PORTSMOUTH GASEOUS DIFFUSION PLANT, X-100
ADMINISTRATION BUILDING
3930 U.S. Route 23 South
Piketon vicinity
Pike County
Ohio

HAER OH-142-H
HAER OH-142-H

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240

HISTORIC AMERICAN ENGINEERING RECORD

PORTSMOUTH GASEOUS DIFFUSION PLANT, X-100 ADMINISTRATION BUILDING

HAER No. OH-142-H

Location:	Portsmouth Gaseous Diffusion Plant (PORTS), 3930 U.S. Route 23 South, Piketon vicinity, Scioto Township, Pike County, Ohio The X-100 Administration Building is located at Ohio State Plane South coordinates at easting 1827602.025025 ft, northing 367779.805505409 ft and at Universal Transverse Mercator Zone 17N easting 327190.3215 m, northing 4319639.412 m. The coordinate represents the approximate center of the X-100 Administration Building. This coordinate was obtained on June 19, 2019 by plotting its location in EnviroInsite 10.0.0.37. The accuracy of the coordinates is +/- 12 meters. The coordinate datum is North American Datum 1983.
Date of Construction:	1954
Designer/Builder:	Peter Kiewit Sons' Construction Company
Previous Owner:	N/A
Present Owner:	The Atomic Energy Commission (AEC) oversaw construction and operation of PORTS until 1974, when the Energy Research and Development Administration was established with responsibility for research and development duties from 1974-1977. In 1977, the U.S. Department of Energy was established, overseeing operations at PORTS.
Present Use:	Demolished September 2012
Significance:	The former X-100 Administration Building housed administrative staff who oversaw day-to-day operations at PORTS. The two-story building was built with four wings surrounding a secure three-level (basement included) records vault where classified documents and photographs were stored. PORTS was a part of the U.S. Cold War nuclear weapons complex. PORTS' primary Cold War era mission was the production of highly enriched uranium by the gaseous diffusion process for defense/military purposes.
Project Information:	Fluor B&W Portsmouth LLC photographed the site in July 2006, December 2010, February 2011, and in August 2012. Gray & Pape, Inc., Cincinnati, Ohio, served as the primary author of the historical narrative and resource descriptions drawing from numerous historical records and reports, drawings, photographs and plans. For additional contextual information, see Portsmouth Gaseous Diffusion Plant, HAER no. OH-142. This X-100 Administrative Building HAER was completed in 2021.

Part I. Historical Information

In support of this report, there are three appendices that are provided: Appendix A through C, which consist of survey photographs, historical photographs, and historical drawings, respectively.

Construction History of the X-100 Administration Building:
The X-100 Administration Building (Appendix A, Figures 1-6) was built in 1954 by the E.C. Corporation, of Knoxville, Tennessee during the initial phase of construction at PORTS (Appendix B, Figures 7-13). LVI Service Inc. demolished the building in September 2012 as a part of site cleanup and closure.

Historical drawings of building plans are included in Appendix C (Figures 14 through 25).

Part II. Site Information

Description of the X-100 Administration Building:
The building provided offices for central files and document records, and housed the offices relating to the administration of operations at PORTS, including a Production Division, Industrial Relations Division, Engineering Division, and general offices of the AEC. The building's location allowed for plant supervisory use, as well as accessibility to members of the public with official business at PORTS.

The X-100 Administration Building was centered on a two-story, squared, reinforced concrete vault structure (Appendix A, Figures 1-6). Radiated from this central block, four, two-story, wood-frame wings clad with asbestos-cement siding were arranged at right angles in a pinwheel fashion. Each wing was at least 240' long and the building as a whole provided 135,000 sqaure feet of floor space. The roof had a slight slope to it and was covered with built-up roofing and gravel. The eaves of the roofline extended slightly over the adjacent walls. Fenestration consisted of banded window openings with steel sash.

The central core of the building had a basement and a penthouse. The wings of the building were built on concrete slabs with concrete pier foundations supporting two rows of structural columns. Each wing was separated from the central core by fire walls consisting of 12" thick concrete block masonry. The center of the core served as a security vault on all three floors. The perimeter walls and adjacent stairwell framing, floors, and roofs of the central core vault were constructed of fire-resistant reinforced concrete. Other interior walls and walls of the four wings were of wood-frame construction and clad in gypsum board on the interior with asbestos siding on the exterior.

The northern wing of the X-100 Administration Building originally housed the Production Division Offices. The eastern wing housed the Industrial Relations Offices. The southern wing housed the AEC Offices, and the western wing housed the Engineering Offices. A freight elevator was located on the south side of the central core facing a parking lot. A print shop, secured communications center, and telephone switchboard were located in one half of the basement. The other half of the basement contained a hydraulic system for the freight elevator and a steam condensate tank. An ambient air monitoring station was located in the penthouse.

Part III. Sources of Information

Department of Energy. *The Role of the Portsmouth Gaseous Diffusion Plant in Cold War History*. Piketon, OH: U.S. Department of Energy, 2017.

Department of Energy. *Remedial Investigation and Feasibility Report for the Process Buildings and Complex Facilities Decontamination and Decommissioning Evaluation Project at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*, DOE/PPPO/03-0245&D3, Piketon, OH: U.S. Department of Energy, 2014.

