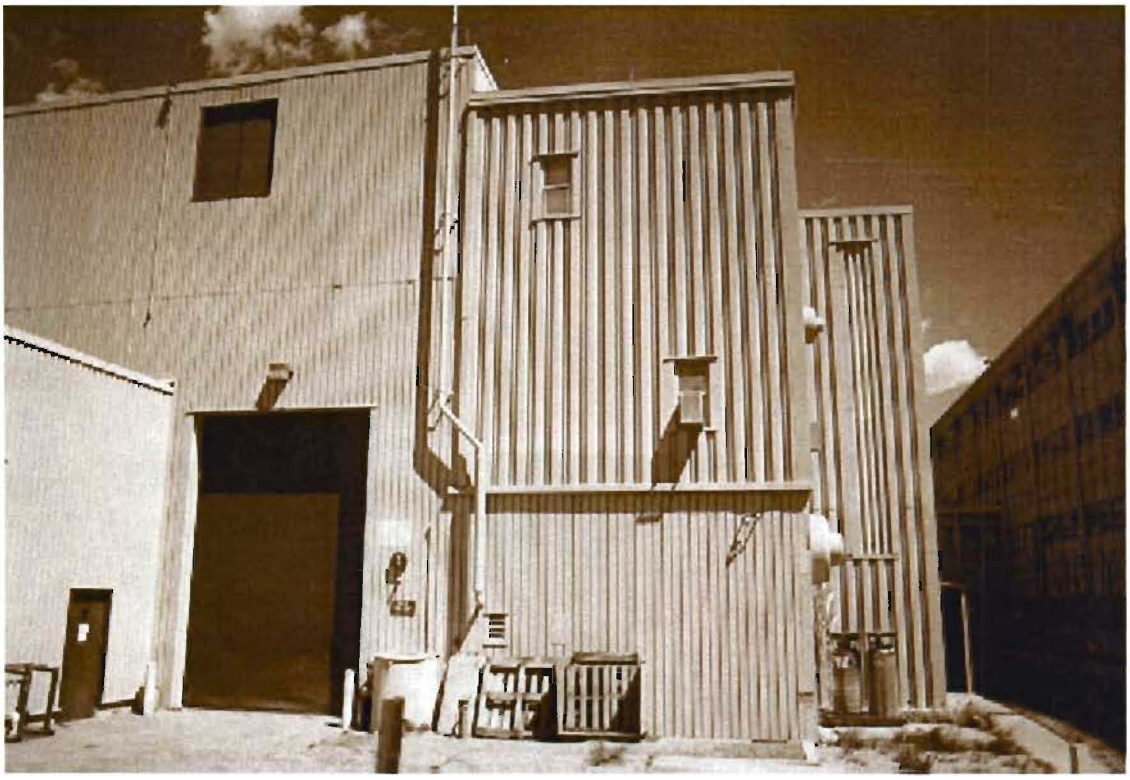
Scyllac Building, TA-3-287, west side (front), direction east



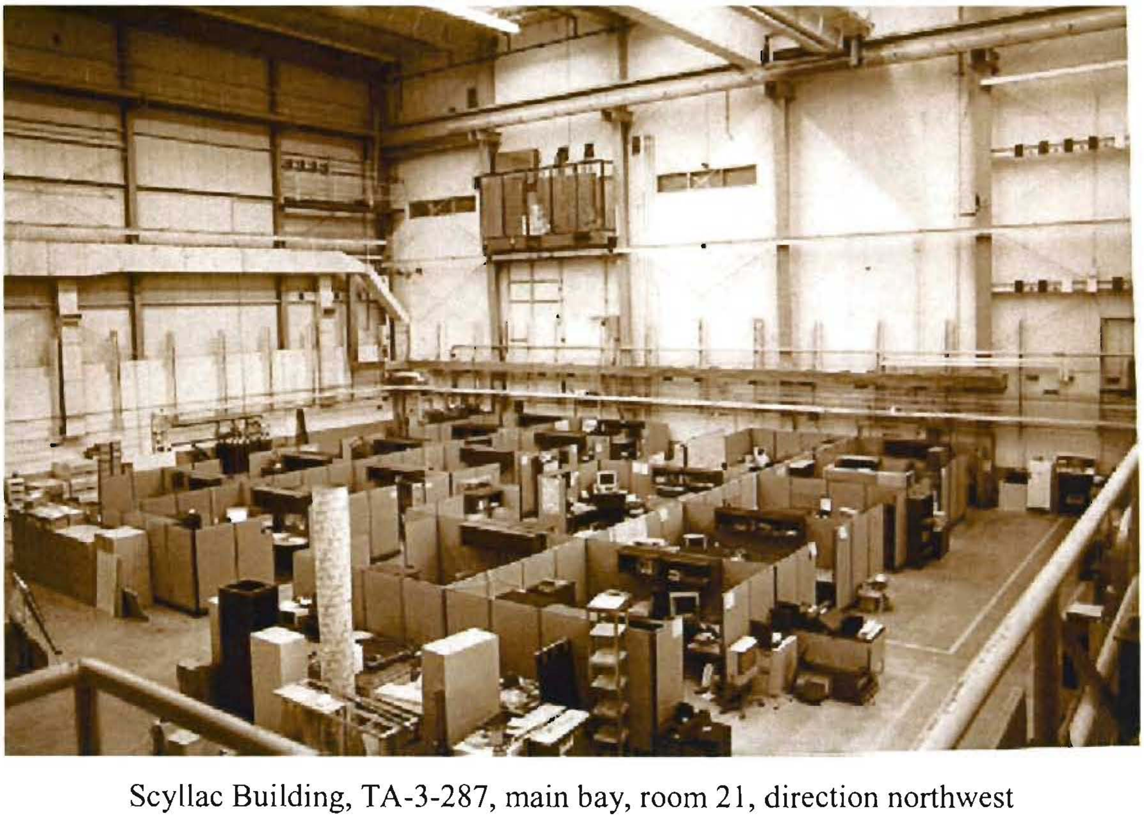
Scyllac Building, TA-3-287, west side (front), direction northeast

Scyllac Building, TA-3-287, north side, direction south southeast

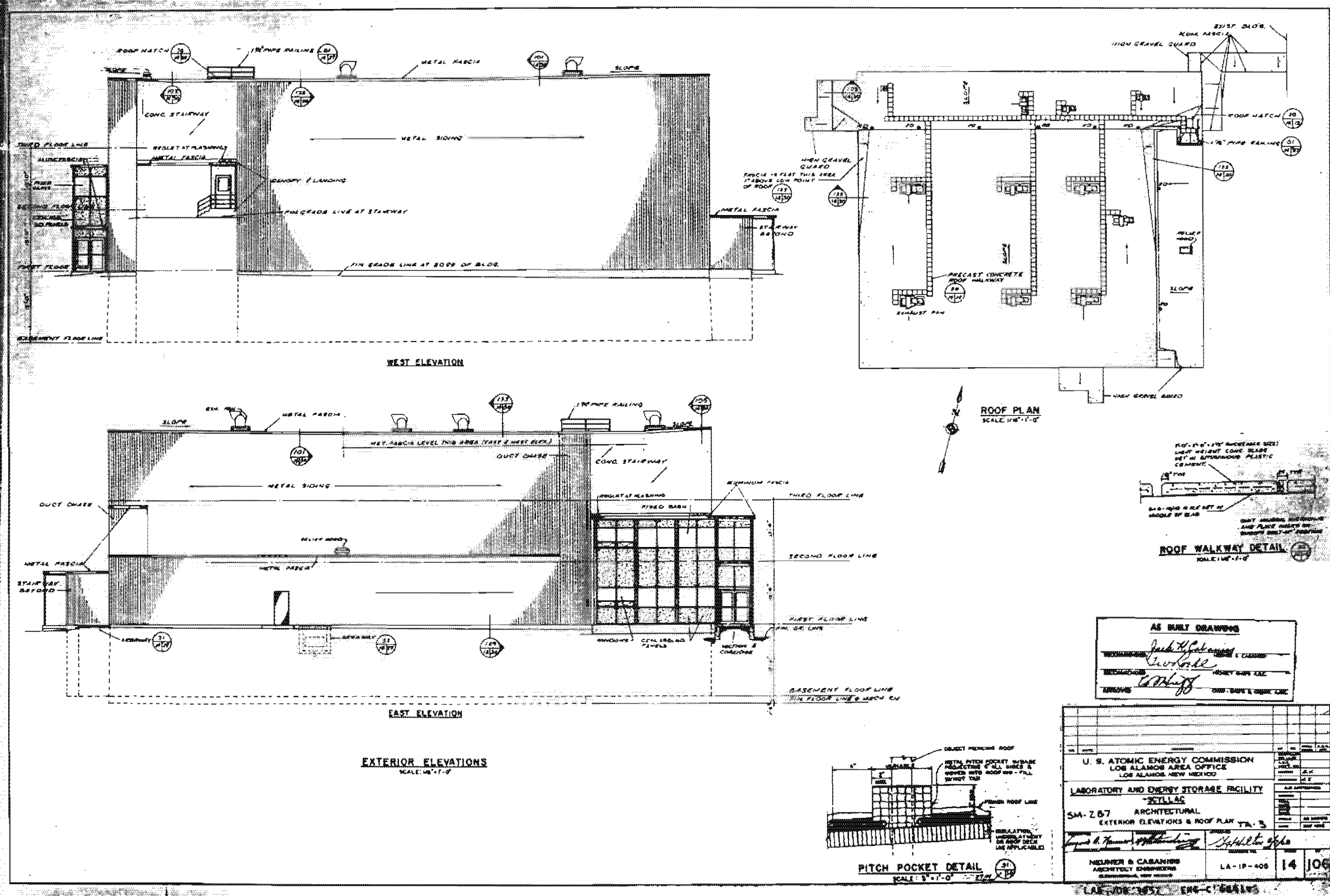
Scyllac Building, TA-3-287, north side, direction southeast

