

HEDL-MG-189

REV. 1

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HEDL FACILITIES CATALOG: 400 AREA

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12/11/2008 J. D. Aandal,

per telecon w/ W.A. Dautel
(FFTF)

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Hanford Engineering Development Laboratory

**Operated by
Westinghouse
Hanford Company
for the U.S. DOE**

**A Subsidiary of
Westinghouse Electric
Corporation**

**Contract No.
DE-AC06-76FF02170**

**P.O. Box 1970
Richland, WA 99352**

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This is a working document required to perform, direct, or integrate work under United States Department of Energy contracts.

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PRELIMINARY DOCUMENT

This document contains information of a preliminary nature prepared in the course of work for the United States Department of Energy. This information is subject to corrections or modification upon the collection and evaluation of additional data.

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REV. 1

HEDL FACILITIES CATALOG: 400 AREA

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B.A. Mayancsik
Date Published: March 1987

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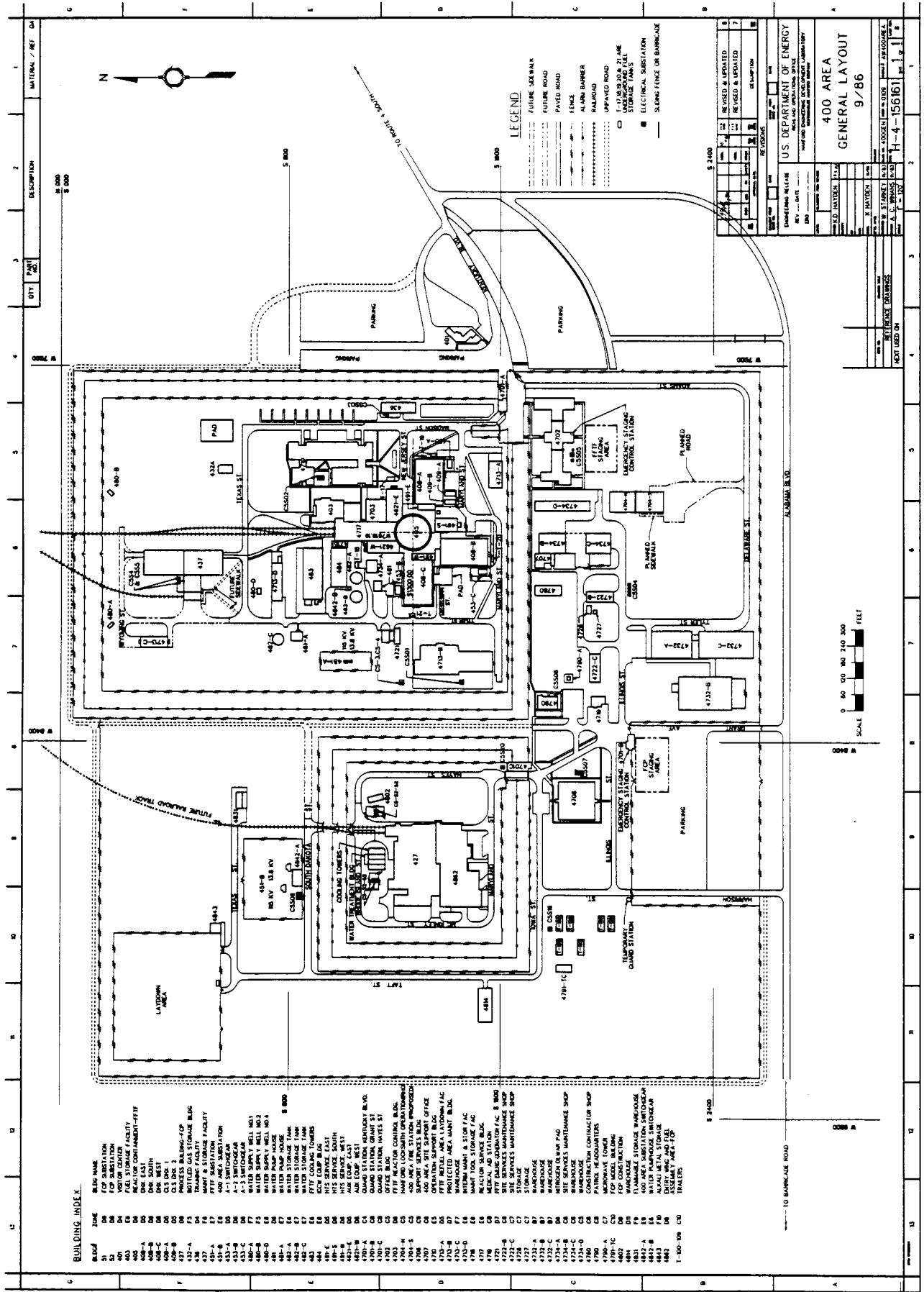
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INITIAL RELEASE AND CHANGE CONTROL RECORD

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Rev. 1		6/85 4/87	New Replace all pages		COG ENGR <i>3-24-87 B. A. Mayancsik</i>	COG MGR



ACRONYMS

FFTF	Fast Flux Test Facility
HTS	Heat Transport System
RSB	Reactor Service Building
ICCW	In-Containment Chilled Water (System)
LMR	Liquid Metal Reactor
DHX	Dump Heat Exchanger
FSF	Fuel Storage Facility
AEB	Auxiliary Equipment Building
A/C	Air Conditioning
RAPS	Radioactive Argon Processing System
R/A	Radioactive
IEM	Interim Examination and Maintenance (Cell)
H&V	Heat and Ventilating
FGM	Fission Gas Monitor
CAPS	Cell Atmosphere Processing System
IDS	Interim Decay Storage
CLS	Closed Loop System
CWS	Chilled Water System
NDE	Nondestructive Examination
DE	Destructive Examination
FAA	Fuel Assembly Area
SAF	Secure Automated Fabrication
PS	Power Supply
ERT	Emergency Response Team

HEDL FACILITIES CATALOG: 400 AREA

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HEDL FACILITIES CATALOG: 400 AREA (Cont'd)

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S E C T I O N I

FAST FLUX TEST FACILITY

FAST FLUX TEST FACILITY

Purpose: To provide a sodium-cooled fast flux test reactor designed specifically for irradiation testing of fuels and materials and for long-term testing and evaluation of plant components and systems for the Liquid Metal Reactor (LMR) Program.

Description: The FFTF includes the reactor, heat removal equipment and structures, containment, core component handling and examination, instrumentation and control, and utilities and other essential services. The complex array of buildings and equipment are arranged around the Reactor Containment Building. A list of these buildings and/or systems follows:

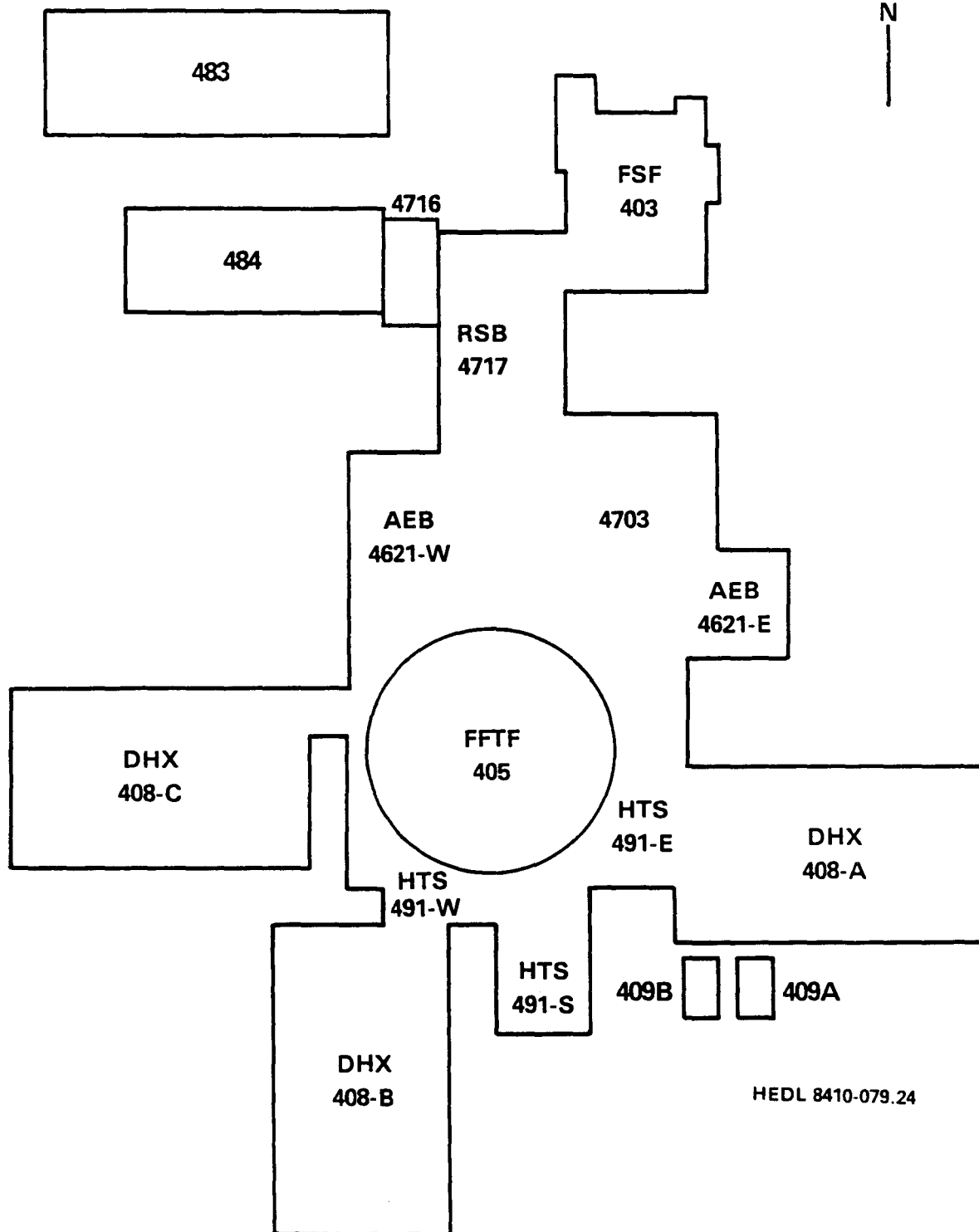
403	- Fuel Storage Facility
405	- Reactor Containment Building
408A, B, C	- HTS Dump Heat Exchangers
409A, B	- Closed Loop System Dump Heat Exchangers
483	- Cooling Water Towers
484	- ICCW Equipment Building
491E, S, W	- HTS Service Buildings
4621E, W	- Auxiliary Equipment Building
4703	- Control Building
4716	- Maintenance Tool Storage Facility
4717	- Reactor Service Building

Further discussion of these buildings and/or systems will be included in this section on the FFTF.

Negative Nos: 8405513-4cn Fast Flux Test Facility - 400 Area
7810614-4 Reactor and Support Buildings, 580-ft Level
7810614-1 Reactor and Support Buildings, 550-ft Level
7810614-3 Reactor and Support Buildings, 533-ft Level
8710614-2 Reactor and Support Buildings, 520-ft Level



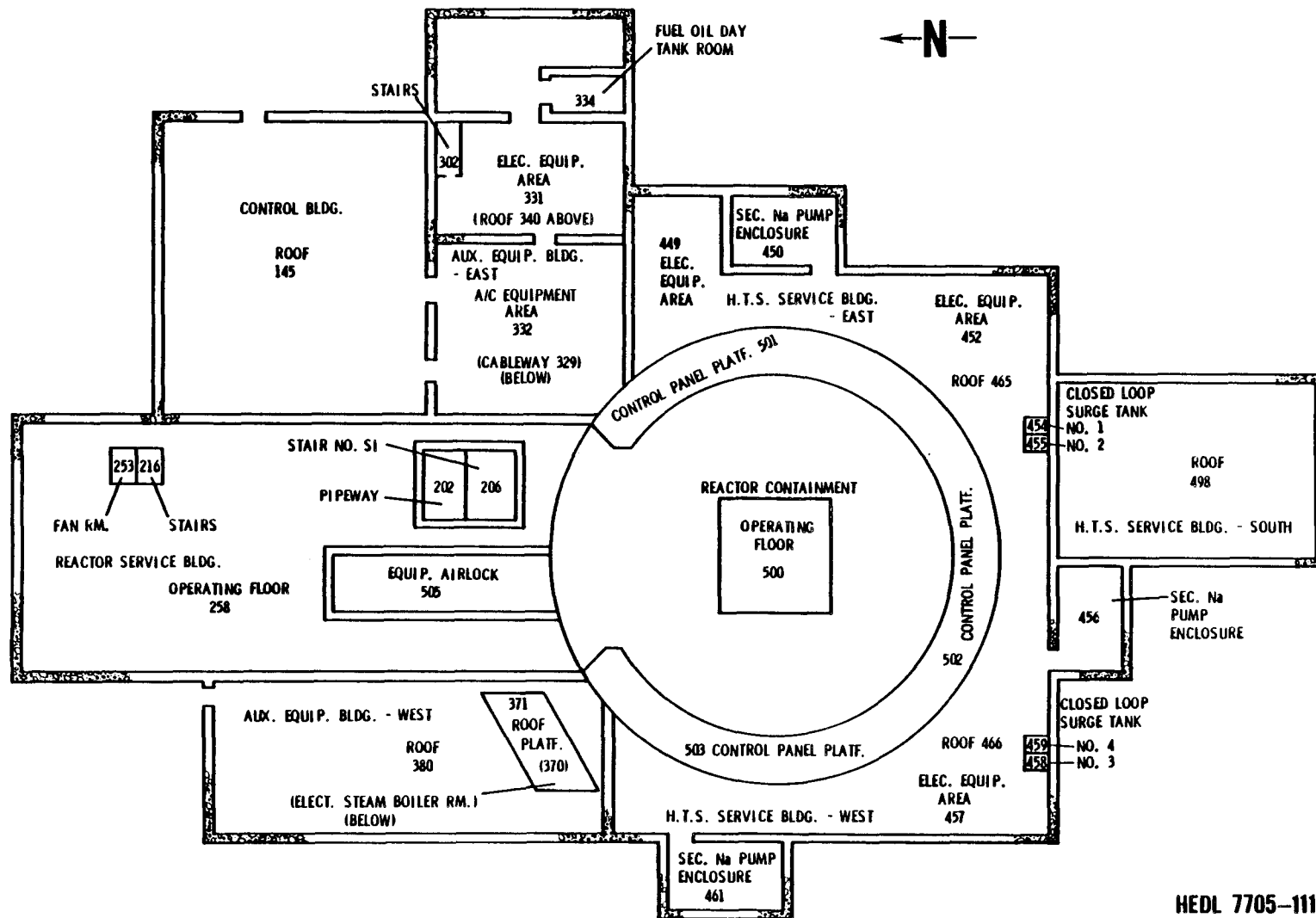
FAST FLUX TEST FACILITY - 400 AREA



HEDL 8410-079.24

FAST FLUX TEST FACILITY BUILDING LAYOUT

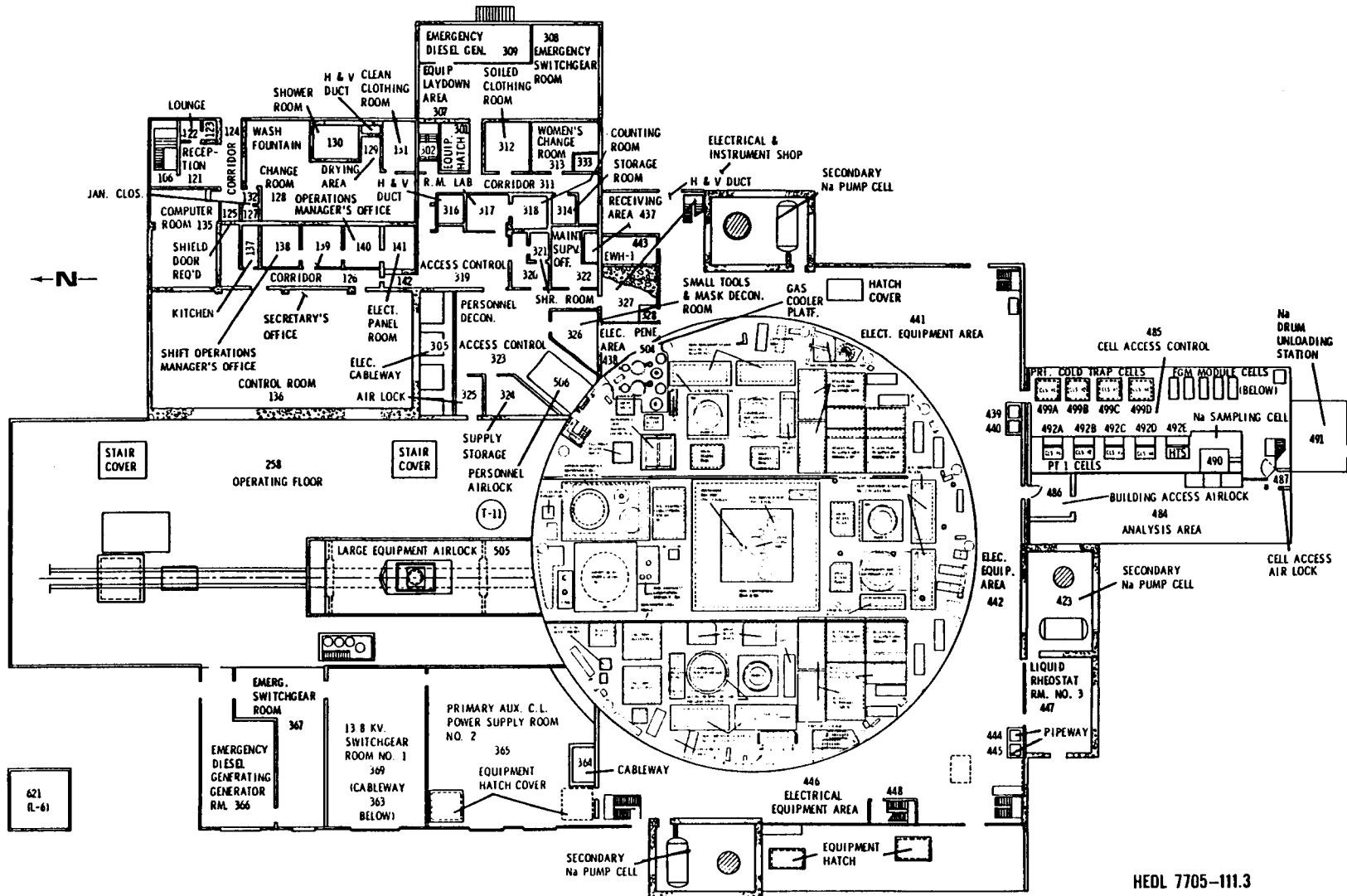
REACTOR AND SUPPORT BUILDINGS, 580-ft LEVEL



HEDL 7705-111.1

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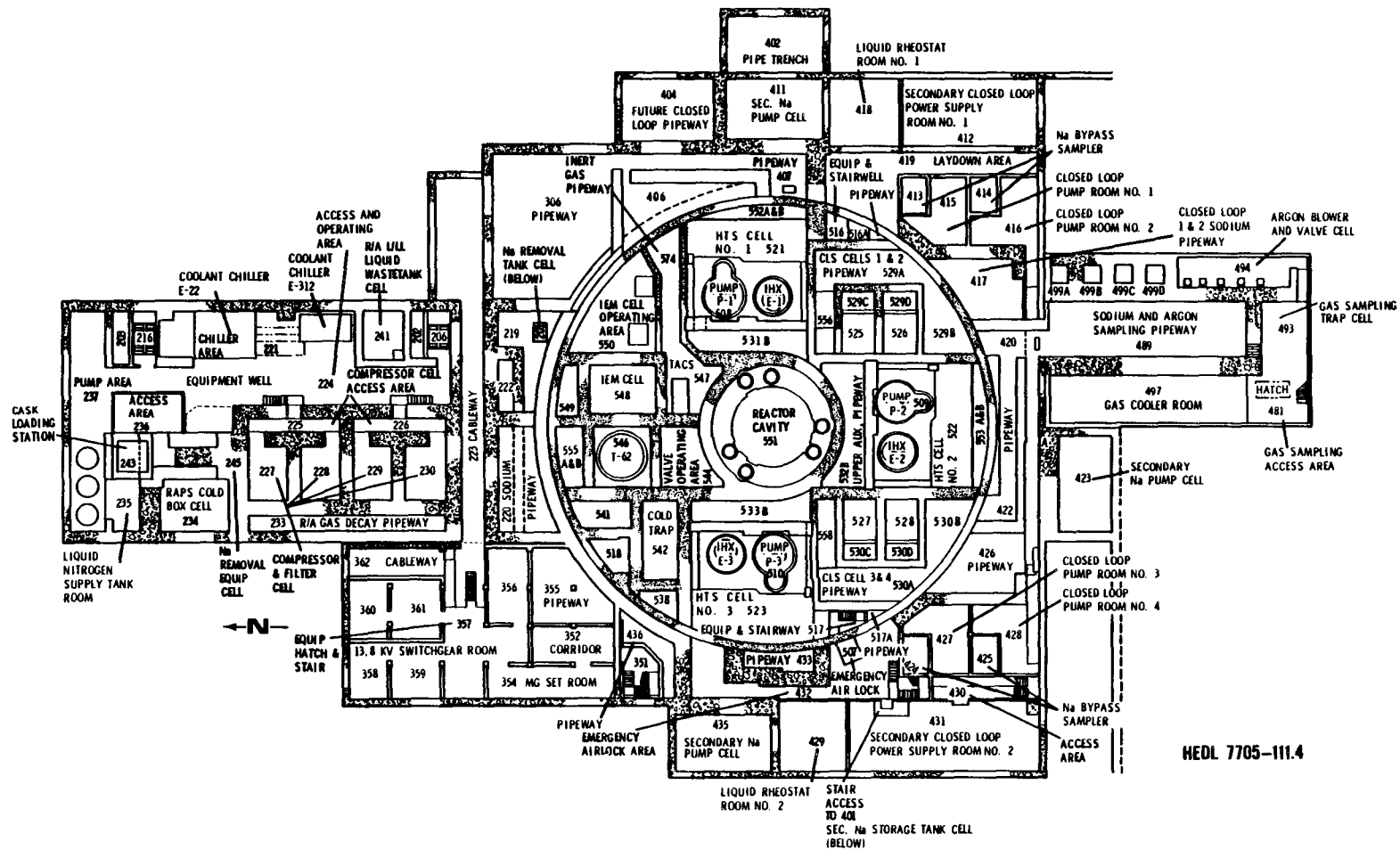
REACTOR AND SUPPORT BUILDINGS, 550-ft. LEVEL

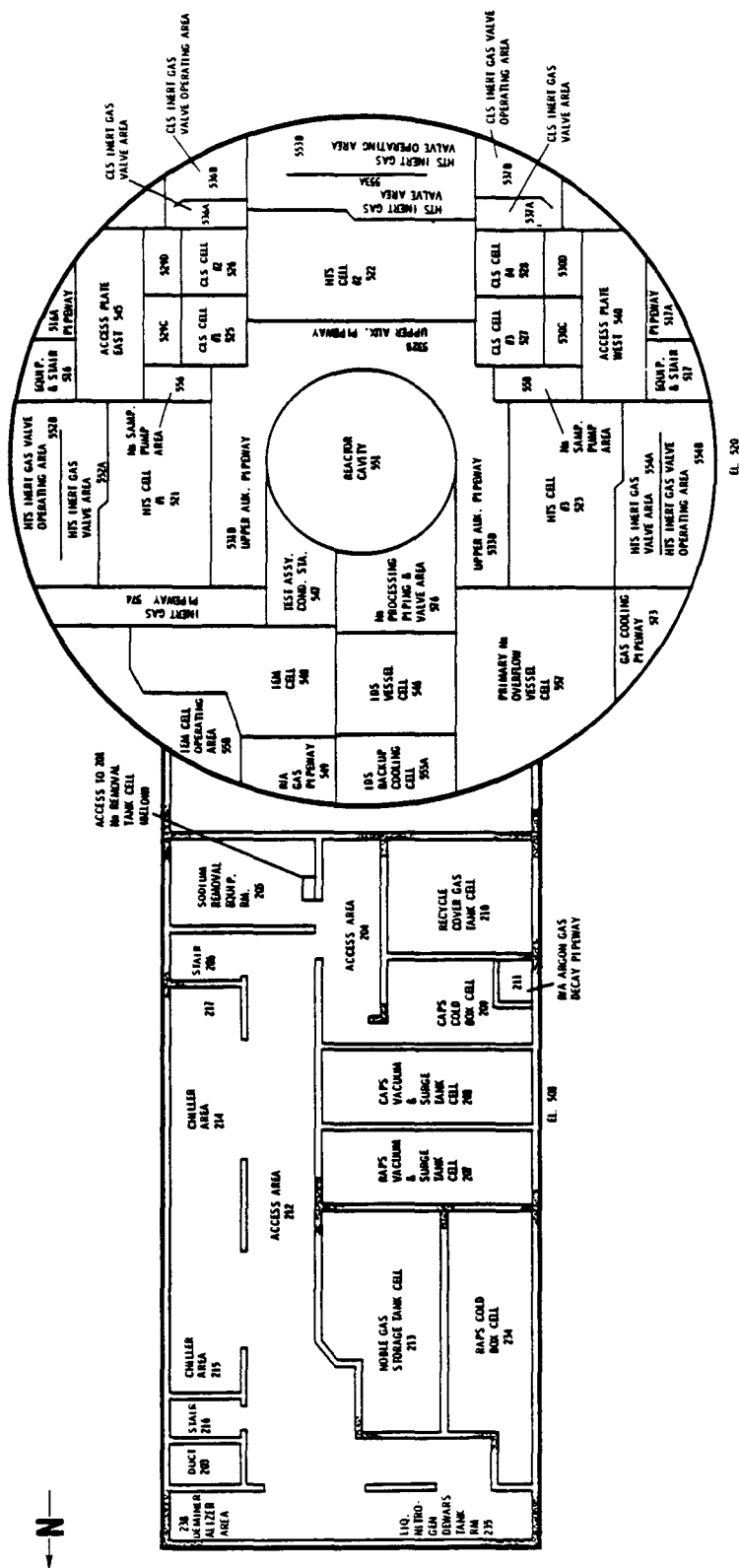


HEDL 7705-111.3

REACTOR AND SUPPORT BUILDINGS, 533-ft LEVEL

I-6





REACTOR AND SUPPORT BUILDINGS, 520-ft LEVEL

403

FUEL STORAGE FACILITY

Purpose: To provide storage of the FFTF spent fuel assemblies in liquid sodium.

Description: The principal equipment in the Fuel Storage Building, which is adjacent to the Reactor Service Building, is a below-ground cell containing a carbon steel storage vessel approximately 21 ft in diameter and 24 ft deep for storing up to 466 FFTF spent fuel assemblies in liquid sodium.

405

REACTOR CONTAINMENT BUILDING

Purpose: To house the reactor and plant operating equipment.

Dimensions: Containment Diameter: 135 ft
 Overall Height: 186 ft-8 in.
 Reactor Vessel Diameter: 21 ft
 Vessel Height: 43 ft
 Vessel Thickness: 2.5 in.

Description: The Containment Building is a cylindrical carbon steel shell. Steel-lined reinforced concrete cells occupy the lower portion of the Containment Building, from grade level to approximately 78 ft below grade. A shielded operating floor is located at grade level (elevation 550 ft). A large fuel handling machine (CLEM) is located on the operating floor. A structural steel mezzanine above the operating floor perimeter (elevation 570 ft) provides additional work area, along with space for heating and ventilation equipment and control panels. A 200-ton polar gantry crane and a jib crane are located above the mezzanine for handling large equipment and materials.

The central portion of the operating floor is occupied by a steel operating deck, which is directly above the reactor head compartment.

408A, B, C

HTS DUMP HEAT EXCHANGERS

- Purpose:** To dissipate reactor heat by air cooling of rows of tubes containing hot liquid sodium.
- Description:** Four Dump Heat Exchanger (DHX) 33-MW modules are located in each of the three HTS DHX structures referred to as East, South, and West. HTS DHX-East (408A) is tornado-hardened with 1/2-in. steel plate on a structural steel frame located just outside the cruciform area to provide tornado protection for DHX units below the 580-ft elevation. The pipeway enclosure in this area is also tornado-hardened with 1/2-in. steel plate. Only the HTS DHX-East is required for safe cooling of the shut-down reactor in the event of a tornado.

409A, B

CLOSED LOOP SYSTEM DUMP HEAT EXCHANGERS

- Purpose:** To provide for independent cooling of specific test locations in the reactor core.
- Description:** The Closed Loop System DHXs for CLS 1 and 2 are small-scale, single-module, 2.3-MW heat exchangers. These structures are near grade level.

483

COOLING WATER TOWERS

- Purpose:** To dissipate heat from the FFTF H&V coolers and air conditioning units, heat exchangers, compressors, electrical components, etc.
- Description:** Approximately 12 MW of heat are dissipated to the atmosphere through seven forced-draft, evaporatively cooled cooling water towers. An eighth tower acts as a spare. Each tower is rated at 482-ton cooling load at 1534 gal/min, yielding a total cooling load of 3380 tons at 10,598 gal/min.

484

ICCW EQUIPMENT BUILDING

- Purpose:** To house the In-Containment Chilled Water System (ICCW).
- Description:** The bolted steel building houses chillers, piping, and pumps needed for the ICCW. The Chilled Water Systems (CWS) collect heat from heating, ventilating, and other equipment and transfer this heat to Freon® refrigerant in "chiller" components. In turn, this heat is transferred by the Freon to the CWS.

491

HTS SERVICE BUILDINGS - EAST, SOUTH, WEST

- Purpose:** To provide space for the sodium pumps and piping, switchgear, controls, and electrical and sampling equipment for the HTS.
- Description:** The two-story East and West concrete, fire-resistant buildings contain the secondary sodium pumps and piping. The pump cells and basements for both buildings are tornado-hardened. Steel cell liners and sodium catchpans are provided for retention of any possible sodium leaks. The South building, one-story with a basement, contains the primary sodium sampling, cover gas monitoring and sampling, decontamination, and building inert gas cooling.

4621E, W

AUXILIARY EQUIPMENT BUILDINGS - EAST, WEST

- Purpose:** To provide an integrated arrangement of plant control, auxiliary equipment, radiation monitoring, and controlled access to both the Reactor Containment and the Reactor Service Building.
- Description:** The Auxiliary Equipment Building-East is a two-story building with a basement and is structurally connected to the control building. The East building contains diesel generator room No. 1, the personnel airlock access way, and a variety of auxiliary equipment. Auxiliary Equipment Building-West is also a two-story building with a tornado-hardened basement. The West building contains electrical distribution and switchgear areas, and diesel generator room No. 2.

®Freon is a registered trademark of E.I. duPont de Nemours & Co.,
Wilmington, DE.

4703

CONTROL BUILDING

- Purpose:** To provide for manual and automatic control of the reactor system and heat transport system, and to provide protection under emergency conditions to personnel who operate the reactor and its coolant system.
- Description:** The control room within this building is a tornado-hardened, reinforced concrete structure with a 3-ft-3-in. and 3-ft thick walls on the south and west sides, respectively (closest to the reactor area), and 1-ft-3-in. thick walls on the north and east sides. The control room floor is 1 ft thick and is supported on reinforced concrete beams.

4716

MAINTENANCE TOOL STORAGE FACILITY

- Purpose:** To provide a holding and storage area for special tools and equipment necessary to maintain the FFTF and other support systems.
- Description:** The 8-ft by 50-ft bolted steel building sits on a 6-in. concrete slab that is located between the ICCW Equipment Building and the Reactor Service Facility. The insulated building is heated and cooled and has high-pressure sodium light fixtures. Fire alarm pull boxes are located at both the north and south ends of the building.

4717

REACTOR SERVICE BUILDING

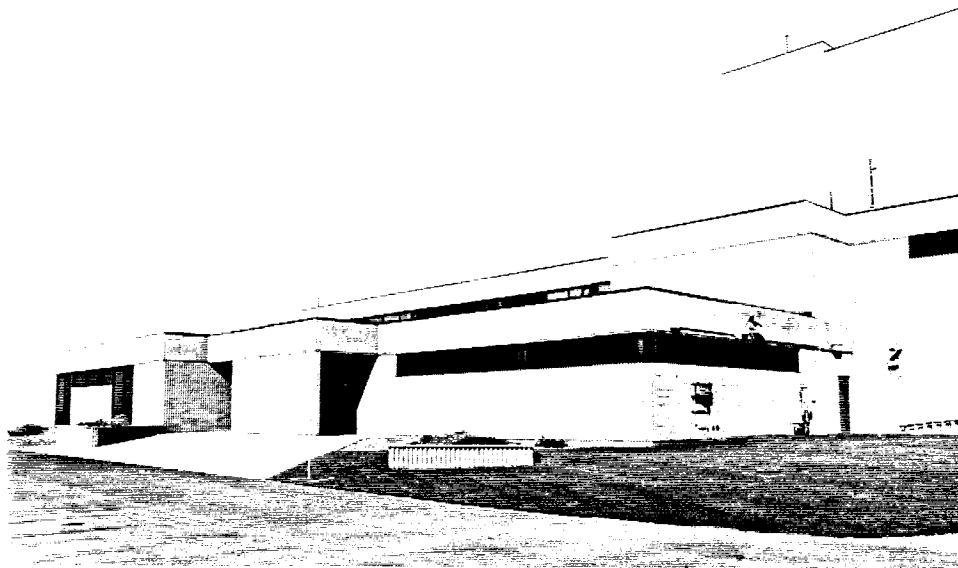
- Purpose:** To provide an enclosure for fuel movement between the FFTF and the Fuel Storage Facility and has a cask loadout station below grade for offsite fuel shipment.
- Description:** The 62-ft-high Reactor Service Building is a structurally independent building with underground cells for offsite cask loading and for storage and processing of radioactive gases and waste. These cells include cell atmosphere processing system cells and pipeways, as well as radioactive argon processing system cells and pipeways. The building's superstructure provides access for trucks and railroad cars to the equipment airlock. It contains a 100-ton bridge crane with an auxiliary 25-ton hook for handling equipment and materials. The bottom-loading transfer cask is stored in this building.

SECTION II

FUEL CYCLE PLANT

4862

FUEL CYCLE PLANT ENTRY WING



Purpose: To provide office space for the Fuel Cycle Plant operation support group, along with space for fuel assembly and fuel pin storage.

Dimensions: Perimeter: 132 ft x 158 ft

FIRST FLOOR

Lunch Room:	2666 sq ft
Exhibit Room:	1512 sq ft
Security Guard Station:	594 sq ft
Security Control Areas:	1100 sq ft
Locker and Toilet Areas:	5621 sq ft
Foyer:	896 sq ft
Vestibule:	280 sq ft
Office Areas:	315 sq ft
Corridors and Miscellaneous:	5400 sq ft
TOTAL Area:	20,856 sq ft

SECOND FLOOR

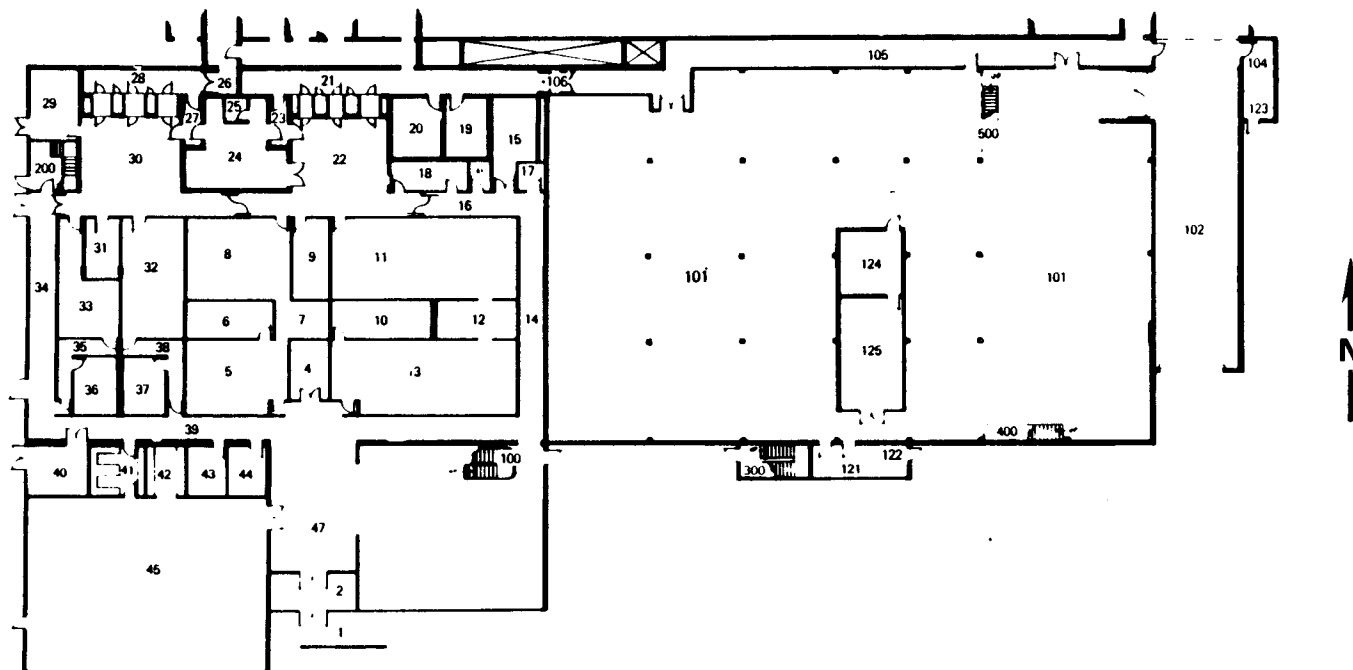
Office Area:	4420 sq ft
Conference and Briefing Area:	616 sq ft
Group Assembly and Training Area:	616 sq ft
Computer Room:	1408 sq ft
Typing Pool:	504 sq ft
Duplicating and Mail Station:	375 sq ft
Corridor and Miscellaneous Area:	1960 sq ft
TOTAL Area:	11,880 sq ft

Description: The exterior of the building is split face masonry units and smooth concrete finish. The fully insulated building has fire protection sprinklers, fluorescent lighting, suspended acoustical tile ceilings, and both carpet and vinyl tile on a concrete base. The built-up roof is on a metal deck. Heating and cooling is provided by the FCP HVAC system.