Department of Energy. *Engineering Evaluation/Cost Analysis for the Plant Support Buildings and Structures at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*, DOE/PPPO/03-0207&D4. Piketon, OH: U.S. Department of Energy, October 2011.

Department of Energy. *National Historic Preservation Act Section 110 Survey of Architectural Properties at the Portsmouth Gaseous Diffusion Plant in Scioto and Seal Townships, Piketon, Ohio,* DOE/PPPO/03-0147&D1. Piketon, OH: U.S. Department of Energy, January 2011.

Giffels & Vallet, Inc. *Gaseous Diffusion Plant at Portsmouth, Ohio, Project History and Completion Report* (Redacted). Washington, D.C.: U.S. Atomic Energy Commission, 1957.

Portsmouth Gaseous Diffusion Plant Virtual Museum – accessed at http://www.portsvirtualmuseum.org/ operated and managed by Fluor-BWXT Portsmouth for DOE.

Appendix A: Survey Photographs

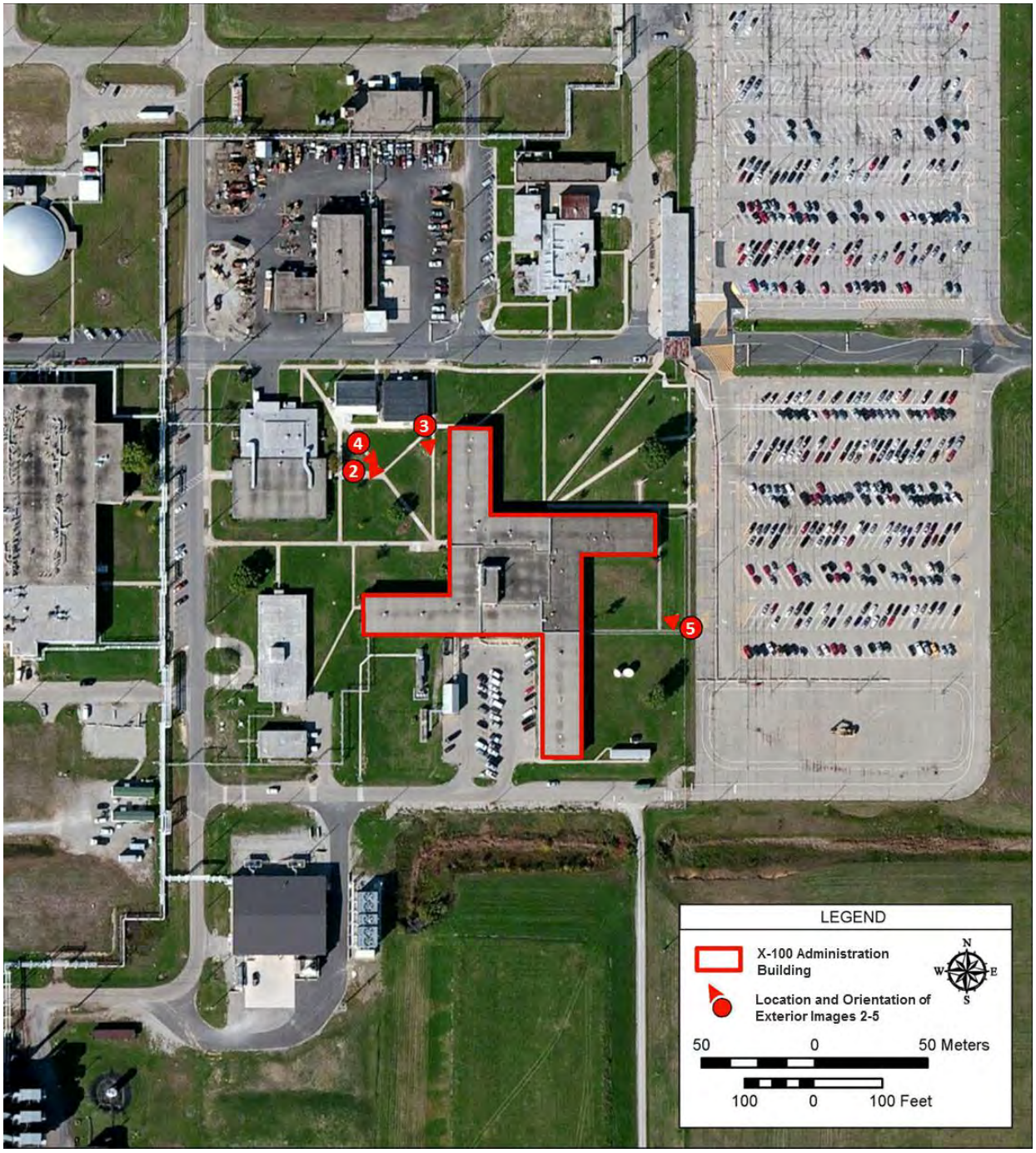

Figure 1: Location and Orientation of Exterior Photographs (2 through 5)

Figure 2: West Side of the X-100 Administration Building, August 2012, Facing Northeast

Figure 3: West Side of the X-100 Administration Building, December 2010, Facing Southeast

Figure 4: West Side of the X-100 Administration Building, February 2011, Facing Southeast

Figure 5: East Side of the X-100 Administration Building, February 2011, Facing Northwest

Figure 6: Aerial View of the X-100 Administration Building, July 2006, Facing West