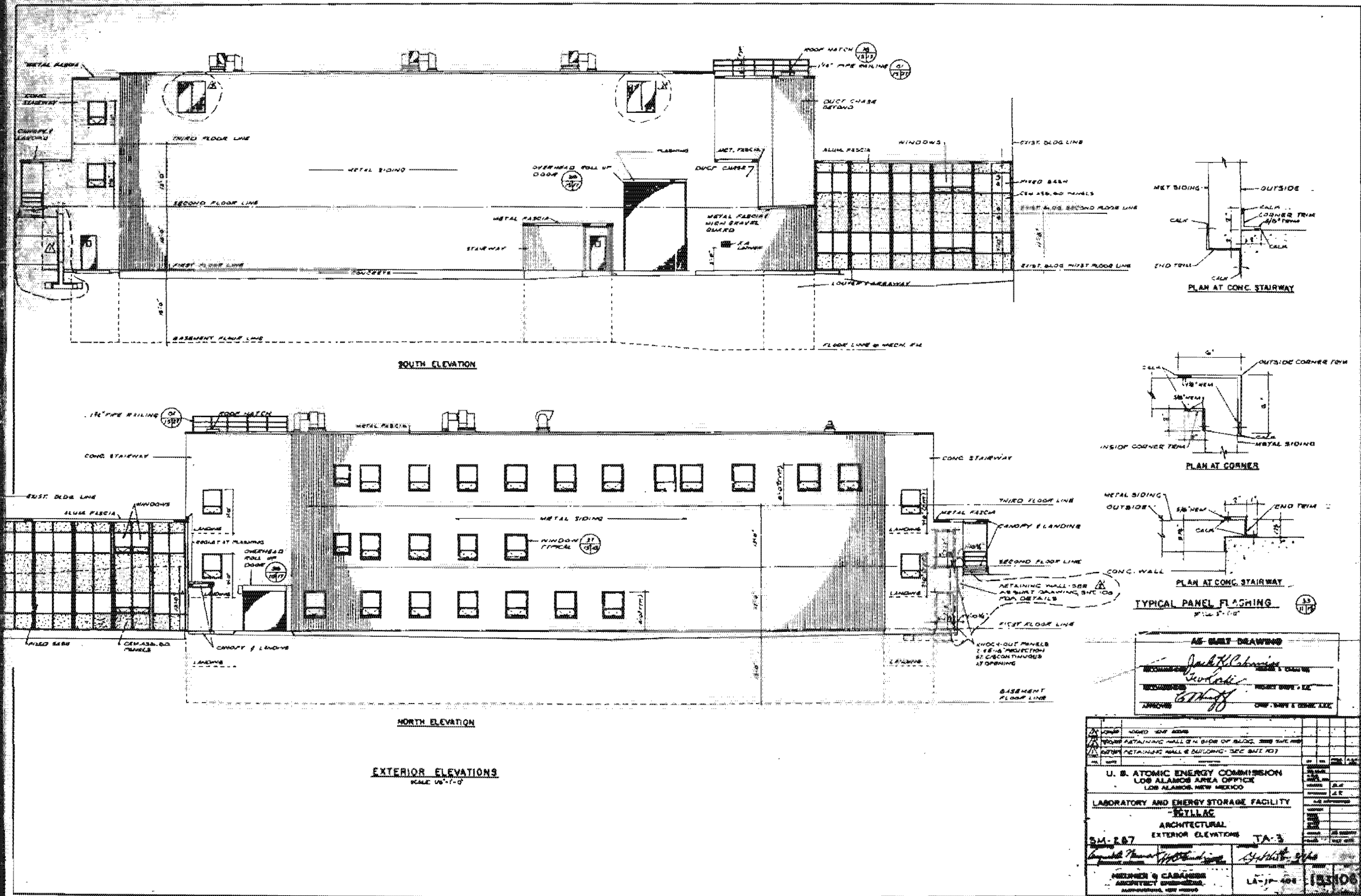


Scyllac Building, TA-3-287, south side, direction north

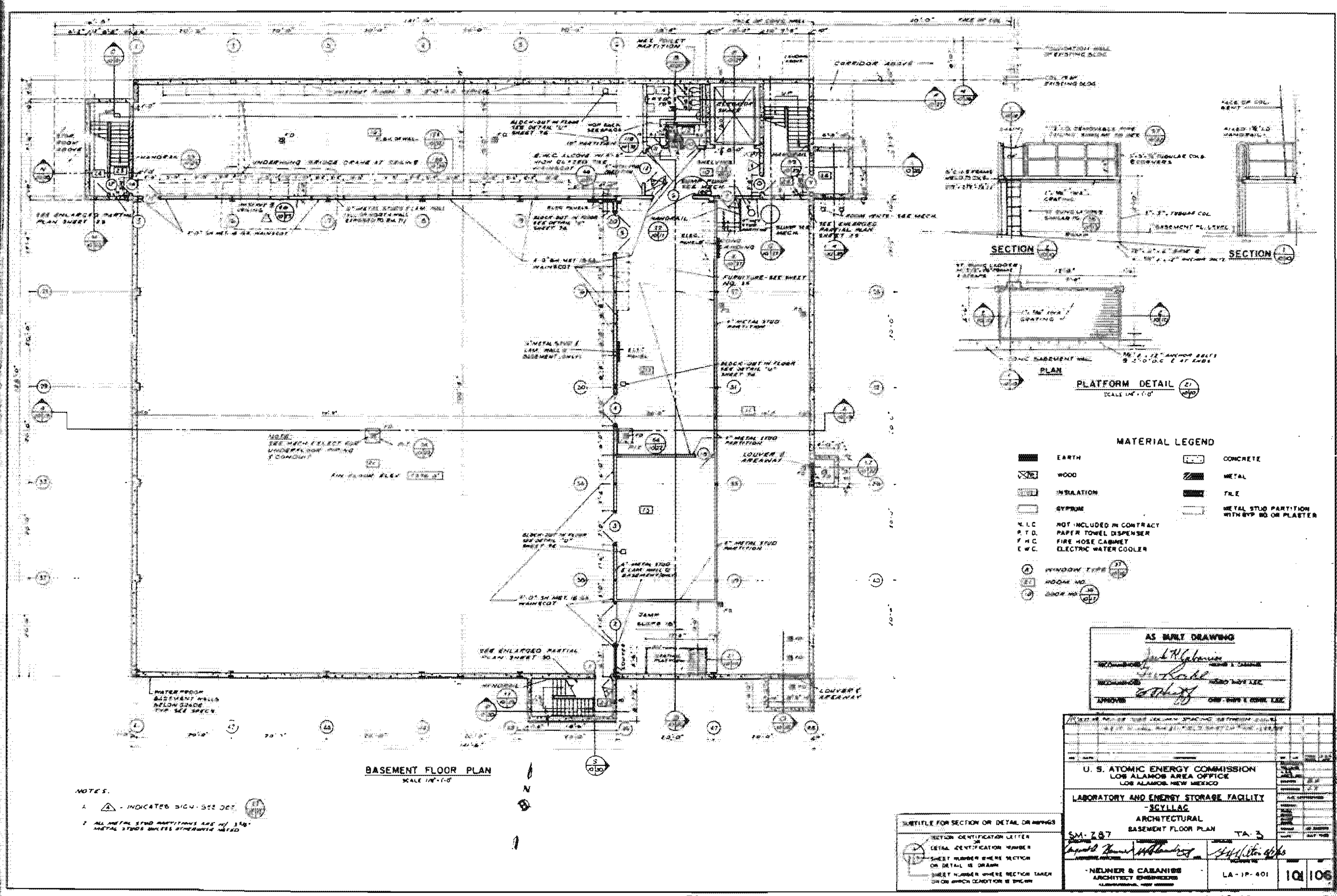


Scyllac Building, TA-3-287, main bay, room 21, direction northwest

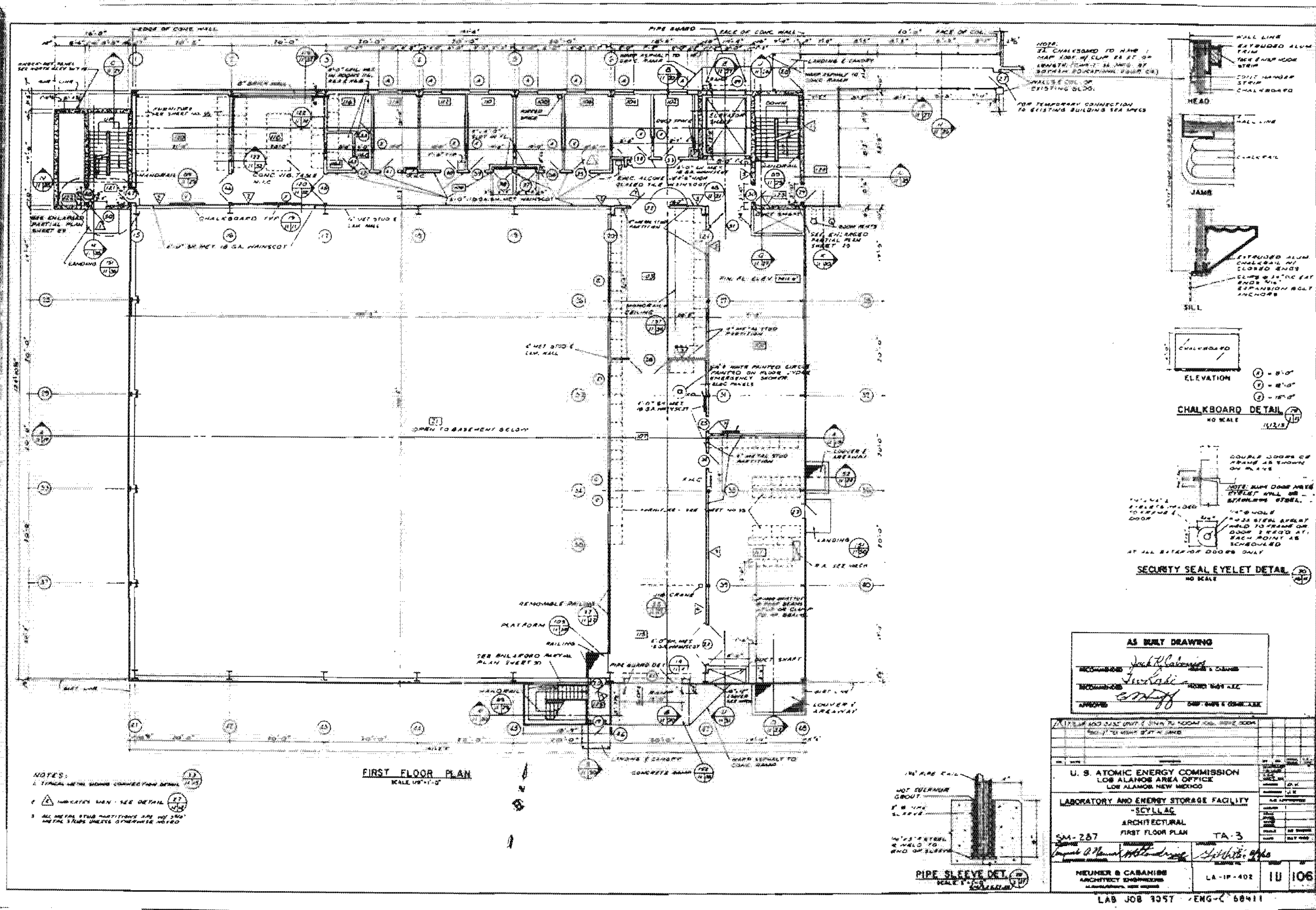

ROOF HATCH
METAL FASCIA
SLOPE
CONC. STAIRWAY
METAL SIDING
THIRD FLOOR LINE
SECOND FLOOR LINE
FIRST FLOOR
BASEMENT FLOOR LINE
CANOPY & LANDING
FIN. GRADE LINE AT STAIRWAY
FIN. GRADE LINE AT EDGE OF BLDG.
METAL FASCIA
STAIRWAY BEYOND
WEST ELEVATION
DUCT CHASE
METAL SIDING
FIXED SASH
THIRD FLOOR LINE
SECOND FLOOR LINE
FIRST FLOOR LINE
BASEMENT FLOOR LINE
EAST ELEVATION
EXTERIOR ELEVATIONS
HIGH GRAVEL GUARD
ROOF HATCH
PRECAST CONCRETE ROOF WALKWAY
EXHAUST FAN
SLOPE
ROOF PLAN
ROOF WALKWAY DETAIL
PITCH POCKET DETAIL
AS BUILT DRAWING
U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS, NEW MEXICO
LABORATORY AND ENERGY STORAGE FACILITY
-SCYLLAC
SM-287 ARCHITECTURAL
EXTERIOR ELEVATIONS & ROOF PLAN TA-3
NEUNER & CABANISS
ARCHITECT ENGINEERS
LA-1P-406
14
106