Drawing No.: H-4-106022, H-4-10623, H-4-106024, H-4-106025

Negative No.: 8406668-24

ENTRY WING AND FUEL ASSEMBLY AREA BUILDING - FLOOR 1



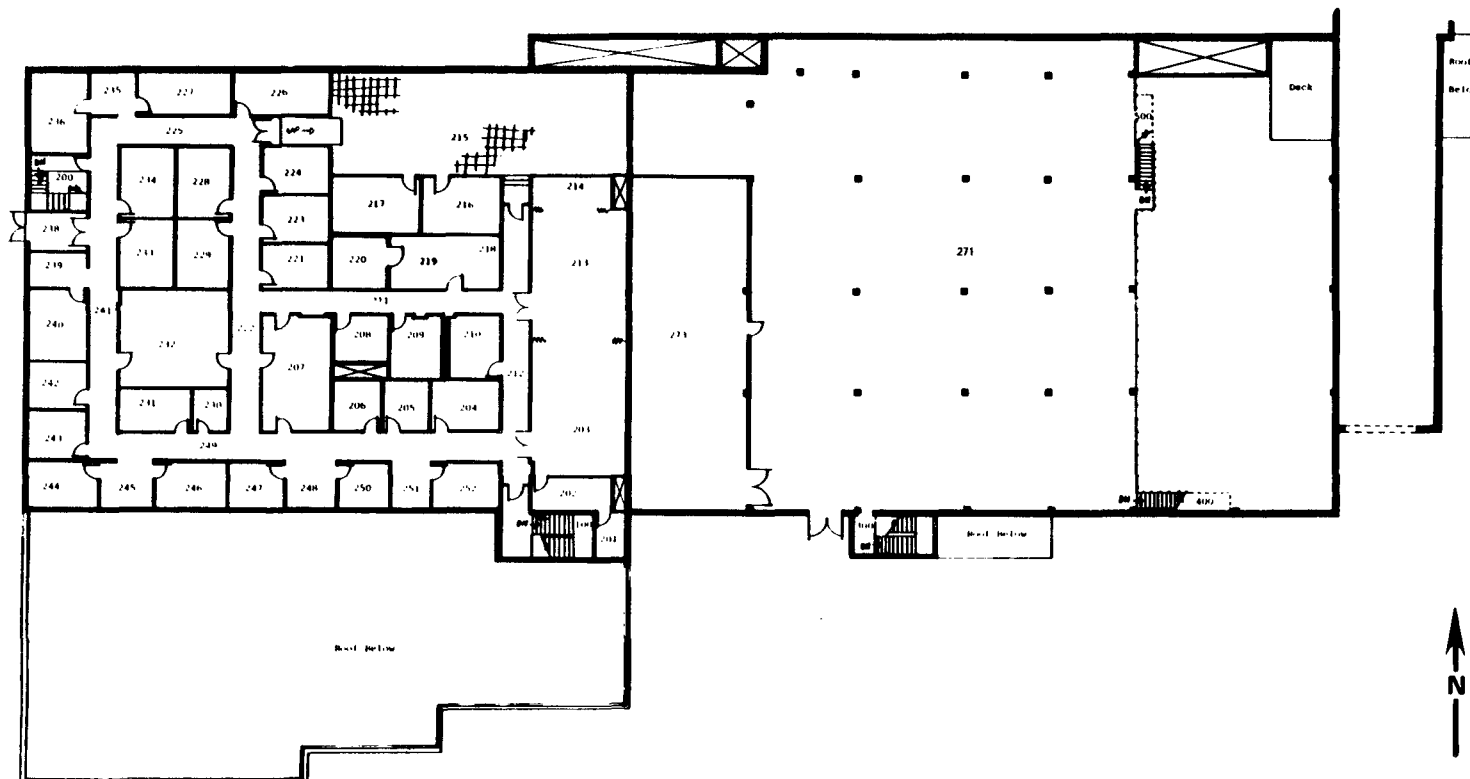
FLOOR 1

1	MAIN ENTRANCE	17	JANITOR CLOSET	33	WOMEN'S STREET CLOTHING LOCKERS	102	TRUCK LOCK
2	VESTIBULE	18	VIP CHANGE ROOM	34	CORRIDOR	104	VESTIBULE
3	LOBBY	19	WOMEN'S TOILET	35	CORRIDOR	105	CORRIDOR
4	CLEAN CLOTHING	20	MEN'S TOILET	36	WOMEN'S TOILET	106	AIR LOCK
5	WOMEN'S PERSONAL LOCKERS	21	SWP CLOTHING ENTRY	37	MEN'S TOILET	121	VESTIBULE
6	WOMEN'S TOILET	22	ENTRY CONTROL AREA	38	CORRIDOR	122	EXIT
7	WOMEN'S SHOWER	23	SWP ENTRY BYPASS	39	CORRIDOR	123	EXIT
8	WOMEN'S SWP LOCKERS	24	SECURITY GUARD STATION	40	CLEAN SWP CLOTHING	124	BATTERY ROOM UPS #2
9	SOILED SWP CLOTHING	25	TOILET	41	LUNCH BOX STORAGE	125	ELECTRICAL EQUIPMENT ROOM
10	MEN'S TOILET	26	VESTIBULE	42	KITCHEN	200	STAIRS
11	MEN'S SWP LOCKERS	27	STREET CLOTHING ENTRY BYPASS	43	OFFICE	300	STAIRS
12	MEN'S SHOWER	28	STREET CLOTHING ENTRY	44	OFFICE	400	STAIRS
13	MEN'S PERSONAL LOCKERS	29	SOILED SWP CLOTHING STORAGE	45	LUNCH ROOM	500	STAIRS
14	CORRIDOR	30	ENTRY CONTROL AREA	47	FOYER		
15	TELEPHONE ROOM	31	SOILED CLOTHING	100	STAIR		
16	CORRIDOR	32	MEN'S STREET CLOTHING LOCKERS	101	FUEL ASSEMBLY		

HEDL 8503-252.1

ENTRY WING AND FUEL ASSEMBLY AREA BUILDING - FLOOR 2

11-4



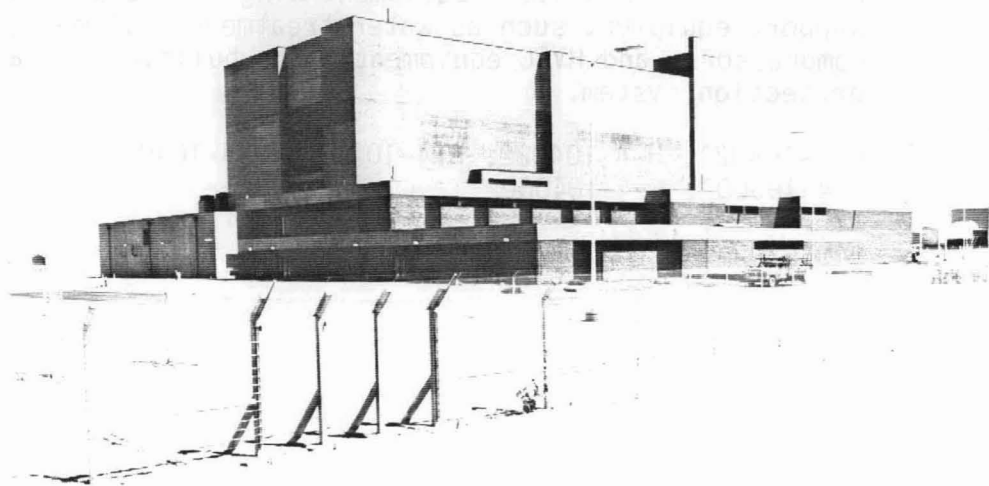
FLOOR 2

100	STAIRS	213	ASSEMBLY & TRAINING AREA	227	OFFICE	243	OFFICE
200	STAIRS	214	STORAGE	228	OFFICE	244	OFFICE
201	STORAGE	215	SAFEGUARDS & SECURITY	229	OFFICE	245	SECRETARY
202	PROJECTION ROOM		COMPUTER ROOM	230	JANITOR CLOSET	246	OFFICE
203	CONFERENCE ROOM	216	SPARE EQUIPMENT STORAGE	231	OFFICE	247	OFFICE
204	OFFICE	217	STORAGE	232	TYPING POOL	248	SECRETARY
205	OFFICE	218	DRAWING SUPERVISOR	233	OFFICE	249	CORRIDOR
206	OFFICE	219	DRAWING STORAGE AREA CONTROL	234	OFFICE	250	OFFICE
207	MAIL & DUPLICATING	220	FIRE PROOF STORAGE	235	SECRETARY	251	SECRETARY
208	OFFICE	221	OFFICE	236	OFFICE	252	OFFICE
209	WOMEN'S TOILET	222	CORRIDOR	238	VESTIBULE	271	FUEL ASSEMBLY
210	MEN'S TOILET	223	OFFICE	239	SECRETARY	273	ZONE III MECHANICAL EQUIPMENT
211	CORRIDOR	224	OFFICE	240	OFFICE	300	STAIRS
212	CORRIDOR	225	CORRIDOR	241	CORRIDOR	400	STAIRS
		226	OFFICE	242	OFFICE	500	STAIRS

HEDL 8503-252.2

427

FUEL CYCLE PLANT



Purpose: To provide space for the Secure Automated Fabrication (SAF) Line and for plutonium storage. The SAF Line will supply fuel for the FFTF and play a major role in the advancement of fuel fabrication technology. The objectives of SAF Line will be to reduce personnel radiation exposure, improve SNM accountability, improve product quality, and increase fuel fabrication productivity. The Fuel Cycle Plant will be the main repository for the plutonium needed for the FFTF Project. A Test Pin Line will fabricate special fuel test pins and will run feed material trials for the SAF Line. Space will also be provided in the undefined areas of the plant for alternate missions.

Dimensions:	Process Building Perimeter:	270 ft x 175 ft x 98 ft
	High Gamma Receiving & Assay Cell Area:	1000 sq ft
	Unit Process Cell:	1800 sq ft
	Hot Equipment Repair Area:	510 sq ft
	Suspect Equipment Repair Area:	750 sq ft
	Analytical Chemistry Area:	8500 sq ft
	Operations Space:	188,000 sq ft
	Shipping and Receiving:	5400 sq ft
	Decon Cell:	1200 sq ft
	NDE Cell:	4000 sq ft
	DE Cell:	4060 sq ft
	Fuel Fabrication Area:	5100 sq ft

Description: The concrete structure, 98 ft in height and 55 ft below grade, has six operating floors. These floors or levels are identified by their elevation relative to the ground floor and are as follows: -35 ft (Process Support Level), -17 ft 6 in. (Equipment Level), 0 ft (Entry Level), +21 ft (Chemistry Level), +42 ft (Fuel Fabrication Level), and +70 ft (SAF Level). The Mechanical Equipment Wing houses utilities and support equipment such as water treatment equipment, air compressors, and HVAC equipment. The building has a fire protection system.

Drawing Nos.: H-4-104021, H-4-104022, H-4-104023, H-4-104024, H-4-104025, H-4-106007, H-4-104030

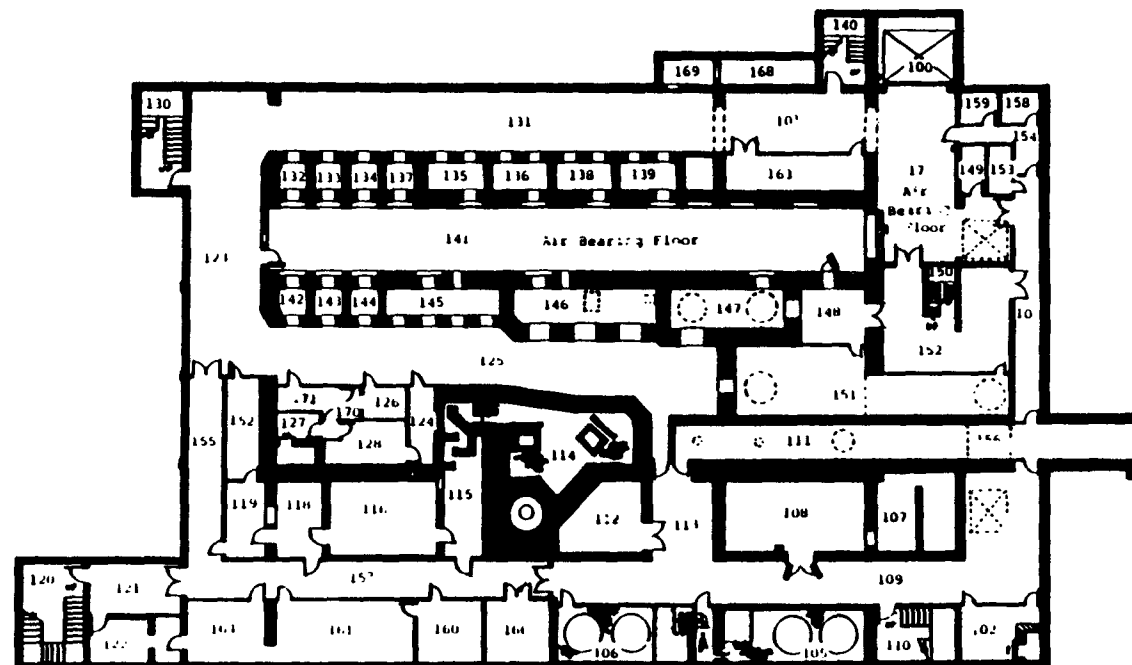
Negative No.: 8405520-30

PROCESS SUPPORT LEVEL FLOOR PLAN, -35-ft LEVEL

-35'-0" ELEVATION

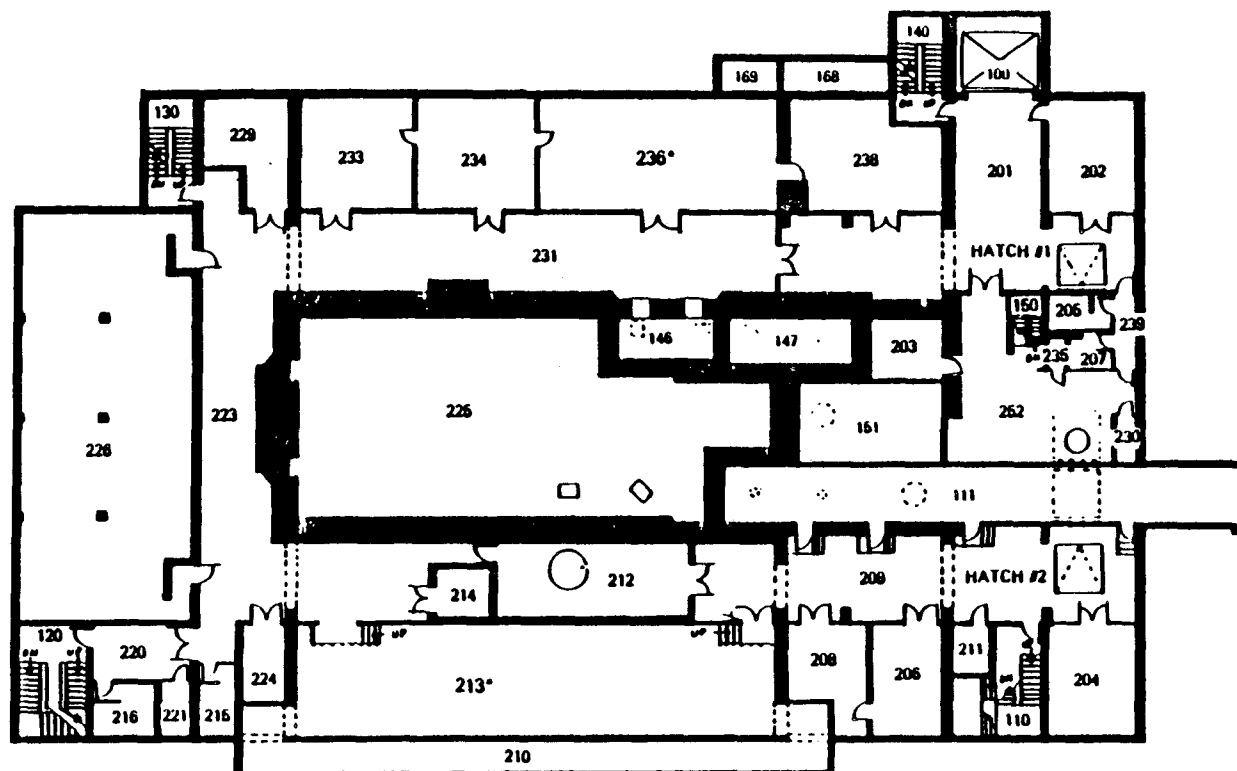
100	ELEVATOR	121	AIR LOCK	140	NE STAIRWELL	160	TRIGA STORAGE
101	CORRIDOR	122	STORAGE	141	HORIZONTAL TRANSFER CORRIDOR	161	MICROPROBE LABORATORY
102	OHP LABORATORY	123	EQUIPMENT CORRIDOR	142	S METALLOGRAPHIC CELL	162	PHOTOANALYSIS
103	PASSAGE	124	CHEMISTRY HOODROOM	143	S POLISHING CELL	163	EQUIPMENT STORAGE
106	RADIOACTIVE LIQUID WASTE	125	OPERATING CORRIDOR	144	S GRINDING CELL	164	SCANNING ELECTRON MICROSCOPE LABORATORY
106	RETENTION LIQUID WASTE	126	VERSAMAT PROCESS	145	SAMPLE PREPARATION CELL	166	ELECTRICAL EQUIPMENT ROOM
107	Na REMOVAL TANK	127	AUTORADIOGRAPHY DARK ROOM	146	PIN CUTTING CELL	168	PIPE CHASE
108	Na REMOVAL EQUIPMENT	128	METALLOGRAPHY DARK ROOM	147	TRANSFER TUNNEL	169	PIPE CHASE
109	CORRIDOR	130	NW STAIRWELL	148	VESTIBULE	170	VERSAMAT DARK ROOM
110	SE STAIRWELL	131	OPERATING CORRIDOR	149	JANITOR	171	VESTIBULE
111	ENTRY TUNNEL	132	PS CELL	150	STAIR		
112	TRIGA WATER TREATMENT	133	PS CELL	151	HOT EQUIPMENT REPAIR		
113	EQUIPMENT CORRIDOR	134	PS CELL	152	SUSPECT EQUIPMENT REPAIR		
114	TRIGA TARGET	135	PS CELL	153	PERSONNEL DECONTAMINATION		
115	CASSETTE LOADING	136	PS CELL	154	VESTIBULE		
116	FILM EXPOSURE	137	ORGANIC LIQUID WASTE	155	PASSAGE		
117	ELEVATOR VESTIBULE		INCINERATOR	156	CASK ENTRY		
118	FILM PROCESS	138	PS CELL	157	PASSAGE		
119	PHOTO LABORATORY TRIGA	139	PS CELL	158	WOMEN'S CHANGE		
120	SW STAIRWELL			159	MEN'S CHANGE		

HEDL 8503-252.8



EQUIPMENT LEVEL FLOOR PLAN, -17-ft 6-in. LEVEL

11-8

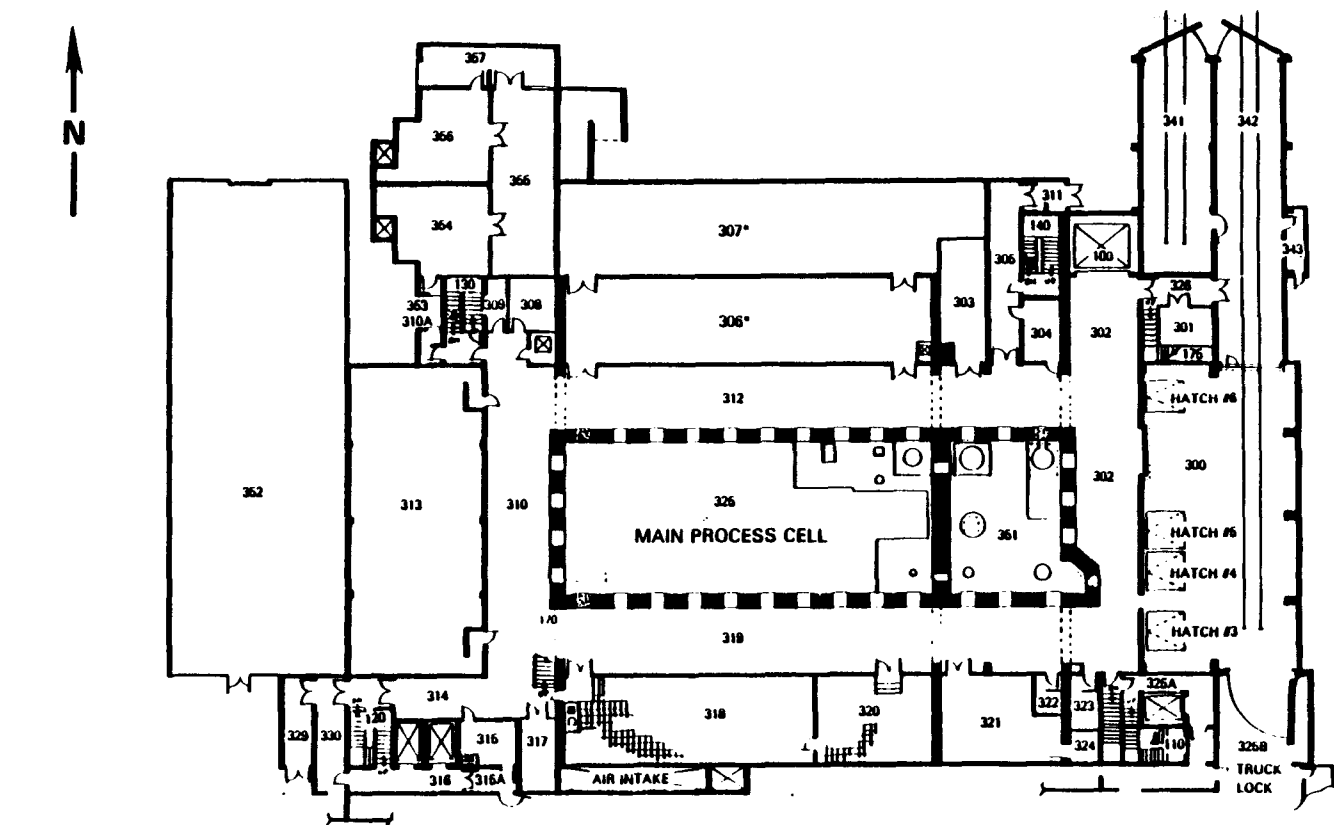


-17'-6" ELEVATION

201	ELEVATOR VESTIBULE	212	REACTOR ROOM	229	MP PRESSURE CONTROL TANKS
202	ELETRICAL SWITCHGEAR	213*	SUPPLY AIR EQUIPMENT	230	STORAGE
203		214	REACTOR CONTROL	231	EQUIPMENT CORRIDOR
204	EMERGENCY AIR COMPRESSOR	215	WOMEN'S TOILET	233	ELECTRICAL SWITCHGEAR
205	MEN'S TOILET	216	MEN'S TOILET	234	
206	UNINTERRUPTABLE POWER SUPPLY #1	220	AIR LOCK	235	SUMP PUMP
207	WOMEN'S TOILET	221	SUMP PUMP	236*	ANALYTICAL CHEMISTRY EXHAUST EQUIPMENT
208	ELECTRICAL EQUIPMENT ROOM	223	EQUIPMENT CORRIDOR	238	VACUUM EQUIPMENT
209	EQUIPMENT CORRIDOR	224	MECHANICAL EQUIPMENT	239	CORRIDOR
210	SUPPLY AIR PLENUM	225	MP CELL SUPPORT	252	SUSPECT EQUIPMENT REPAIR
211	COMMUNICATIONS	226	CELL ATMOS. TREATMENT		

*HVAC EQUIPMENT LOCATIONS

ENTRY LEVEL FLOOR PLAN, 0-ft LEVEL



0' 0" ELEVATION

300	SHIPPING & RECEIVING	309	JANITOR'S CLOSET	316	VESTIBULE	325	MAIN PROCESS CELL	351	MAINTENANCE & DECONTAMINATION CELL
301	SOLID WASTE STORE	310	OPERATING CORRIDOR	317	RETENTION WASTE & ANALYSIS	325A	VESTIBULE	352	MECHANICAL WING
302	OPERATING CORRIDOR	310A	VESTIBULE	318	OPERATING CORRIDOR	325B	TRUCK LOCK	353	VESTIBULE
303	FUME HOOD SCRUBBER	311	VESTIBULE	319	OPERATIONS CONTROL ROOM	326	DOCK	354	EMERGENCY GENERATOR #2
304	OHP LABORATORY	312	OPERATING CORRIDOR	320	CLOSED LOOP COOLING	329	VESTIBULE	355	COOLING TOWER
305	VESTIBULE	313	VESTIBULE	321	WOMEN'S TOILET	330	STORAGE	356	EMERGENCY GENERATOR #1
306*	EXHAUST FILTER PLENUM	314	VESTIBULE	322	MEN'S TOILET	341	LIQUID WASTE LOADOUT	357	VESTIBULE
307*	EXHAUST FAN ROOM	315	STORAGE ROOM	323	SUMP PUMP	342	TRUCK LOAD		
308	HEPA FIRE SYSTEM EQUIPMENT	316A	AIR LOCK			343	EMERGENCY EXIT		

*HVAC EQUIPMENT LOCATIONS

HEDL 8503-252.3



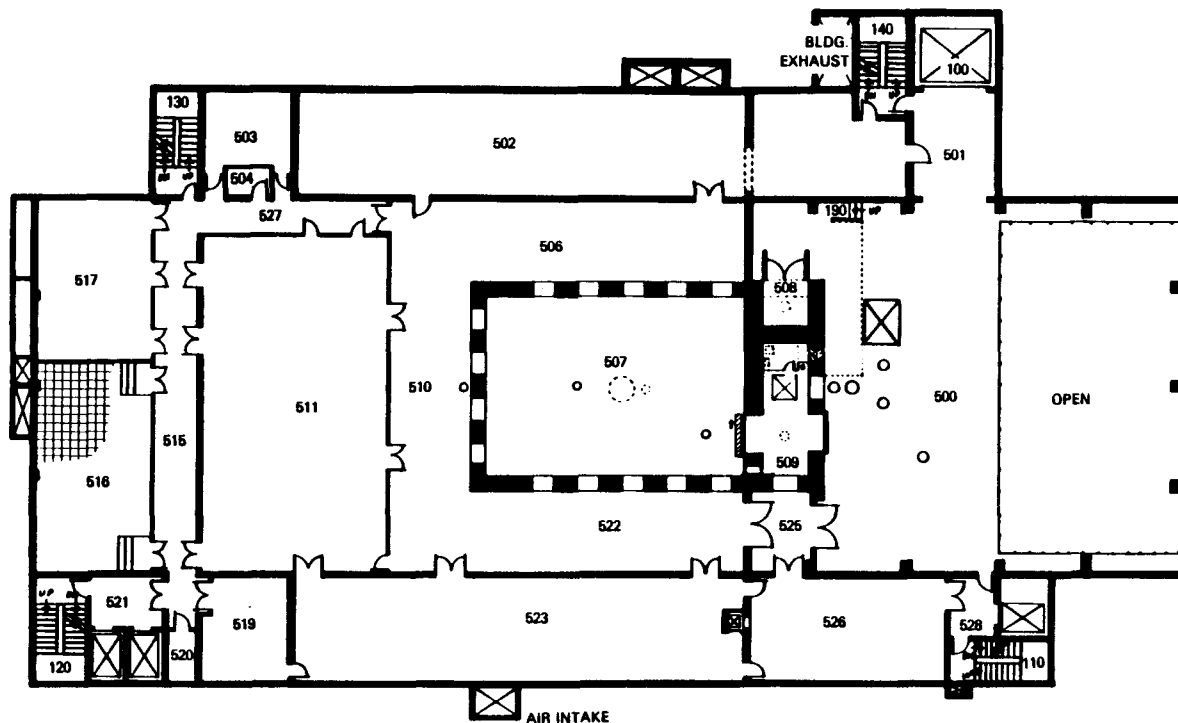
• 15'-0" ELEVATION

175 STAIR
344 PERSONNEL DECONTAMINATION
345 CHANGE ROOM
346 LIQUID WASTE LOADOUT CONTROL

HEDL-MG-189
REV. 1

FUEL FABRICATION LEVEL FLOOR PLAN, +42-ft LEVEL

II-11

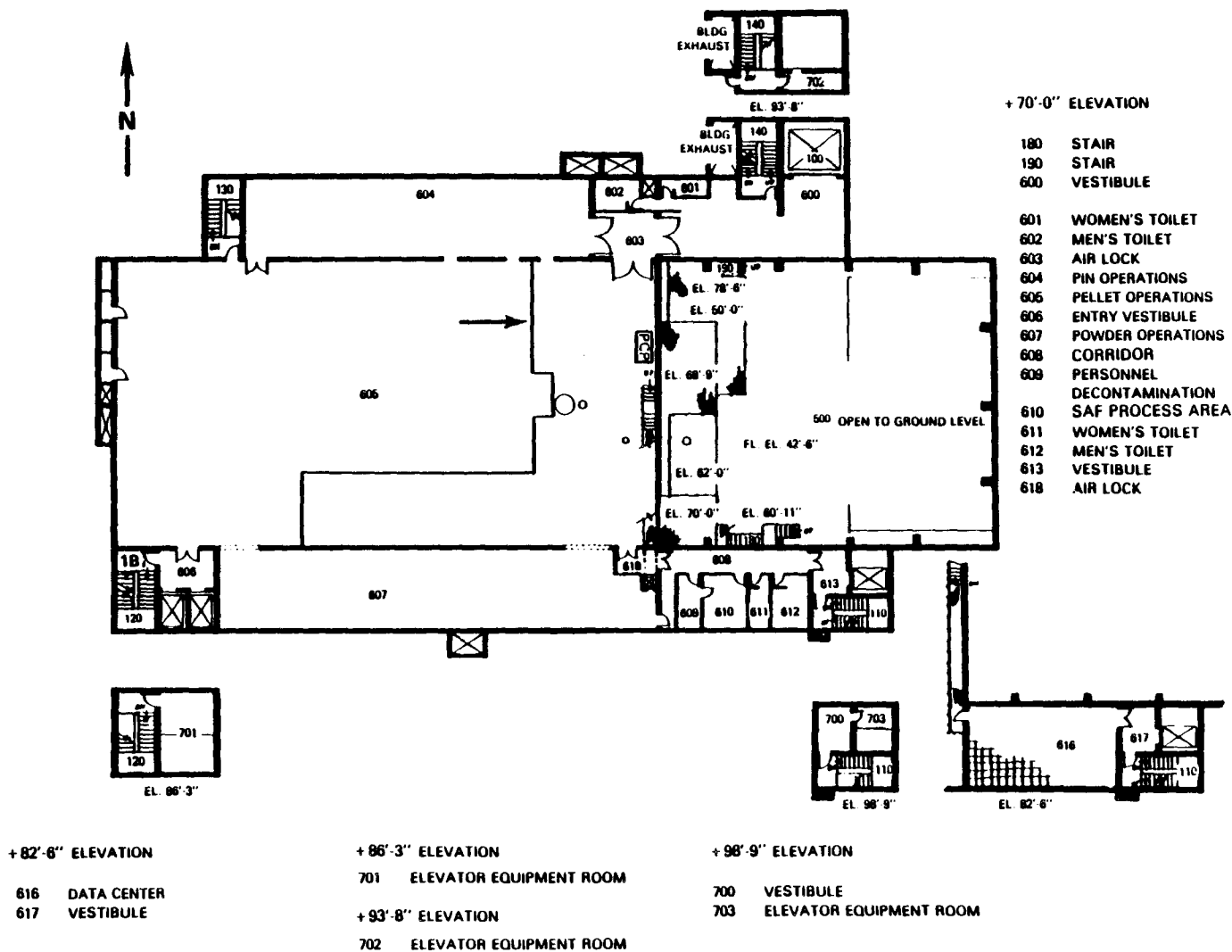


+42'-6" ELEVATION

190	STAIR	515	CORRIDOR
500	CRANE BAY	516	CONTROL ROOM
501	ELEVATOR CORRIDOR	517	UNASSIGNED AREA
502	RECIRCULATE EQUIPMENT	518	SNM TRANSFER CORRIDOR
503	OHP LABORATORY	519	GRINDING
504	JANITOR	520	PERSONNEL DECONTAMINATION
506	OPERATING CORRIDOR	521	VESTIBULE
507	UNIT PROCESS CELL	522	OPERATING CORRIDOR
508	ENTRY LOCK	523	TEST PIN LINE
509	TRANSFER LOCK	525	AIR LOCK
510	OPERATING CORRIDOR	526	LOW GAMMA RECEIVING
511	UNASSIGNED AREA	527	PASSAGE
		528	VESTIBULE

HEDL 8503-235.8

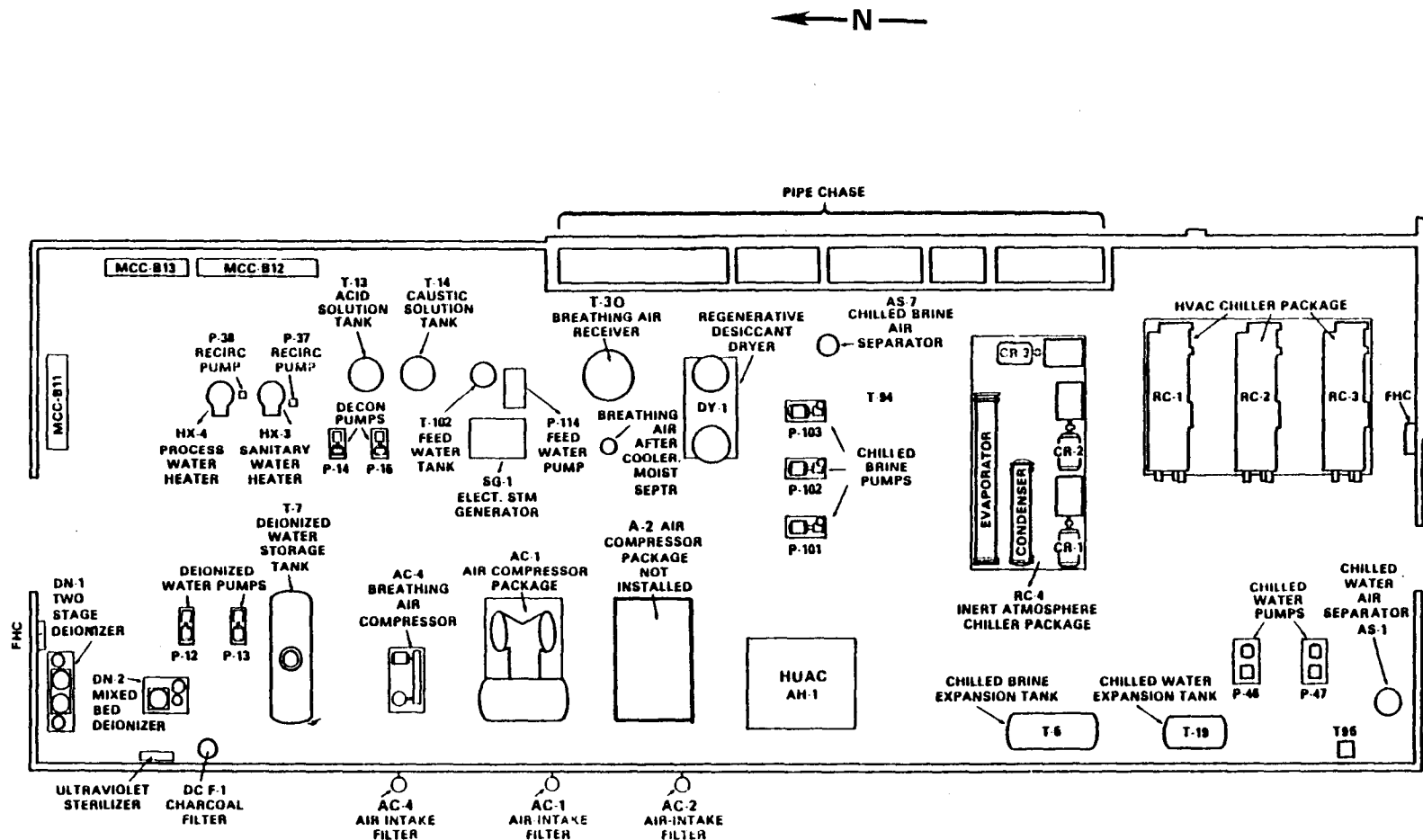
SAF LEVEL FLOOR PLAN, +70-ft LEVEL



HEDL 8503-252.7

FCP MECHANICAL EQUIPMENT WING FLOOR PLAN

11-13



HEDL 8503-252.9

S E C T I O N I I I

BALANCE OF 400 AREA

401

VISITOR CENTER



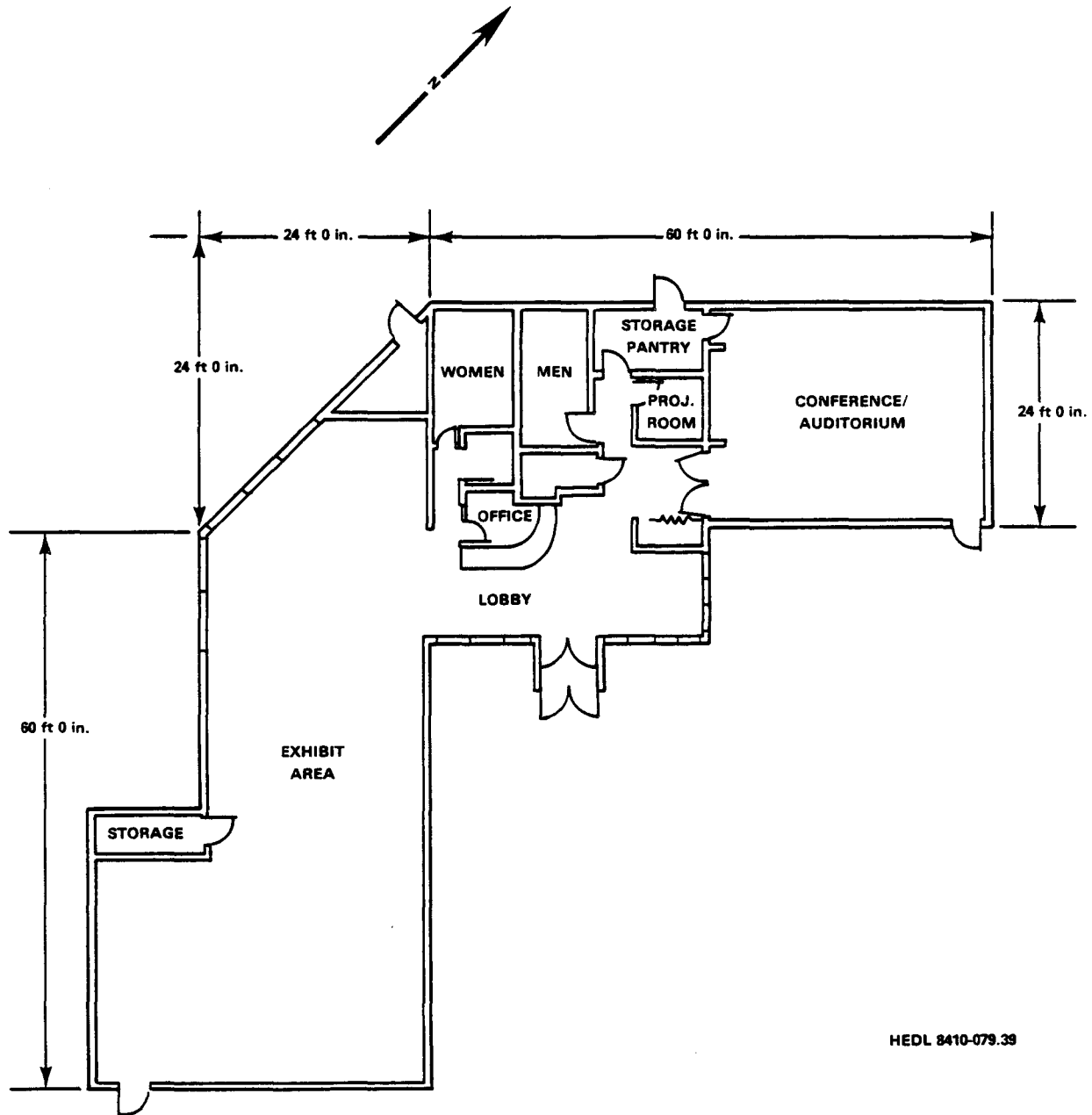
Purpose: To provide information to visitors about the FFTF. The models that are in the exhibit room are as follows: FFTF fuel assembly, reactor cell, Heat Transfer System (HTS) cell, Reactor Containment Building (including heat dumps and HTS-E Building), test assembly, Materials Open Test Assembly display, and reactor vessel. Some pieces of the different materials used either in construction or in the various systems at the FFTF are also included in the display.