Appendix B: Historical Photographs

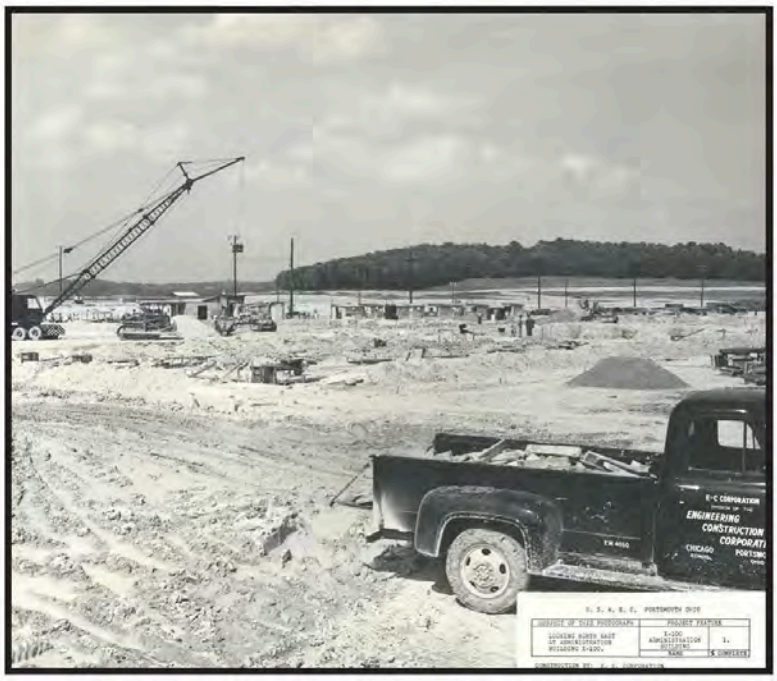

Figure 7: Looking Northeast at X-100 Administration Building, August 12, 1953

Figure 8: Looking East at X-100 Administration Building, October 14, 1953

Figure 9: Looking East at X-101 Dispensary and X-100 Administration Building, December 15, 1953

Figure 10: Looking West at X-100 Administration Building, December 1953

Figure 11: The X-101 and X-100 Administration Buildings, Looking East, February 12, 1954

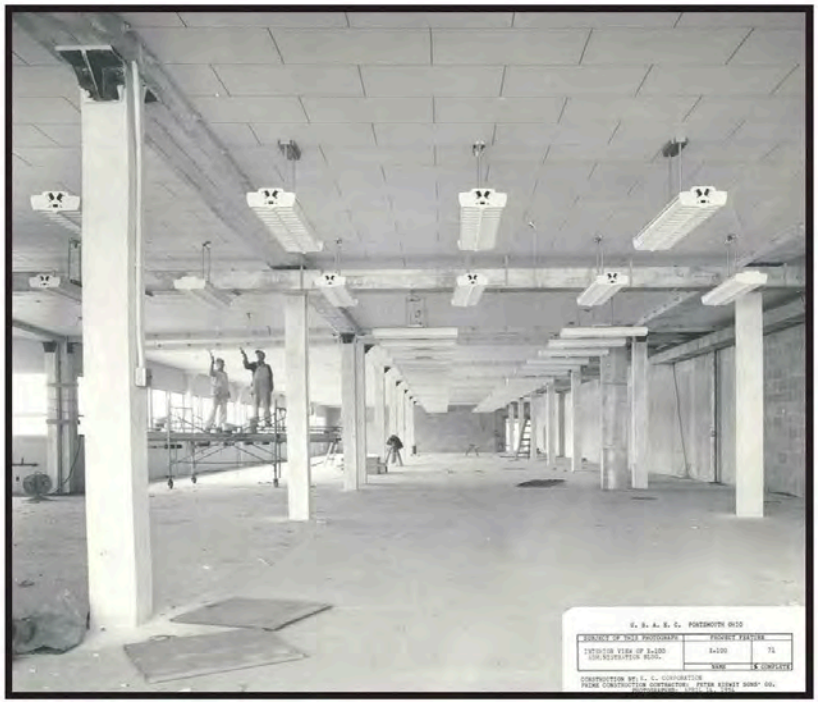

Figure 12: Interior View of X-100 Administration Building, April 14, 1954

Figure 13: Interior View of South Wing of X-100 Administration Building, May 14, 1954