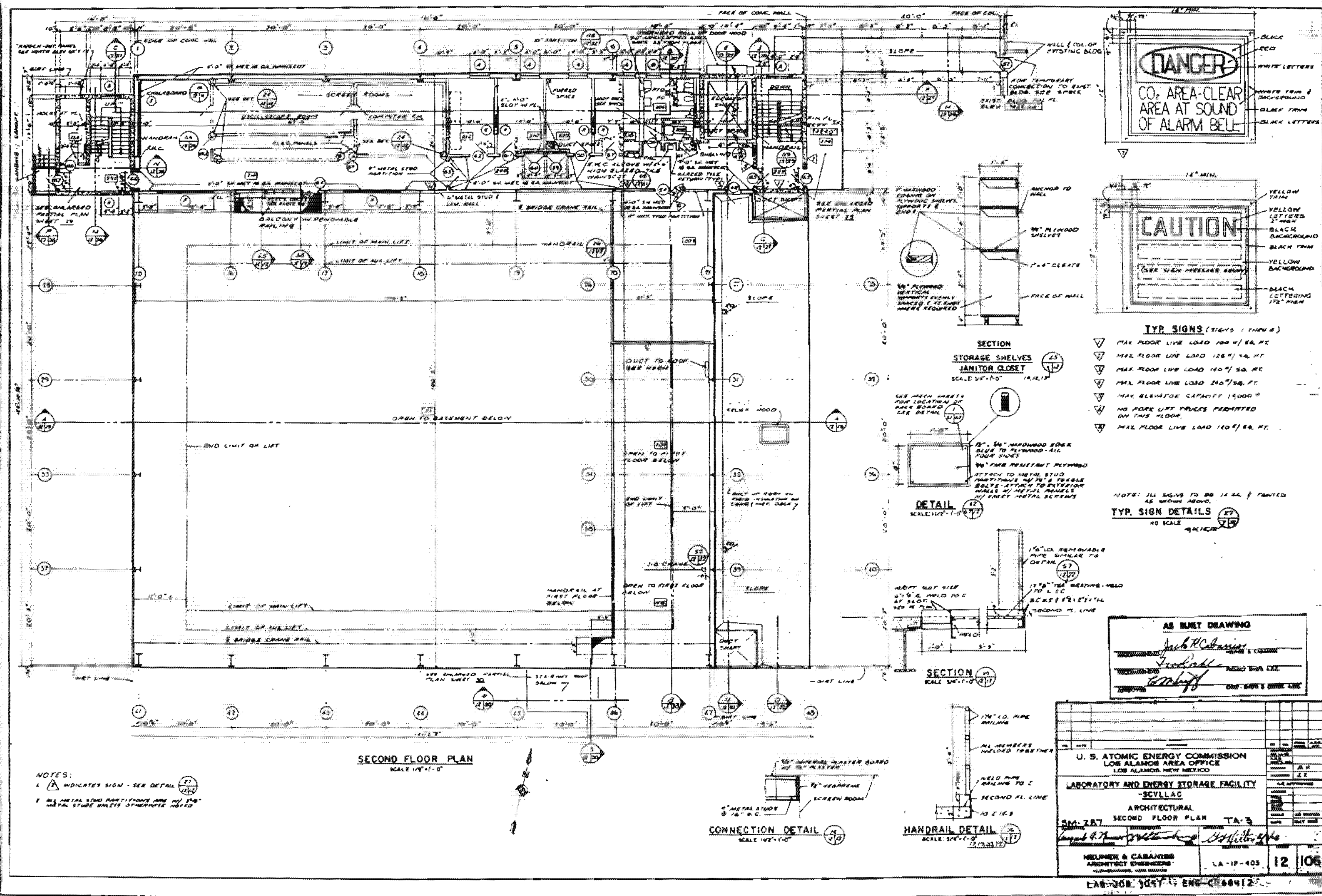


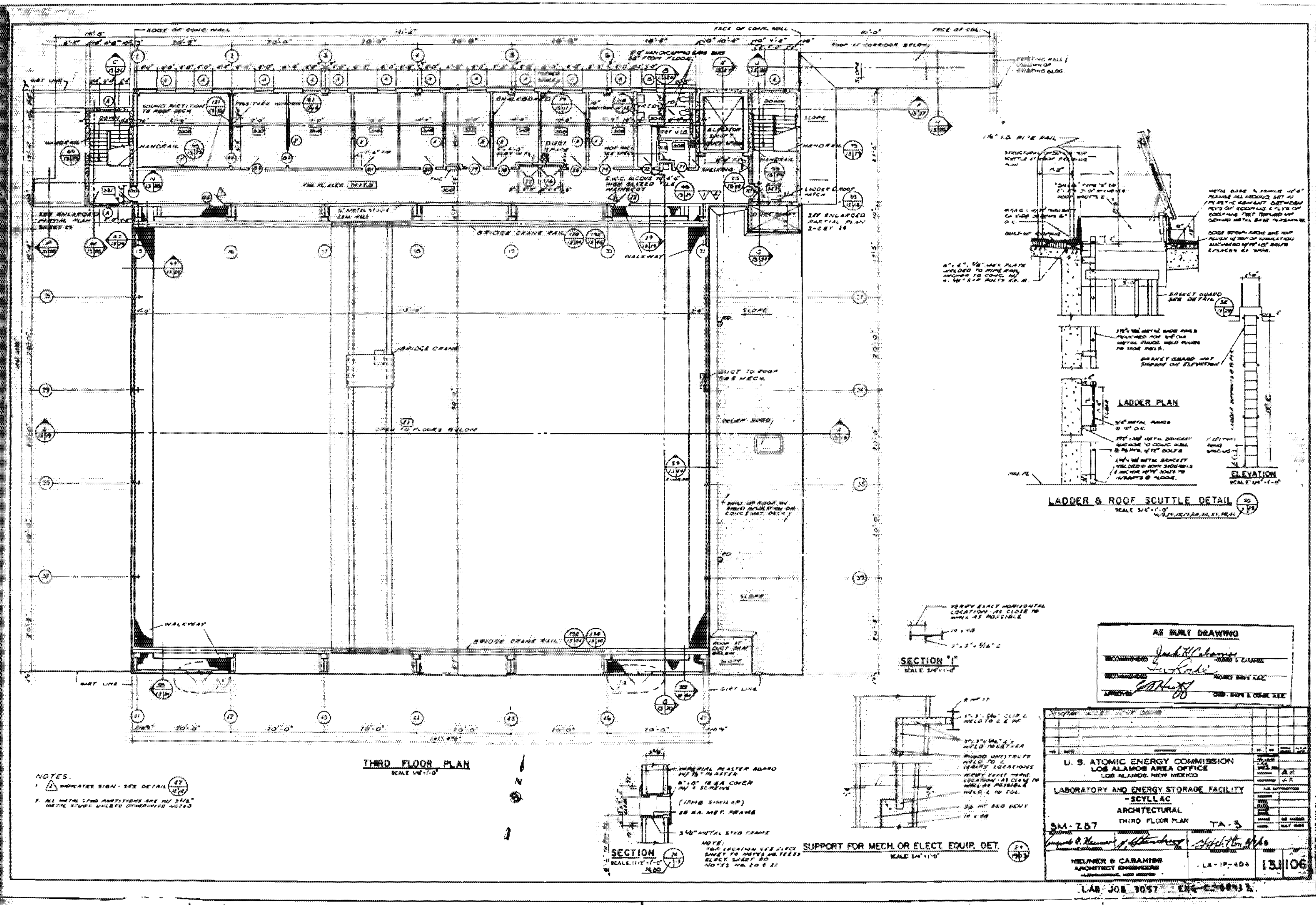
EXTERIOR ELEVATIONS

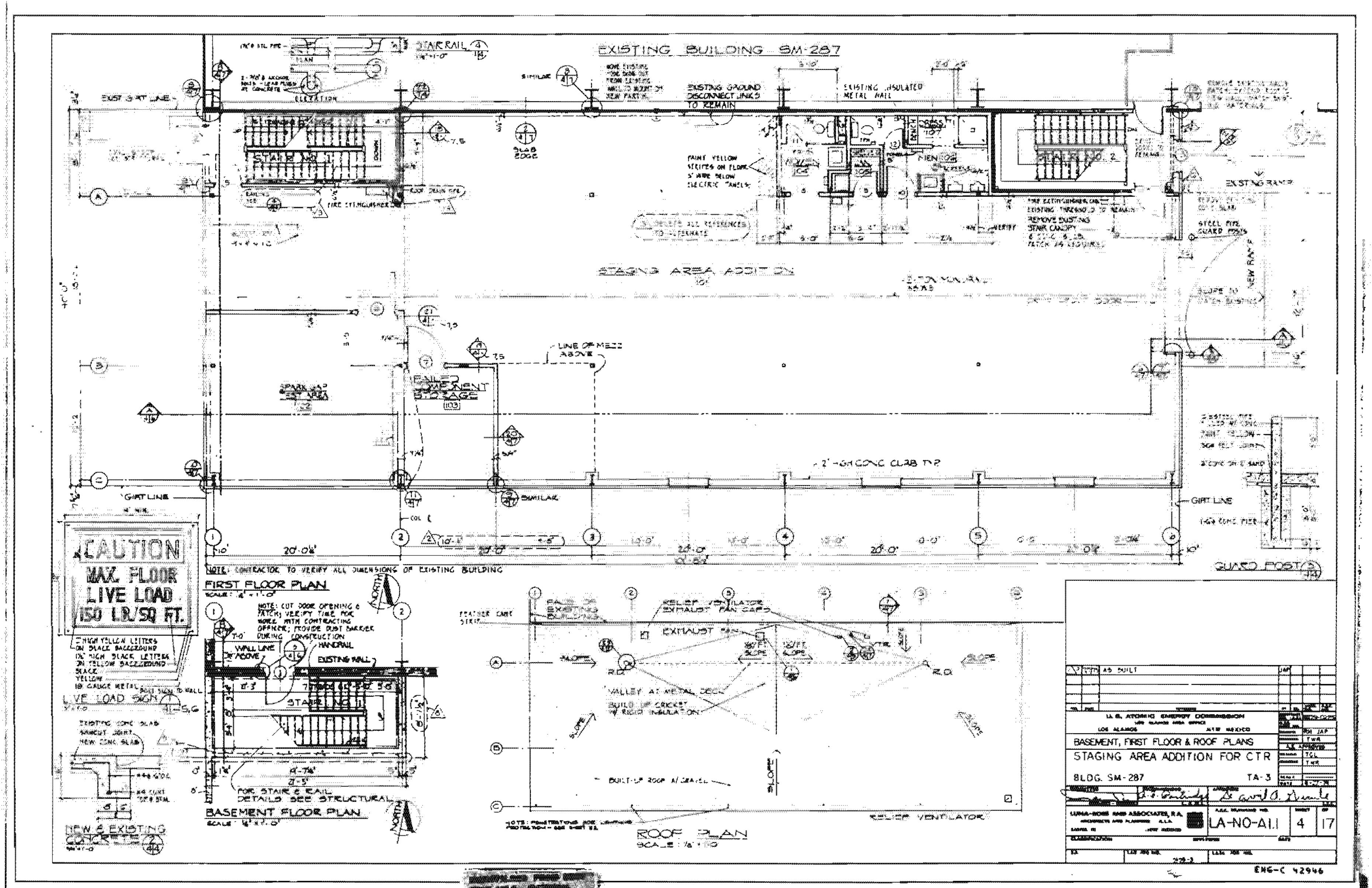


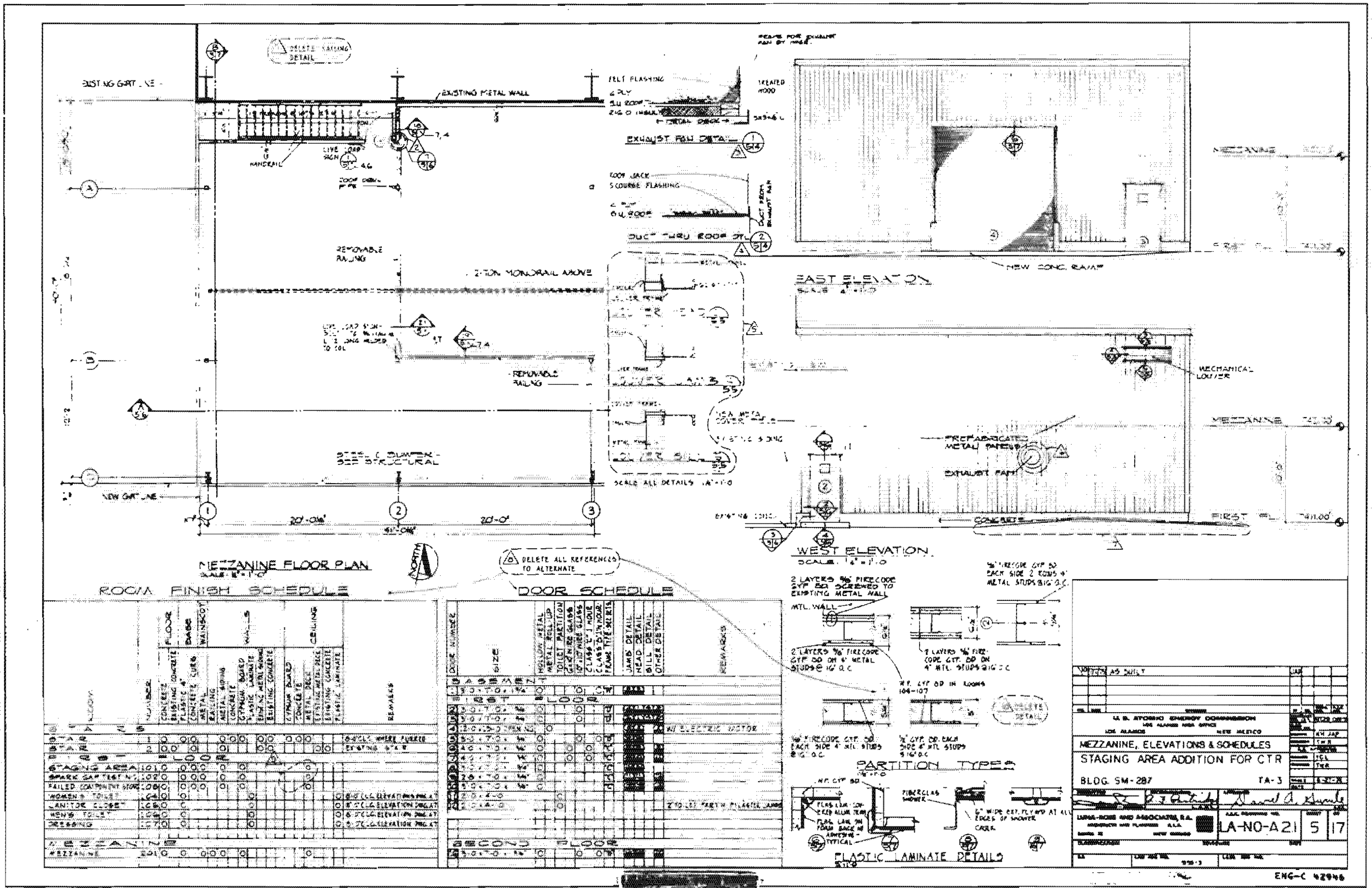
LAB JOB 3057 ENG-C 68410

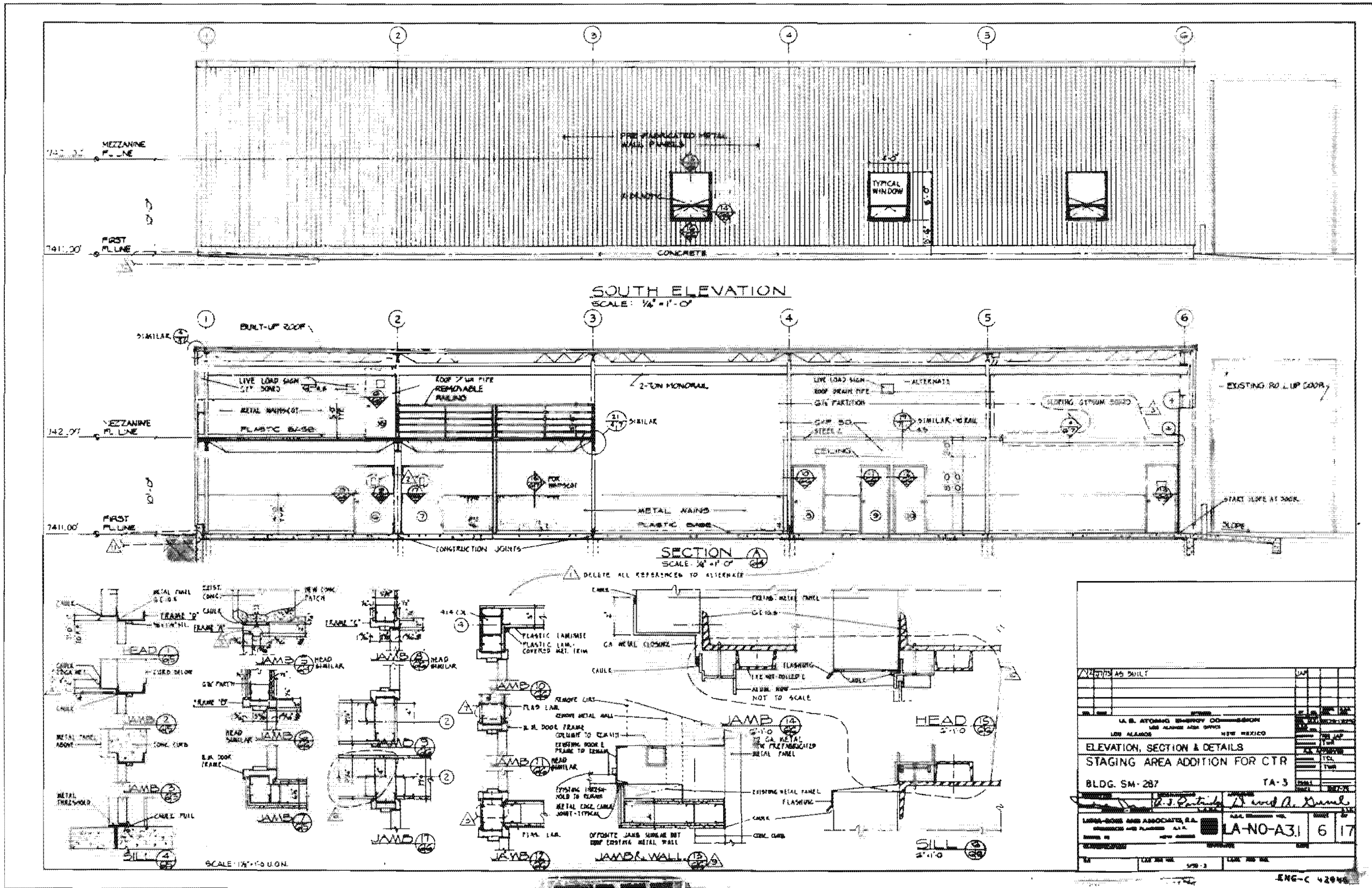

FIRST FLOOR PLAN
SCALE 1/8"=1'-0"
NOTES:
CHALKBOARD DETAIL
NO SCALE
HEAD
JAMB
SILL
ELEVATION
SECURITY SEAL EYELET DETAIL
NO SCALE
PIPE SLEEVE DET.
AS BUILT DRAWING
U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS NEW MEXICO
LABORATORY AND ENERGY STORAGE FACILITY
-SCYLLAC
ARCHITECTURAL
FIRST FLOOR PLAN
SM-287
TA-3
NEUNER & CABANISS
ARCHITECT ENGINEERS
LA-IF-402
10
106
LAB JOB 3057
ENG-C 68411