Dimensions:	Conference/Auditorium:	667 sq ft
	Exhibit Area:	1850 sq ft
	Common Area:	840 sq ft

Description: The single-story wood frame structure is on a concrete foundation. The windowed west wall allows visitors to view the FFTF. The fully insulated building has carpet throughout and a suspended acoustical tile ceiling. Fluorescent fixtures provide lighting. Two heat pumps are used for heating and cooling. The building is equipped with a fire protection system.

Drawing No.: H-4-57995

Negative No.: 8405520-40



HEDL 8410-079.39

401 BUILDING

432A

BOTTLED GAS STORAGE BUILDING



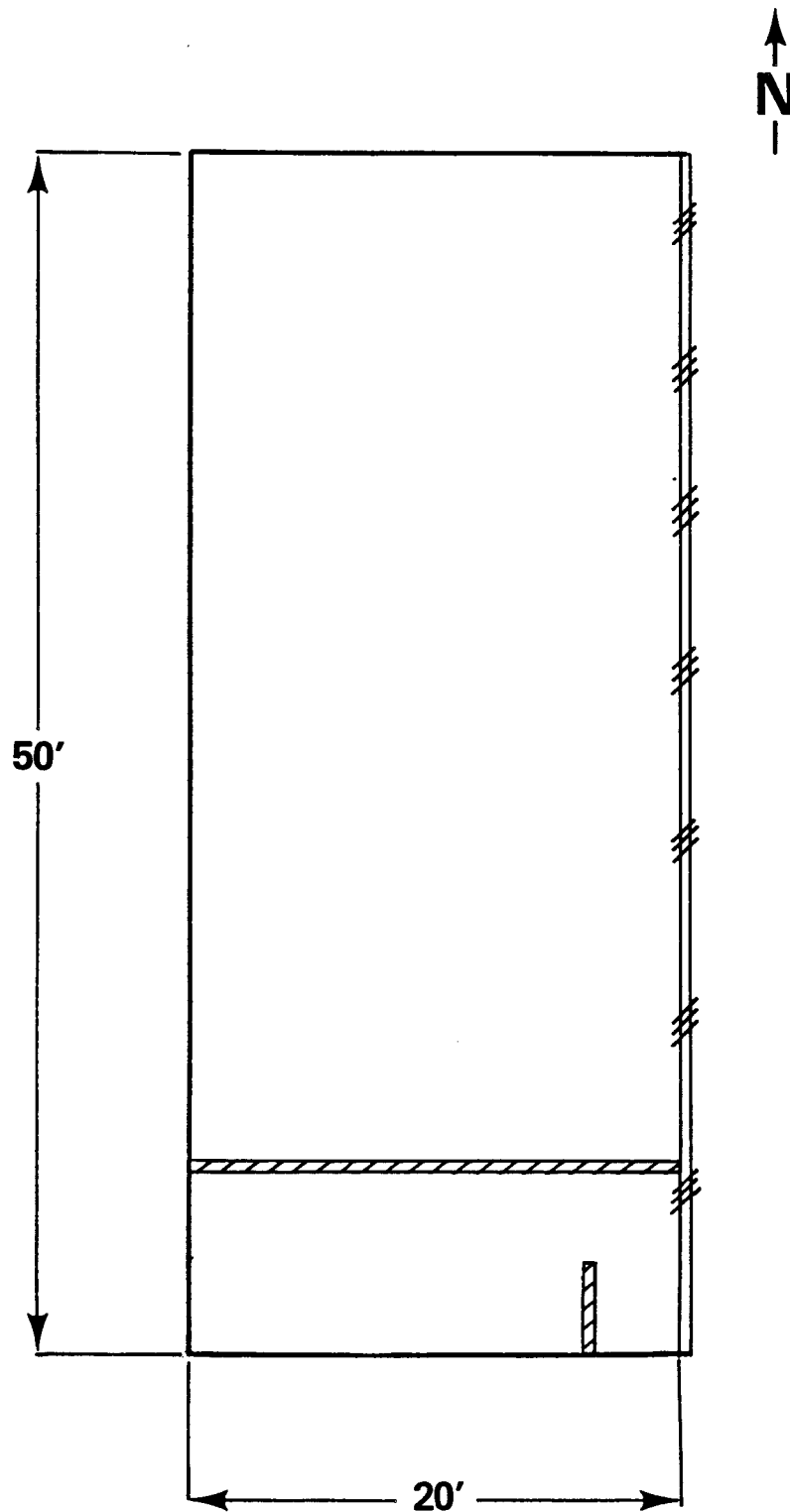
Purpose: To provide a weather-protected storage area for bottled gas cylinders used at the FFTF.

Dimensions: Perimeter: 20 ft x 50 ft
Total Area: 1000 sq ft

Description: The pre-engineered steel building is erected on a concrete slab. The east side is open with access controlled by a chain linked fence running the entire length of the building. Lighting is provided by fluorescent outdoor fixtures. A small part of the building's south end is sectioned off by a concrete block wall for storage of flammable gas.

Drawing No.: H-4-159169

Negative No.: 8701430-1



HEDL 8703-050

432A BUILDING

III-4

436

TRAINING FACILITY



Purpose: To provide for orientation and safety training, along with training, qualifying and requalifying of control room operators. Other training classes held in this building include Radiation Worker Safety Training, First Aid, Emergency Response Team (ERT) and various crew training sessions.

Dimensions:	Perimeter:	38 ft x 62 ft
	Computer Room Addition:	38 ft x 66 ft
	Classroom 1:	312 sq ft
	Classroom 2:	502 sq ft
	Classroom 3:	324 sq ft
	Lunchroom:	270 sq ft
	Office Area:	800 sq ft
	Instructor Room:	110 sq ft
	Computer Room:	387 sq ft
	Simulator Room:	1114 sq ft

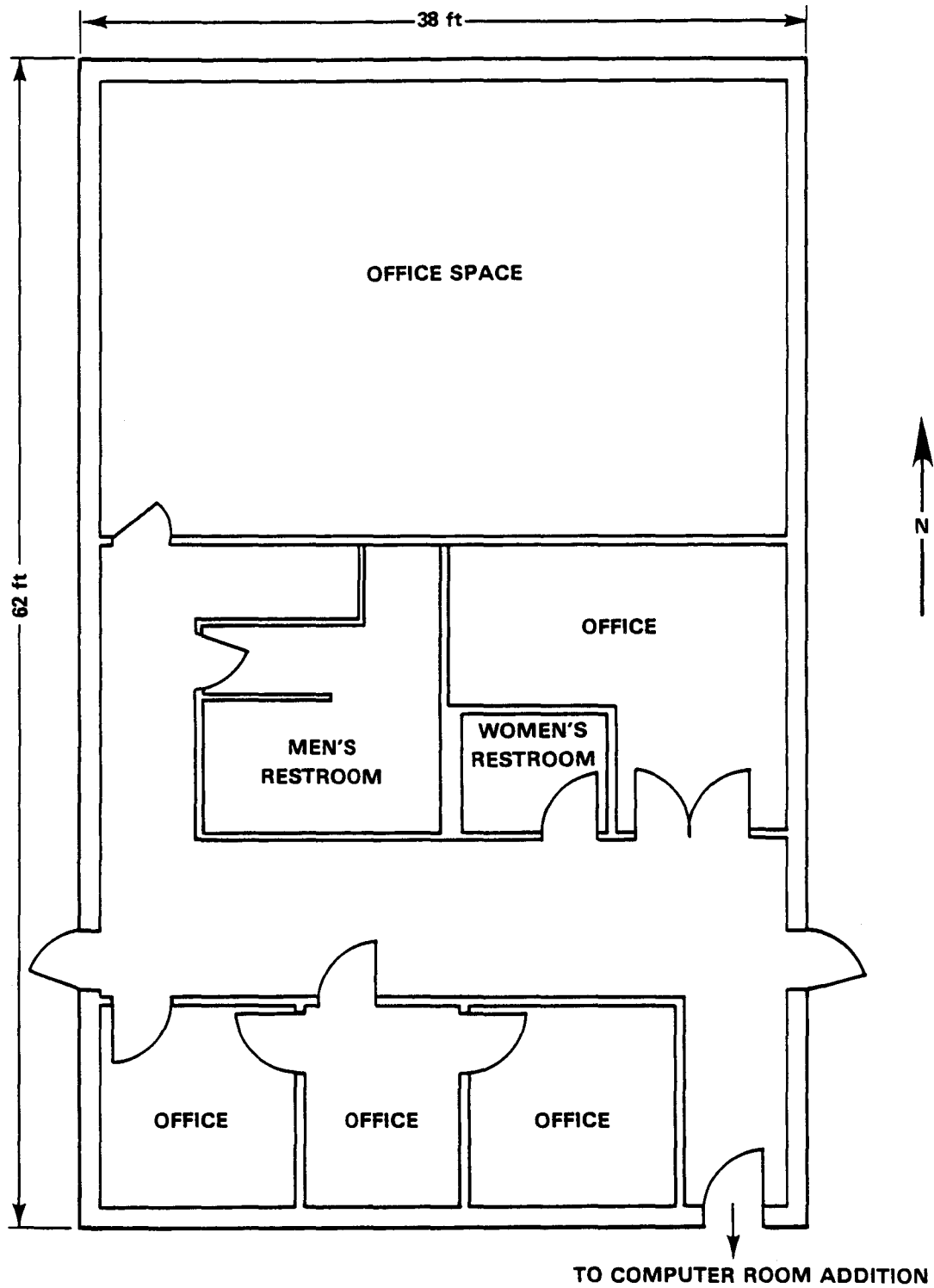
Description: The fully insulated building is constructed of concrete masonry units having a Dryvit® laminar earthstone finish on the exterior walls. The built-up roof is on rigid insulation and a 1-1/2-in. deck. The computer room is cooled and heated with an EDPAC air conditioning unit, while the rest of the

®Dryvit is a registered trademark of Dryvit Systems Inc., West Warwick, RI.

building has two heat pumps for its cooling and heating needs. Fluorescent fixtures light the building. A complete mockup of a reactor control room is contained in this building and is used to train, qualify, and requalify the control room operators at the FFTF. Vinyl tile blocks cover the floor and acoustical tile blocks are suspended from the ceiling. The building is equipped with a fire protection sprinkler system.

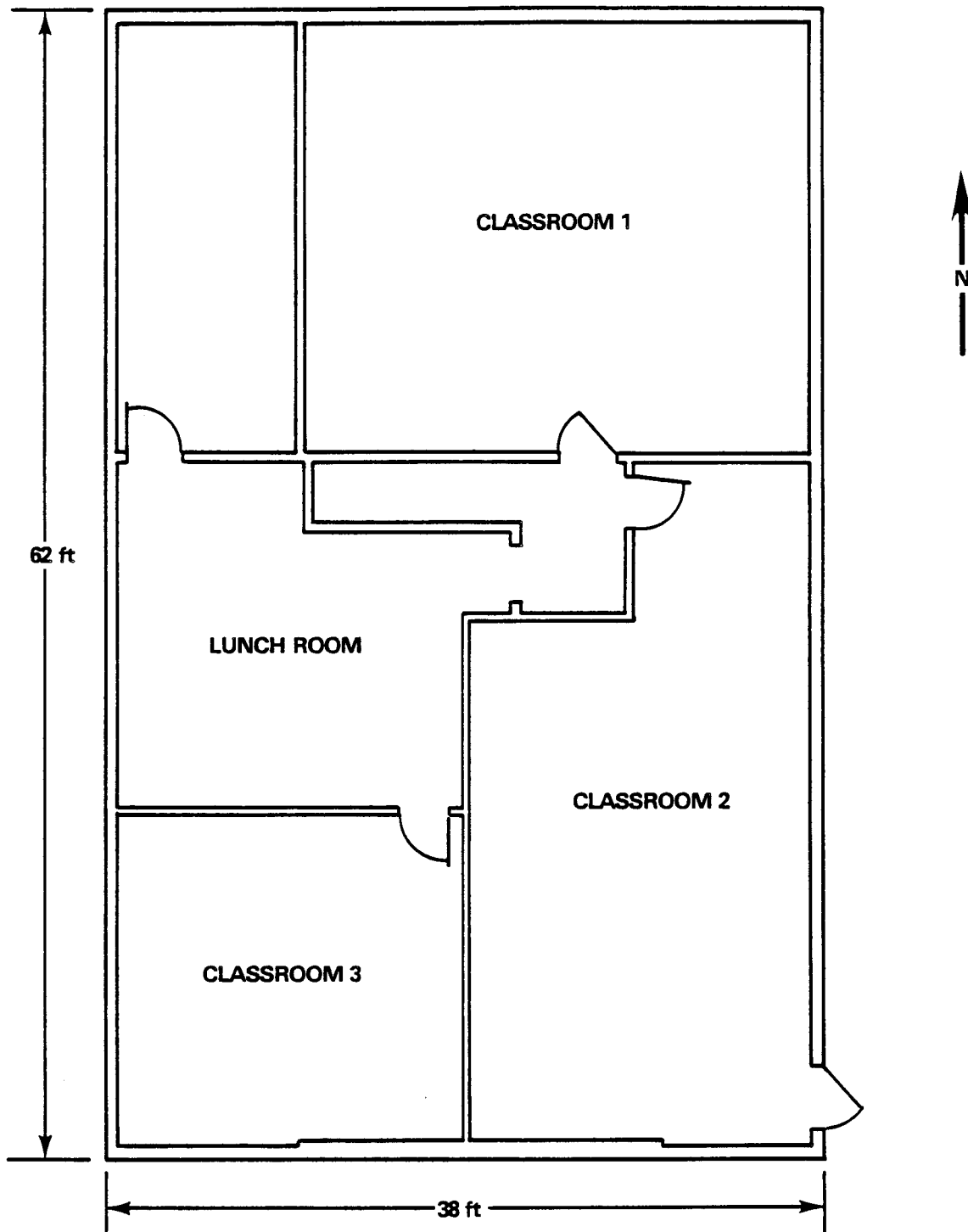
Drawing No.: H-4-150002, H-4-64766, H-4-64763

Negative No.: 8405520-11



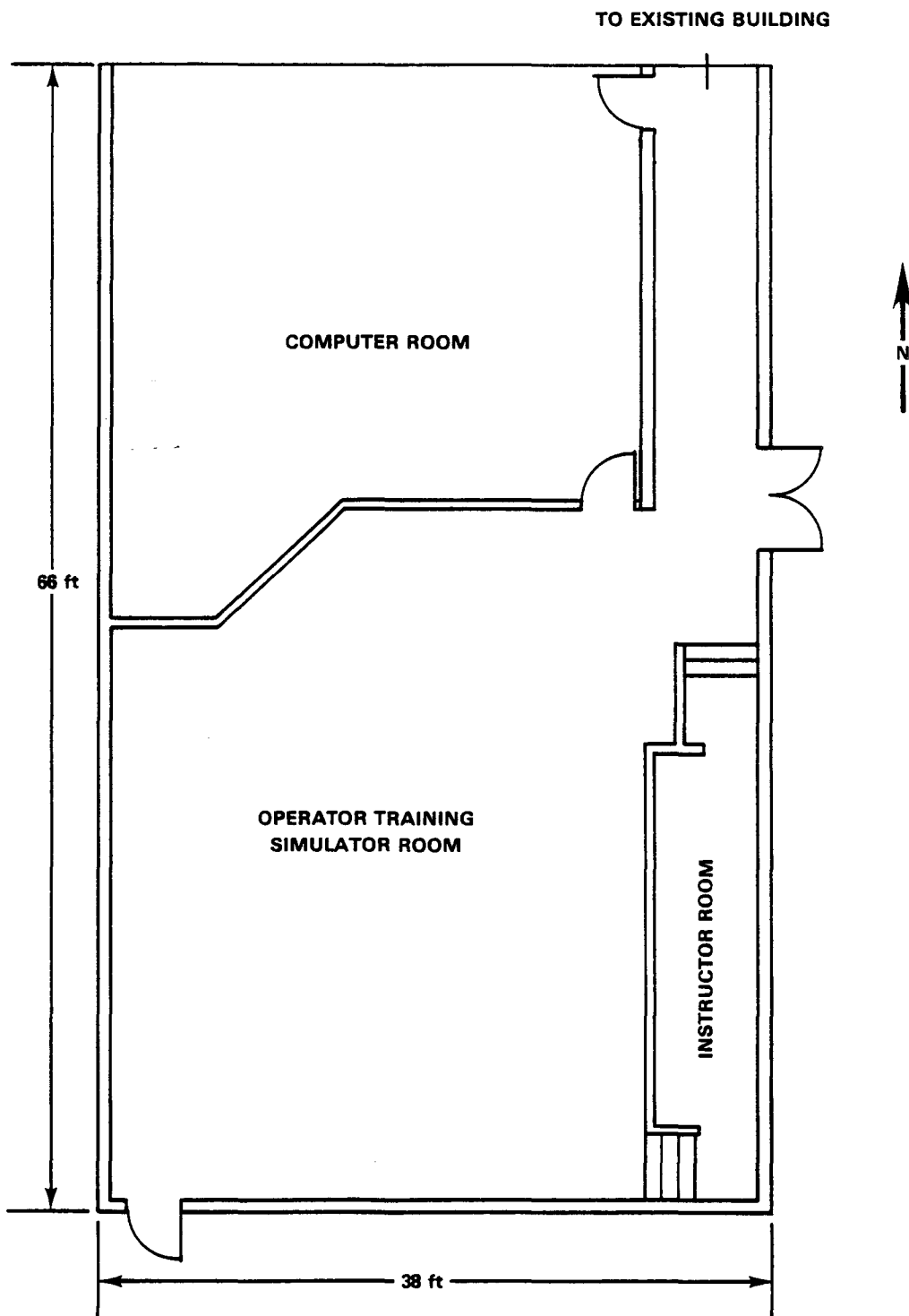
436 BUILDING - FIRST FLOOR

HEDL 8410-079.33



HEDL 8410-079.27

436 BUILDING - SECOND FLOOR

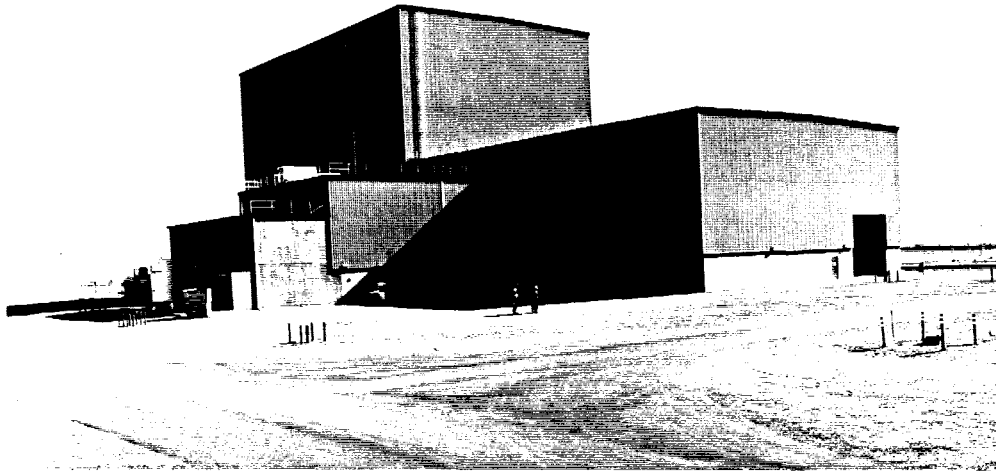


HEDL 8410-079.28

436 BUILDING - COMPUTER ROOM ADDITION

437

MAINTENANCE AND STORAGE FACILITY



Purpose: To provide the maintenance and repair facility needs and a storage area for equipment used in the FFTF that is sodium-wetted, is radioactive, or needs specialized maintenance. Essential support services, such as sodium removal for other 400 Area activities, will also be provided.

Dimensions:	Ground Floor:	33,236 sq ft
	Below Grade, Plan 1:	9164 sq ft
	Below Grade, Plan 2:	6888 sq ft
	78-ft Level:	2136 sq ft
	68-ft 6-in. Level:	2136 sq ft
	58-ft 6-in. Level:	2616 sq ft
	Second Floor Mezzanine:	4021 sq ft

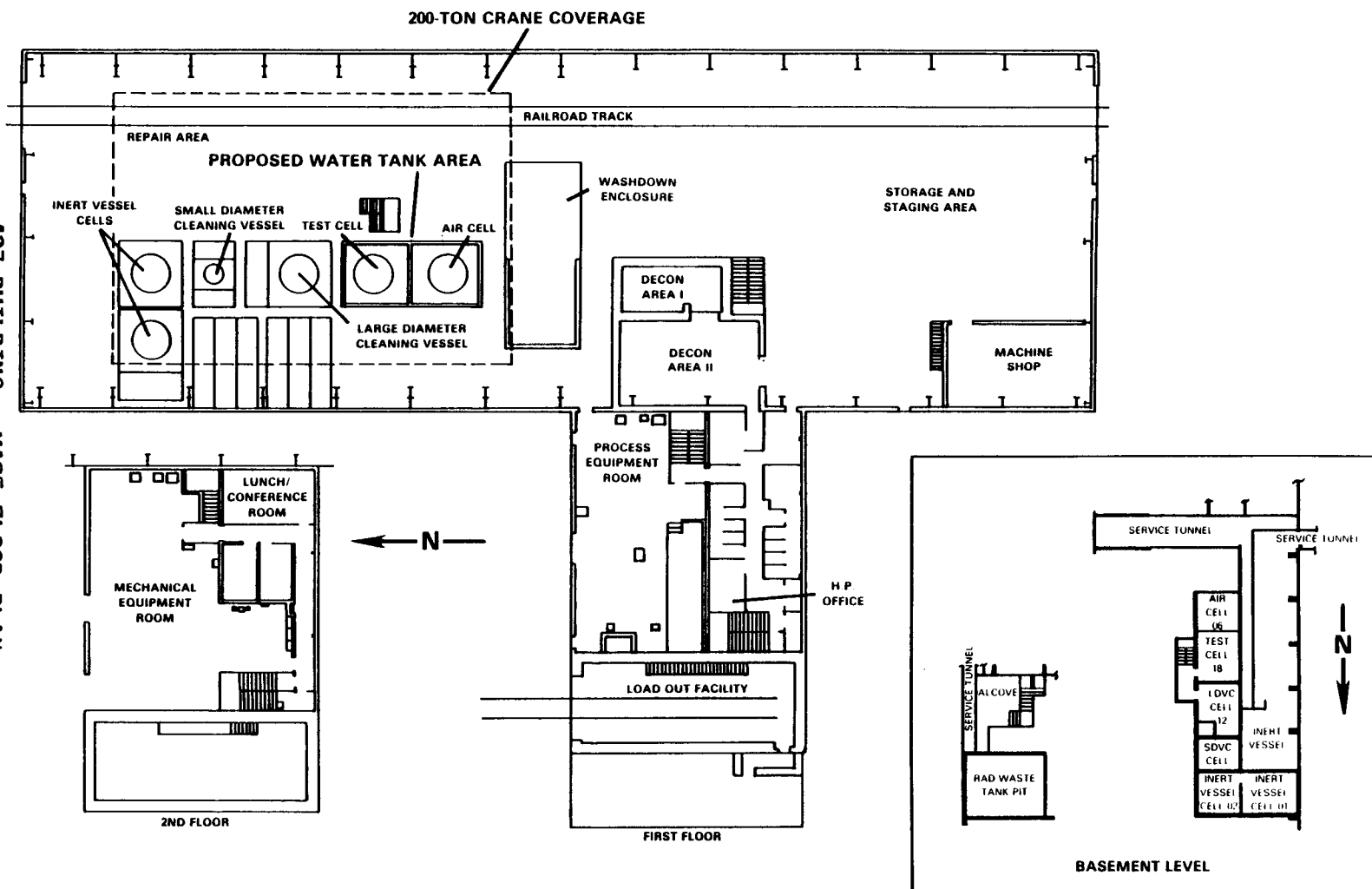
Description: The building consists of a bolted steel upper level shell on a concrete basement that houses the lower levels. Both 200-ton and 6-ton cranes are used for handling large and/or heavy equipment and materials. Air conditioning is provided by a chilled water pump, and heating is achieved by using heating coils and space heaters. Some of the specialized areas besides the lower level cells are the mechanical equipment room, process equipment room, contaminated equipment repair shop, monitor room, Decon Area I and II, the storage and staging area, and the cask decontamination and maintenance facility for the T-3 casks.

Drawing No.: H-4-62151, H-4-62152, H-4-62153, H-4-62154

Negative No.: 8405520-4

437 BUILDING - MASF FLOOR PLAN

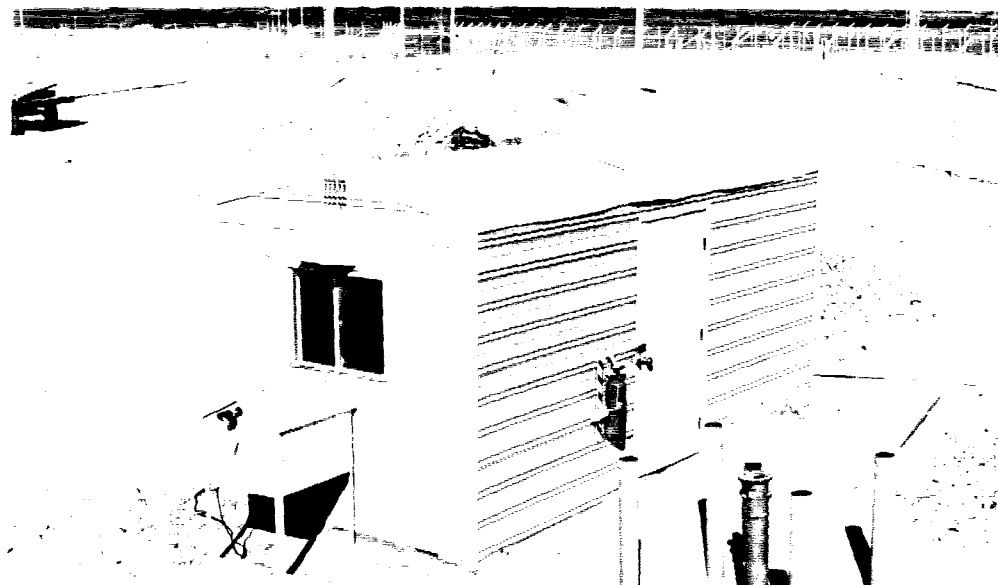
III-11



HEDL 8503-252.10

480A

WATER SUPPLY WELL NO. 1



Purpose: To supply water for use in the 400 Area.

Dimensions: Well No. 1 Depth: 290 ft
Capacity: 200 gal/min

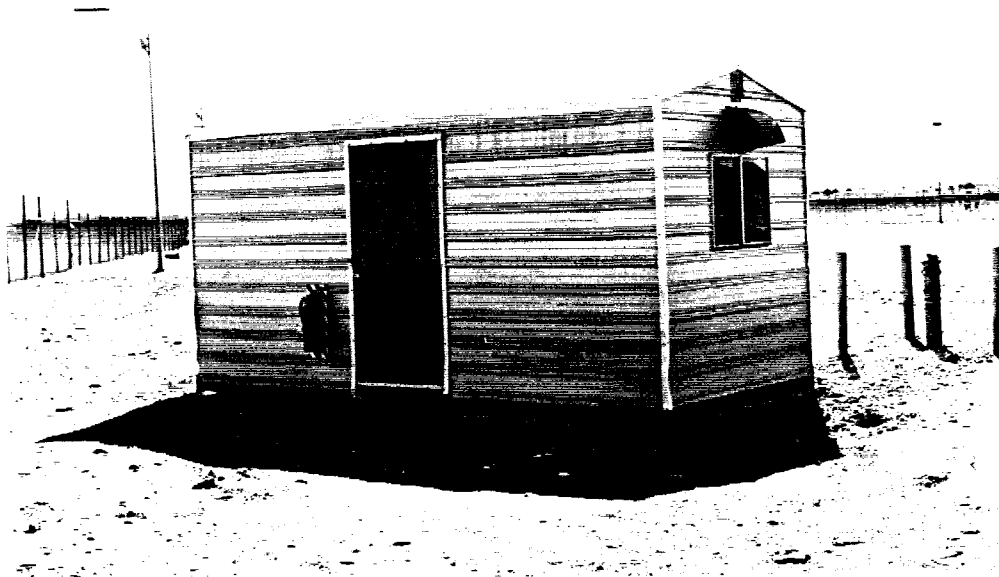
Description: The deep well turbine pump, P-14, used at Well No. 1 is protected by a small bolted steel building. Heating is provided in the insulated building.

Drawing No.: H-4-11360, H-4-14664

Negative No.: 8405520-2

480B

WATER SUPPLY WELL NO. 2



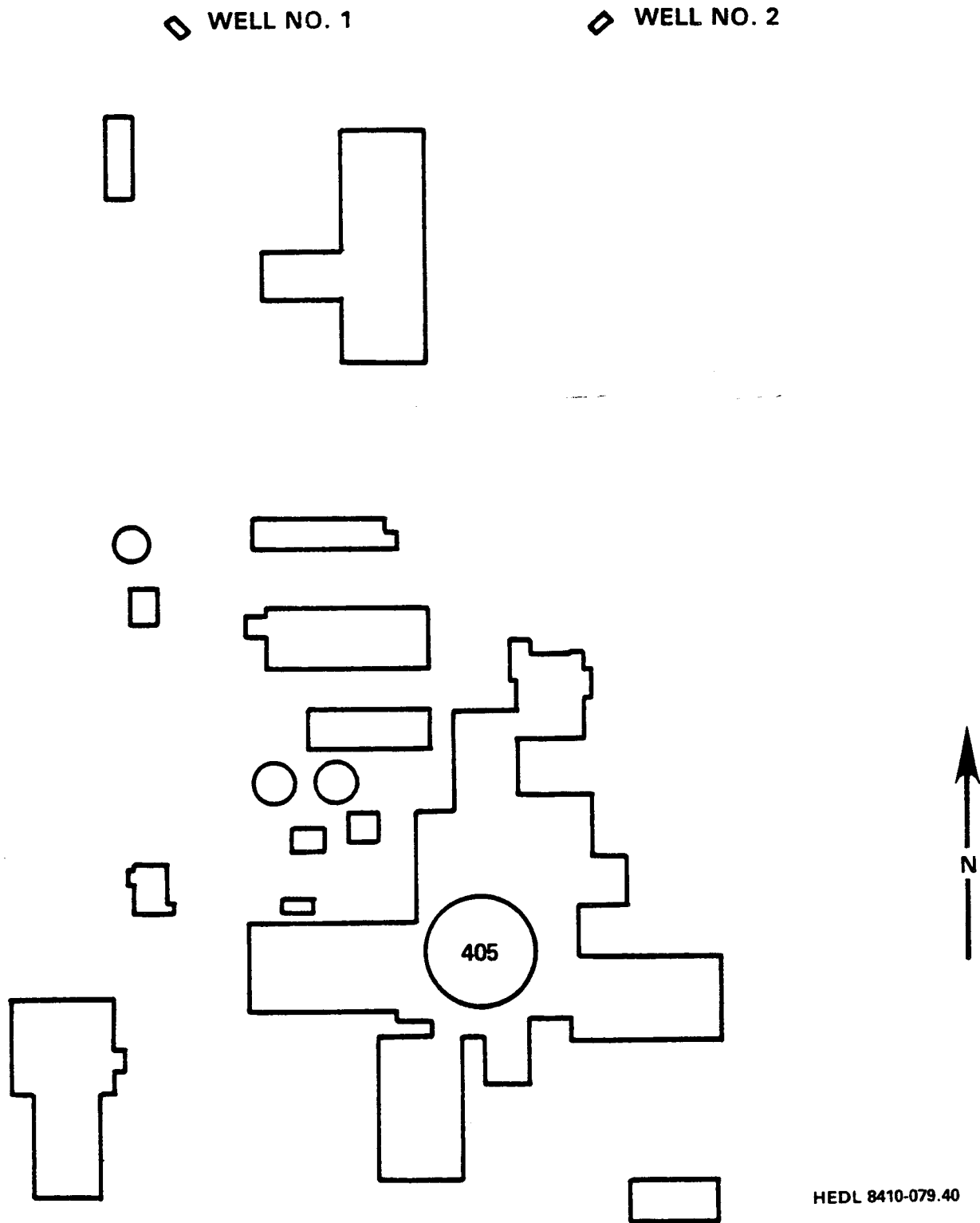
Purpose: To supply water for use in the 400 Area.

Dimensions: Well No. 2 Depth: 395 ft
Pump Capacity: 220 gal/min

Description: The deep well turbine pump, P-15, is protected at the Well No. 2 site by a small bolted steel building. The pump is similar to the one at the Well No. 1 location. The insulated building is provided with heat.

Drawing No.: H-4-11360, H-4-14664

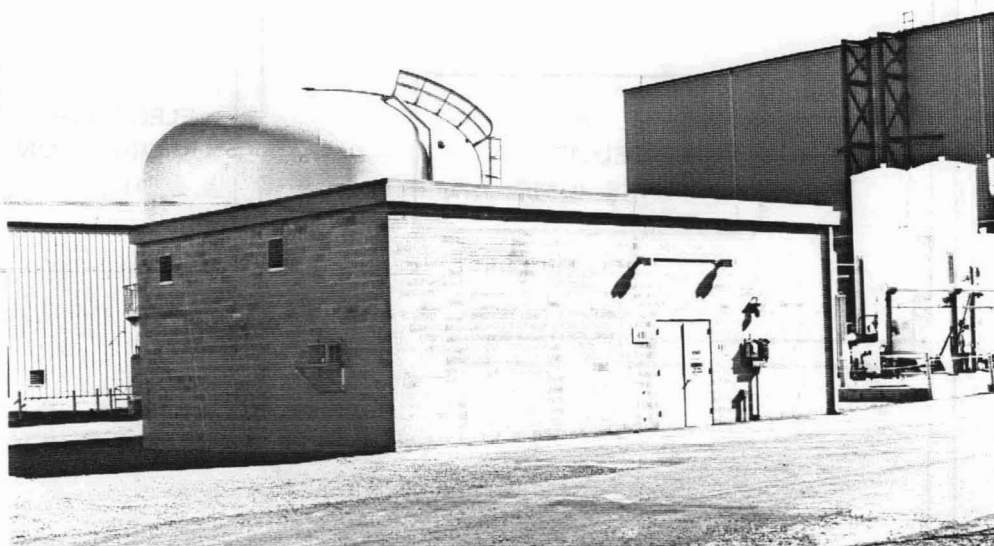
Negative No.: 8405520-3



480A, B WATER SUPPLY WELLS NO. 1, 2 LOCATIONS

481

WATER PUMPHOUSE



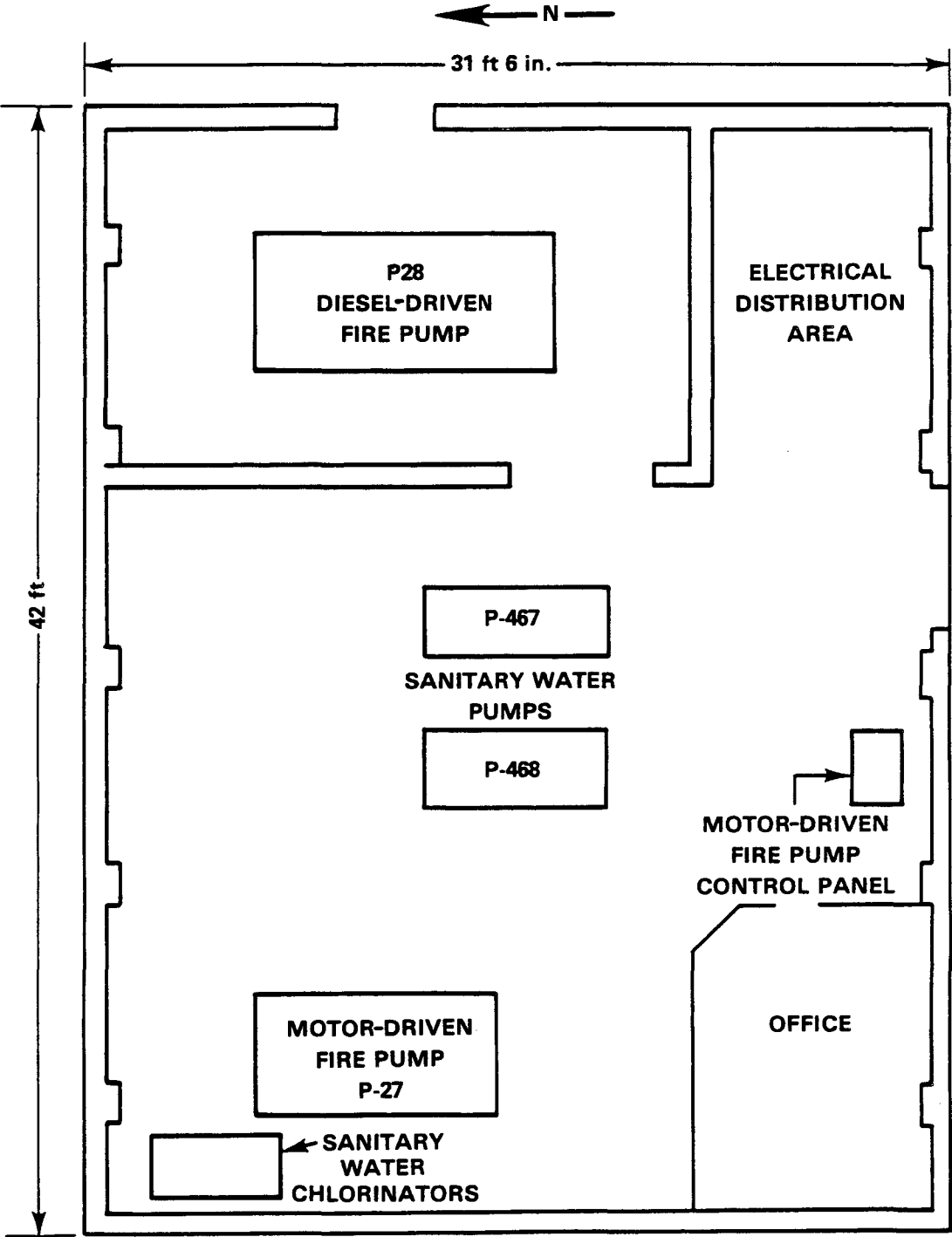
Purpose: To provide space for the sanitary water pumps (P-467 and P-468), the electric fire pump (P-27), and the diesel fire pump (P-28).