Appendix C: Historical Drawings

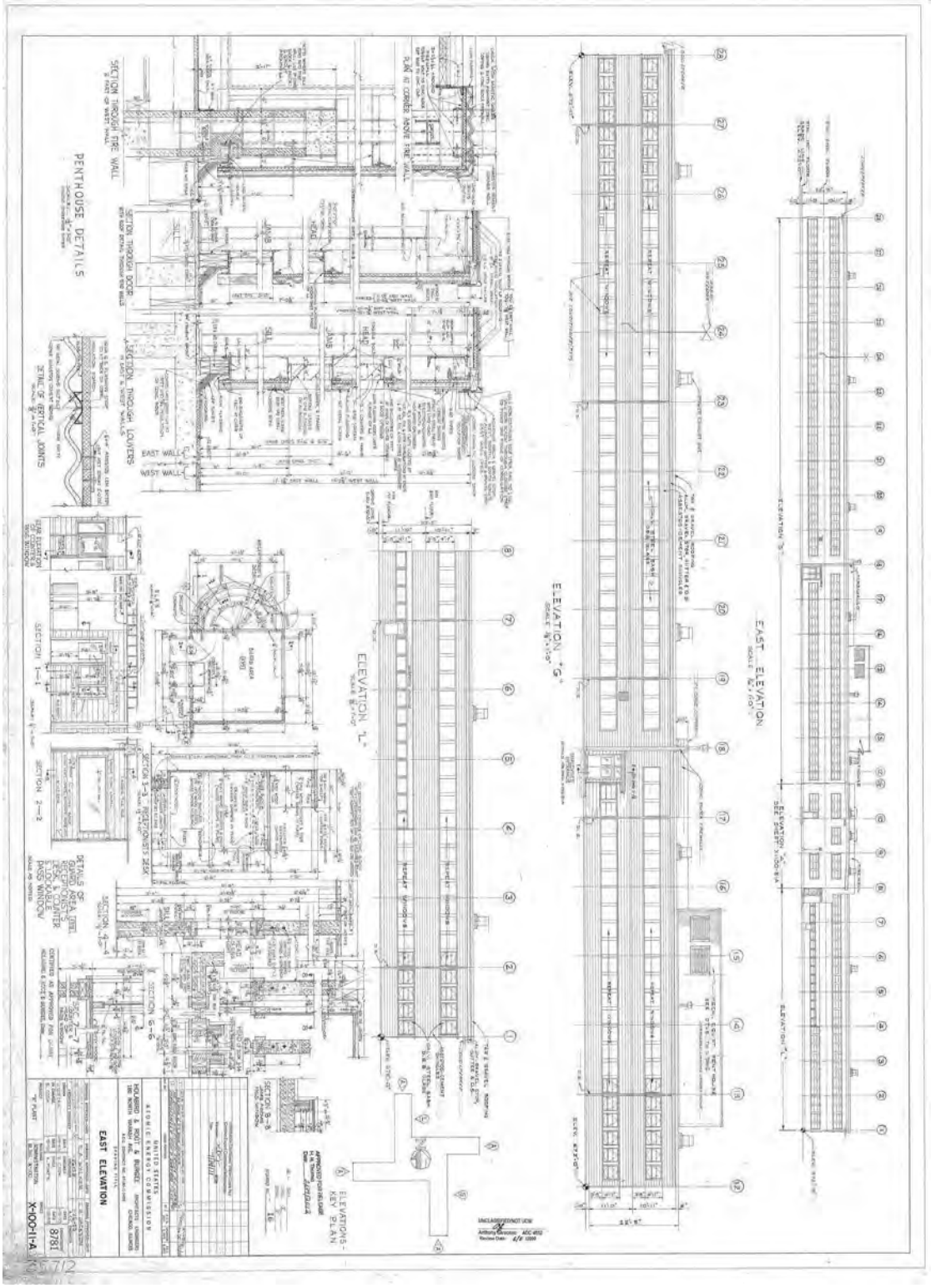

Figure 14: East Elevation