DANGER
CO2 AREA-CLEAR AREA AT SOUND OF ALARM BELL
CAUTION
TYP. SIGNS
SECTION
STORAGE SHELVES JANITOR CLOSET
DETAIL
TYP. SIGN DETAILS
SECTION
AS BUILT DRAWING
SECOND FLOOR PLAN
CONNECTION DETAIL
HANDRAIL DETAIL
OPEN TO BASEMENT BELOW
NOTES:
U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS, NEW MEXICO
LABORATORY AND ENERGY STORAGE FACILITY -SCYLLAC
ARCHITECTURAL
SECOND FLOOR PLAN
SM-287
TA-3
MEUNIER & CABANISS
ARCHITECT ENGINEERS
LA-19-403
12
106
LAB-JOB 3057 ENG-C 68412

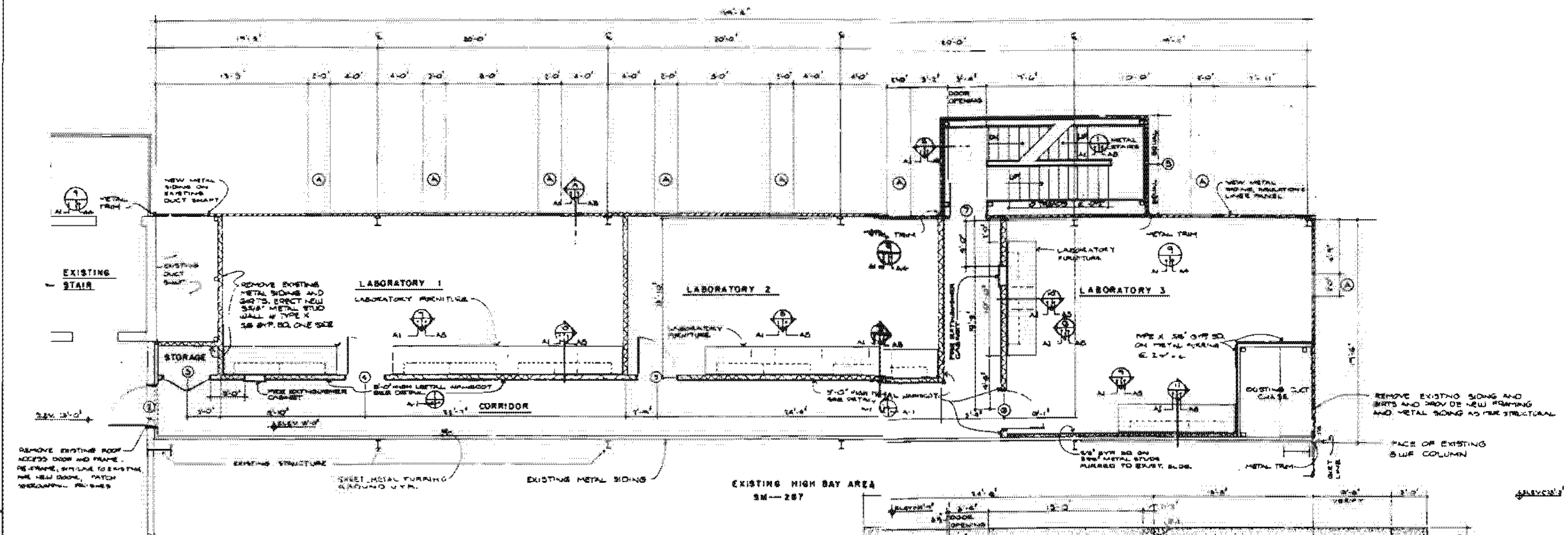

THIRD FLOOR PLAN
SCALE 1/8"=1'-0"
LADDER PLAN
ELEVATION
LADDER & ROOF SCUTTLE DETAIL
SECTION "I"
SECTION
SUPPORT FOR MECH. OR ELECT. EQUIP. DET.
BRIDGE CRANE RAIL
BRIDGE CRANE
WALKWAY
OPEN TO FLOORS BELOW
SLOPE
NOTES
AS BUILT DRAWING
U. S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS, NEW MEXICO
LABORATORY AND ENERGY STORAGE FACILITY
-SCYLLAC
ARCHITECTURAL
THIRD FLOOR PLAN
SM-257
TA-3
NEUMER & CABANISS
ARCHITECT ENGINEERS
LA-IP-404
131
106
LAB JOB 3057


EXISTING BUILDING SM-287
STAIR RAIL
EXISTING GROUND DISCONNECT LINKS TO REMAIN
EXISTING INSULATED METAL WALL
STAIR NO. 1
STAIR NO. 2
EXISTING RAMP
STAGING AREA ADDITION
NEW RAMP
LINE OF MEZZ ABOVE
GIRT LINE
SIMILAR
GUARD POST
CAUTION
MAX. FLOOR LIVE LOAD 150 LB./SQ FT.
LIVE LOAD SIGN
NOTE: CONTRACTOR TO VERIFY ALL DIMENSIONS OF EXISTING BUILDING
FIRST FLOOR PLAN
NORTH
WALL LINE ABOVE
HANDRAIL
EXISTING WALL
FOR STAIR & RAIL DETAILS SEE STRUCTURAL
BASEMENT FLOOR PLAN
NEW & EXISTING CONCRETE
RELIEF VENTILATOR
EXHAUST FAN
SLOPE
VALLEY AT METAL DECK
ROOF PLAN
AS BUILT
U.S. ATOMIC ENERGY COMMISSION
LOS ALAMOS NEW MEXICO
BASEMENT, FIRST FLOOR & ROOF PLANS
STAGING AREA ADDITION FOR CTR
BLDG. SM-287
TA-3
LA-NO-A1.1
4
17
ENG-C 42946

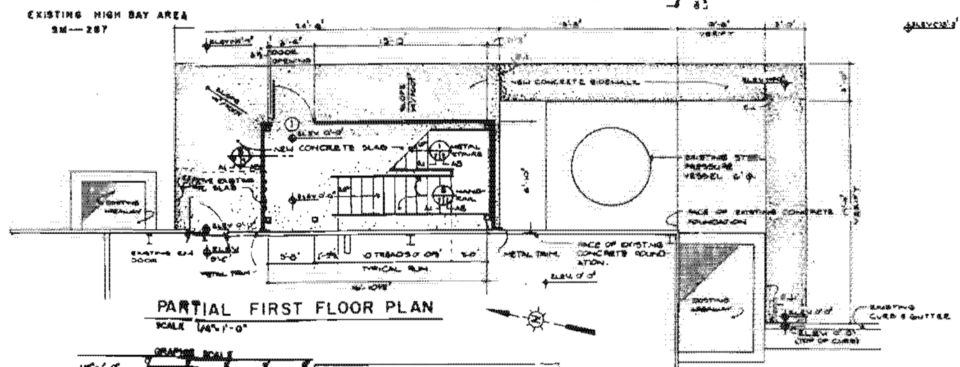

MEZZANINE FLOOR PLAN
EXISTING METAL WALL
2-TON MONORAIL ABOVE
REMOVABLE RAILING
NEW GIRT LINE
20'-0"
EXHAUST FAN DETAIL
DUCT THRU ROOF
SCALE ALL DETAILS 1 1/2"=1'-0
EAST ELEVATION
WEST ELEVATION
MEZZANINE
FIRST FL.
NEW CONC. RAMP
MECHANICAL LOUVER
PREFABRICATED METAL PANELS
EXHAUST FAN
DELETE ALL REFERENCES TO ALTERNATE
ROOM FINISH SCHEDULE
DOOR SCHEDULE
PARTITION TYPES
PLASTIC LAMINATE DETAILS
AS BUILT
U.S. ATOMIC ENERGY COMMISSION
LOS ALAMOS AREA OFFICE
LOS ALAMOS NEW MEXICO
MEZZANINE, ELEVATIONS & SCHEDULES
STAGING AREA ADDITION FOR CTR
BLDG. SM-287
TA-3
LA-NO-A21
5
17
ENG-C 42946



SOUTH ELEVATION
SCALE: 1/4" = 1'-0"
PREFABRICATED METAL WALL PANELS
TYPICAL WINDOW
CONCRETE
MEZZANINE FL. LINE
FIRST FL. LINE
7411.00'
BUILT-UP ROOF
2-TON MONORAIL
REMOVABLE RAILING
METAL WAINSCOT
PLASTIC BASE
LIVE LOAD SIGN
ALTERNATE
ROOF DRAIN PIPE
G/B PARTITION
SLIDING GYPSUM BOARD
EXISTING ROLL UP DOOR
CEILING
START SLOPE AT DOOR
SLOPE
CONSTRUCTION JOINTS
SECTION A
SCALE: 1/4" = 1'-0"
DELETE ALL REFERENCES TO ALTERNATE
HEAD
JAMB
SILL
JAMB & WALL
NOT TO SCALE
SCALE: 1 1/2" = 1'-0" U.O.N.
CAULK
FLASHING
EXISTING METAL PANEL
△2 2/7/75 AS BUILT
U.S. ATOMIC ENERGY COMMISSION
LOS ALAMOS NEW MEXICO
ELEVATION, SECTION & DETAILS
STAGING AREA ADDITION FOR CTR
BLDG. SM-287
TA-3
LA-NO-A3.1
6
17
ENG-C 42046