Dimensions: Building Perimeter: 42 ft x 31-ft 6-in.

Description: The concrete block building with composite roofing is completely insulated. The two 480 gal/min sanitary water pumps are arranged with one operating and the other pump on standby. The pumps alternate operating modes every four hours. The electric fire pump and the diesel fire pump both have a capacity of 1500 gal/min. The building also houses the two sanitary water chlorinators.

Drawing No.: H-4-104669

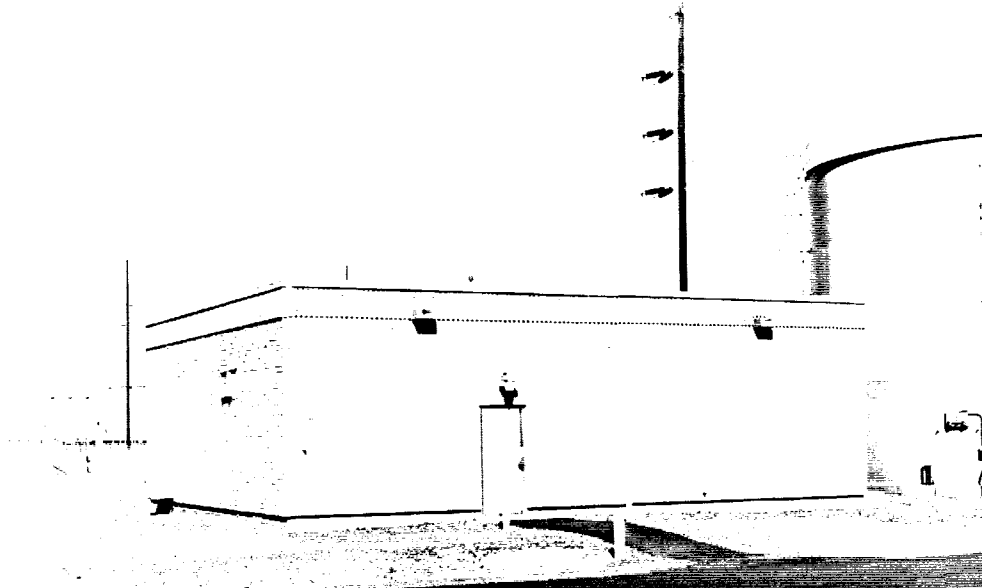
Negative No.: 8405520-6



HEDL 8410-079.25

481 BUILDING

481A
WATER PUMPHOUSE



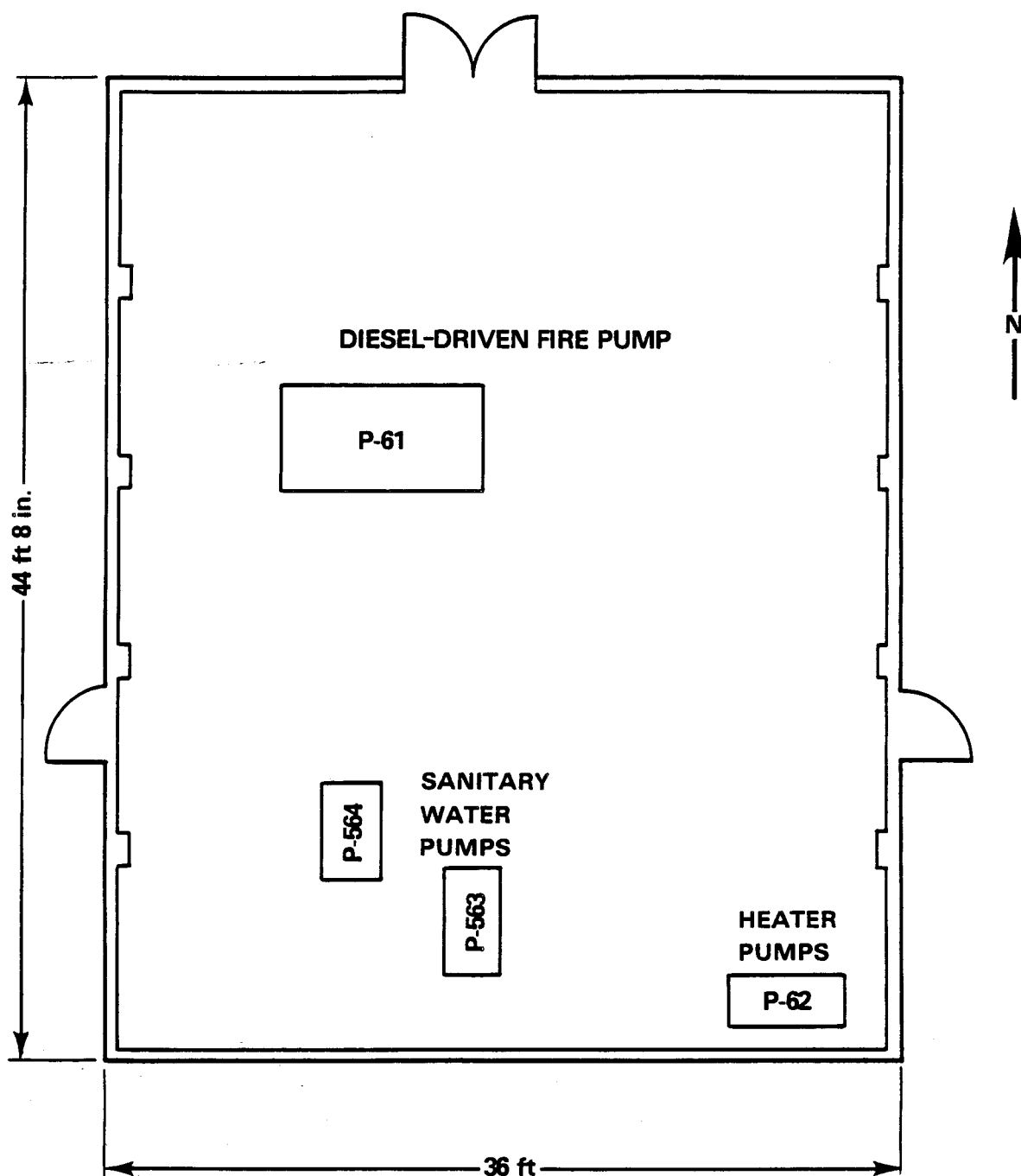
Purpose: To provide space for the diesel fire pump (P-61) and two sanitary water pumps (P-563 and P-564).

Dimensions: Building Perimeter: 36 ft x 44-ft 8-in.

Description: The split-face concrete block building has composite roofing over insulation. The diesel fire pump has a 1500 gal/min capacity. The two sanitary water pumps are rated at 200 gal/min.

Drawing No.: H-4-101749

Negative No.: 8405520-7



HEDL 8410-079.23

481A BUILDING

482A, B
WATER STORAGE TANKS



Purpose: To provide water storage for the 400 Area.

Dimensions:	482A Present Capacity:	212,800 gal
	482A Future Capacity:	300,000 gal
	482B Present Capacity:	212,000 gal
	482B Future Capacity:	300,000 gal

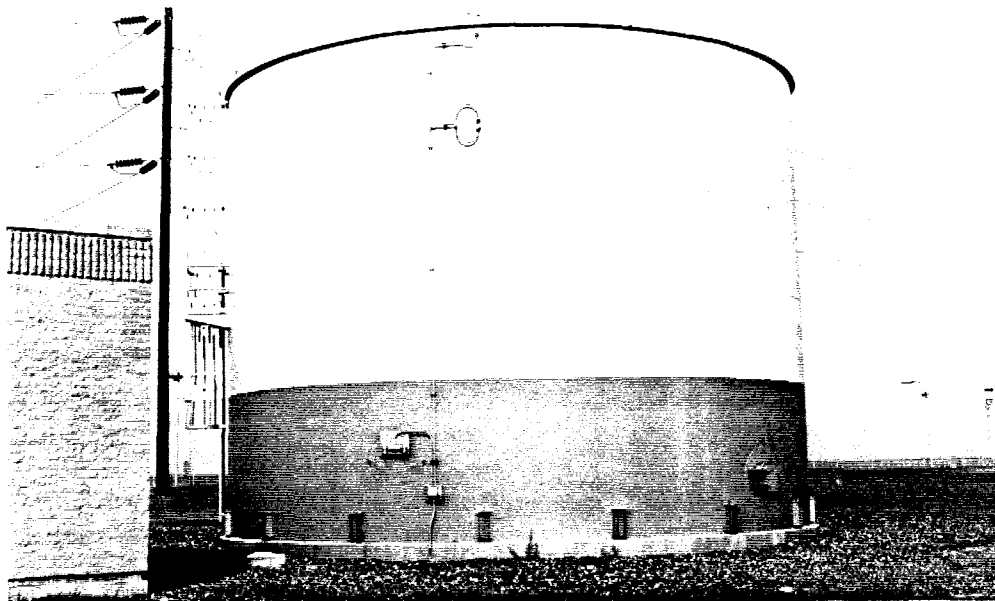
Description: The two water tanks provide for water storage at the 400 Area. 482A (T-58) is reserved for the 400 Area fire water. 482B (T-87) is used for the 400 Area sanitary water.

Drawing No.: H-4-14733, H-4-12702, H-4-12703

Negative No.: 8405520-5

482C

WATER STORAGE TANK



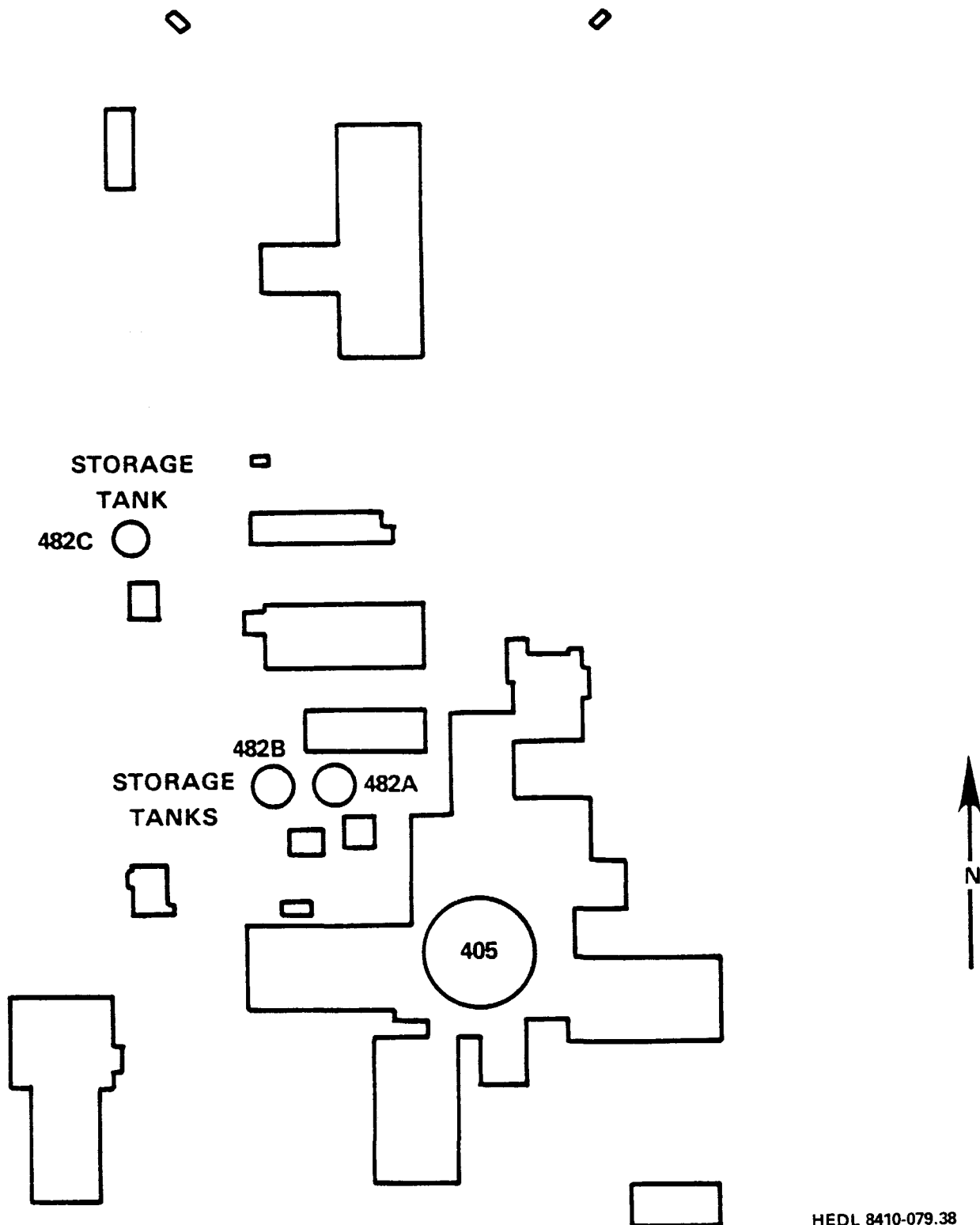
Purpose: To provide water storage for the 400 Area.

Dimensions: 482C Capacity: 300,000 gal

Description: Water storage tank 482C (T-330) is reserved for fire protection, along with approximately 50,000 gal used as sanitary water for the FCP.

Drawing No.: None

Negative No.: 8406668-4

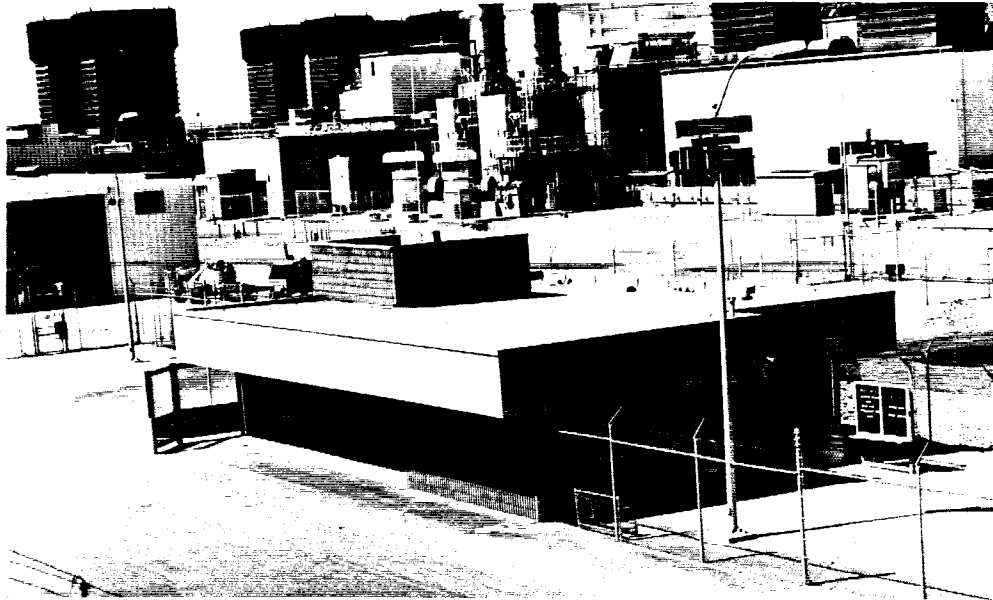


HEDL 8410-079.38

482A, B, C WATER STORAGE TANKS

4701A

GUARD STATION, KENTUCKY BOULEVARD



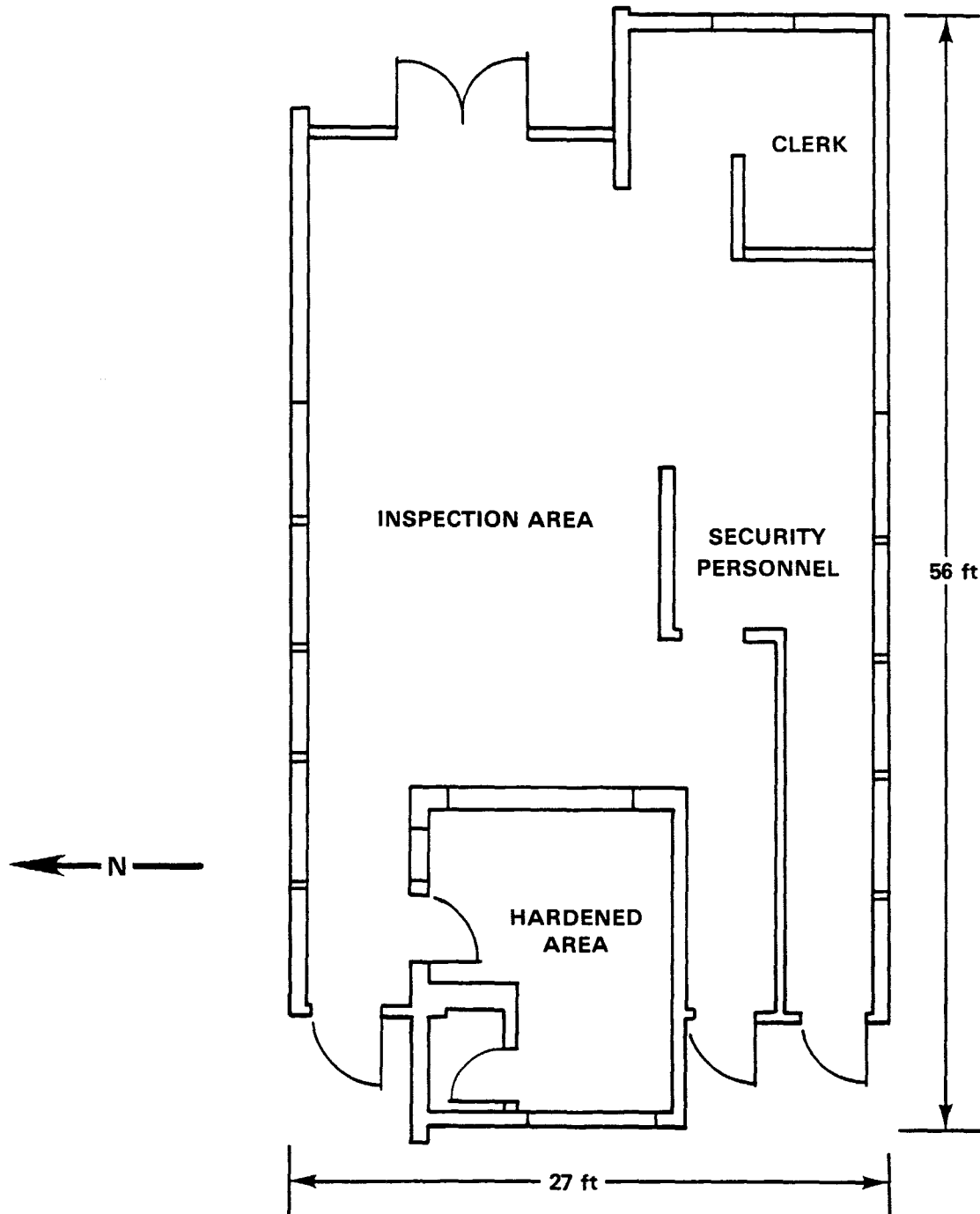
Purpose: To provide an efficient means of screening personnel, materials, and vehicles entering or leaving the protected area and personnel entering or leaving the limited area.

Dimensions: Perimeter: 56 ft x 27 ft
Total Area: 1605 sq ft

Description: The concrete block building has a fluted and tinted exterior with a built-up stucco top. Vinyl tile is on top of the concrete base, and suspended acoustical tile makes up the ceiling. Fluorescent fixtures provide lighting. A heat pump is used for both heating and cooling the building.

Drawing No.: H-4-33923

Negative No.: 8405520-42

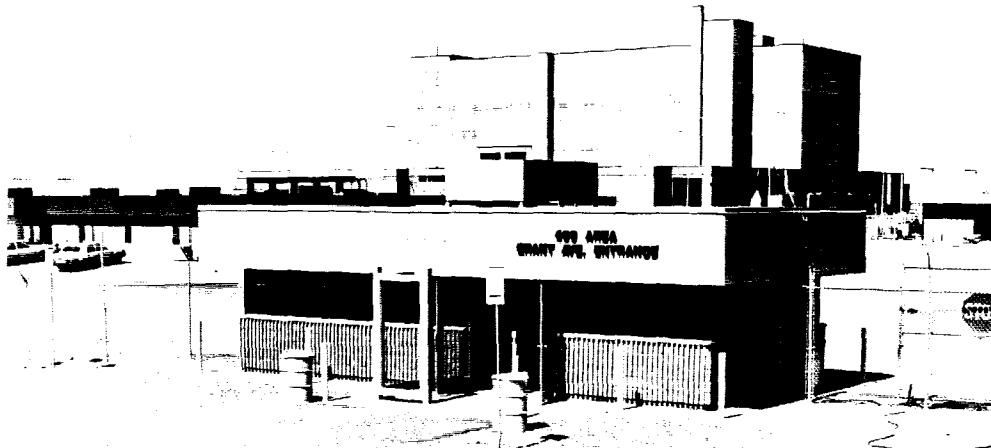


HEDL 8410-079.28

4701A BUILDING

4701B

GUARD STATION, GRANT AVENUE



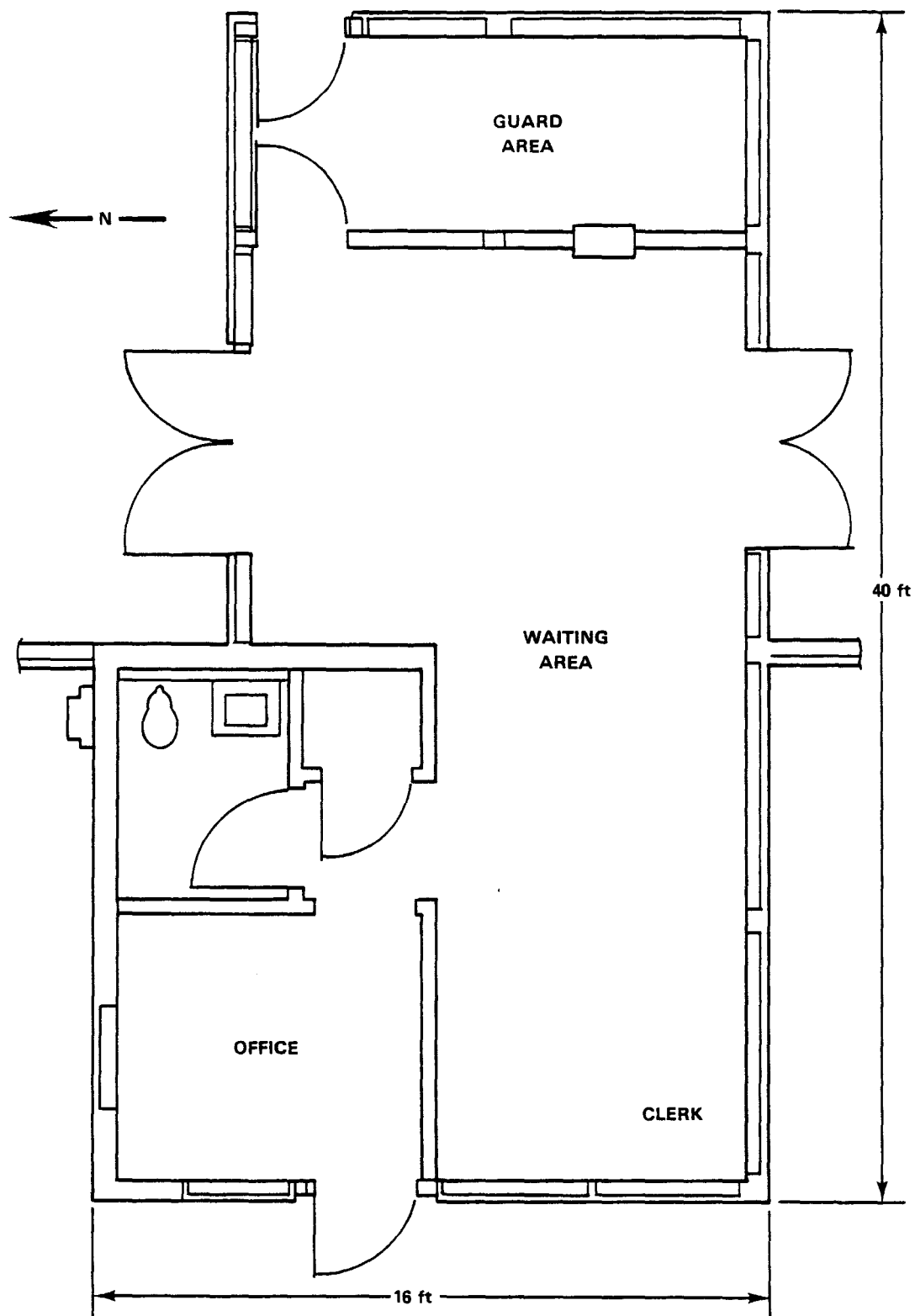
Purpose: To provide a means of screening personnel, materials, and vehicles entering or leaving the limited area.

Dimensions: Perimeter: 40 ft x 16 ft
Total Area: 635 sq ft

Description: The fluted concrete block building is framed with an aggregate-faced fascia material around the top of the building. Suspended acoustical tile makes up the ceiling while vinyl asbestos tile is on top of a concrete floor. A heat pump provides for heating and cooling the building.

Drawing No.: H-4-150723

Negative No.: 8405520-39

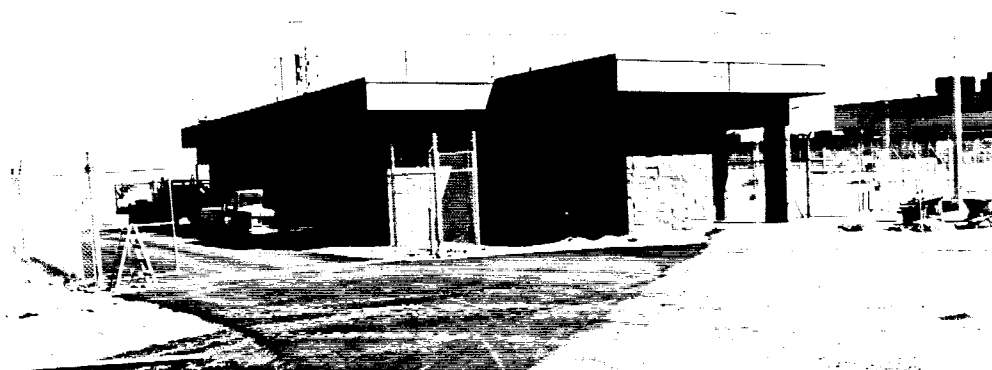


4701B BUILDING

HEDL 8410-079.29

4701C

GUARD STATION, HAYES STREET



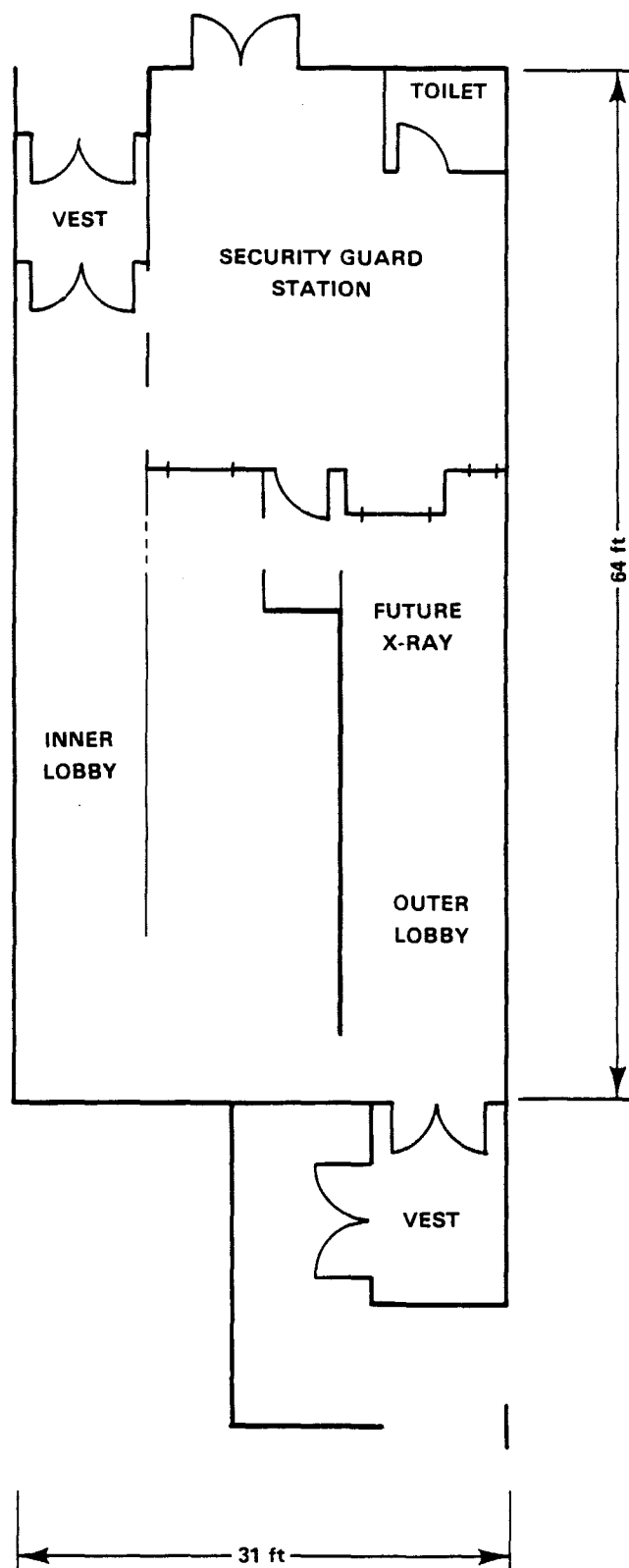
Purpose: To provide a means of screening personnel, materials, and vehicles entering or leaving the FCP protected area.

Dimensions:	Perimeter:	31 ft x 64 ft
	Outer Lobby Area:	272 sq ft
	Inner Lobby Area:	495 sq ft
	Vestibule:	114 sq ft
	Guard Station:	382 sq ft
	Restroom:	43 sq ft

Description: The split-face concrete block building has a built-up roof over rigid insulation and a concrete slab. Vinyl tile is on top of a concrete slab base. The interior walls are finished with gypsum board. The ceiling is suspended acoustical tile blocks. Heating and cooling are provided by a heat pump. Fluorescent lighting fixtures are used in the building.

Drawing No.: H-4-103537

Negative No.: 8405520-28

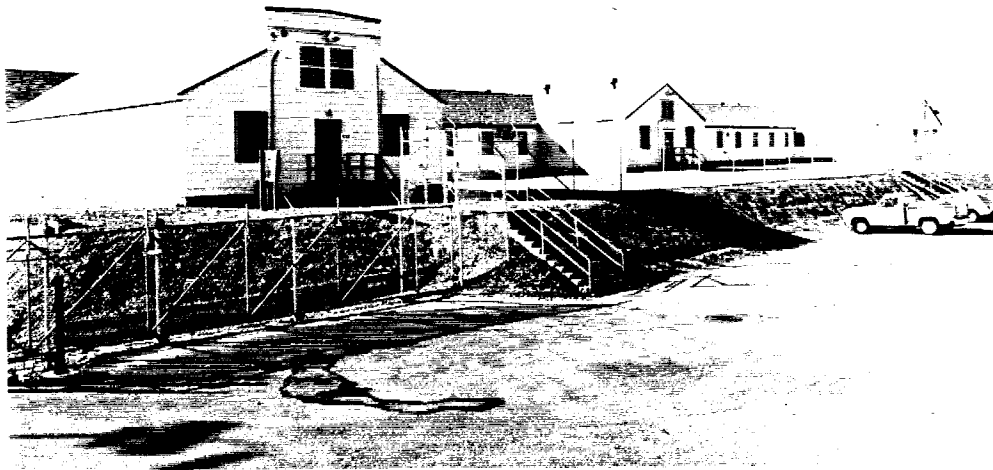


4701C BUILDING

HEDL 8410-079.36

4702

OFFICE BUILDING



Purpose: To provide office space for several different groups that support 400 Area activities and a QA documentation storage vault, a documentation center, and a mail room.

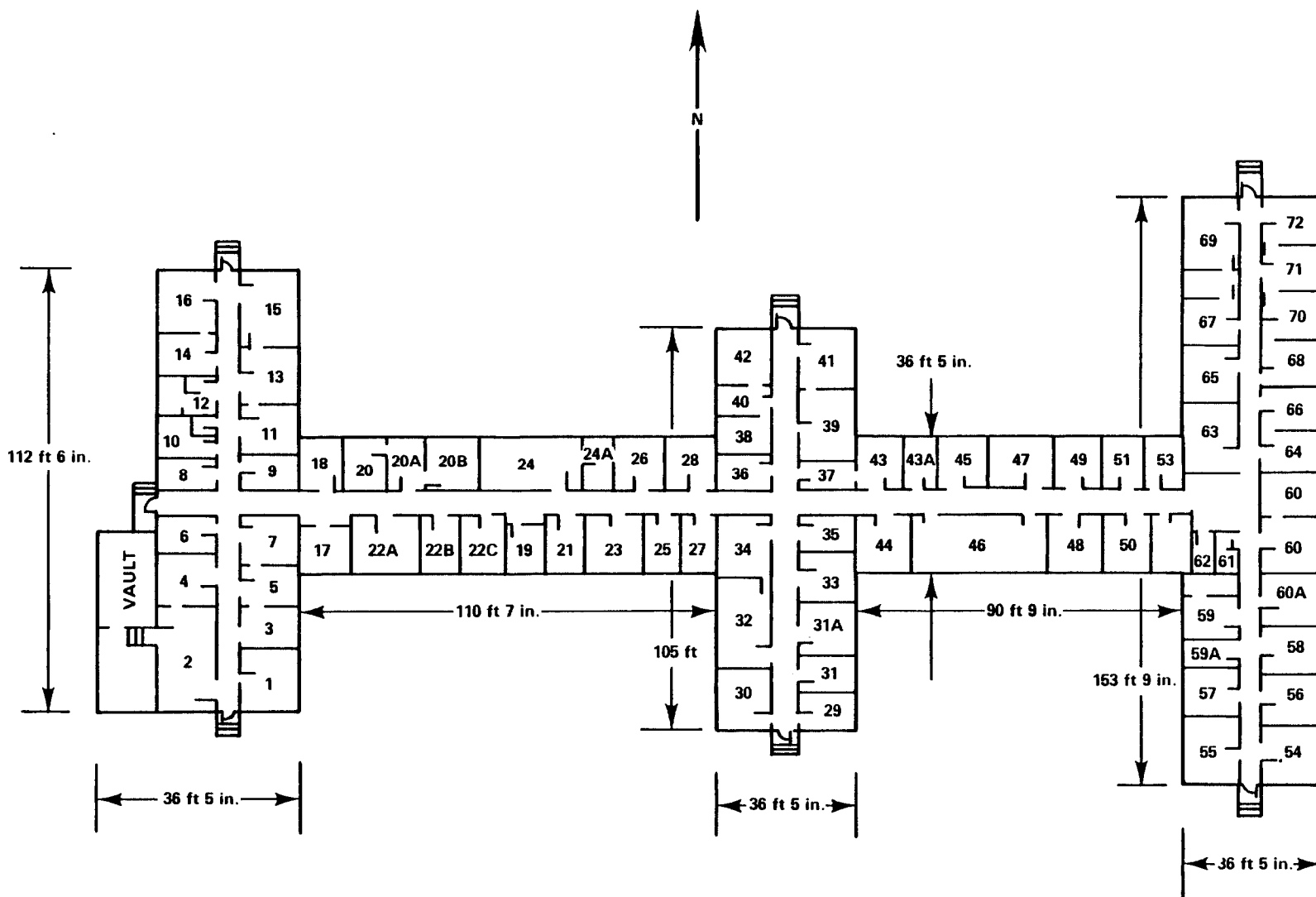
Dimensions:	Perimeter:	
	Building 14:	112-ft 6-in. x 36-ft 5-in.
	Building 15:	105 ft x 36-ft 5-in.
		110-ft 7-in. x 36-ft 5-in.
	Building 16:	153-ft 9-in. x 36-ft 5-in.
		90-ft 9-in. x 36-ft 5-in.
	Vault:	48-ft 8-in. x 15-ft 4-in.
	TOTAL Area:	21,687 sq ft

Description: The wood frame buildings are on concrete foundations. The three original buildings (14, 15, and 16) were connected together. The exterior has a shingle finish, while the interior finish is 1/2-in. drywall. Heating units are located in the attic and along the baseboards. A Contempo HVAC unit is in the computer room. Other parts of the building are cooled with heat pumps, swamp coolers, or wall A/C units. Incandescent hall lighting and fluorescent fixtures provide light for the building. The fire-proof vault is constructed of 7-5/8 in. thick concrete block. All the sections in this building are equipped with a fire protection sprinkler system.

Drawing No.: H-4-152202

Negative No.: 8406668-6

4702 BUILDING



BUILDING 14

BUILDING 15

BUILDING 16

4704

OFFICE BUILDING



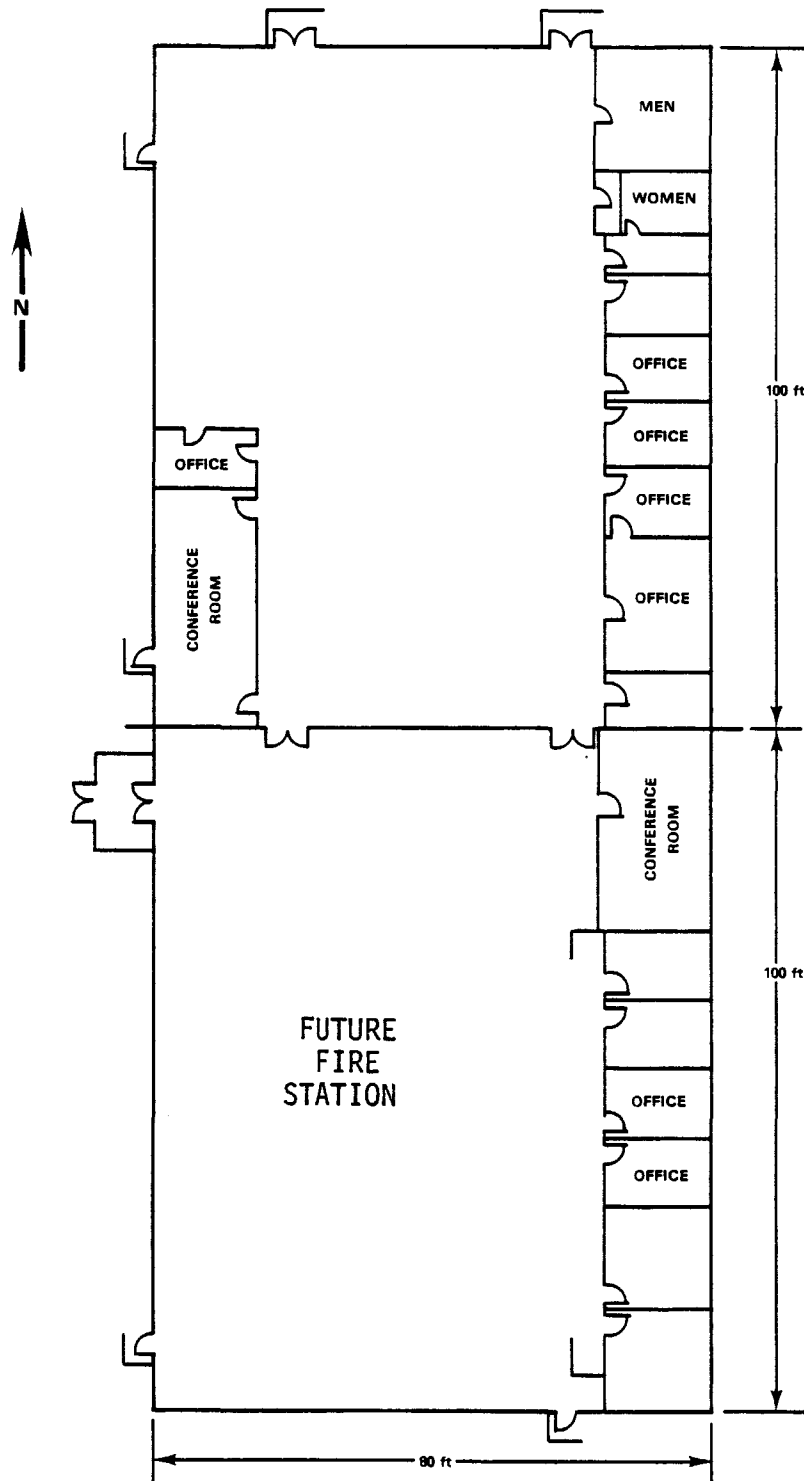
Purpose: To provide space for locksmith offices in the north section of the building and the future site for the 400 Area Fire Station in the south section.