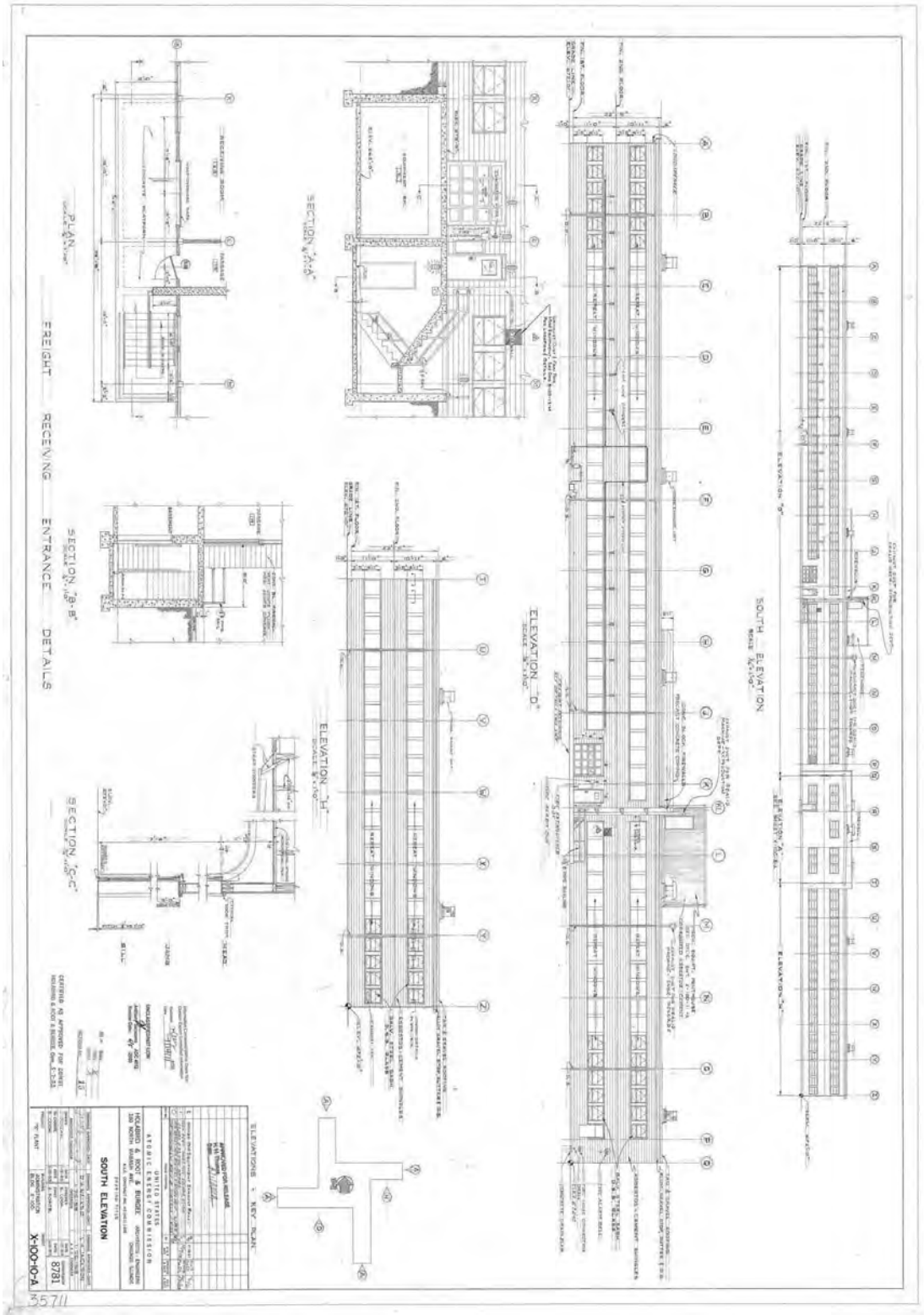

Figure 15: South Elevation

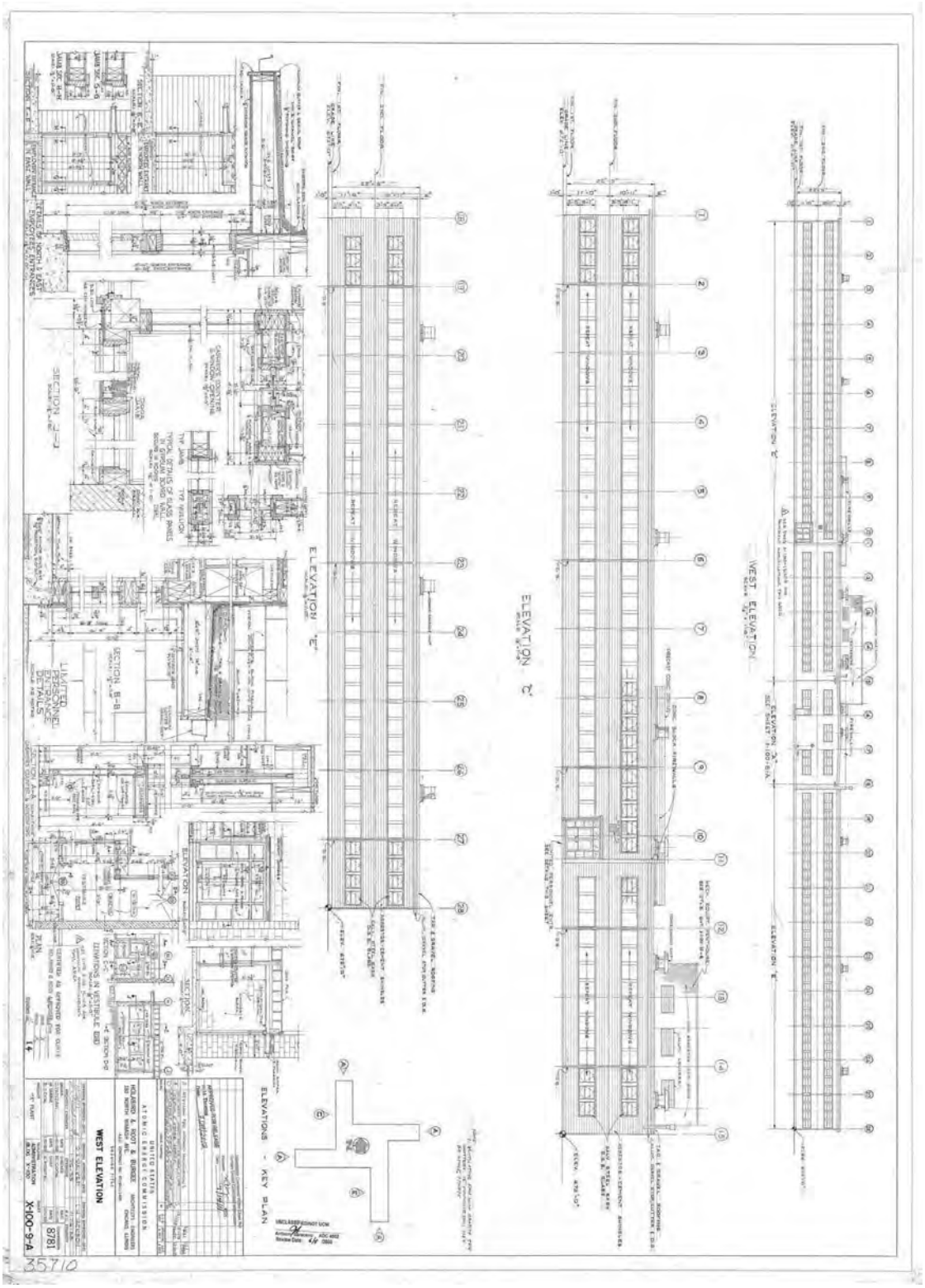