SECOND FLOOR PLAN
SCALE 1/4"=1'-0"

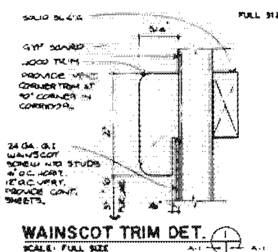


PARTIAL FIRST FLOOR PLAN
SCALE 1/4"=1'-0"

FINISH SCHEDULE

ROOM NAME	FLOOR: VINYL ASBESTOS TILE	FLOOR: CARPET	FLOOR: CONCRETE	FLOOR: METAL	BASE: VINYL	BASE: METAL SUBBASE	BASE: NO BASE	BASE	WALLS: EXISTING METAL PANEL	WALLS: GYP. WALL BOARD	WALLS: METAL LINER PANEL	WALLS: 5'-0" HIGH METAL WAINSCOT	CEILING: STRUCTURE	CEILING: LAMIN. ACOUSTICAL	CEILING: SUSPENDED GYP. BD. 5/8"	CEILING	REMARKS (* SEE SPECIFICATIONS FOR TREATMENT.)
SECOND FLOOR																	
STORAGE	●				●				○	●					●		
CORRIDOR	●				●	●			○	●		●	●				5'-0" HIGH [illegible] PAINTED
LABORATORY 1	●				●					●	●		●				
LABORATORY 2	●				●					●	●		●				
LABORATORY 3	●				●					●	●		●				
THIRD FLOOR																	
STORAGE		●			●				○	●					●		
GROUP LEADER 2		●			●					●	●			●			
OPEN AREA OFFICE		●			●	●			○		●			●			
STAIR				●			●				●		●				

NEW ● EXISTING ○



WAINSCOT TRIM DET.
SCALE: FULL SIZE

SYMBOL LEGEND

- CONSTRUCTION TO BE REMOVED
- 5/8" GYPSUM BOARD ON 3 5/8" METAL STUD PARTITION
- METAL SIDING, INSULATION & METAL LINER PANEL
- METAL SIDING & METAL LINER PANEL
- EXISTING METAL SIDING
- NEW SPOT ELEVATION
- EXISTING SPOT ELEVATION

AS CONSTRUCTED DRAWING
CONSTRUCTION CONTRACT NO. EW-14-C-32-4114
SUBMITTED 16 FEB 1977 Kenneth Ellerbe
RECOMMENDED
APPROVED

NO.	DATE	REVISIONS	BY	CK.
1	8-4-77	ADDENDUM NO. 1		KC

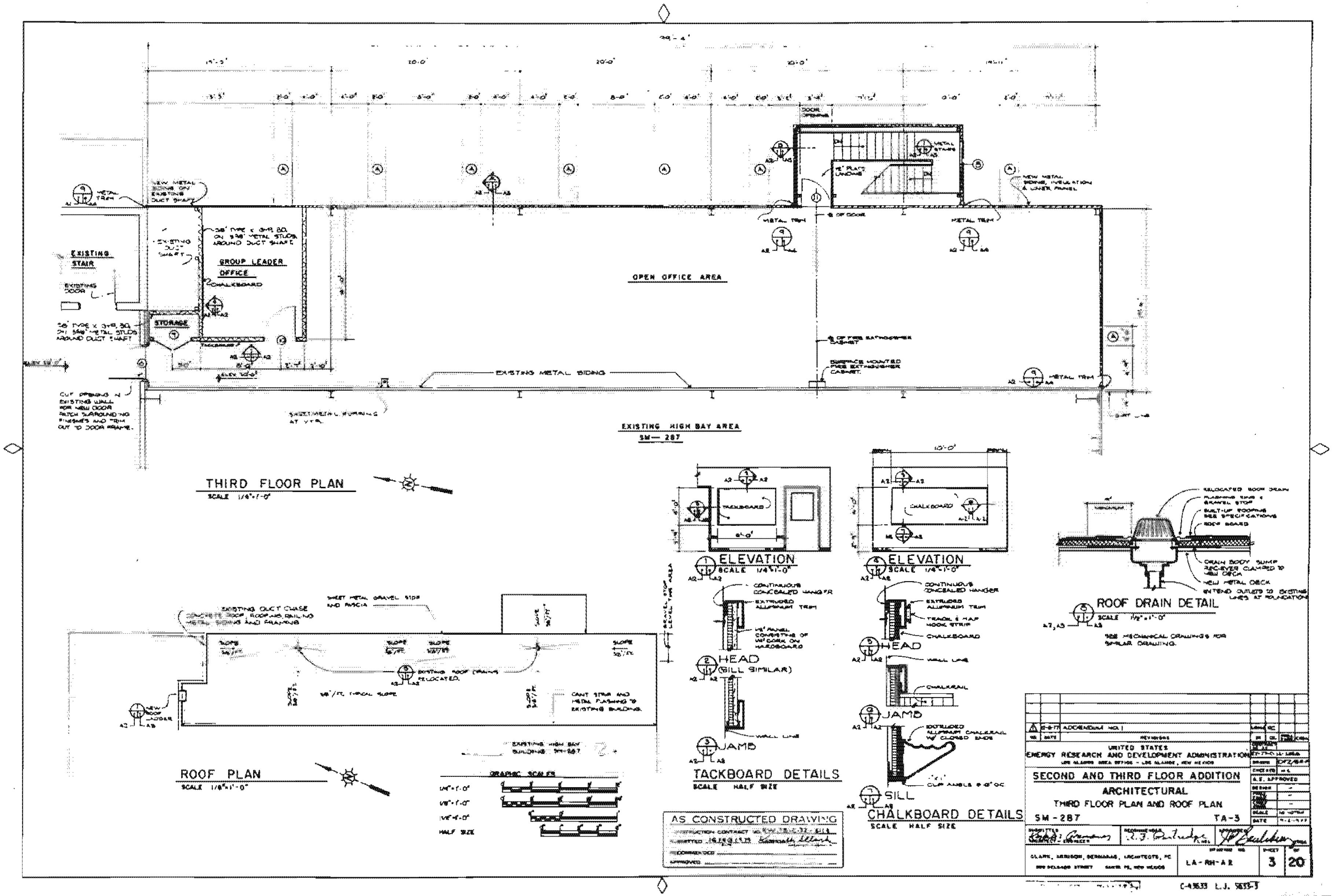
UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
LOS ALAMOS AREA OFFICE - LOS ALAMOS, NEW MEXICO

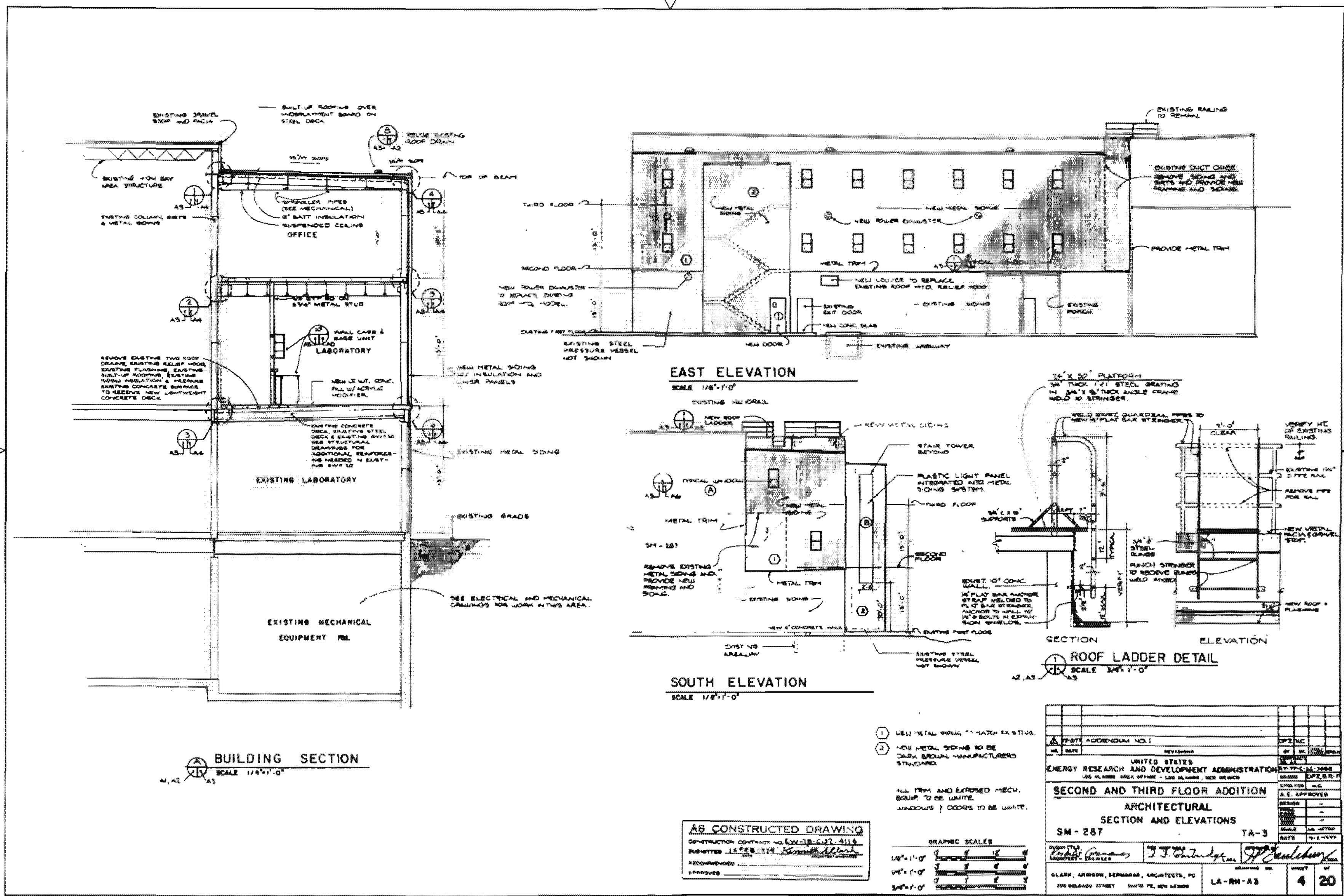
SECOND AND THIRD FLOOR ADDITION
ARCHITECTURAL
SECOND FLOOR PLAN AND SCHEDULE
SM - 287 TA - 3