Dimensions: South Section Perimeter: 100 ft x 80 ft
North Section Perimeter: 100 ft x 80 ft

Description: The steel frame, fully insulated, metal building is divided into two main sections. The south section provides space for most of the offices that are presently used and provides space for the drafting department. The interior walls are finished with 1/2-in. gypsum wallboard. Heating is provided with baseboard units and some suspended ceiling units. Cooling is from evaporative units. Fluorescent fixtures are used for overhead lighting.

Drawing No.: F22-5E-682, F4-5E-951, F4-3E-1612

Negative No.: 8405520-20



HEDL 8410-079.31

4704 BUILDING

4706

SUPPORT SERVICES BUILDING (SSB)



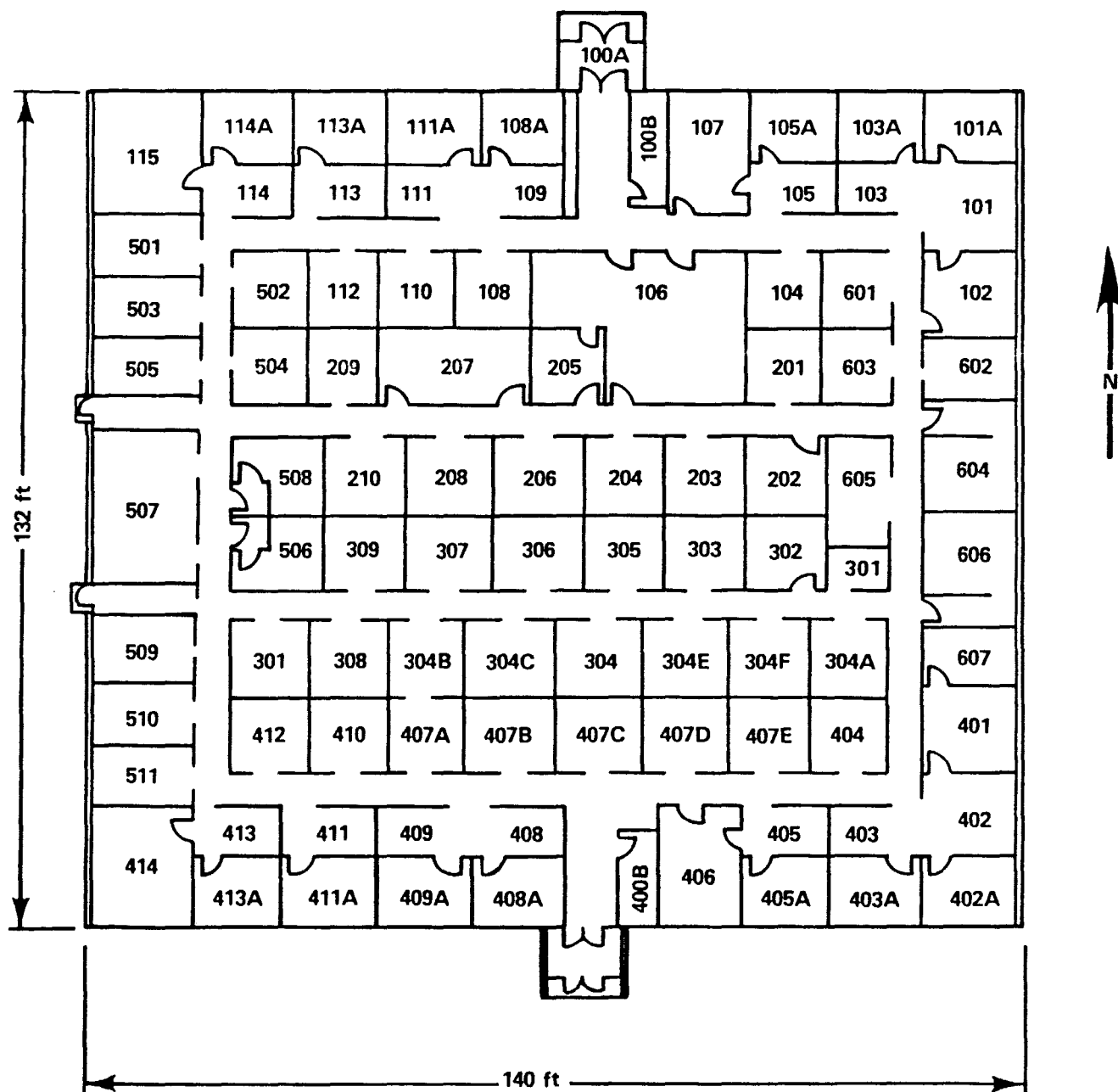
Purpose: To provide office space for various engineering groups that service 400 Area activities.

Dimensions:	Perimeter:	140 ft x 132 ft
	Office Area:	9622 sq ft
	Secretary Area:	1386 sq ft
	Mail Room:	132 sq ft
	Conference Rooms:	512 sq ft
	Lunch Room:	346 sq ft
	Hallways:	1586 sq ft

Description: The wood frame building has an exterior finish of stucco over plywood sheathing. Interior finish is gypsum wallboard. The 12 heat pumps used for heating and cooling the building are situated on the built-up roof. The fully insulated building has carpet throughout and has a suspended acoustical tile ceiling. Fluorescent fixtures provide lighting. The building has a sprinkler system for fire protection.

Drawing No: H-4-152204

Negative No.: 845520-31



HEDL 8410-079.42

4706 BUILDING

4707

400 AREA SITE SUPPORT OFFICES



Purpose: To provide office space for the Site Services group that primarily handles all the general building and utilities maintenance for the 400 Area.

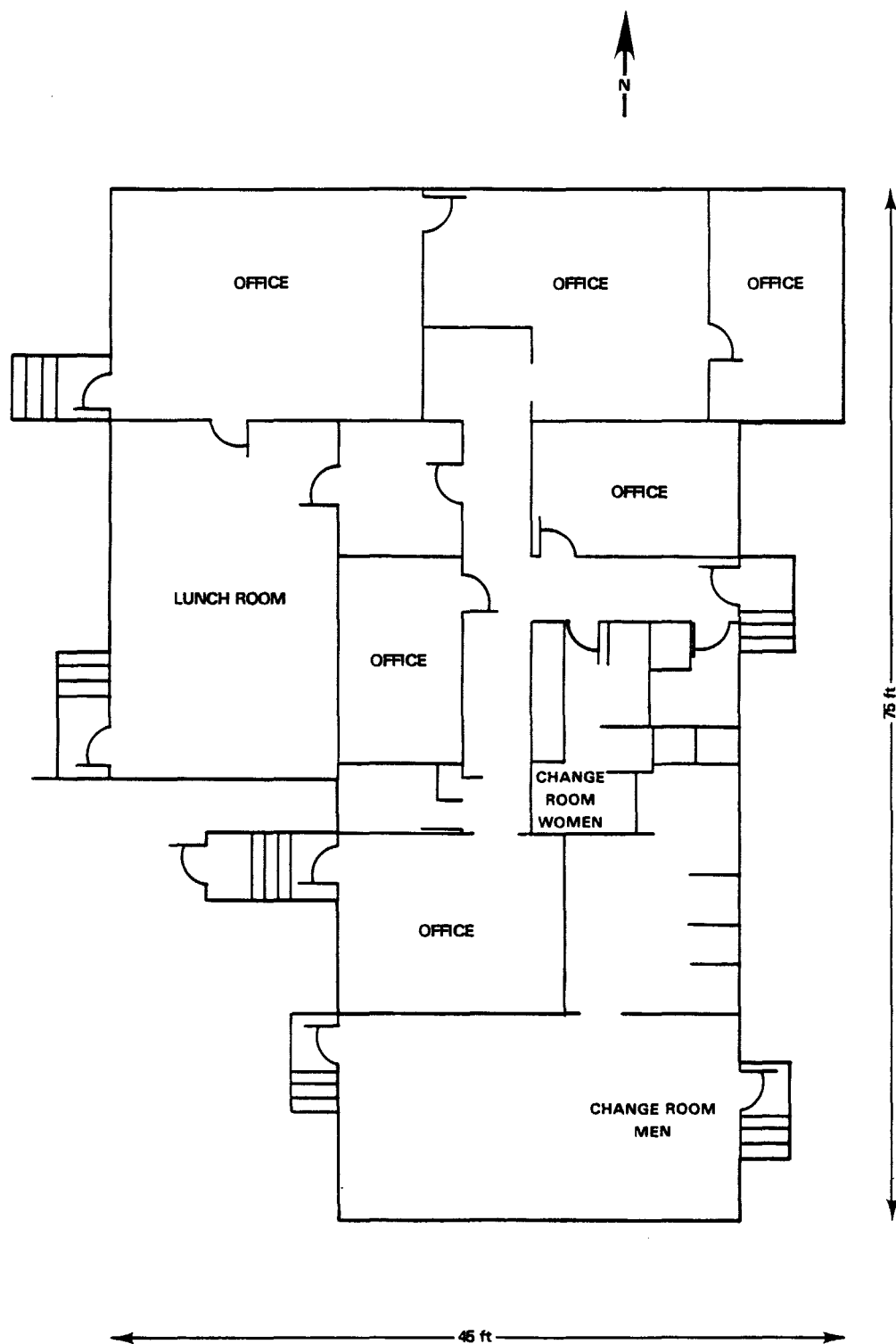
Dimensions: Perimeter: 75 ft x 45 ft
Total Area: 2156 sq ft

Description: The wood frame building is on a concrete foundation and has a small metal building extension. The interior finish includes tile floors and 1/2-in. gypsum wall board and ceiling. The 2-in. Fiberglas®-insulated building is heated and cooled with a heat pump system. The building has a fire protection sprinkler system.

Drawing No.: F11-5E-110

Negative No.: 8405520-19

®Fiberglas is a registered trademark of Owens-Corning Fiberglas Corp, Toledo, OH.



HEDL 8410-079.35

4707 BUILDING

III-35

4710

OPERATIONS SUPPORT BUILDING (OSB)



Purpose: To provide office space for the FFTF Plant Organization.

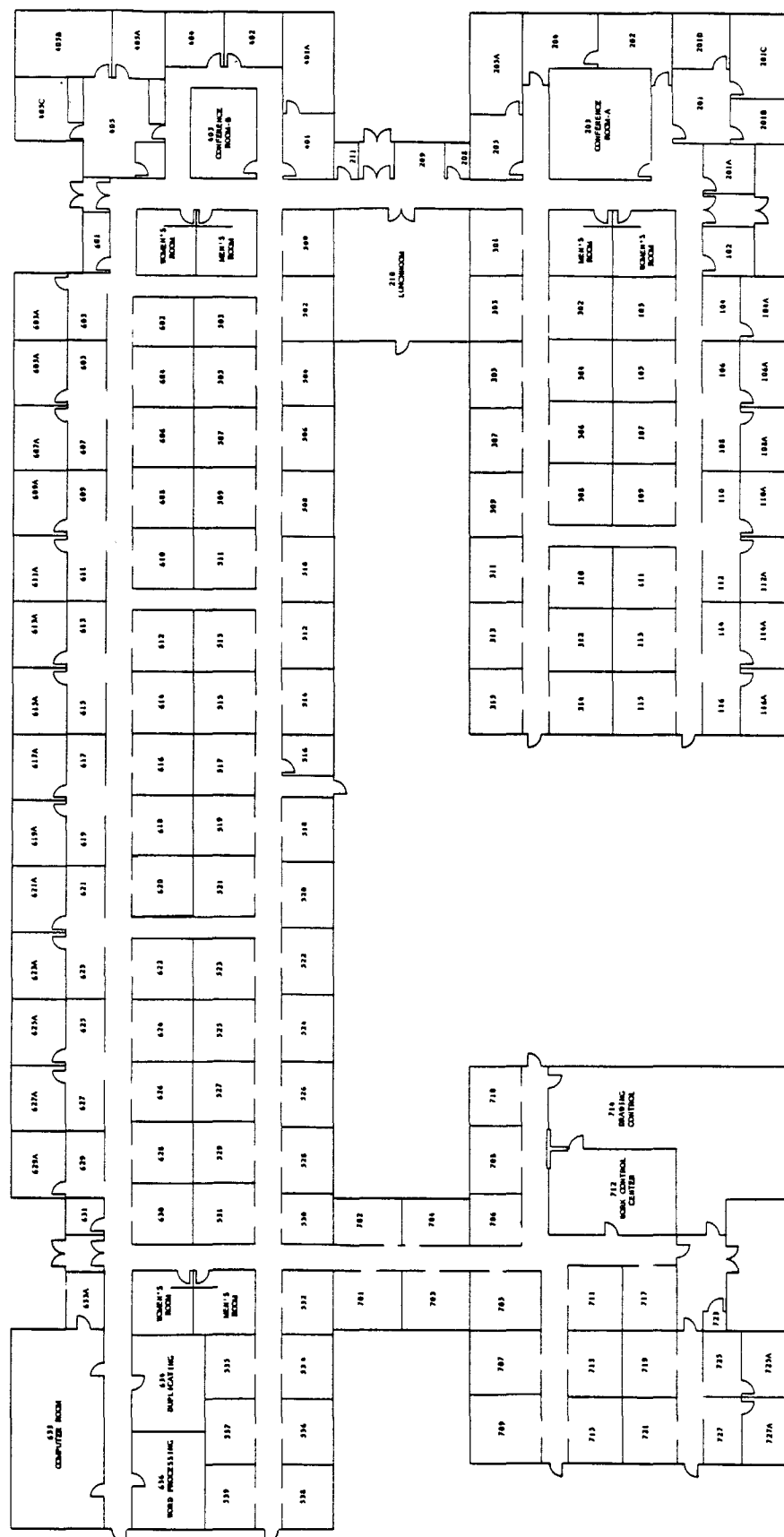
Dimensions:	East Section Perimeter:	316 ft x 66 ft
	South West Section Perimeter:	151 ft x 66 ft
	North West Section Perimeter:	82 ft x 66 ft
	Office Area:	33,700 sq ft
	Conference Room:	477 sq ft
	Lunch Room:	756 sq ft
	Computer Area:	720 sq ft
	Word Processing and Duplicating:	560 sq ft

Description: The wood frame building has an exterior finish of Plekoflex® over 5/8-in. plywood. The fully insulated building has 23 heat pumps to provide for cooling and heating. The floor is carpeted and the ceiling is composed of suspended acoustical tile blocks. Lighting is from fluorescent fixtures. The building has a fire protection system.

Drawing No.: H-4-152215, H-4-152219

Negative No.: 8405520-10

®Plekoflex is a registered trademark of the Pleko Company.

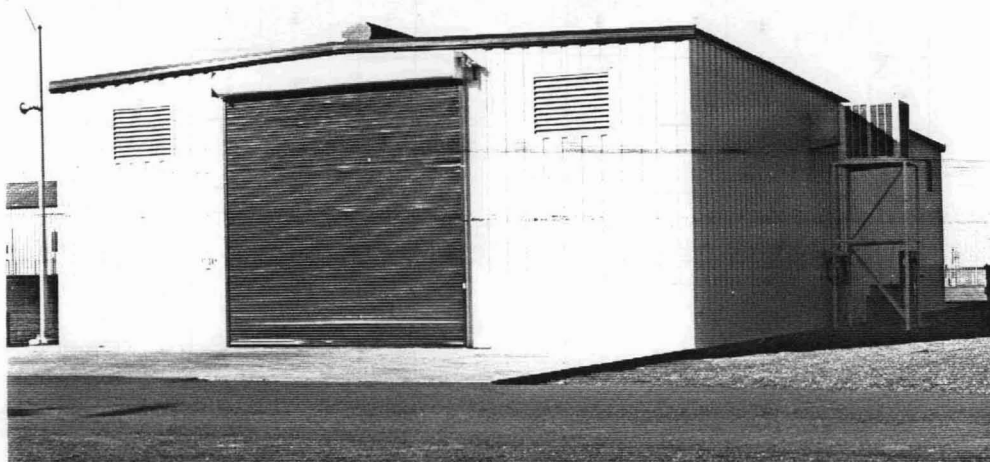


OPERATIONS SUPPORT BUILDING



4713A

FFTF REFUELING AREA LAYDOWN FACILITY



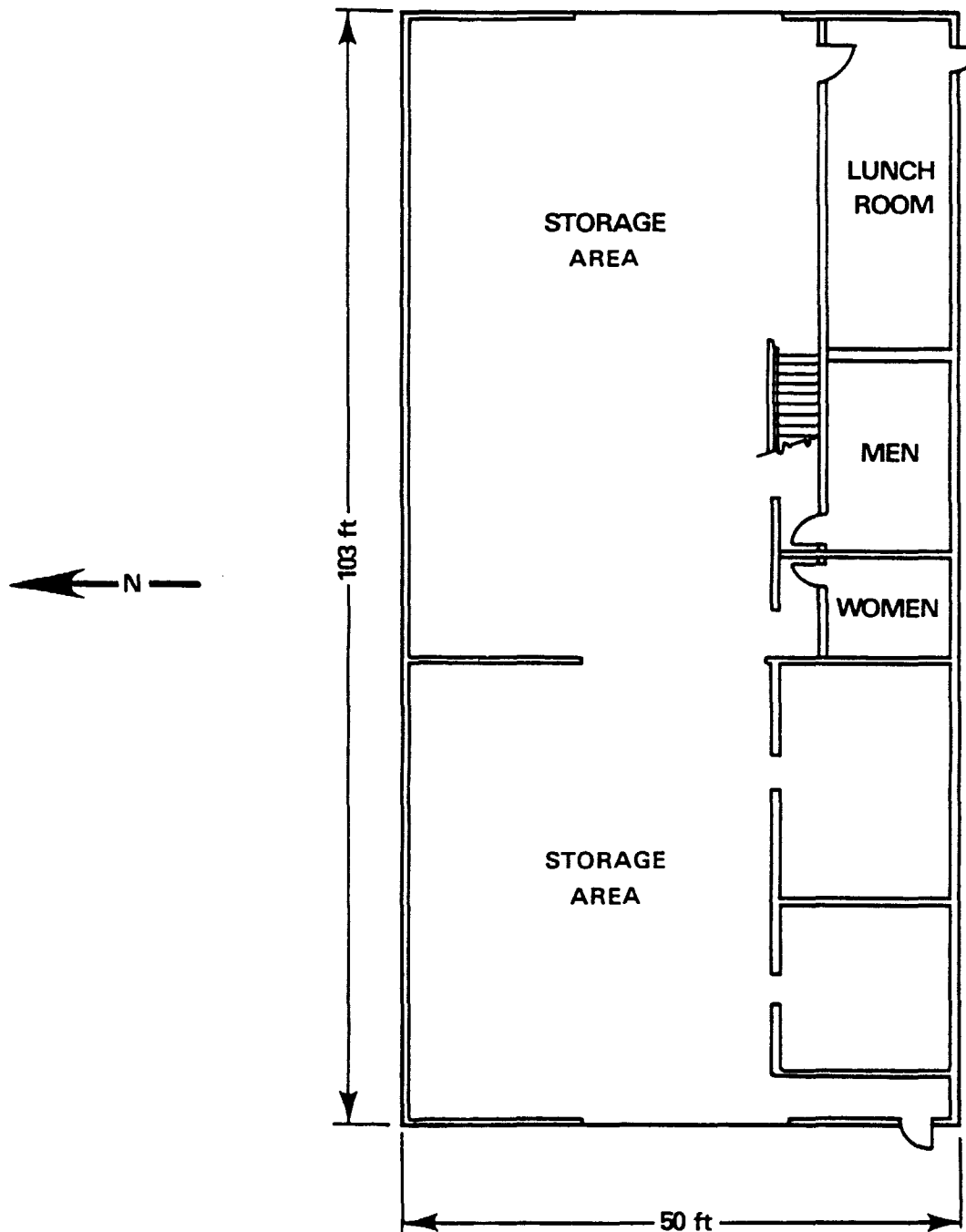
Purpose: To provide space for storing refueling equipment in support of FFTF Plant Operations.

Dimensions:	Perimeter:	103 ft x 50 ft
	Storage Area:	3535 sq ft
	Lunch Room:	356 sq ft
	Mezzanine:	412 sq ft

Description: The bolted steel building rests on a concrete slab and is fully insulated. The building has ceiling-suspended heaters and a single evaporative cooler. Fluorescent industrial fixtures provide lighting. Two 18-ft roll-up doors are located on the east and west walls to allow for easy movement of the equipment into and out of the building.

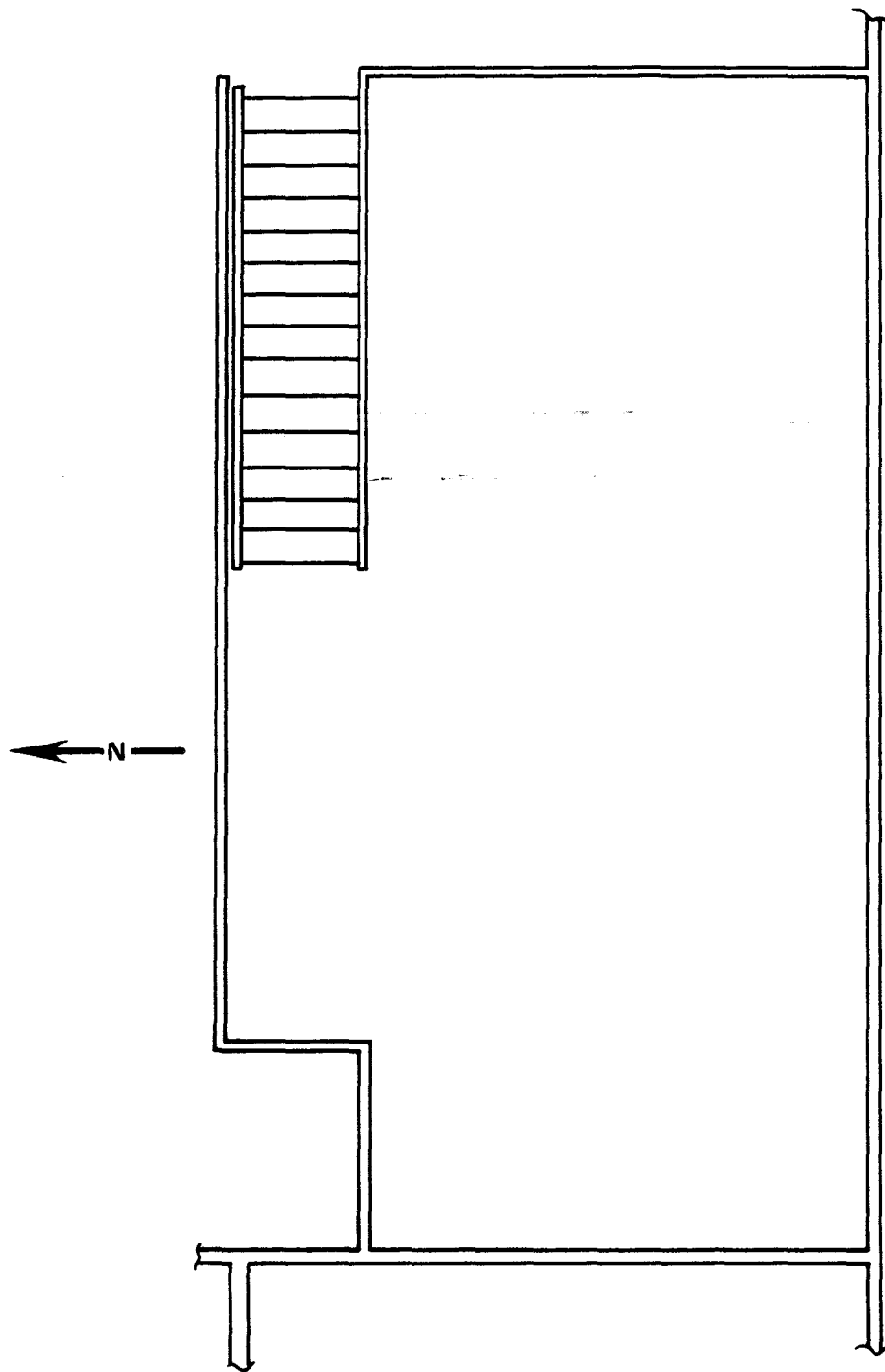
Drawing No.: H-4-150037, F4-3E-1582

Negative No.: 8406668-1



HEDL 8410-079.34

4713A BUILDING - MAIN FLOOR PLAN



HEDL 8410-079.21

4713A BUILDING - MEZZANINE FLOOR PLAN

4713B

PROTECTED AREA MAINTENANCE BUILDING



Purpose: To provide space for site maintenance and service areas. Some of these services and/or shops are equipment calibration, general electrical shop, general mechanical shop, computer and security maintenance area, instrumentation shop, shop-tool-material storage areas, and flammable storage area.

Dimensions:	Perimeter:	80 ft x 125 ft
	Existing Addition:	120 ft x 138 ft
	Mezzanine:	2430 sq ft
	Offices:	4470 sq ft
	Lunch Room:	2160 sq ft
	Shop:	18,114 sq ft
	Common:	4680 sq ft

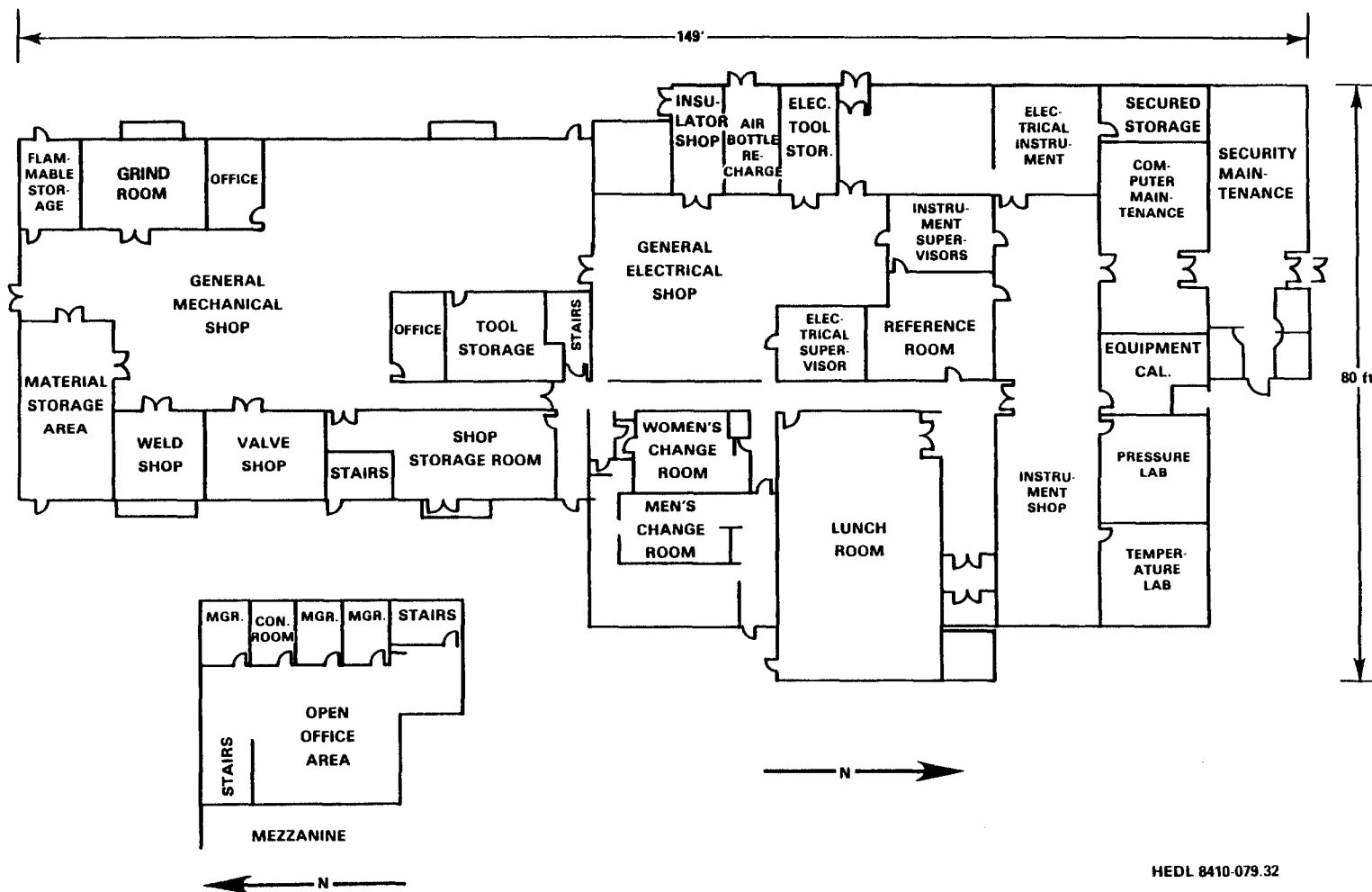
Description: The south building is bolted steel on a steel frame and is used mainly for the General Mechanical Shop. The existing addition is a wood frame building with a fine aggregate fascia finish. The floor covering in the two sections varies from concrete to vinyl asbestos tile to carpeting. A gravel finish is on the built-up roof of the modular addition. The fully insulated building has a suspended acoustical tile ceiling in the existing addition. Air conditioning and heating are provided with six roof-mounted heat pump units. The building is equipped with a fire protection system.

Drawing No.: H-4-62799

Negative No.: 8500147-1

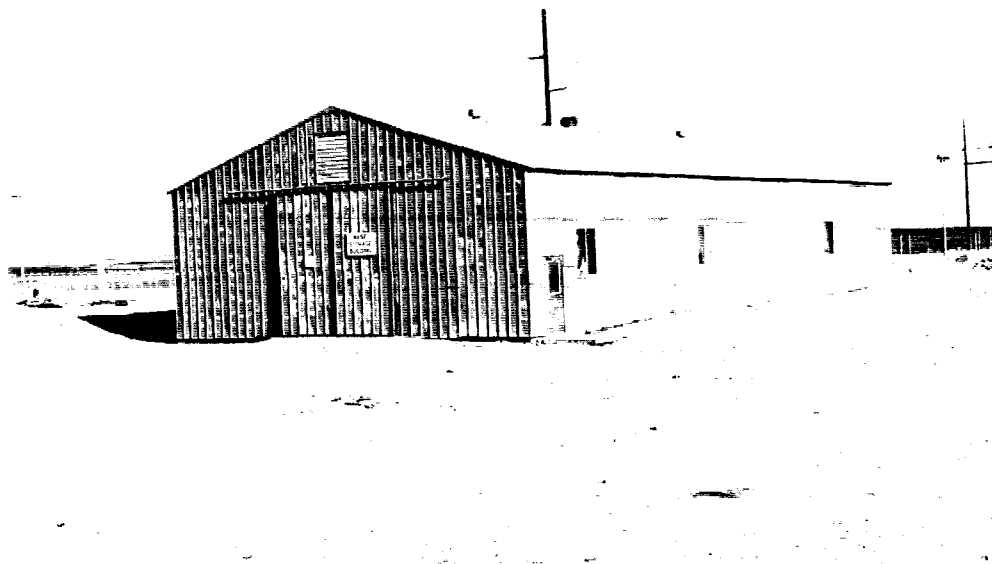
III-42

4713B BUILDING



HEDL 8410-079.32

4713C
WAREHOUSE



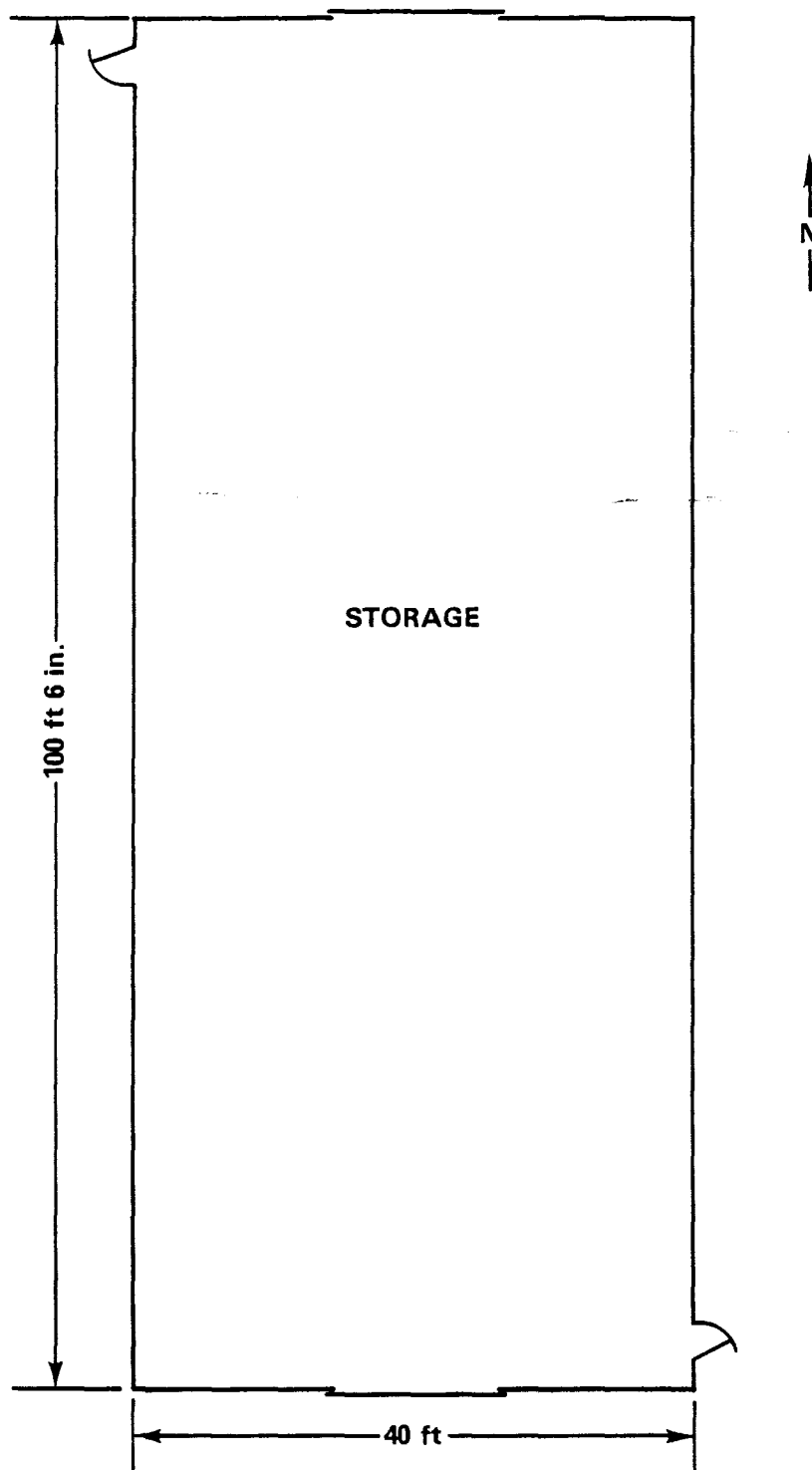
Purpose: To provide a warehouse area for the storage of low-level radioactive materials.

Dimensions: Perimeter: 100-ft 6-in. x 40 ft

Description: The insulated, bolted steel building sits on a concrete slab. Heating is provided with ceiling-suspended units. Fluorescent fixtures light the non-partitioned building. Two 12-ft sliding doors allow for easy movement of materials into and out of the building. The building is equipped with a sprinkler system.

Drawing No.: FSK-70E-182

Negative No.: 8405520-1



HEDL 8410-079.20

4713C BUILDING

III-44

4713D

INTERIM MAINTENANCE AND STORAGE FACILITY



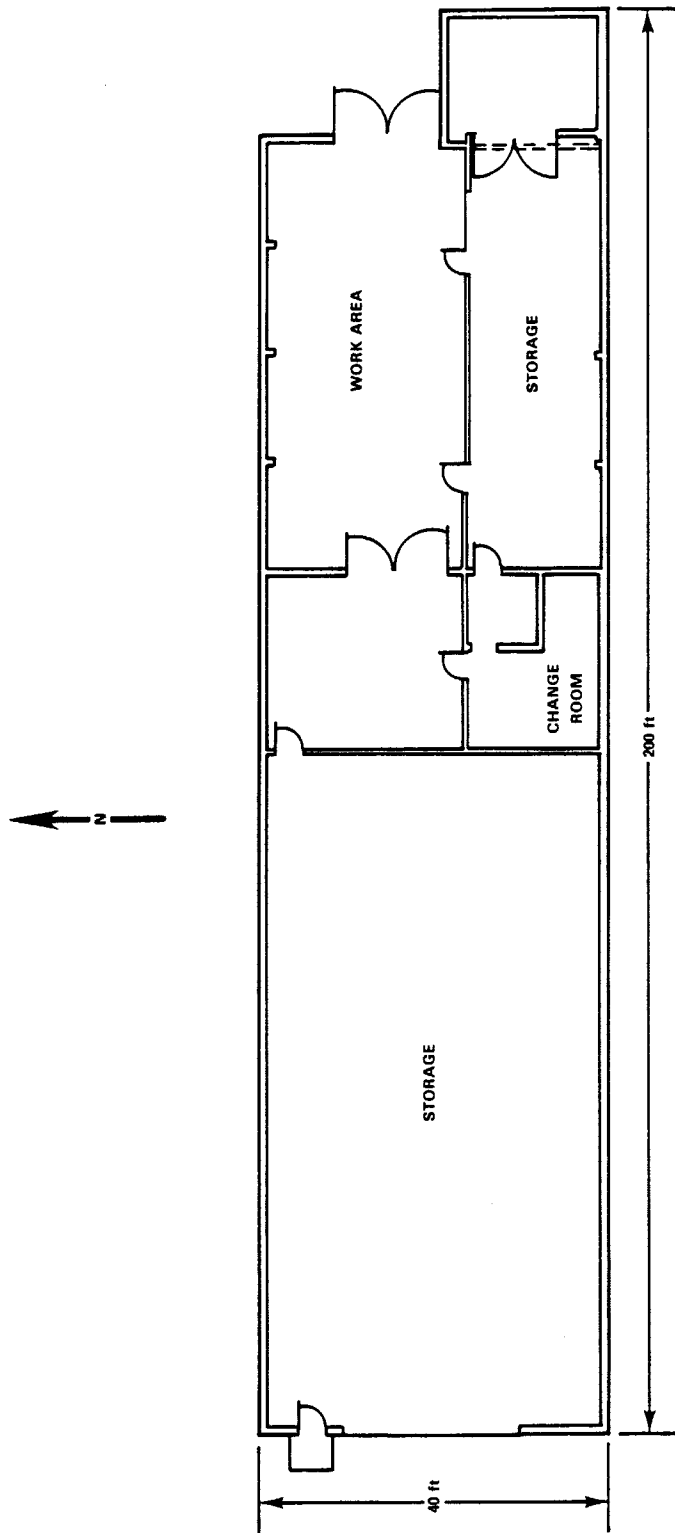
Purpose: To provide space for storage and clean area manipulator maintenance in support of FFTF work activities.