Figure 16: West Elevation

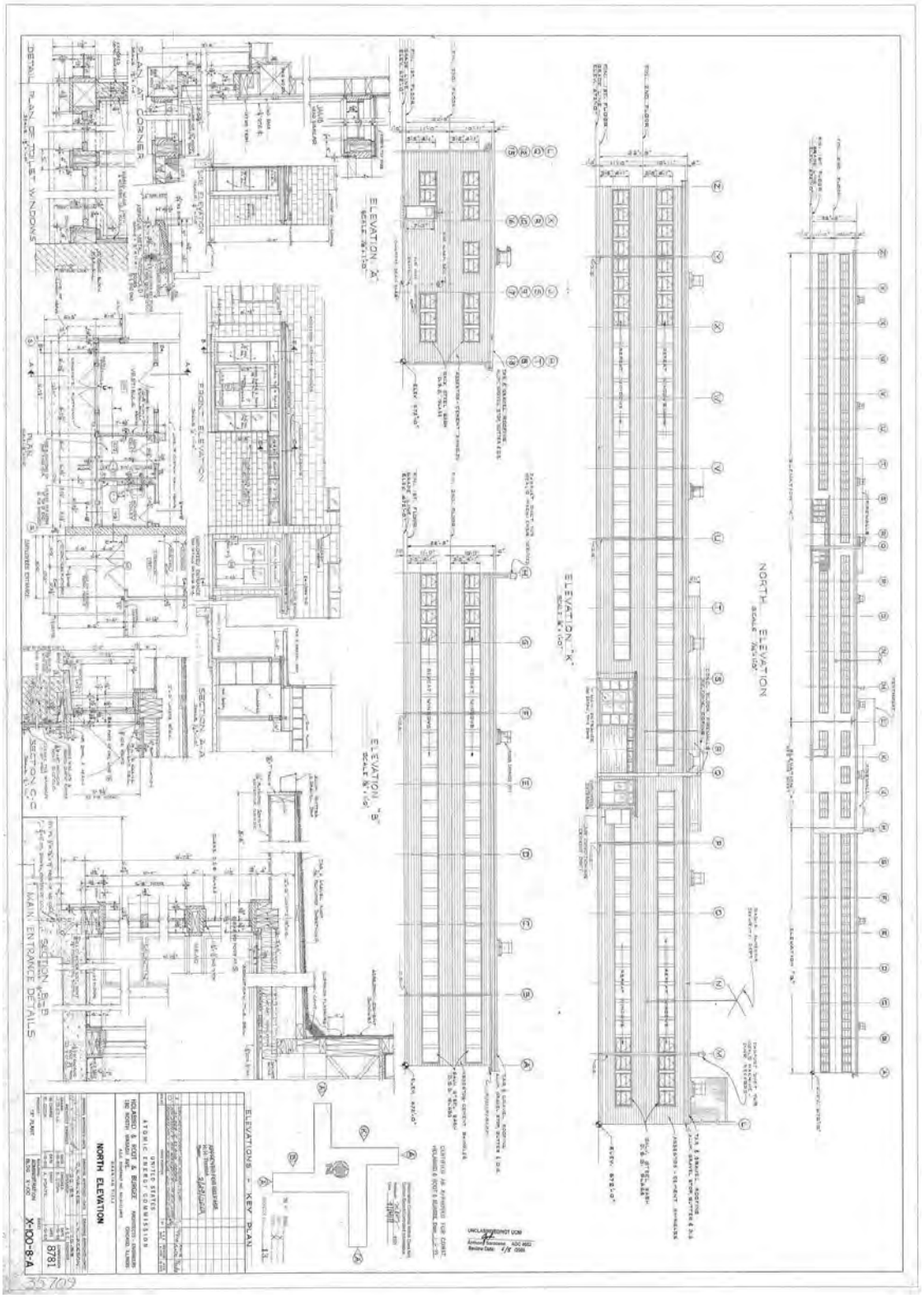

Figure 17: North Elevation

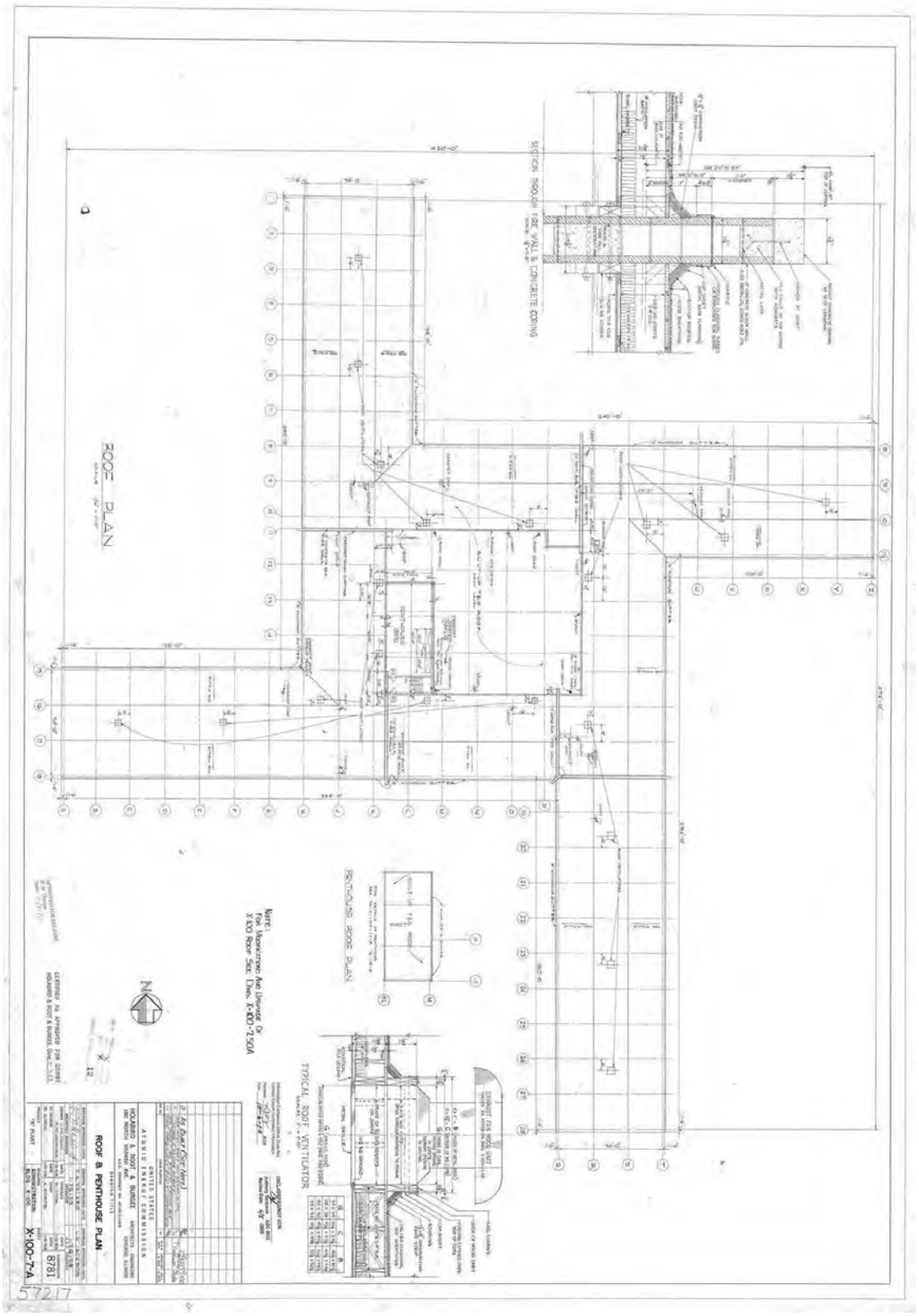