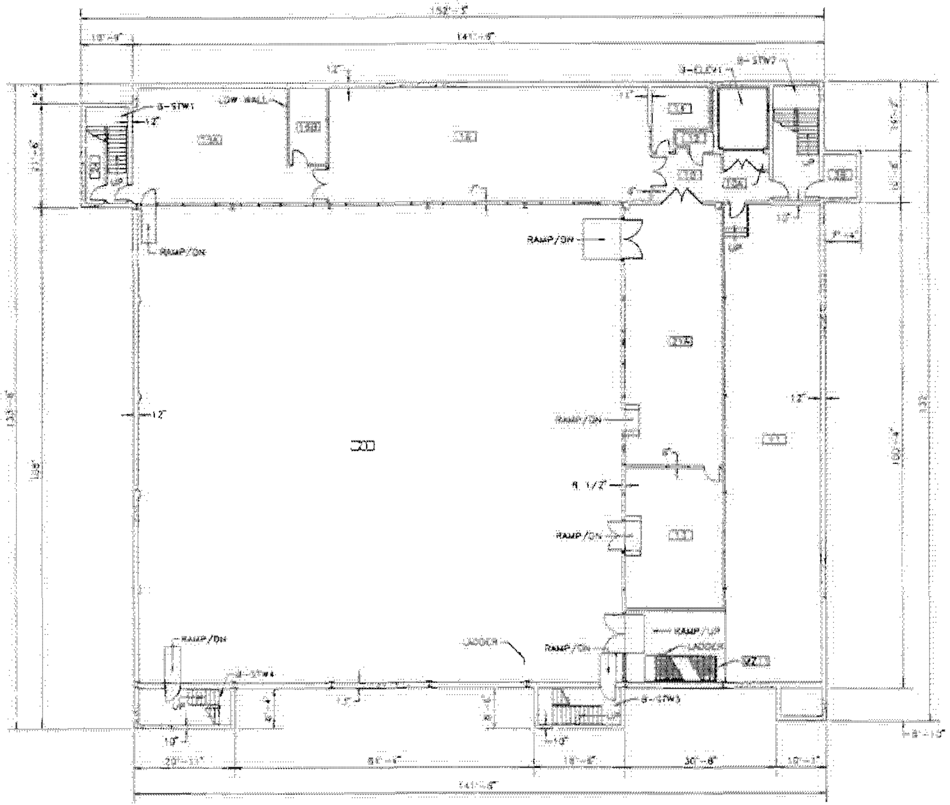
CLARK, ARRISON, [illegible], ARCHITECTS, PC
SANTA FE, NEW MEXICO

LA-RN-A1
SHEET 2 OF 20

C-43633 L.J. 5633-3

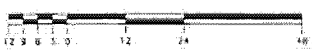

EXISTING STAIR
GROUP LEADER OFFICE
STORAGE
CHALKBOARD
OPEN OFFICE AREA
EXISTING METAL SIDING
EXISTING HIGH BAY AREA
SM— 287
THIRD FLOOR PLAN
SCALE 1/4"=1'-0"
ROOF PLAN
SCALE 1/8"=1'-0"
GRAPHIC SCALES
ELEVATION
HEAD
JAMB
SILL
TACKBOARD DETAILS
SCALE HALF SIZE
CHALKBOARD DETAILS
SCALE HALF SIZE
ROOF DRAIN DETAIL
AS CONSTRUCTED DRAWING
ADDENDUM NO. 1
UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
SECOND AND THIRD FLOOR ADDITION
ARCHITECTURAL
THIRD FLOOR PLAN AND ROOF PLAN
SM - 287
TA-3
LA - RH - A 2
3
20
C-43633 L.J. 5633-3


BUILDING SECTION
EXISTING LABORATORY
LABORATORY
OFFICE
EXISTING MECHANICAL EQUIPMENT RM.
EAST ELEVATION
SCALE 1/8"=1'-0"
SOUTH ELEVATION
SCALE 1/8"=1'-0"
ROOF LADDER DETAIL
SECTION
ELEVATION
AS CONSTRUCTED DRAWING
GRAPHIC SCALES
UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
SECOND AND THIRD FLOOR ADDITION
ARCHITECTURAL
SECTION AND ELEVATIONS
SM - 287
TA-3
A.E. APPROVED
LA-RH-A3
4
20
C-43633 L.J. 5633-3



BASEMENT FLOOR PLAN

SCALE: 3/32" = 1'-0"



N

ROOM INFORMATION CHART

ROOM NUMBER | ROOM NET SQUARE FOOTAGE

TOTAL ROOM NET SQUARE FOOTAGE = 17,833
GROSS SQUARE FOOTAGE = 18,345

LEGEND

- CONCRETE
- UTILITY SPACE
- LOUVER
- METAL STUD
- WINDOW
- I BEAM

NOTES

1. ALL INTERIOR WALLS ARE 5 1/2" THICK UNLESS OTHERWISE NOTED.
2. REFERENCE DRAWINGS ENG-C88410 AND ENG-R1902.
3. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF THE EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS.
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, 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.

NO	DATE	CLASS REV	REVISIONS	DWN	VER	CHKD	REL	SUB	ACC	APP

JOHNSON CONTROLS WORLD SERVICES INC.

AS-BUILT RECORD FLOOR PLAN
LAB/OFFICE BLDG
ARCH: BASEMENT FLOOR PLAN

BLDG 787

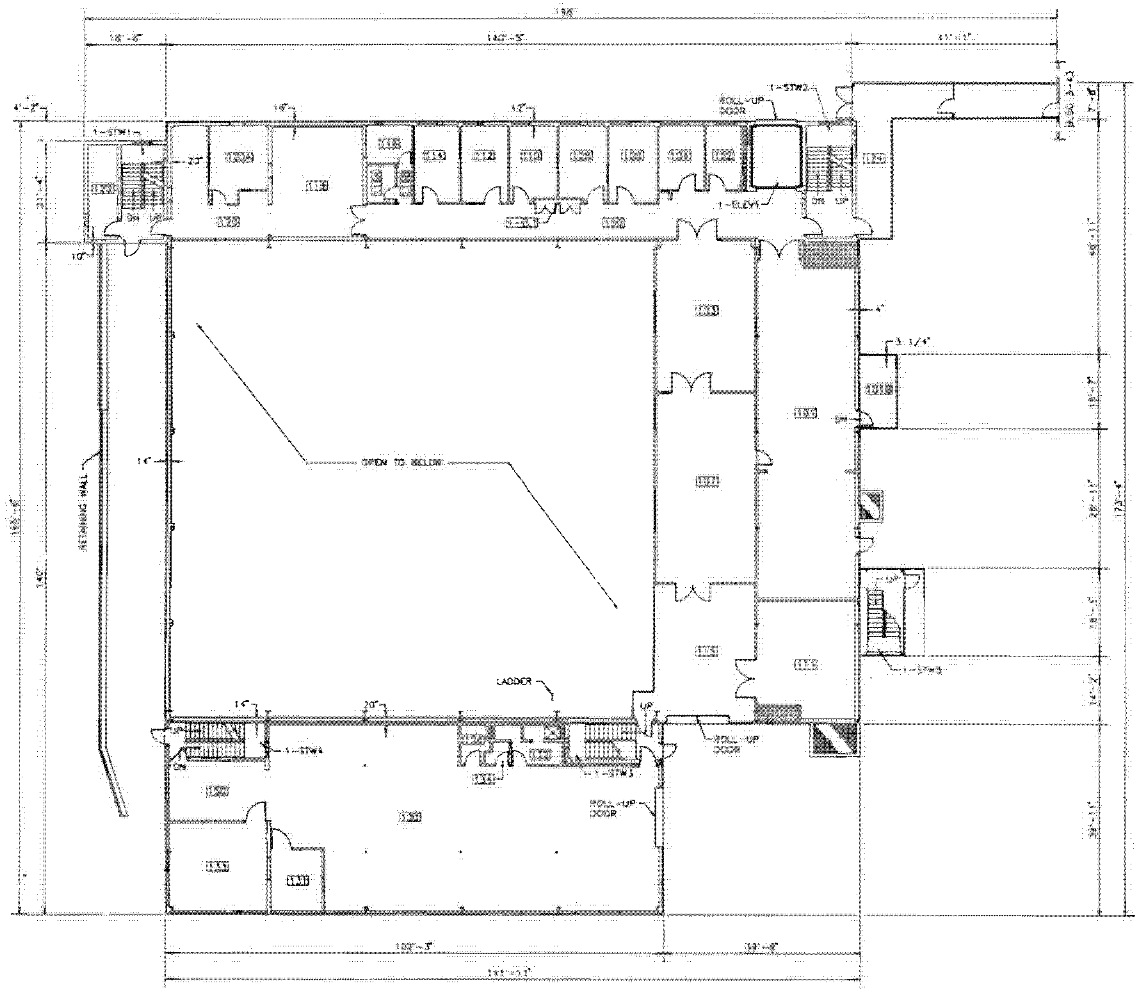
Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

SHEET 1 of 4

PROJECT ID 7556 | DRAWING NO AB175

FIELD VERIFIED 07-08-93

JCI 891-011



FIRST FLOOR PLAN

SCALE: 3/32" = 1'-0"

GRAPHIC SCALE

ROOM INFORMATION CHART

ROOM NUMBER	ROOM NET SQUARE FOOTAGE
[illegible]	[illegible]
[illegible]	[illegible]
101A	[illegible]
[illegible]	[illegible]
1-STW1	[illegible]
1-STW2	[illegible]
1-STW3	[illegible]
1-STW4	[illegible]
1-STW5	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
1-ELEV1	[illegible]

TOTAL ROOM NET SQUARE FOOTAGE = 12,613
GROSS SQUARE FOOTAGE = 23,014

LEGEND

CONCRETE — UTILITY SPACE — LOUVER — METAL SIDING — WINDOW — I BEAM — METAL STUD — COLUMN

NOTES

1. ALL INTERIOR WALLS ARE 5 1/2" THICK OTHERWISE NOTED.
2. REFERENCE DRAWINGS ENG-C88438, C88411, AND ENG-R1303
3. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF THE EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS.
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, 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.

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

JOHNSON CONTROLS WORLD SERVICES INC.