Dimensions:	Perimeter:	200 ft x 40 ft
	Storage Area:	5000 sq ft
	Change Room:	375 sq ft
	Work Area:	1050 sq ft

Description: The insulated bolted steel building is on a concrete slab floor. Heating and cooling are provided by a heat pump. The building also has an exhaust system. A 20-ft sliding door is on the west wall to allow movement of large supplies and equipment into and out of the main storage area. The building is equipped with a fire protection system.

Drawing No.: H-4-61089, H-4-61086

Negative No.: 8405520-8



HEDL 8410-07S.37

4713D BUILDING

4719

MEDICAL AID STATION



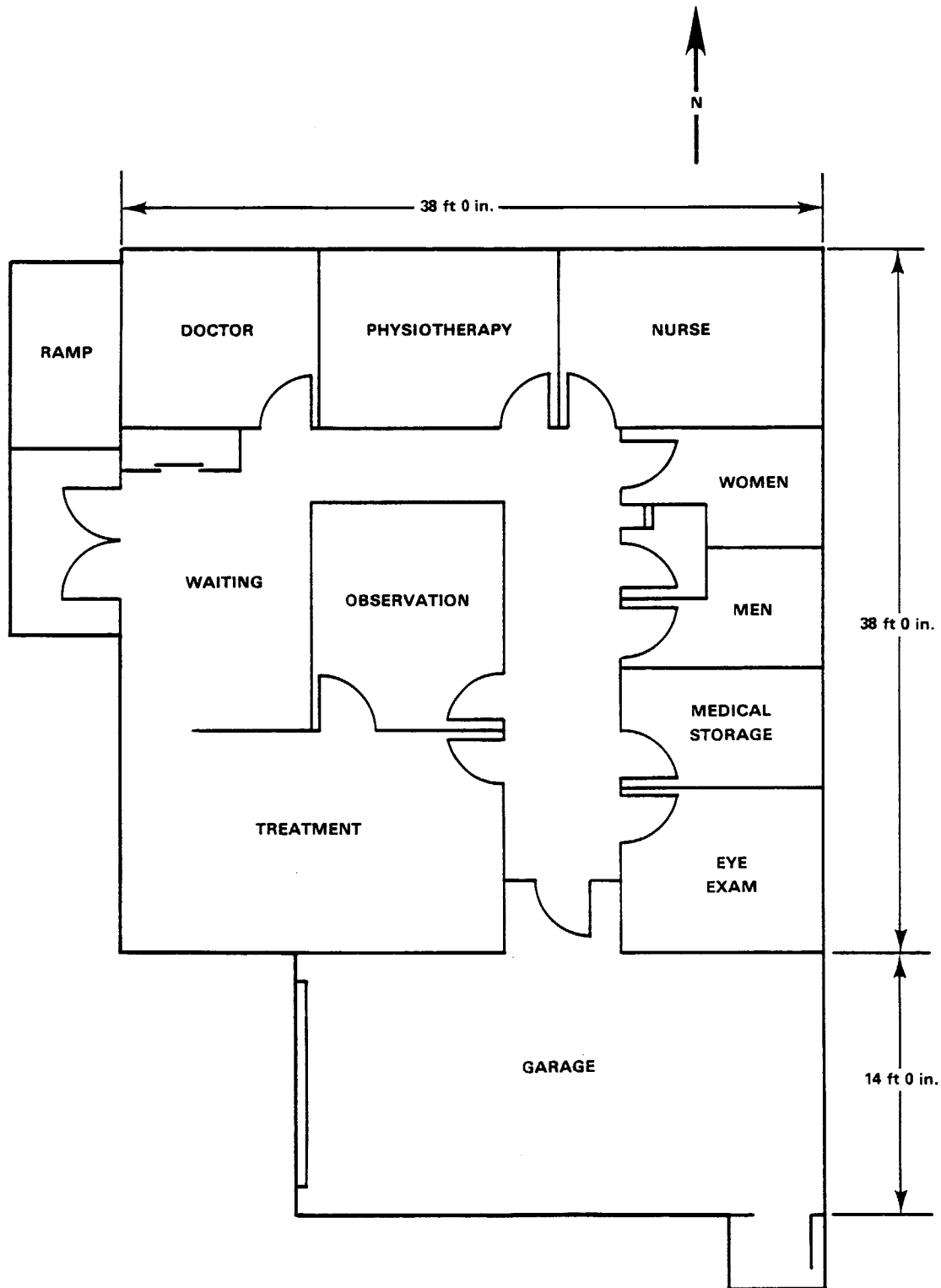
Purpose: To provide for on-site medical aid.

Dimensions:	Perimeter:	38 ft x 38 ft
	Nurse Area:	144 sq ft
	Eye Exam Area:	91 sq ft
	Med Storage:	70 sq ft
	Observation:	120 sq ft
	Treatment:	250 sq ft
	Waiting Area:	126 sq ft
	Doctor Area:	102 sq ft
	Physiotherapy:	130 sq ft
	Garage:	392 sq ft

Description: The building is wood frame with an exposed aggregate composite exterior on a concrete foundation. The insulated building has an interior finish of 5/8-in. gypsum wall board and a suspended acoustical tile ceiling and a tile floor. Heating and cooling needs are provided by a heat pump with electric resistance heaters. The building has a fire protection system and fluorescent lighting throughout.

Drawing No.: H-4-150557

Negative No.: 8405520-26

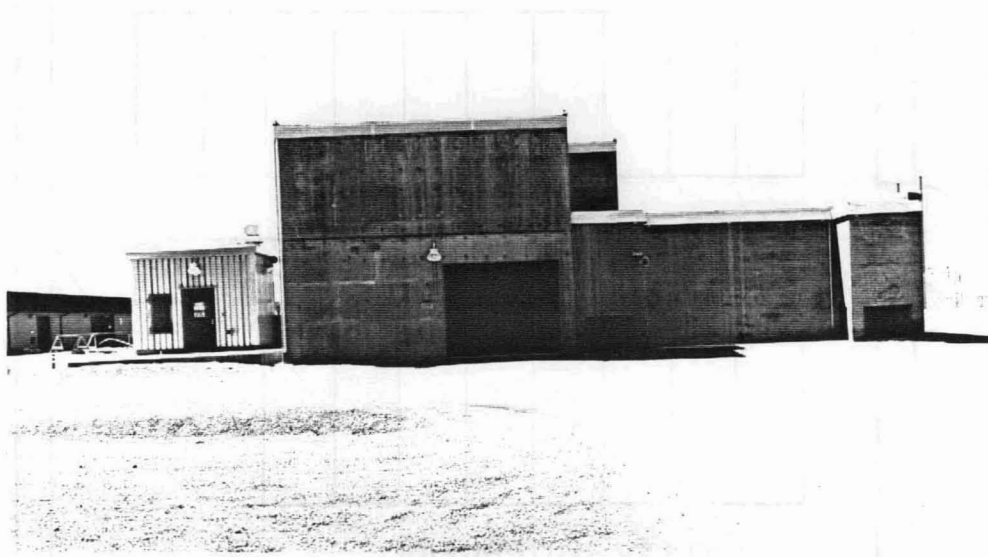


HEDL 8410-079.30

4719 BUILDING

4721

FFTF EMERGENCY GENERATOR FACILITY



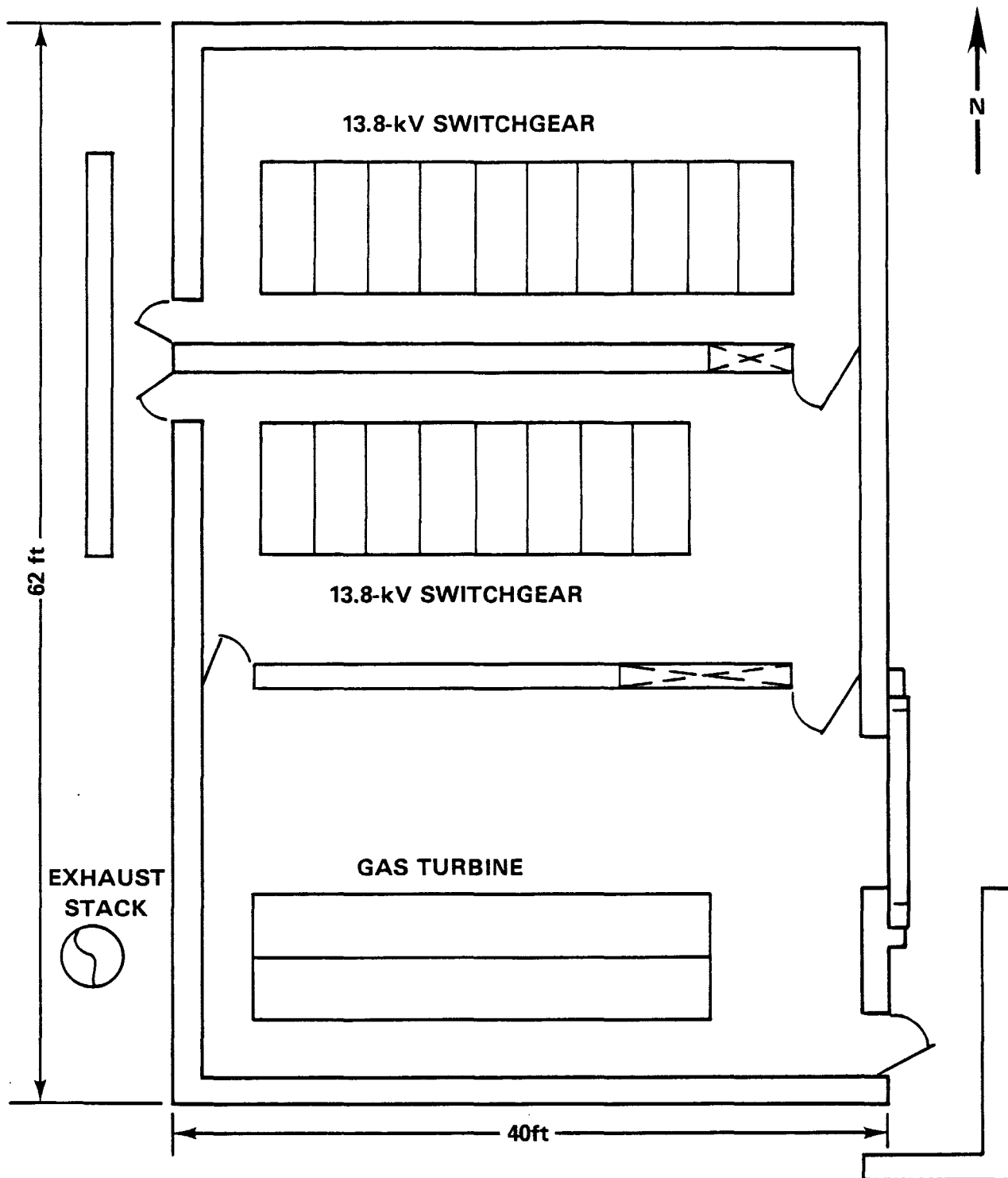
Purpose: To provide for the emergency power, 3-MW gas turbine generator and switchgear.

Dimensions:	Perimeter:	40 ft x 62 ft
	Turbine Area:	410 sq ft
	Switchgear Area:	630 sq ft

Description: The concrete building rests on a concrete floor on top of sheet pilings. The tornado-hardened opening is off the gas turbine area. The generator set and auxiliaries are sized to power Emergency Power Systems 1, 2, and 3, as well as 4, if the main and alternate electrical services are lost. A single diesel generator can supply 3000 kW of power if the offsite power supply is lost.

Drawing No.: H-4-63100

Negative No.: 8405520-44

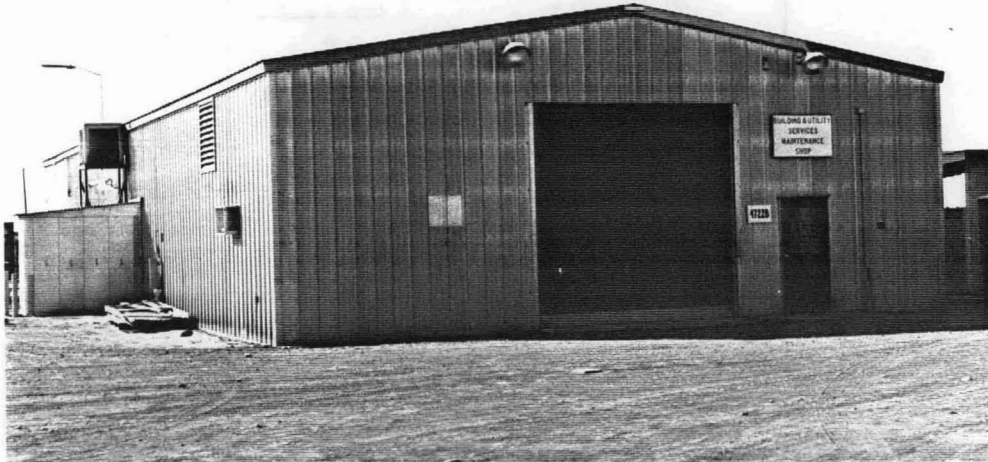


HEDL 8410-079.18

4721 BUILDING

4722B

SITE SERVICES MAINTENANCE SHOP



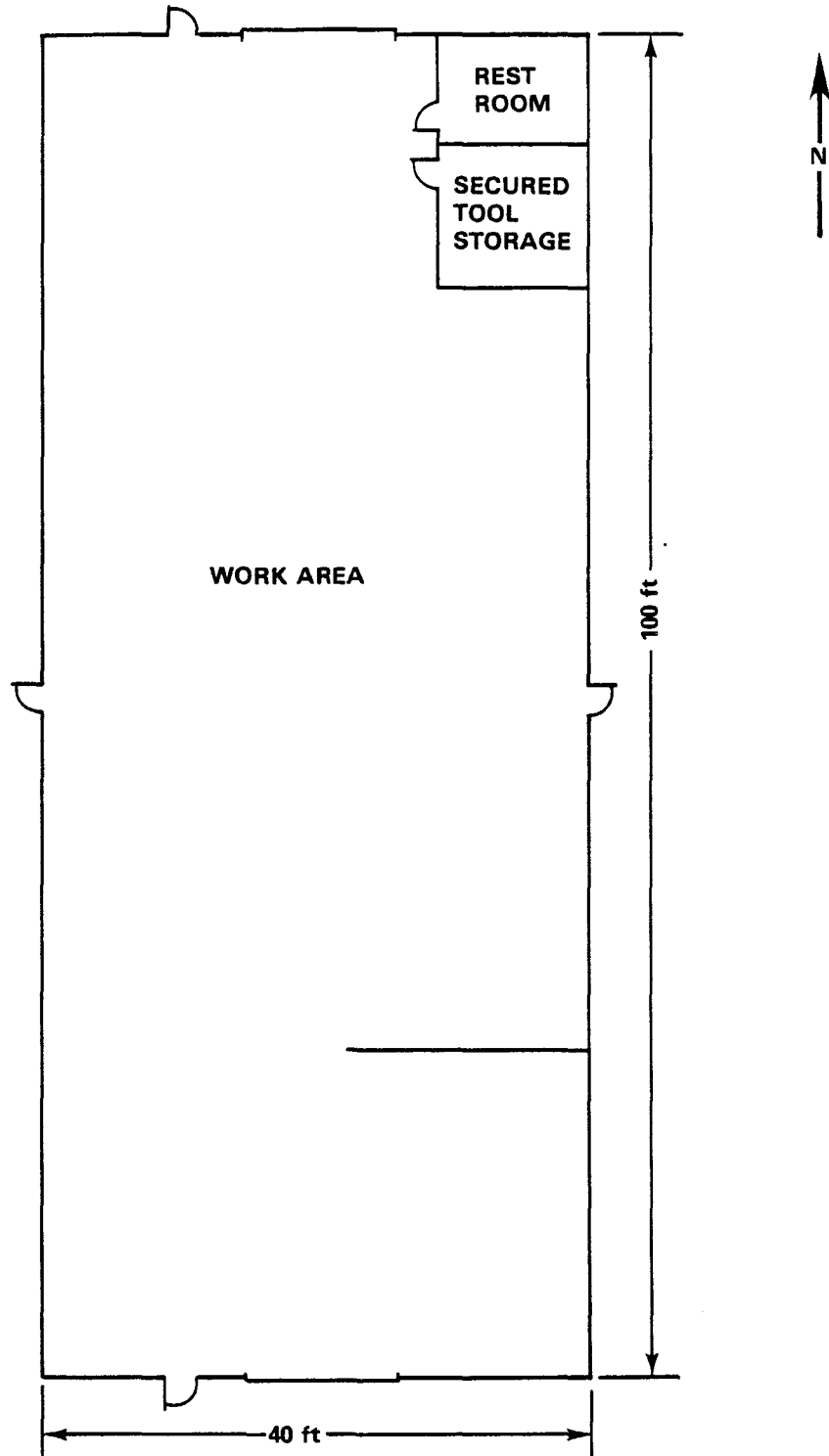
Purpose: To provide space for the Site Services Carpenter Shop and floor service storage area.

Dimensions: Perimeter: 100 ft x 40 ft
Office: 100 sq ft
Work Area: 2900 sq ft

Description: The insulated bolted steel building is on a concrete slab. The building has fluorescent lighting and is heated and cooled by a heat pump. Two 12-ft roll-up doors on the north and south provide for material access into and out of the building. The building is equipped with a fire protection system.

Drawing No.: F4-5E-1094, F4-5E-1090

Negative No.: 8406668-9

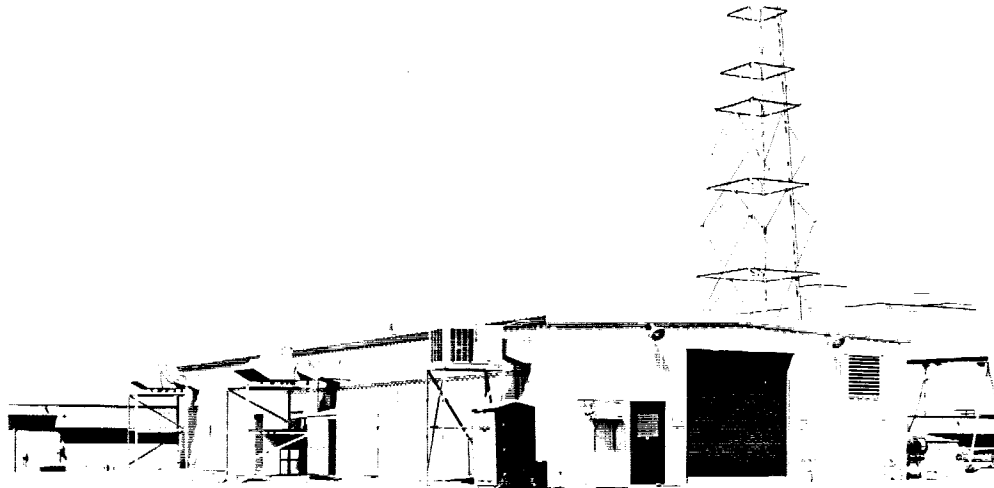


HEDL 8410-079.19

4722B BUILDING

4722C

SITE SERVICES MAINTENANCE SHOP



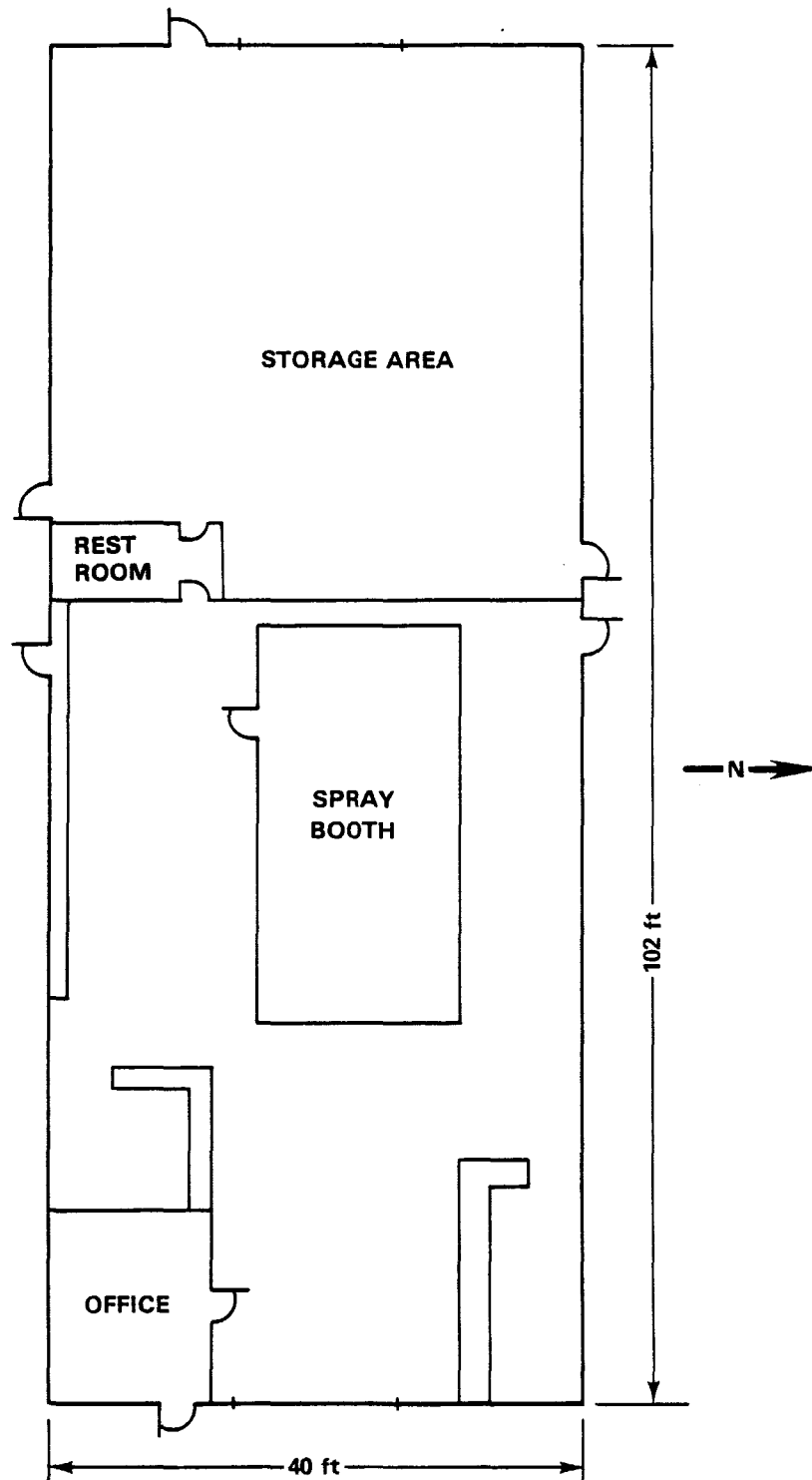
Purpose: To provide space for the Site Services Paint Shop. The west end of the building is used for paint storage.

Dimensions:	Perimeter:	102 ft x 40 ft
	Office:	156 sq ft
	Storage/Work Space:	3900 sq ft

Description: The fully insulated bolted steel building is on a concrete slab floor. Hanging space heaters provide for heating, and a swamp cooler and wall units provide for cooling. The building has fluorescent industrial lighting fixtures. Two 12-ft roll-up doors on the east and west walls allow for material movement into and out of the building. The building has a fire protection system.

Drawing No.: F4-5E-960

Negative No.: 8405520-24



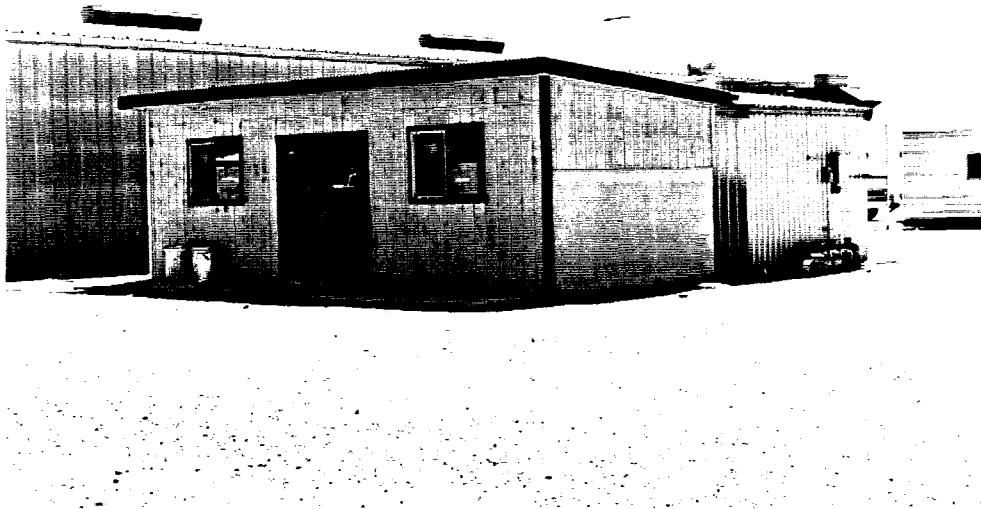
HEDL 8410-079.7

4722C BUILDING

III-54

4726

STORAGE



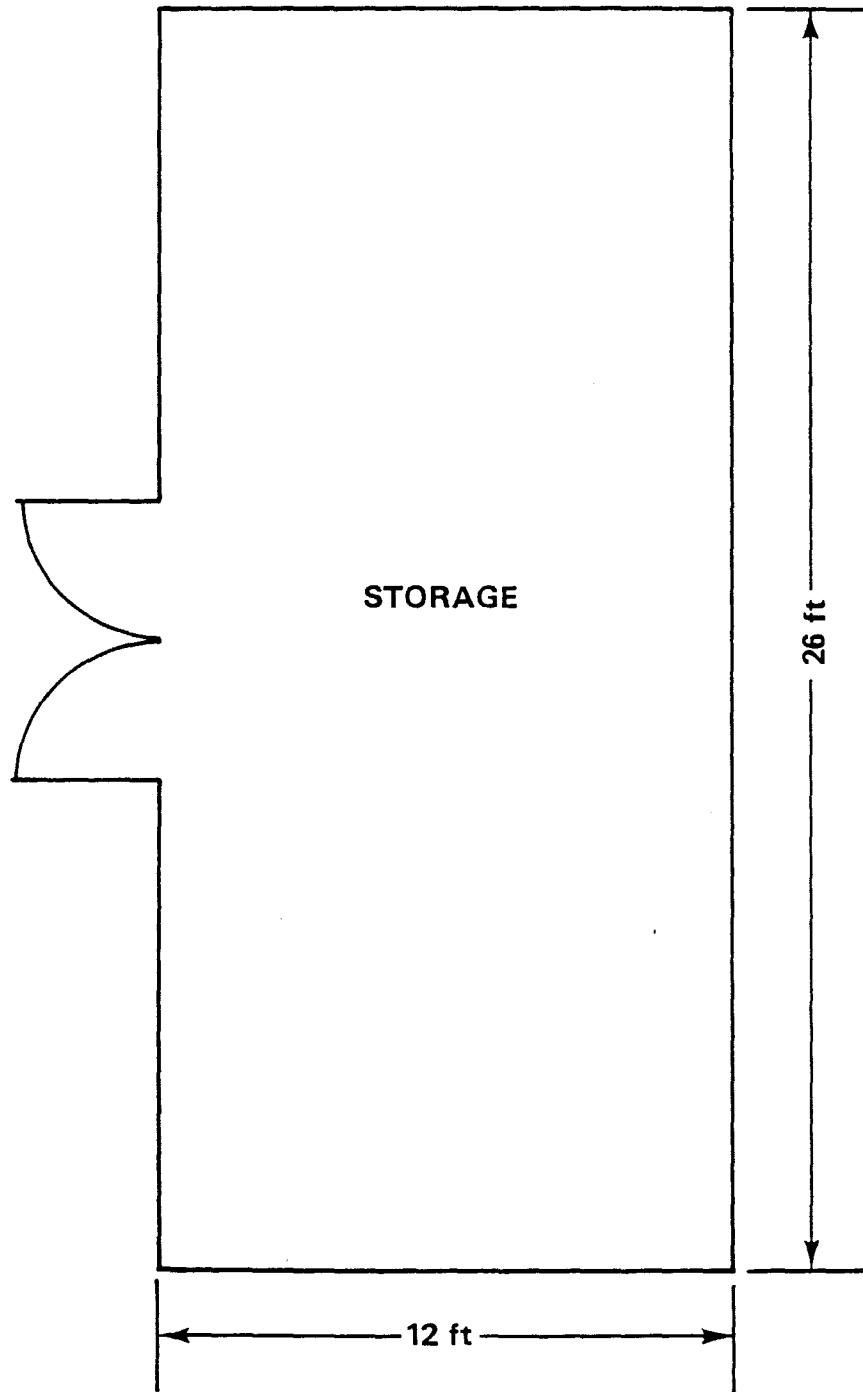
Purpose: To provide miscellaneous storage space.

Dimensions: Perimeter: 12 ft x 26 ft
Storage Area: 270 sq ft

Description: The wood frame and concrete block building has a plywood siding exterior finish. The floor is a concrete slab. Two resistance heaters are suspended from the ceiling.

Drawing No.: None

Negative No.: 8405520-32

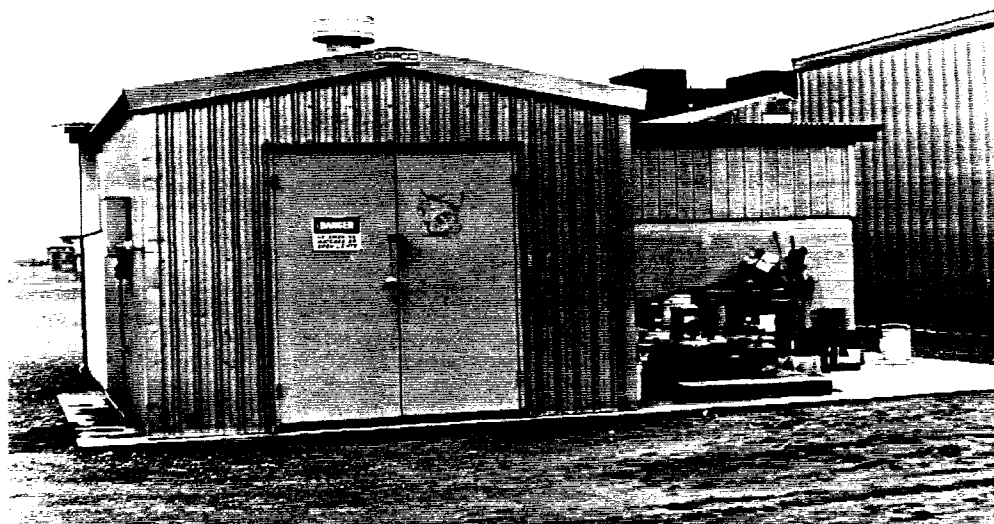


4726 BUILDING

HEDL 8410-079.8

4727

FLAMMABLE STORAGE



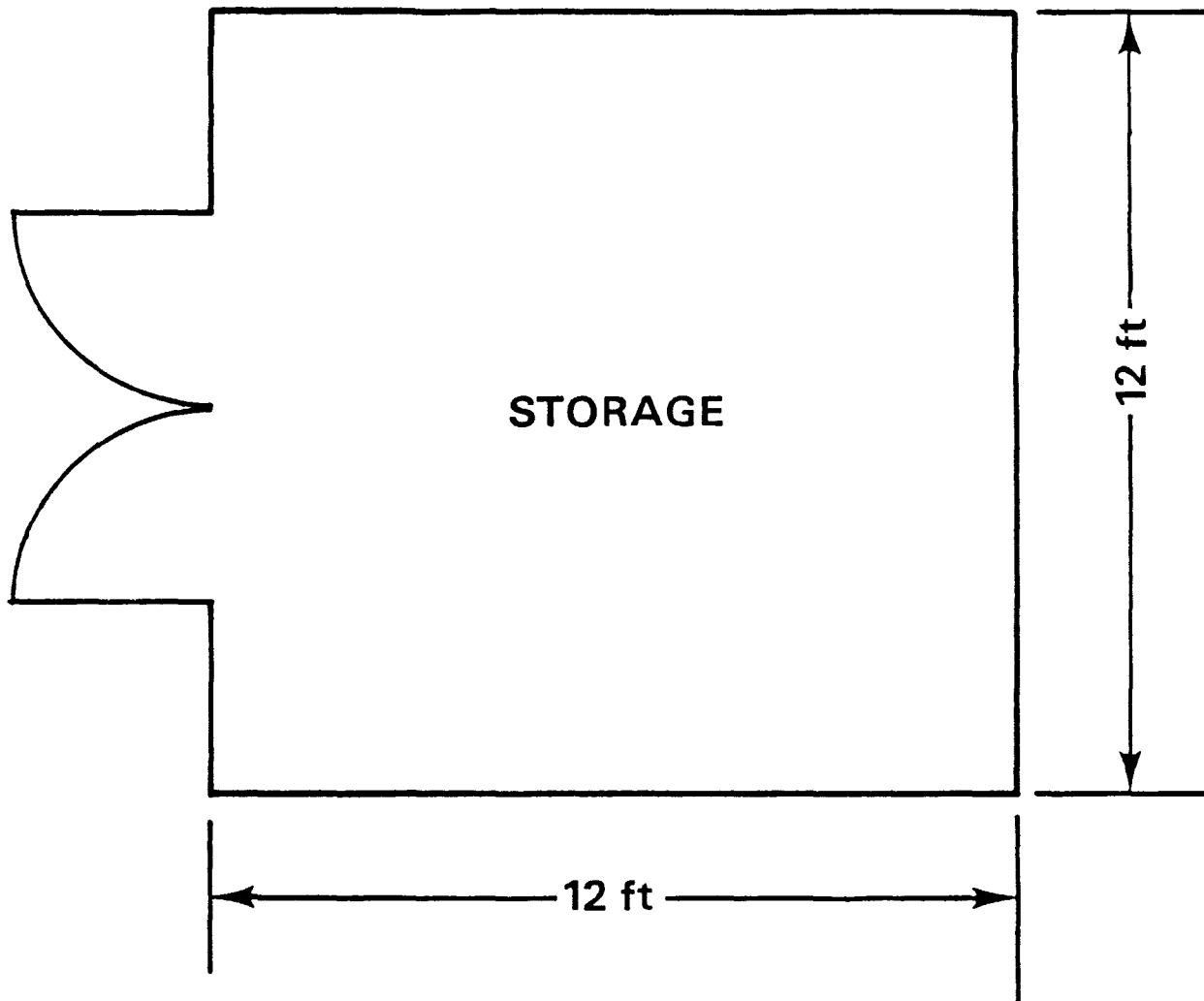
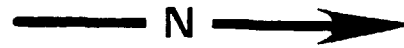
Purpose: To provide for flammable liquid storage. The flammable materials consist of gasoline, bulk paint, oil, and kerosine.

Dimensions: Perimeter: 12 ft x 12 ft

Description: The small metal building is resting on a concrete slab. The building has explosion-proof features and is equipped with an exhaust system.

Drawing No.: F26-5E-705

Negative No.: 8406851-3



HEDL 8410-079.9

4727 BUILDING

III-58

4732A

WAREHOUSE



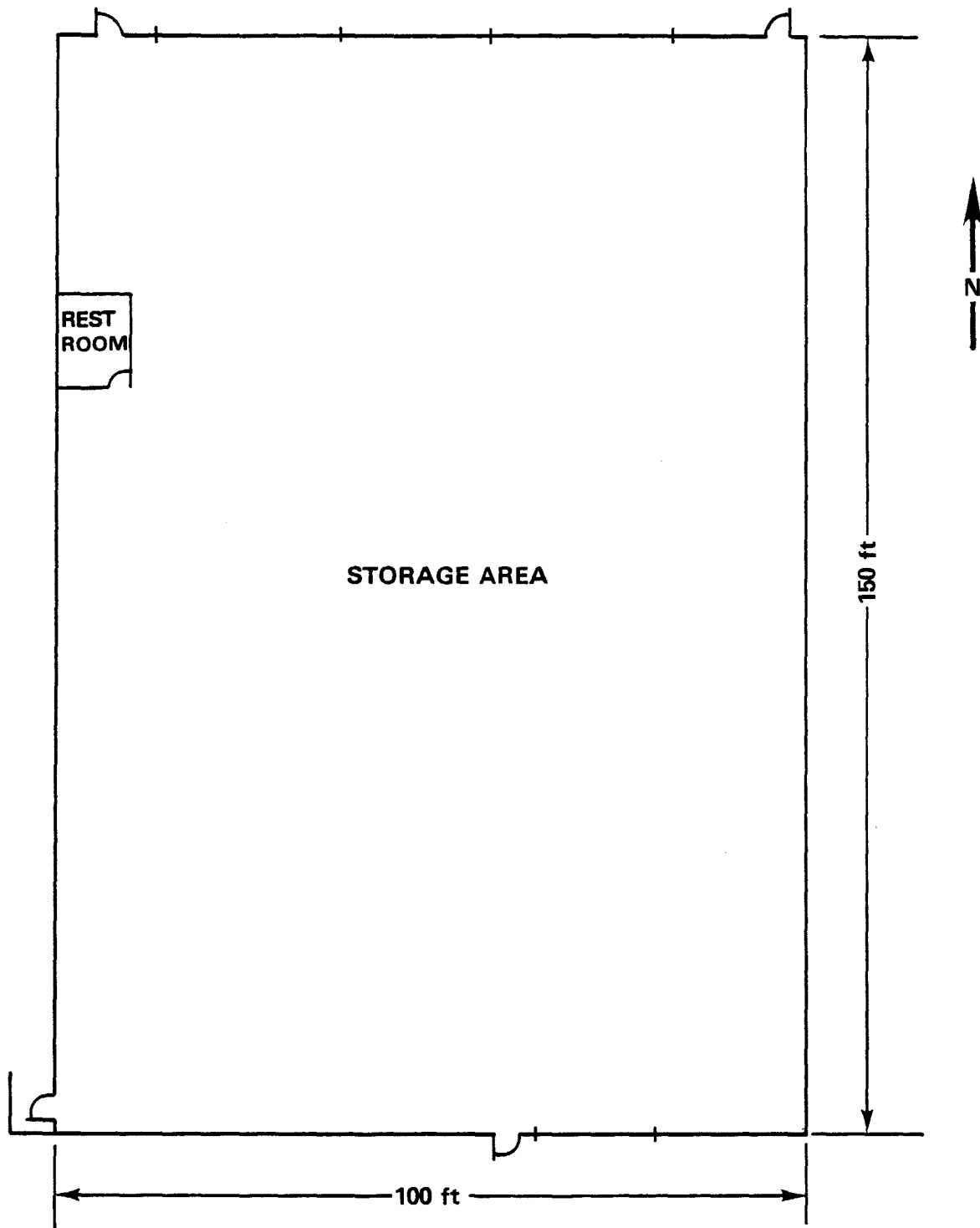
Purpose: To provide for warehouse receiving and storage for the 400 Area.