Figure 18: Roof and Penthouse Plan

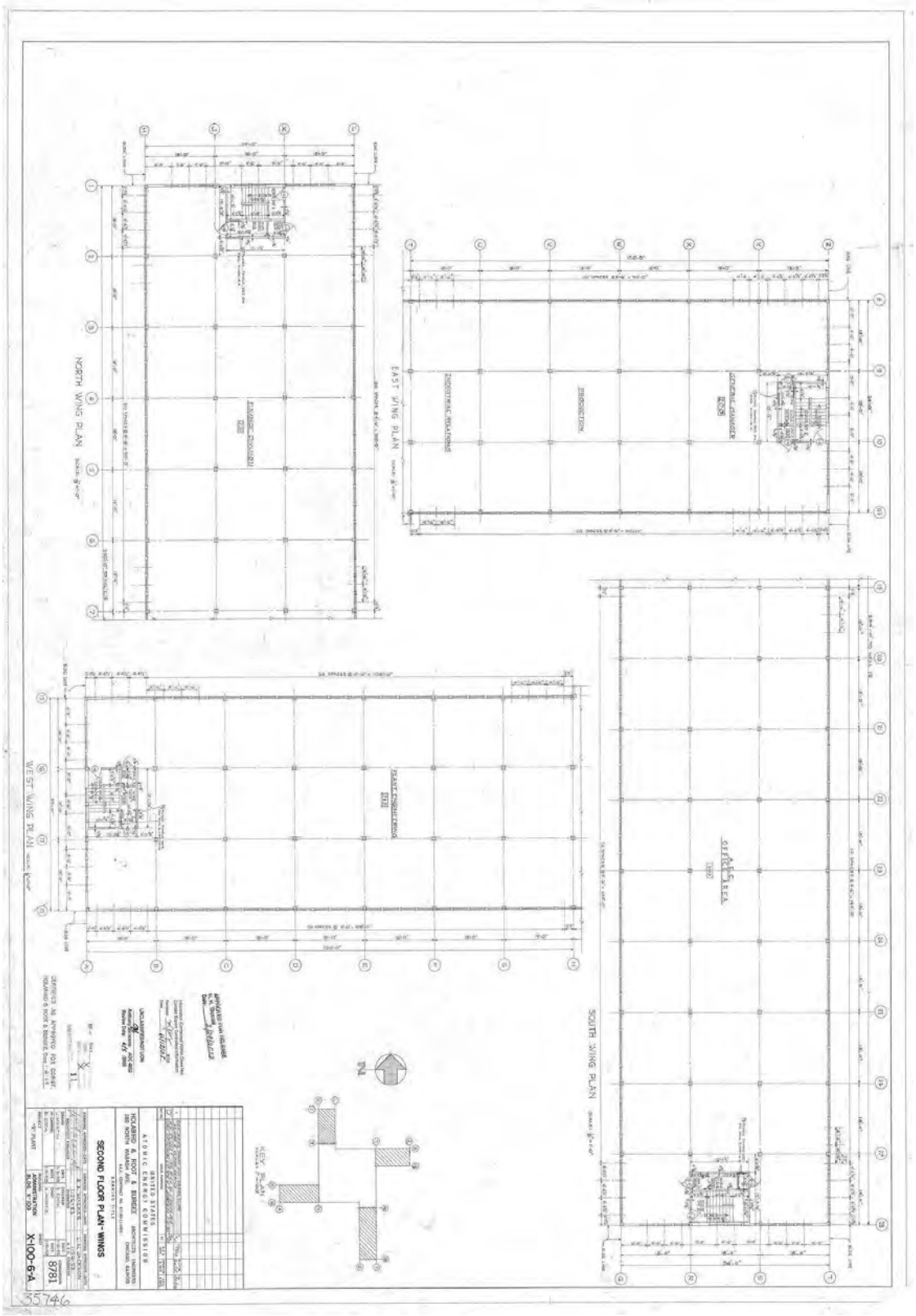