AS-BUILT RECORD FLOOR PLAN
LAB/OFFICE BLDG
ARCH. FIRST FLOOR PLAN

BLDG 287 — TA-3

DRAWN / VERIFIED / CHECKED / RELEASED / DATE

SUBMITTED JERRY FORTE — RECOMMENDED FRED THOMPSON — APPROVED FRED THOMPSON

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

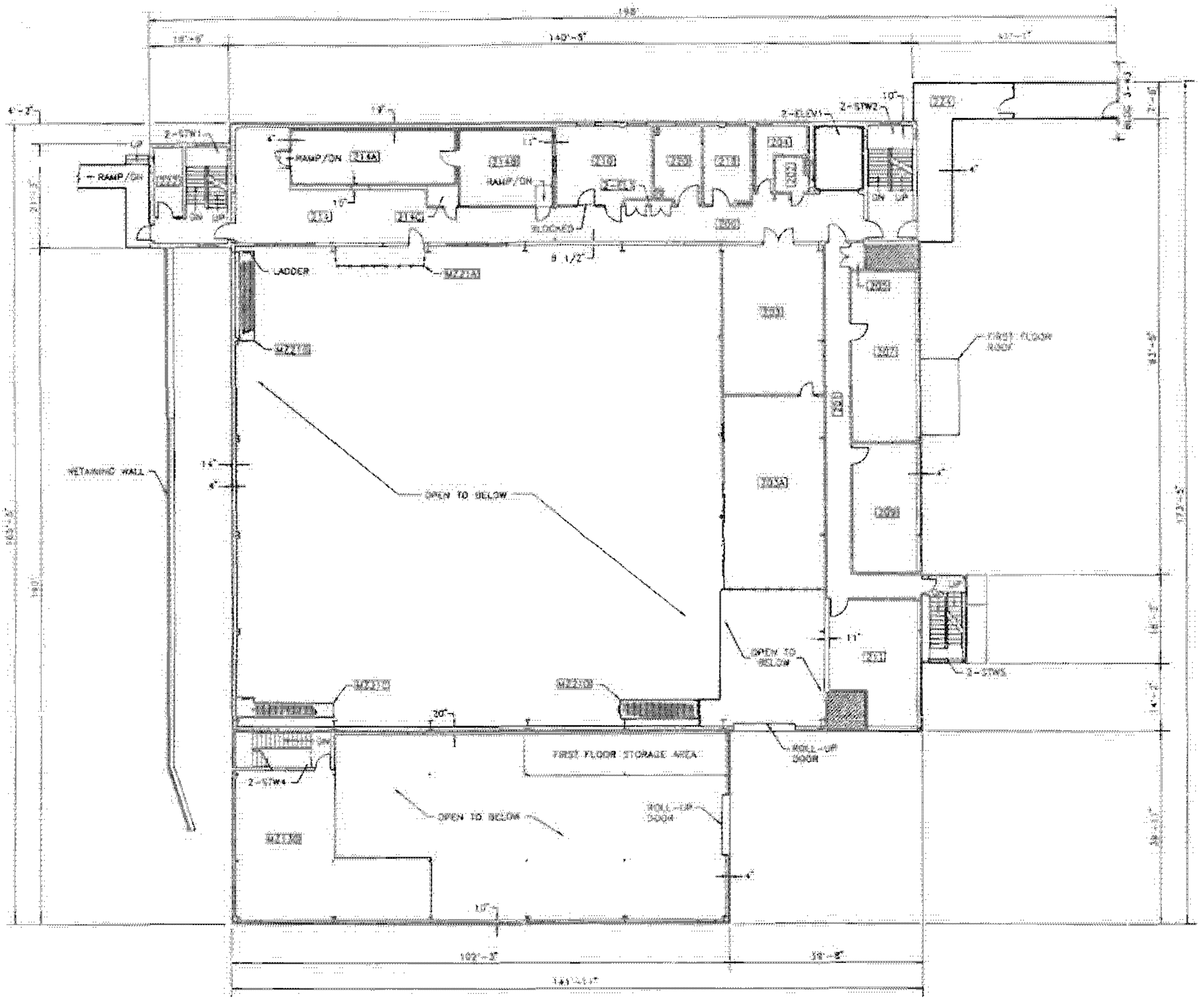
SHEET 2 — 2 OF 4

CLASSIFICATION U — REVIEWER H. SALAZAR — DATE

PROJECT ID 7556 — DRAWING NO. AB175 — REV

FIELD VERIFIED 07-27-93

JCI #91-011



SECOND FLOOR PLAN

SCALE: 3/32" = 1'-0"

GRAPHIC SCALE

ROOM NUMBER	ROOM NET SQUARE FOOTAGE
[illegible]	[illegible]

ROOM INFORMATION CHART

TOTAL ROOM NET SQUARE FOOTAGE = 9,142
GROSS SQUARE FOOTAGE = 22,884

LEGEND

CONCRETE — WINDOW
UTILITY SPACE — I BEAM
LOUVER — METAL SIDING
METAL STUD — WIRE MESH PARTITION
COLUMN

NOTES

1. ALL INTERIOR WALLS ARE 5 1/2" THICK UNLESS OTHERWISE NOTED.
2. REFERENCE DRAWINGS ENG-C68412 AND ENG-R1904.
3. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF THE EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS.
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, 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.

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

JOHNSON CONTROLS WORLD SERVICES INC.

AS-BUILT RECORD FLOOR PLAN
LAB/OFFICE BLDG
ARCH: SECOND FLOOR PLAN

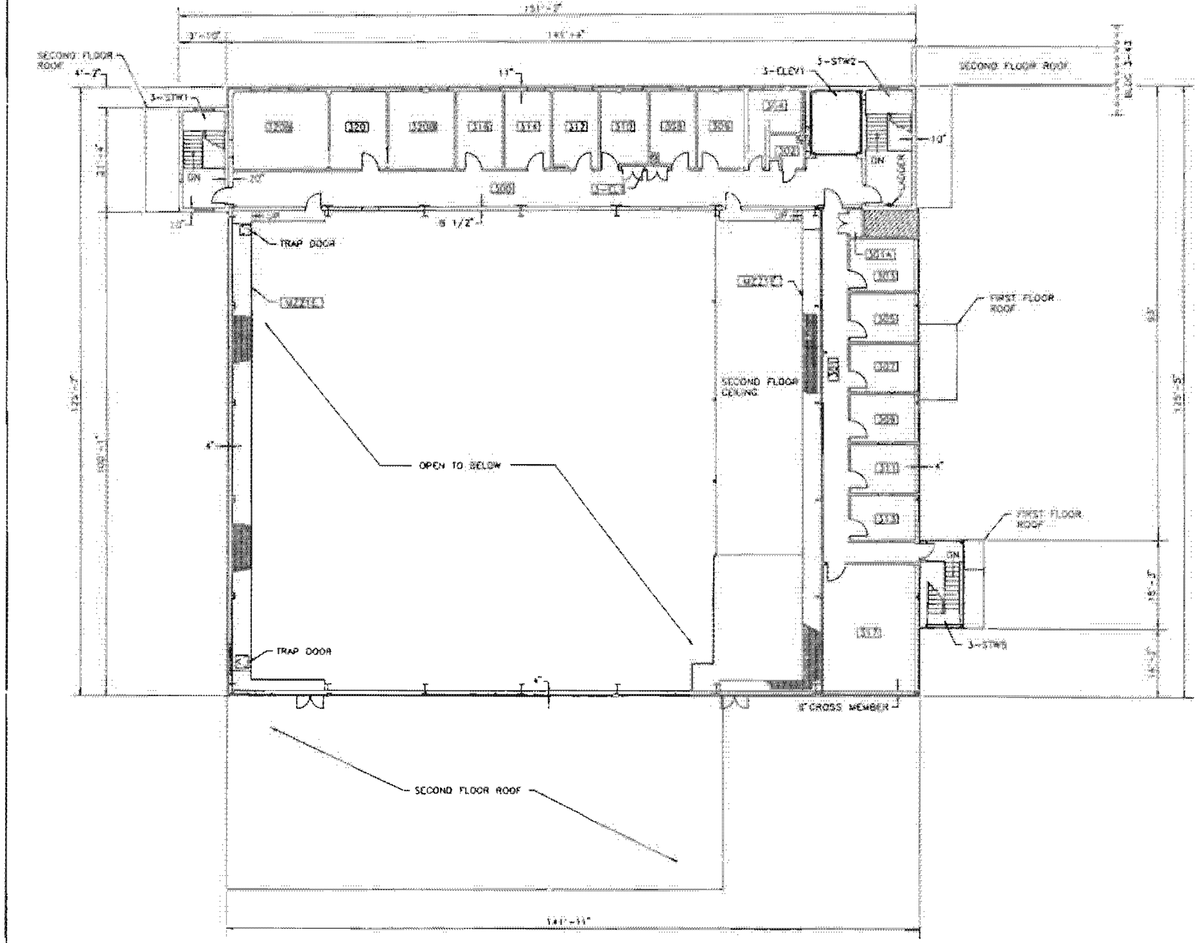
DATE 09-07-93

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

SHEET 3 — 3/4

PROJECT ID 7556 — DRAWING NO AB175

FIELD VERIFIED 07-27-93



THIRD FLOOR PLAN

SCALE: 3/32" = 1'-0"

GRAPHIC SCALE

ROOM INFORMATION CHART

ROOM NUMBER	ROOM NET SQUARE FOOTAGE
[illegible]	[illegible]
3-ELEV1	50

TOTAL ROOM NET SQUARE FOOTAGE = 8,534

GROSS SQUARE FOOTAGE = 10,172

LEGEND

CONCRETE		I-BEAM	
UTILITY SPACE		METAL SIDING	
METAL STUD		LOUVER	
WINDOW		COLUMN	

NOTES

1. ALL INTERIOR WALLS ARE 5 1/2" THICK UNLESS OTHERWISE NOTED.
2. REFERENCE DRAWINGS ENG-C6B413 AND ENG-R1305
3. ROOM NET SQUARE FOOTAGE IS COMPUTED BY MEASURING FROM THE INSIDE FACE OF THE EXTERIOR WALLS TO THE CENTERLINE OF ALL OTHER WALLS.
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, 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.

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

JOHNSON CONTROLS WORLD SERVICES INC.

AS-BUILT RECORD FLOOR PLAN

LAB/OFFICE BLDG

ARCH: THIRD FLOOR PLAN

BLDG 267 TA-3

DATE 08-10-93

SUBMITTED JERRY FORTE

FRED THOMPSON

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

SHEET 4 of 4

CLASSIFICATION U REVIEWER N. SALAZAR

PROJECT # 7556

DRAWING NO AB175

FIELD VERIFIED 07-27-93

JCI #91-011