Dimensions: Perimeter: 150 ft x 100 ft
Storage Area: 14900 sq ft

Description: The insulated, bolted steel building has six unit heaters and a swamp cooler. The floor is a concrete slab and lighting is provided with fluorescent industrial fixtures. Two large roll-up doors are situated on the north wall of the building. A smaller roll-up door is located on the south end of the building. The building has a fire protection sprinkler system.

Drawing No.: F4-4E-1690

Negative No.: 8406668-13



HEDL 8410-079.10

4732A BUILDING

III-60

4732B
WAREHOUSE



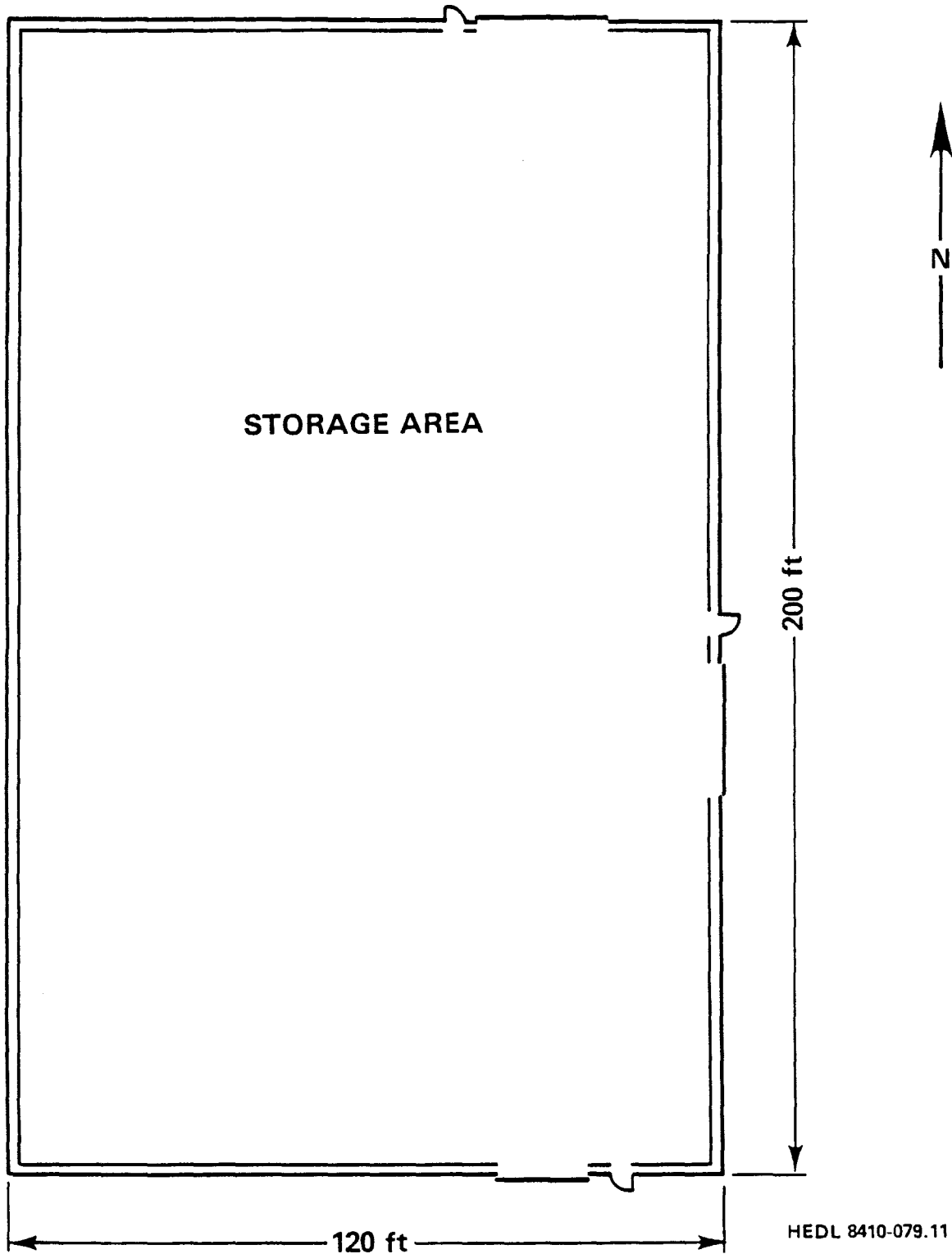
Purpose: To provide a general storage warehouse for the 400 Area.

Dimensions: Perimeter: 120 ft x 200
Storage Area: 23,900 sq ft

Description: The insulated metal building is on a concrete slab floor. Heating is provided with eight unit heaters. Three exhaust fans are provided for ventilation. Lighting is from fluorescent industrial fixtures. Two 20-ft roll-ups doors allow for easy access into and out of the building. A fire protection sprinkler system is in the building.

Drawing No.: H-4-65967

Negative No.: 8405520-14

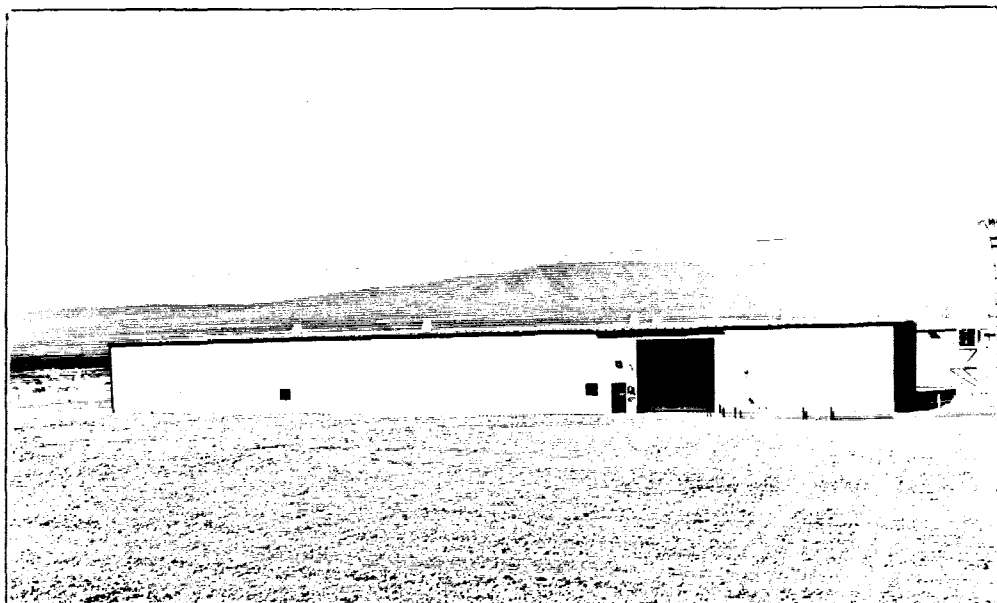


HEDL 8410-079.11

4732B BUILDING

4732C

WAREHOUSE



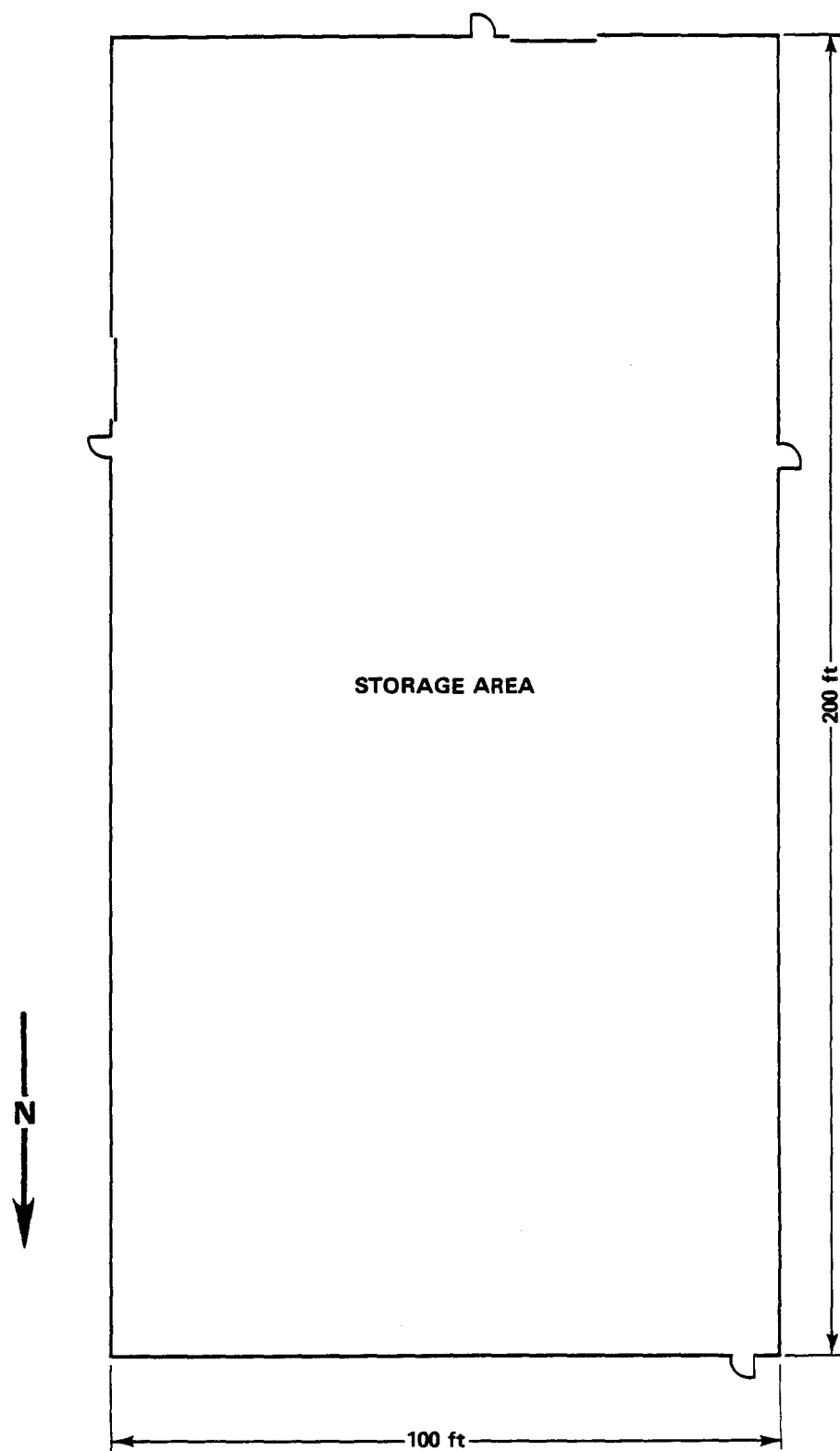
Purpose: To provide a general storage warehouse for the 400 Area.

Dimensions: Perimeter: 100 ft x 200 ft
Storage Area: 19,900 sq ft

Description: The building is constructed using steel panels on a steel frame. The floor is a concrete slab. The insulated building has suspended unit heaters and fluorescent industrial lighting. Roll-ups doors allow for material access into and out of the building. The building has a dry fire protection sprinkler system.

Drawing No.: H-4-200189

Negative No.: 8405520-16

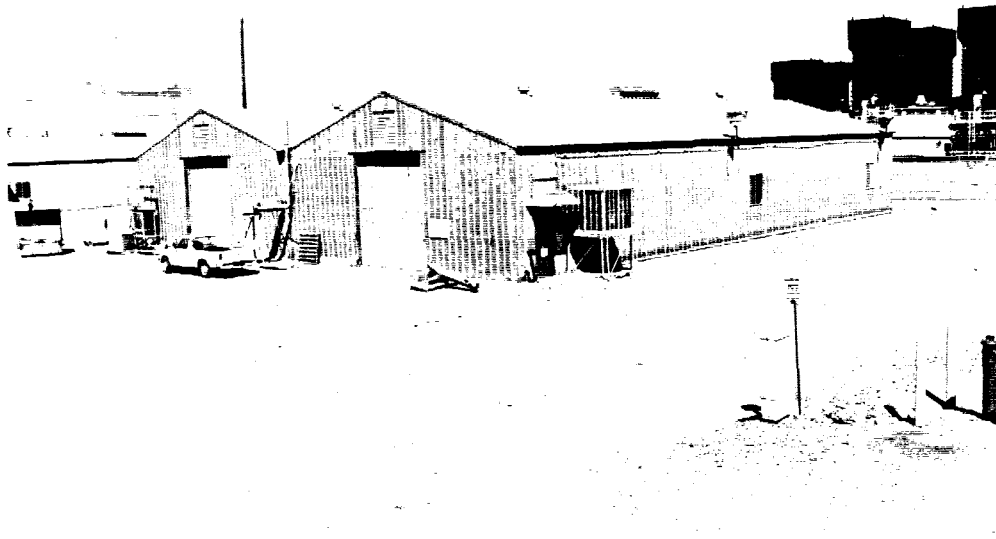


HEDL 8410-079.13

4732C BUILDING

4734B

SITE SERVICES MAINTENANCE SHOP



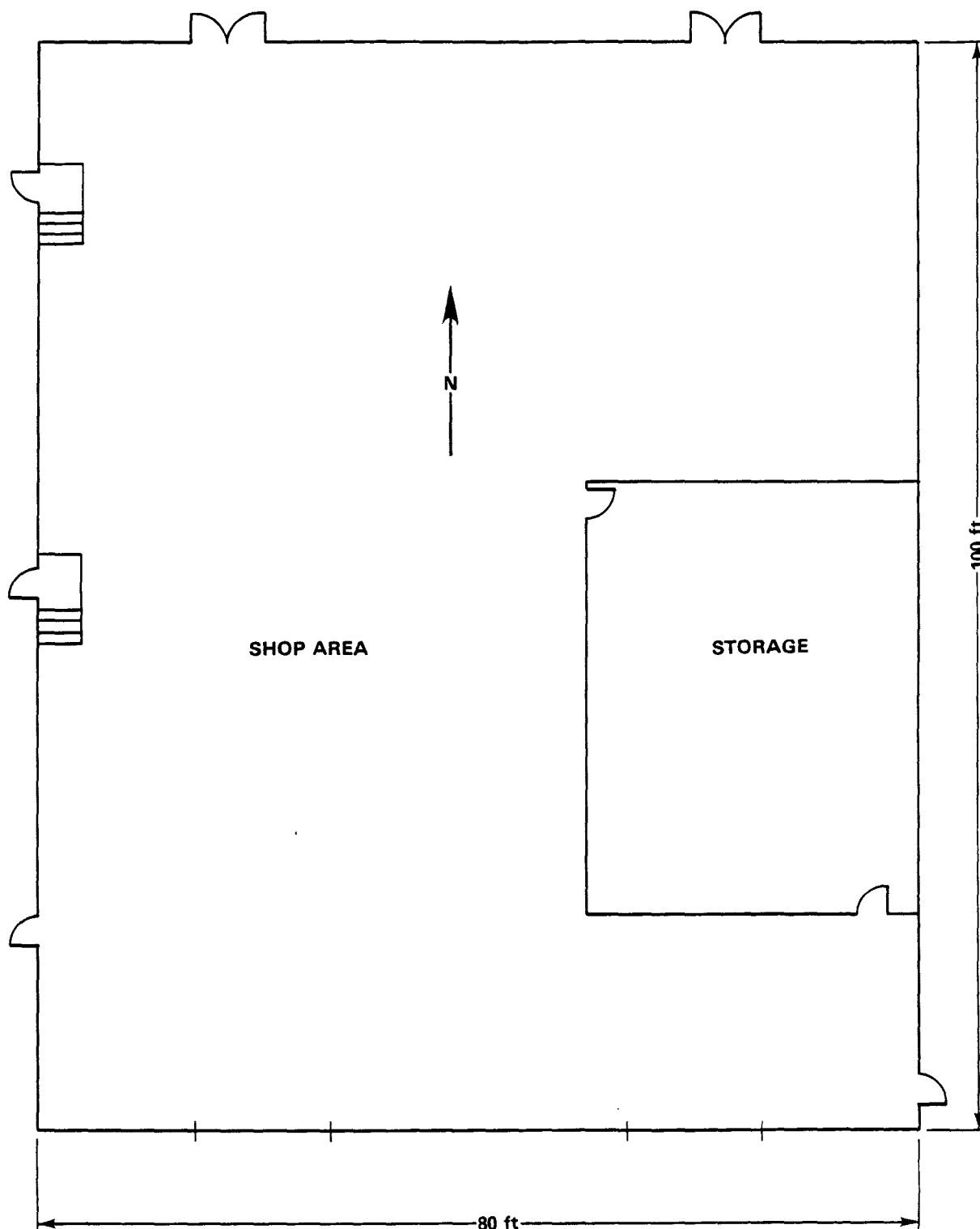
Purpose: To provide a work area for Site Services electrical and mechanical maintenance activities and a storage area for plumbing, electrical, and sheetmetal supplies, along with some general supplies.

Dimensions: Perimeter: 100 ft x 80 ft
Storage Area: 940 sq ft
Work Area: 7900 sq ft

Description: The building is bolted steel on a concrete slab floor. A heat pump heats and cools this building. The insulated building has fluorescent industrial lighting fixtures. The building is equipped with a fire protection system.

Drawing No.: F4-5E-125

Negative No.: 8405520-21



HEDL 8410-079.15

4734B BUILDING

4734C
WAREHOUSE



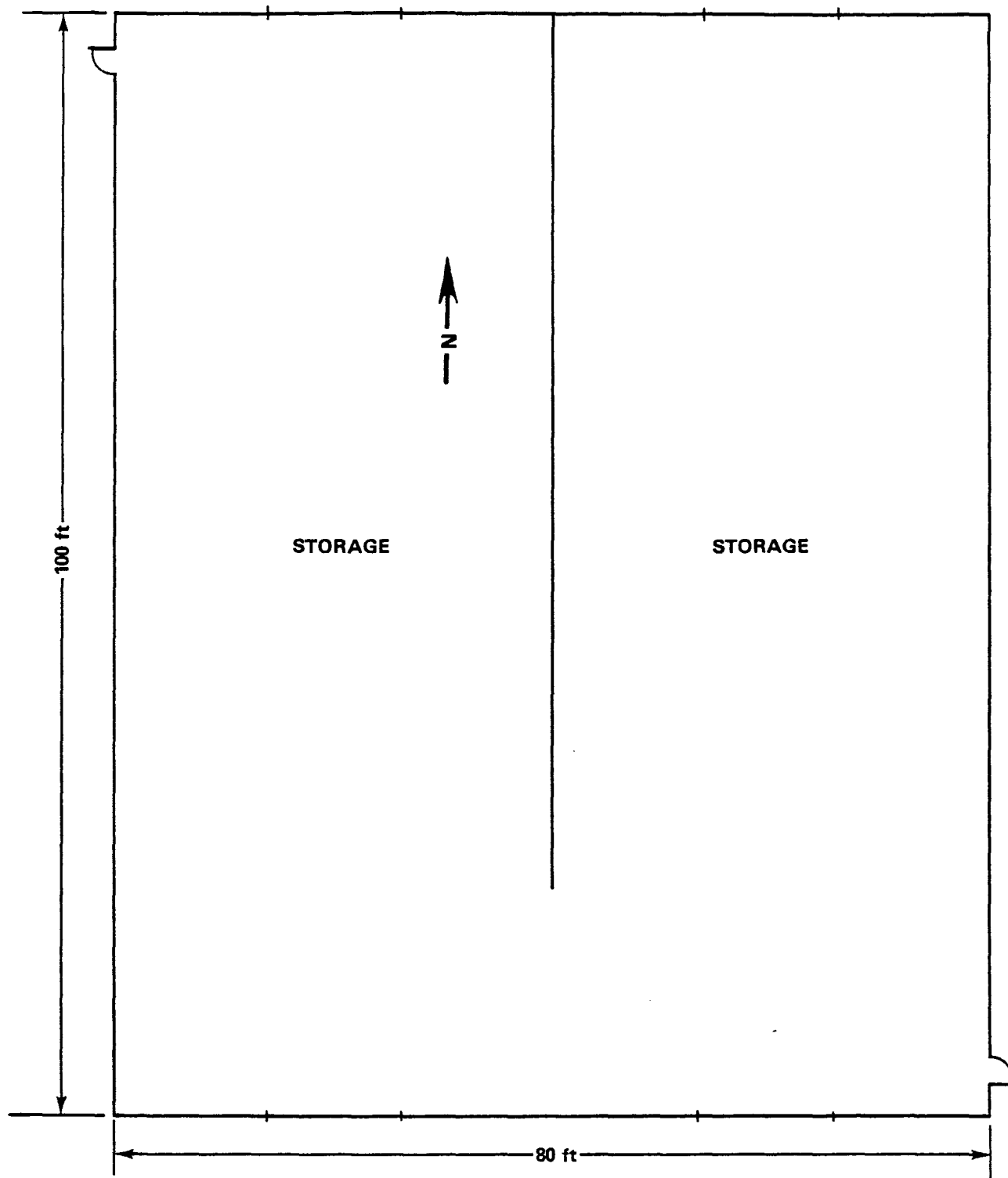
Purpose: To provide a general storage warehouse for the 400 Area.

Dimensions: Perimeter: 100 ft x 80 ft
Storage Space: 7800 sq ft

Description: The fully insulated building has bolted steel panels on a steel frame. Ceiling-suspended unit heaters provide for heating. The floor is a concrete slab. The lights are fluorescent industrial fixtures. Four 12-ft doors allow for material movement into and out of the building. The building has a fire protection system.

Drawing No.: None

Negative No.: 8405520-18



HEDL 8410-079.12

4734C BUILDING

III-68

4734D

WAREHOUSE



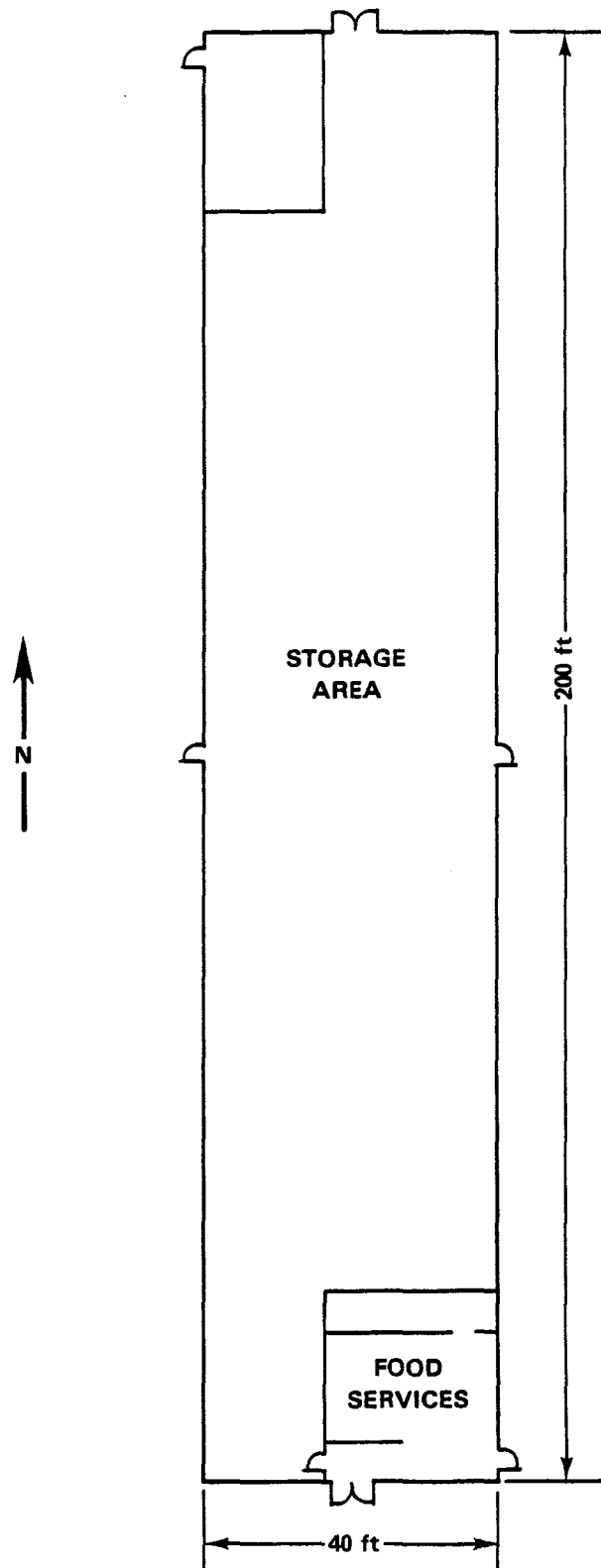
Purpose: To provide space for 400 Area custodial supplies and equipment storage. A small area in the southeast part of the building is used for food services. A section is also used as a lunch room.

Dimensions:	Perimeter:	40 ft x 200 ft
	Food Services:	600 sq ft
	Lunch Room:	380 sq ft
	Storage Area:	6550 sq ft

Description: The fully insulated bolted steel building rests on a concrete slab floor. Heating in the main section of the building is provided with ceiling-suspended heating units. Cooling and heating for the Food Services is provided by means of a heat pump. A swamp cooler is used to cool the supply and equipment area. Fluorescent fixtures provide light.

Drawing No.: FSK70E181

Negative No.: 8405520-17



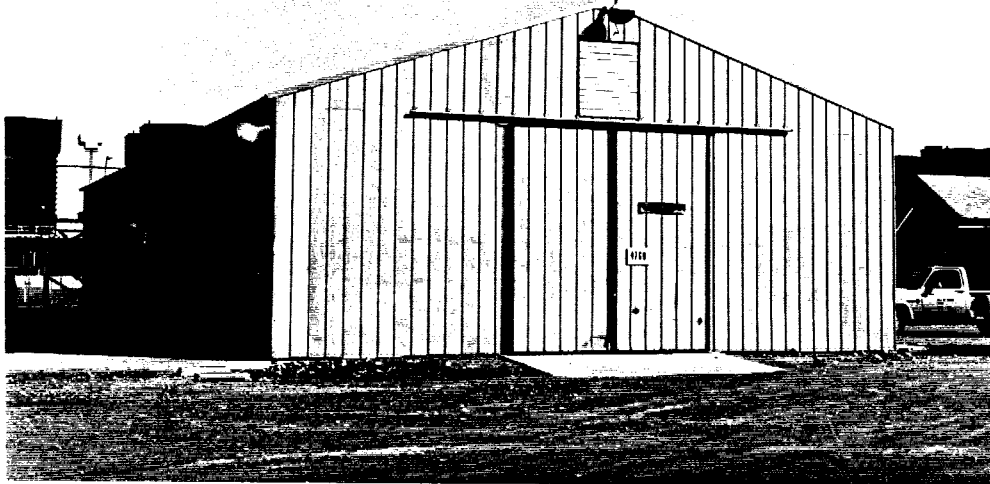
HEDL 8410-079.16

4734D BUILDING

III-70

4760

CONSTRUCTION CONTRACTOR SHOP



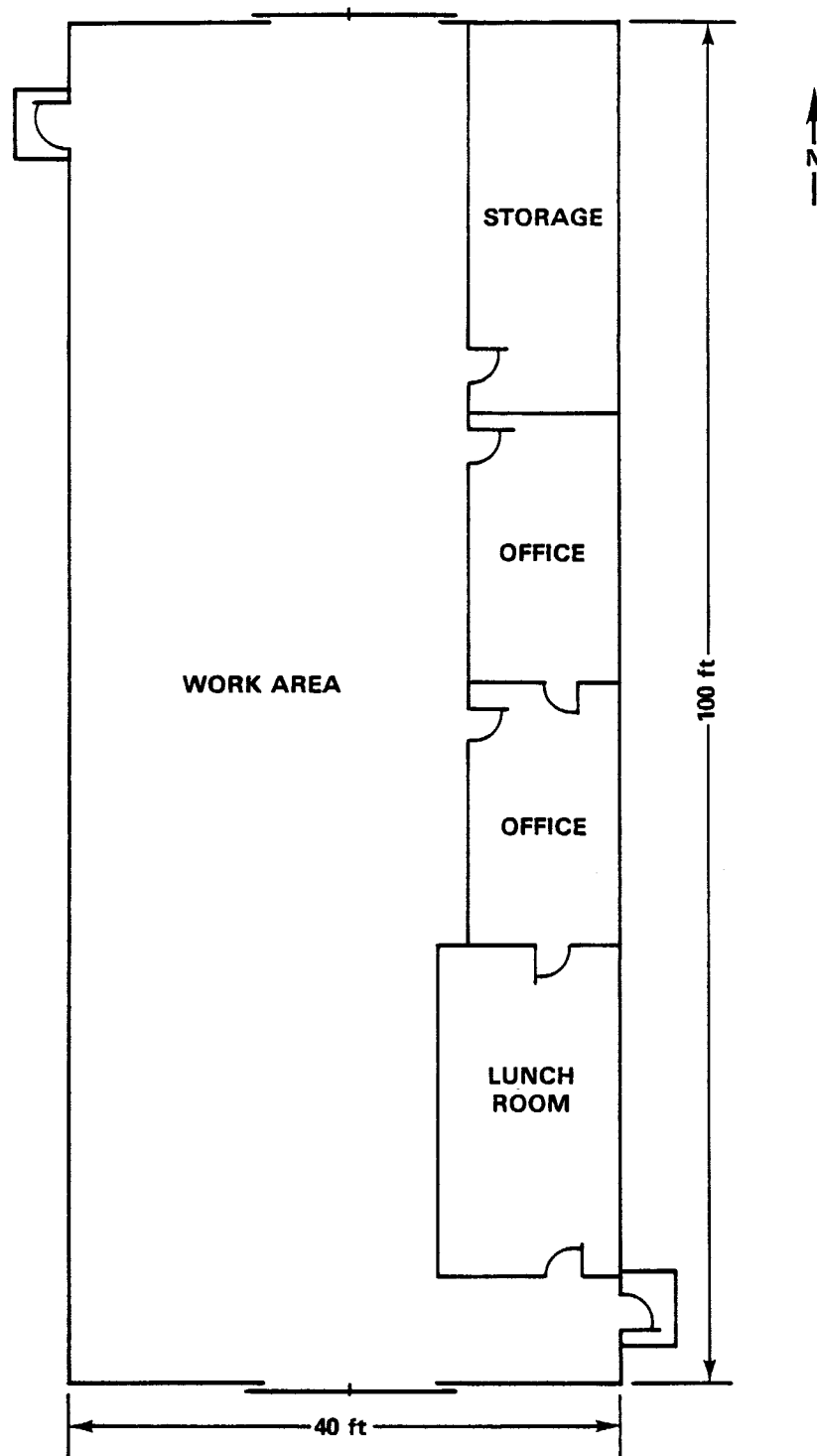
Purpose: To provide space for the craft shops used by Kaiser Engineers' construction forces.

Dimensions: Perimeter: 100 ft x 40 ft

Description: The insulated bolted steel building sits on a concrete slab floor. Some air conditioning is provided with wall units and heating is provided with ceiling-suspended unit heaters. Large sliding doors on both ends of the building allow for easy material access to the building.

Drawing No.: F4-5E-124

Negative No.: 8406668-21



HEDL 8410-079.17

4760 BUILDING

III-72

4790

PATROL HEADQUARTERS



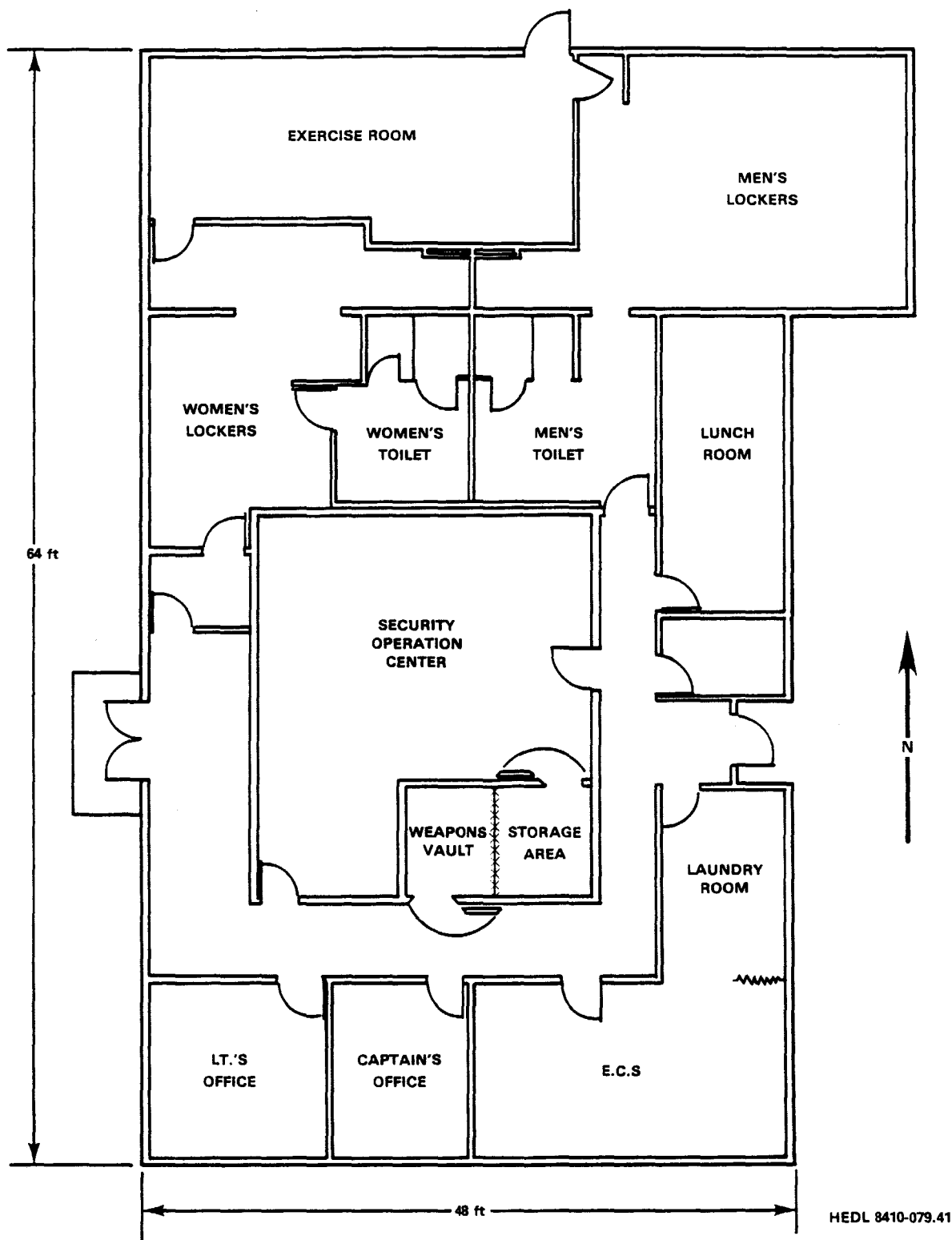
Purpose: To provide space for the 400 Area Patrol personnel and the Security Operation Center.

Dimensions:	Perimeter:	48 ft x 64 ft
	New Addition Perimeter:	57 ft x 20 ft
	Office:	299 sq ft
	Entry Control System:	425 sq ft
	Security Operations Center:	580 sq ft
	Weapons Storage:	115 sq ft
	Lunch Room:	202 sq ft
	Exercise Room:	440 sq ft
	Men's Locker Room:	456 sq ft
	Women's Locker Room:	312 sq ft

Description: An aggregate exterior siding covers the fire walls of this building. The built-up roofing is on a 1-1/2 in. metal deck. The Security Operations Center has a self-contained HVAC unit. The rest of the building is on a separate heat pump. The concrete slab floor is covered with vinyl tile. The building is equipped with a fire protection system.

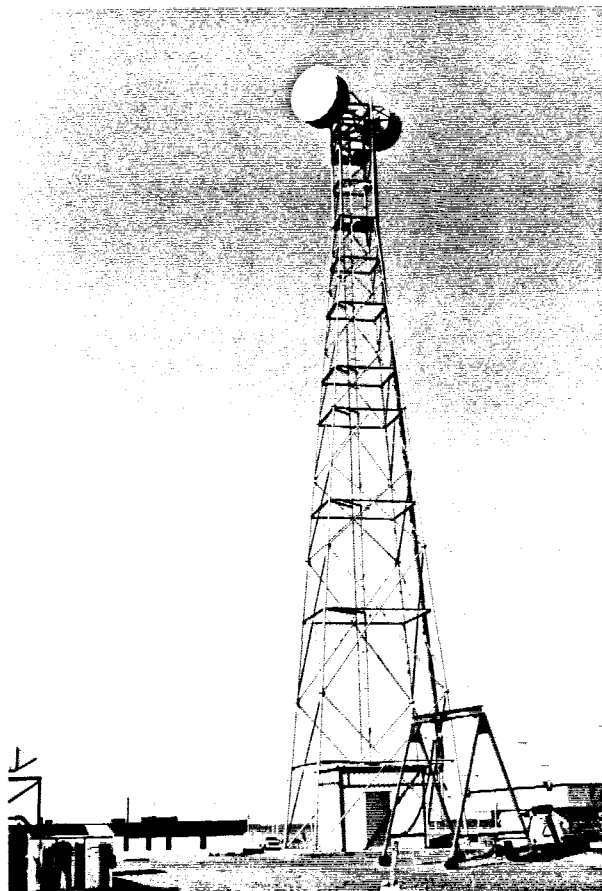
Drawing No.: H-4-61028, H-4-155732

Negative No.: 8405520-27



4790 BUILDING

4790A
MICROWAVE TOWER



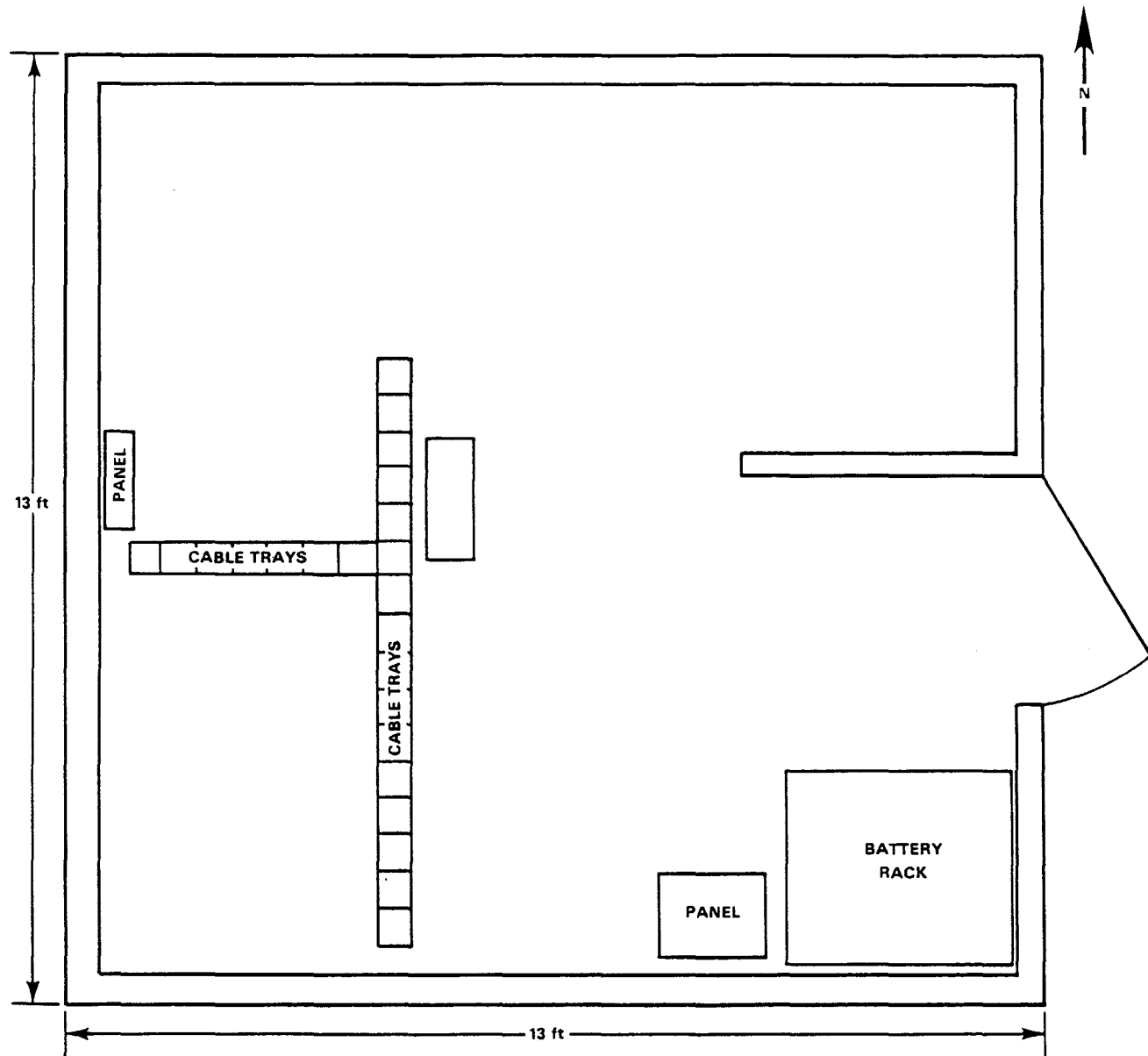
Purpose: To provide data and power communications for the southern part of the Hanford Site and an interloop tie at Gable Mountain. Areas that are tied together with the 400 Area are 200E, 200W, 100N and the 300 Area.

Dimensions: Tower Height: 100 ft
Building Perimeter: 13 ft x 13 ft
Area: 144 sq ft

Description: The fully insulated building has a wall air conditioning unit and an electric heater. The building rests on a concrete slab. The grounded tubular steel tower rests on a large concrete base. Two microwave dishes are supported by the tower.

Drawing No.: H-4-155541, H-5-863

Negative No.: 8406668-18



HEDL 8410-079.43

4790A BUILDING

4791TC

FUEL CYCLE PLANT MODEL BUILDING



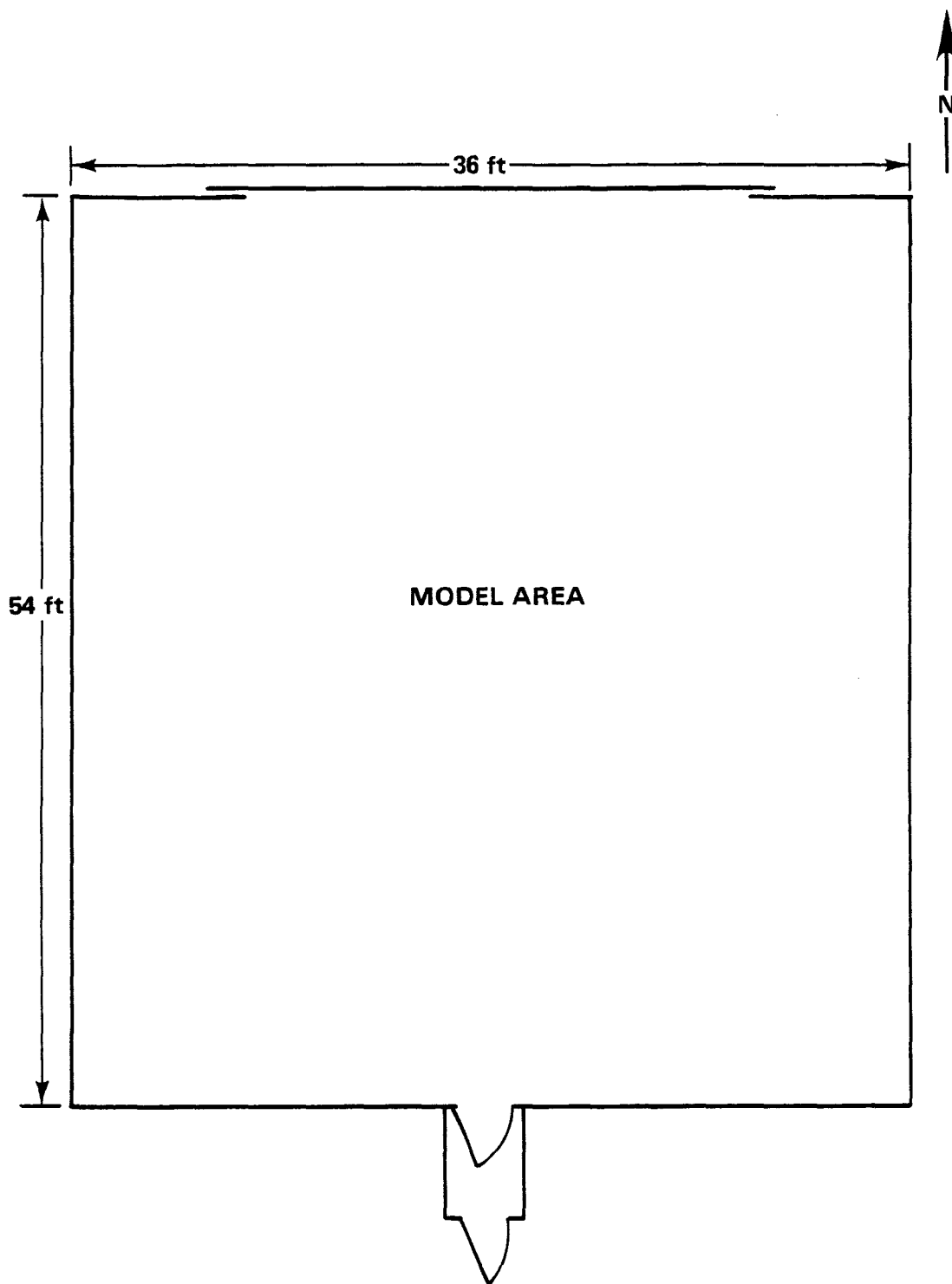
Purpose: To provide space for the model of the FCP and miscellaneous storage.

Dimension: Perimeter: 54 ft x 36 ft

Description: The metal building is on a concrete slab covered with carpet. The interior is finished with sheetrock and paneling. A single wall unit is used for air conditioning. Baseboard heaters provide for heating. A large sliding door is on the north end of the building.

Drawing No.: None

Negative No.: 8405520-34



HEDL 8410-079.1

4791TC BUILDING

4802

CONSTRUCTION OFFICE BUILDING



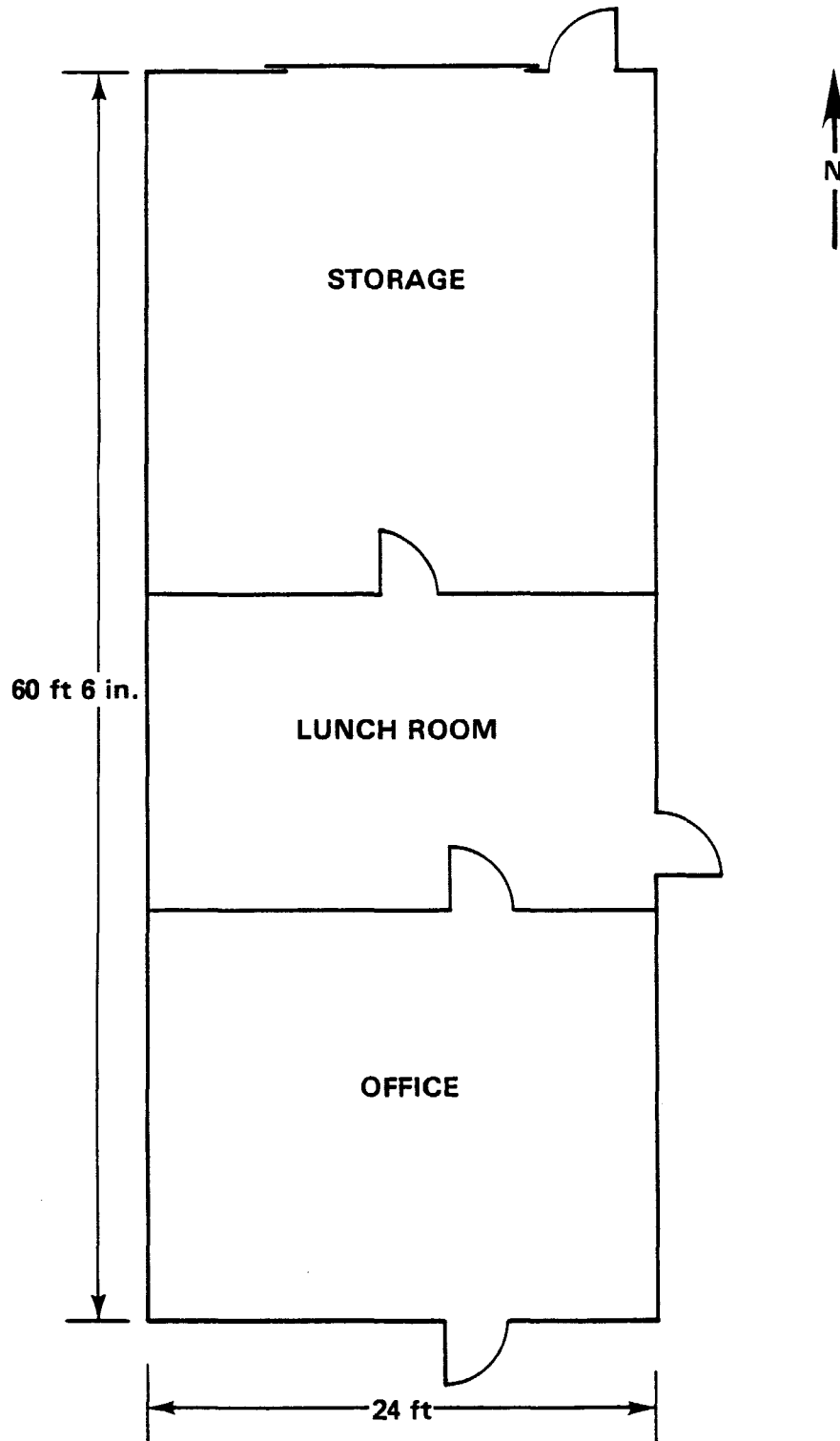
Purpose: To provide office space, lunch room, and a small storage area for the FCP construction crew.

Dimensions:	Perimeter:	60 ft 6 in. x 24 ft
	Storage Area:	575 sq ft
	Lunch Room:	340 sq ft
	Office Area:	458 sq ft

Description: The bolted steel building is on a concrete slab floor. The interior of the building is finished with wall board. Small air conditioning wall units cool the building, and baseboard heaters provide heat. Fluorescent fixtures provide lighting. A 12-ft sliding door is located on the north side of the building.

Drawing No.: None

Negative No.: 8405520-29

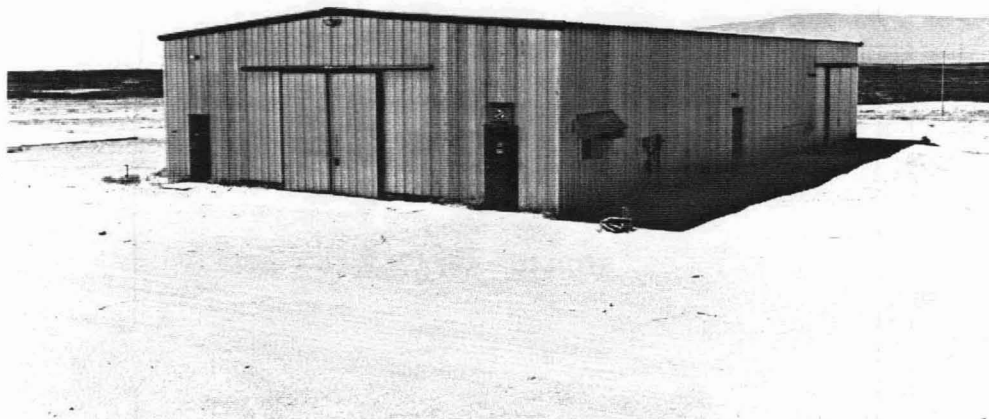


4802 BUILDING

HEDL 8410-079.2

4814

WAREHOUSE



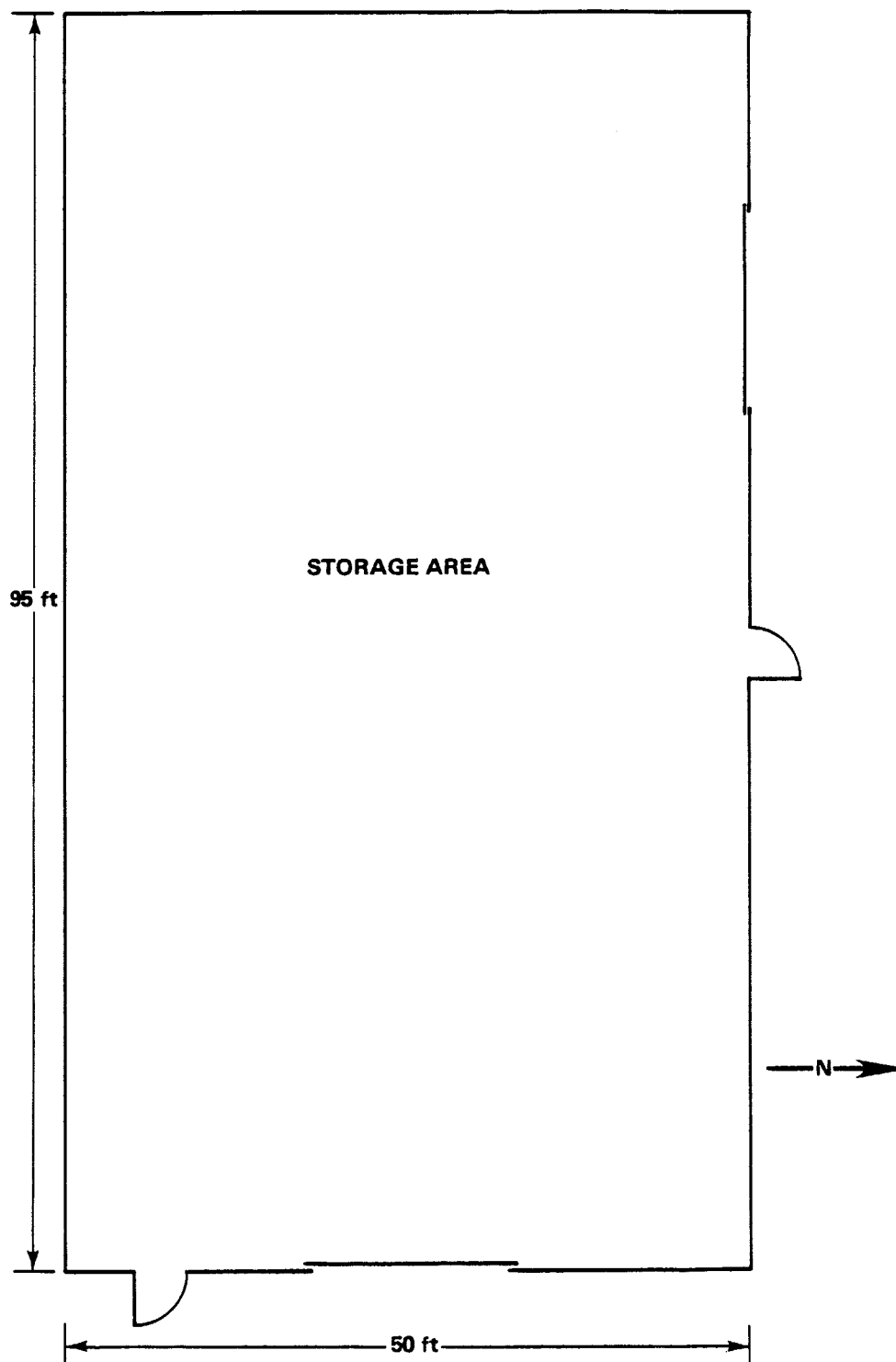
Purpose: To provide a general storage warehouse for the 400 Area.

Dimensions: Perimeter: 50 ft x 95 ft

Description: The fully insulated bolted steel building rests on a concrete slab. The building is equipped with two sliding doors with dimensions of 10 ft and 12 ft. Heating is supplied by ceiling-suspended heaters.

Drawing No.: None

Negative No.: 8405520-38



4814 BUILDING

III-82

4831

FLAMMABLE STORAGE WAREHOUSE



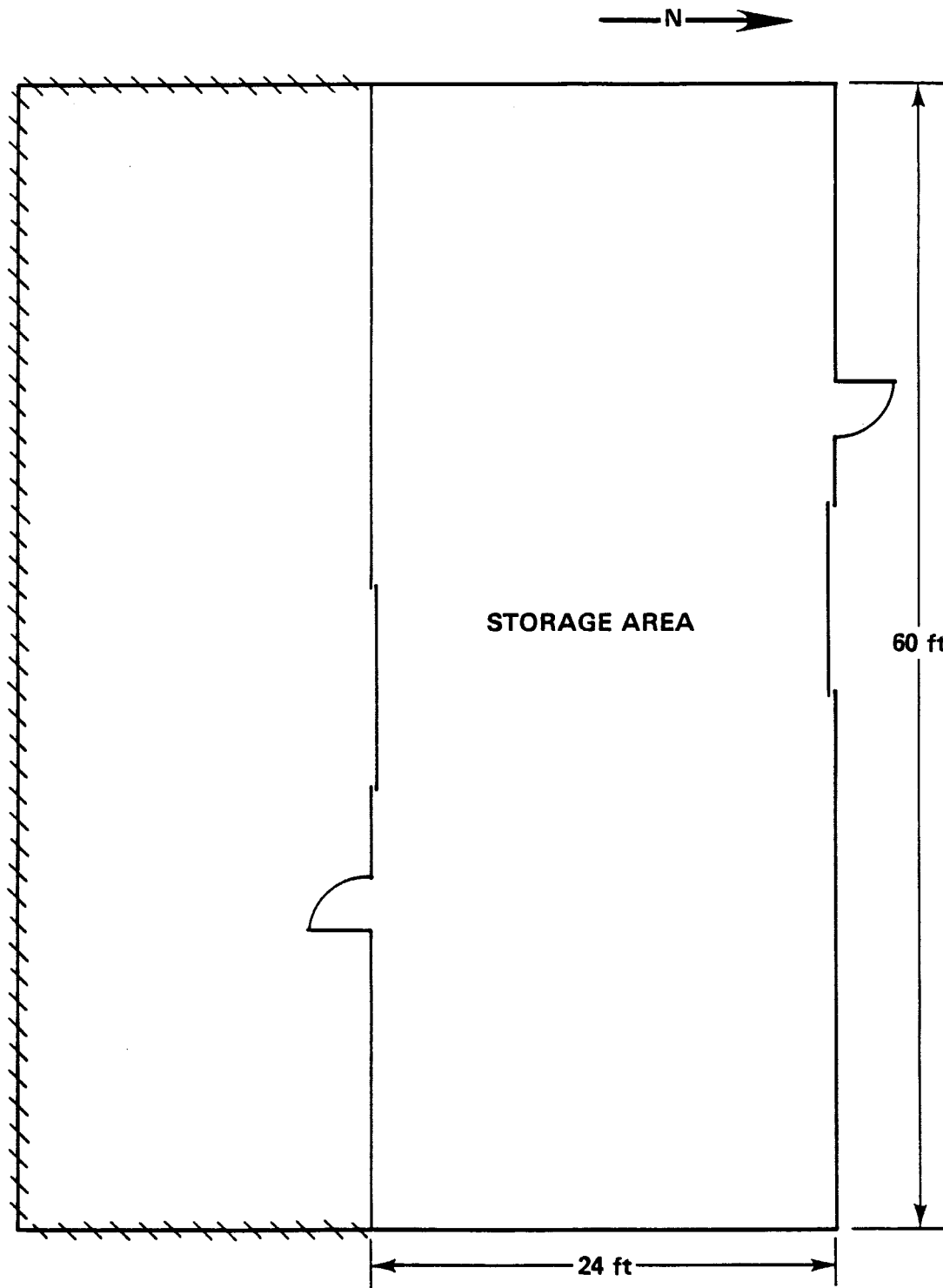
Purpose: To provide space for bulk storage of flammable materials such as oil (new and used) and kerosine.

Dimensions:	Perimeter:	24 ft x 60 ft
	Indoor Storage:	1350 sq ft
	Outdoor Storage:	500 sq ft

Description: The bolted steel building on a concrete slab floor is equipped with exhaust fans. Just south of the building, a section is fenced for outdoor storage. Two roll-up doors provide easy access for moving material into and out of the building.

Drawing No.: None

Negative No.: 8405520-35



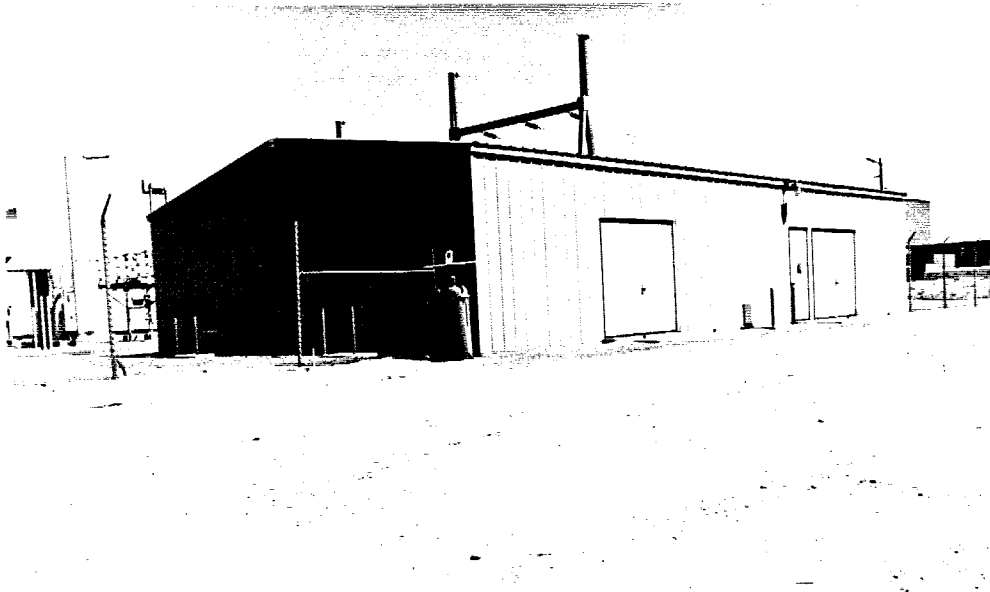
HEDL 8410-079.4

4831 BUILDING

III-84

4842A

451B SUBSTATION SWITCHGEAR



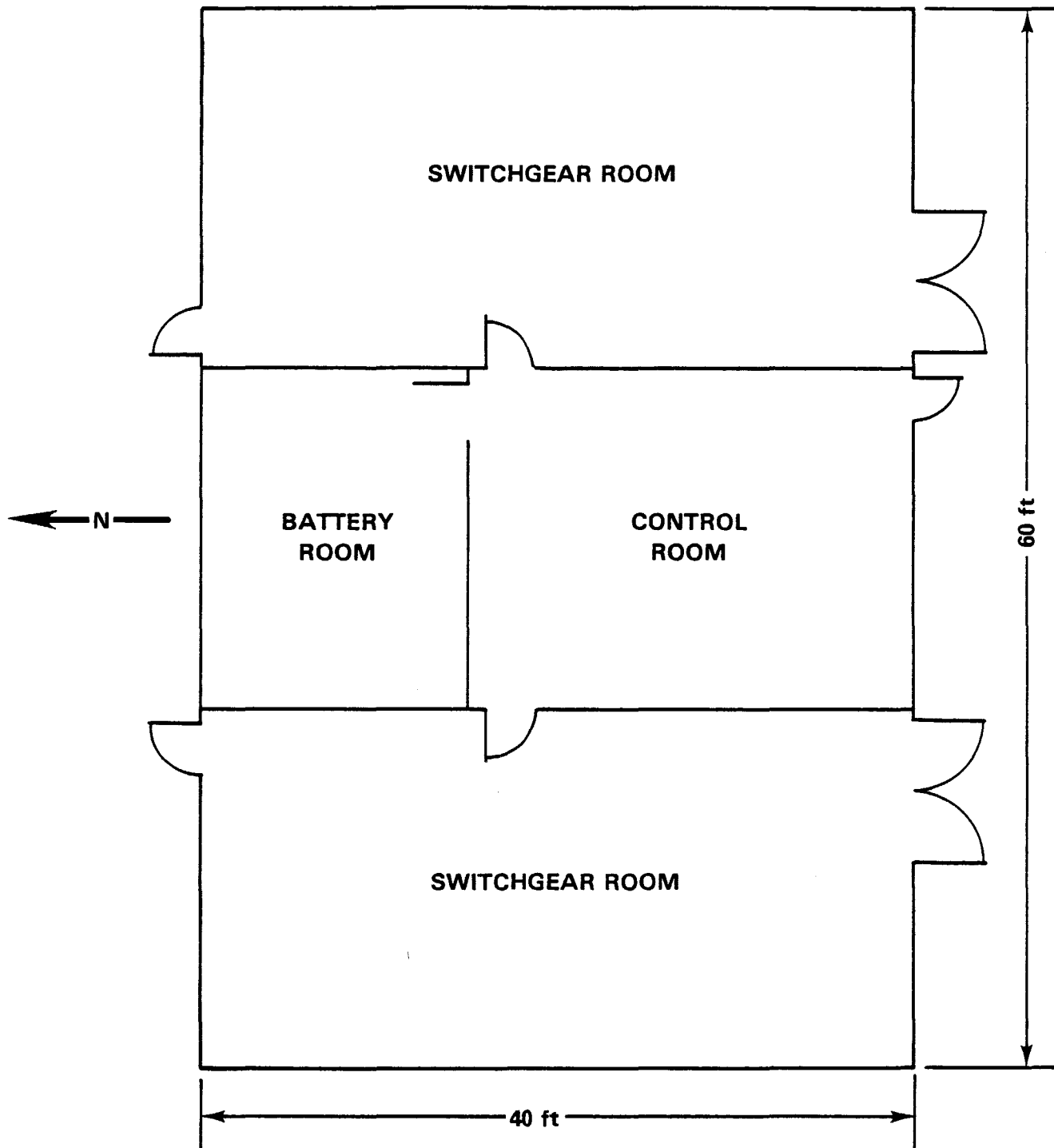
Purpose: To provide an enclosure for the main 400 Area substation equipment. The building shelters switchgear, control equipment, and batteries needed for emergency power.

Dimensions:	Perimeter:	60 ft x 40 ft
	Switchgear Area:	1600 sq ft
	Control Room:	480 sq ft
	Battery Room:	280 sq ft

Description: The insulated metal building rests on a concrete slab. Two cable vaults are below grade. Wall-mounted heating and air conditioning units heat and cool the building. Lighting is provided with fluorescent fixtures. The building is equipped with smoke detectors.

Drawing No.: H-4-151800

Negative No.: 8405520-36



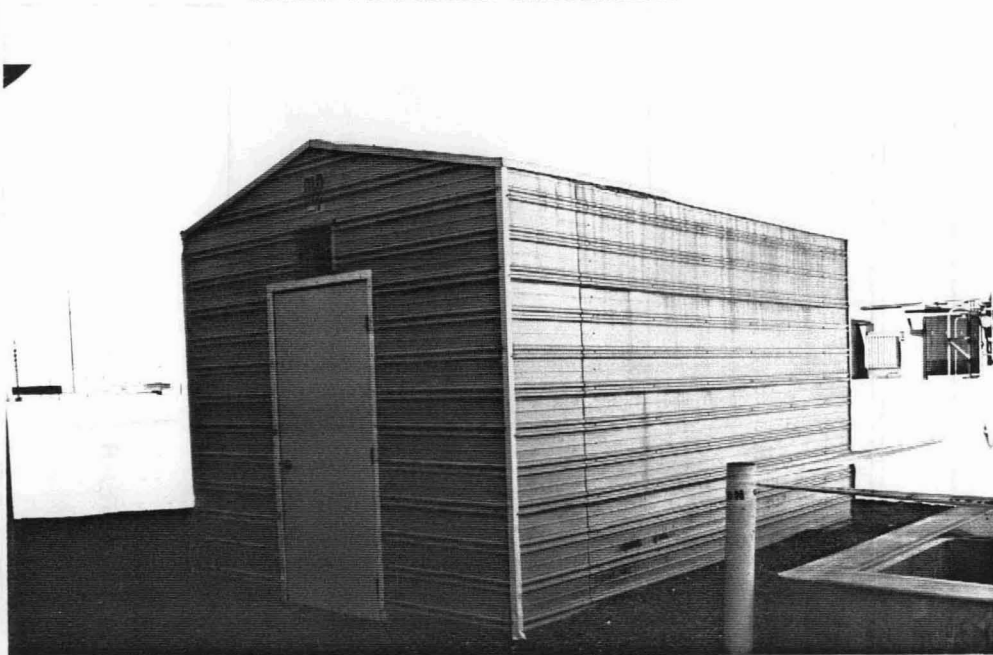
HEDL 8410-079.5

4842A BUILDING

III-86

4842B

WATER PUMPHOUSE SWITCHGEAR



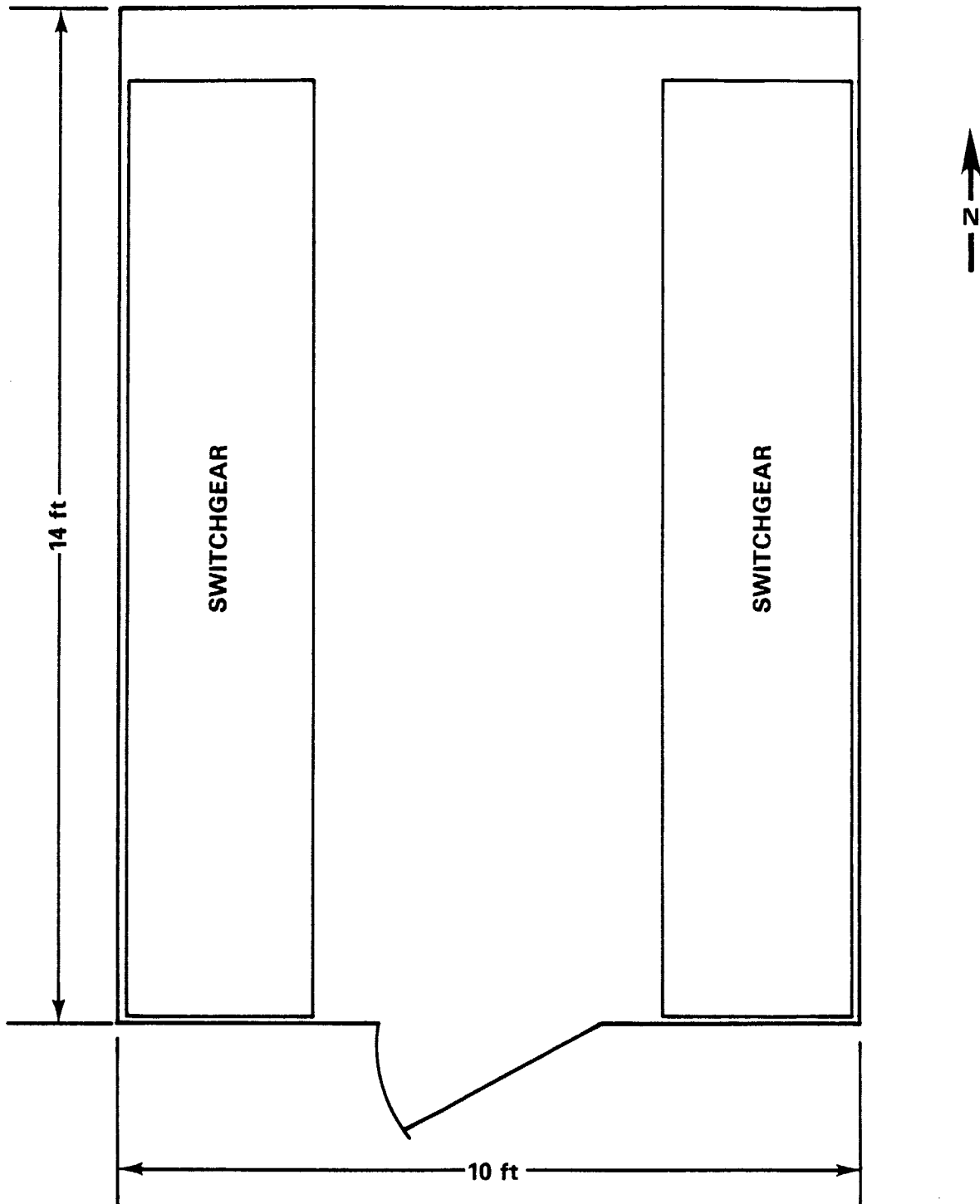
Purpose: To provide space for the pumphouse switchgear.

Dimensions: Perimeter 14 ft x 10 ft

Description: The insulated, bolted metal building is on a concrete slab. The interior is finished with sheetrock and has a baseboard electric heater. The building has a ventilation system.

Drawing No.: None

Negative No.: 8405520-45



4842B BUILDING

HEDL 8410-079.6

4843
WAREHOUSE



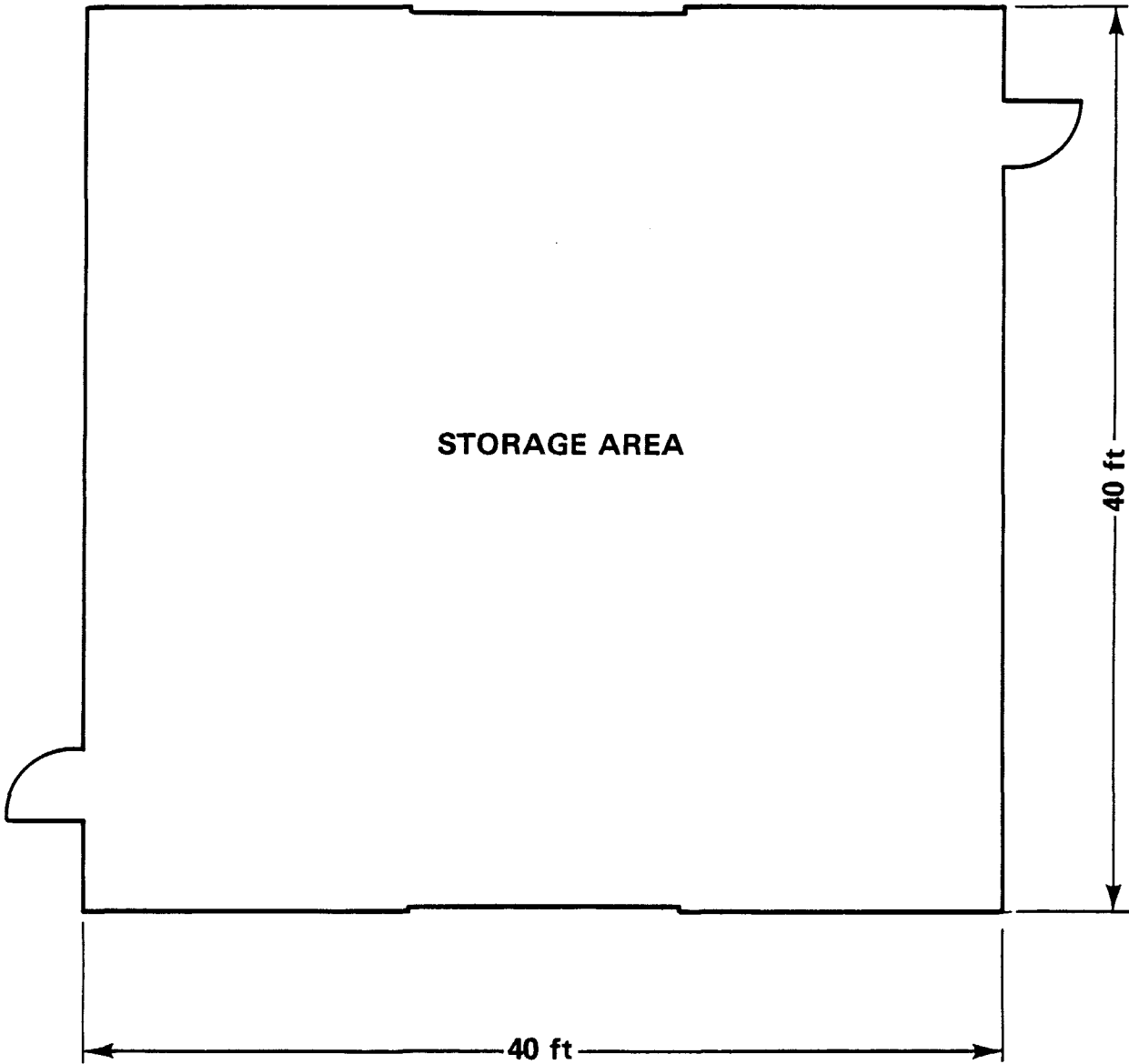
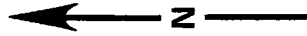
Purpose: To provide a general storage warehouse for the 400 Area.

Dimensions: Building Perimeter: 40 ft x 40 ft

Description: The fully insulated bolted steel building rests on a concrete slab. Ceiling-suspended heaters provide for heat. Two 12-ft roll-up doors are used for easy access for moving supplies into and out of the building.

Drawing No.: None

Negative No.: 8500147-3



HEDL 8410-079.22

4843 BUILDING

MOBILE OFFICES



Purpose: To provide additional office space for the 400 Area.

Dimensions: Perimeter: 66 ft x 24 ft

Description: The mobile offices (trailers) are of the double-wide type. Some interior features include carpeting and paneling. All the trailers are provided with air conditioning and heating, ranging from heat pumps to wall-mounted units and electric strip heaters. Fluorescent lighting is used throughout.

Drawing No.: None

Negative No.: 8405520-12

T-100 ID No.: JAJ6415001

T-102 ID No.: JAJ6415002

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