Figure 19: Second Floor Plan – Wings

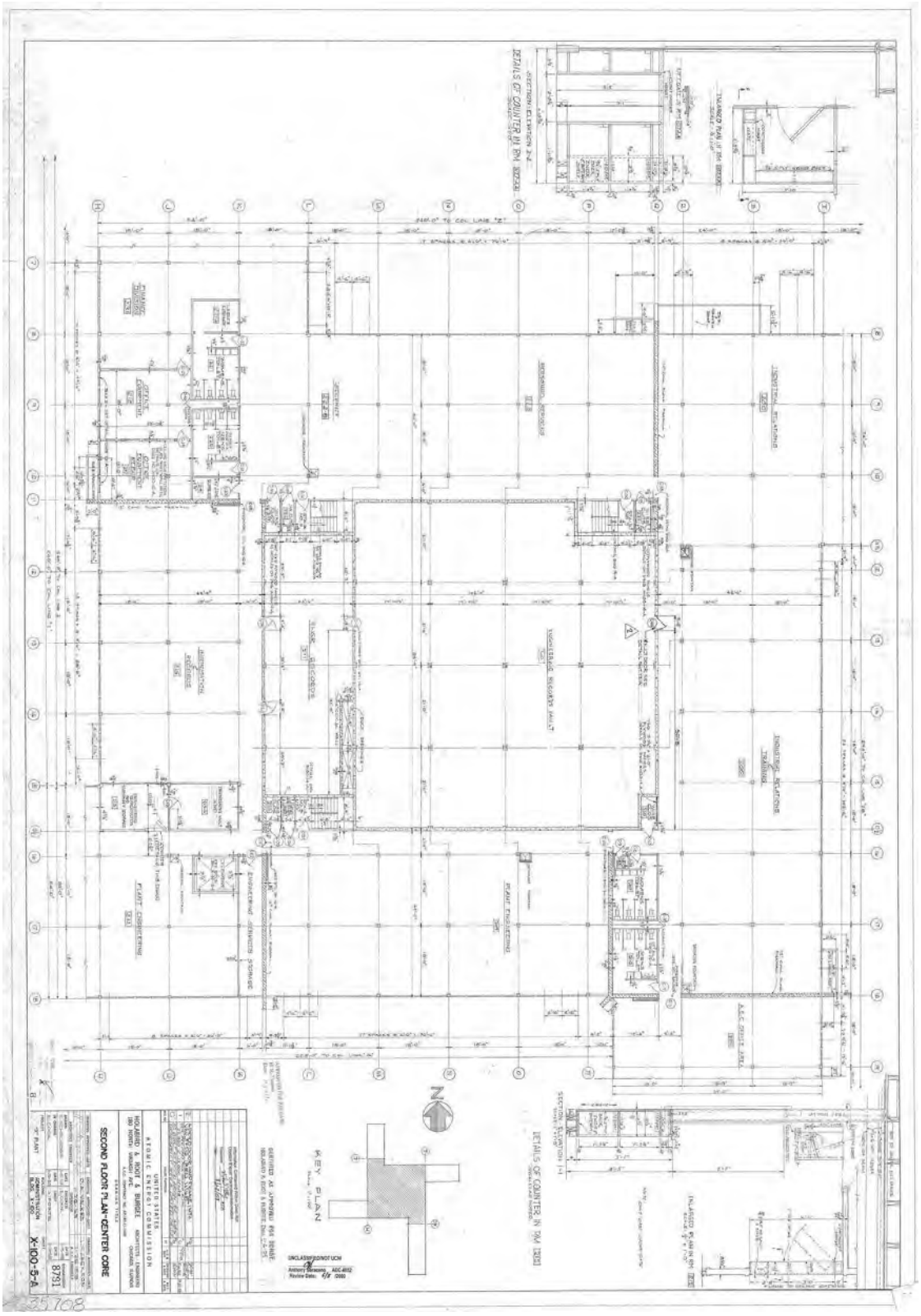

Figure 20: Second Floor Plan – Center Core

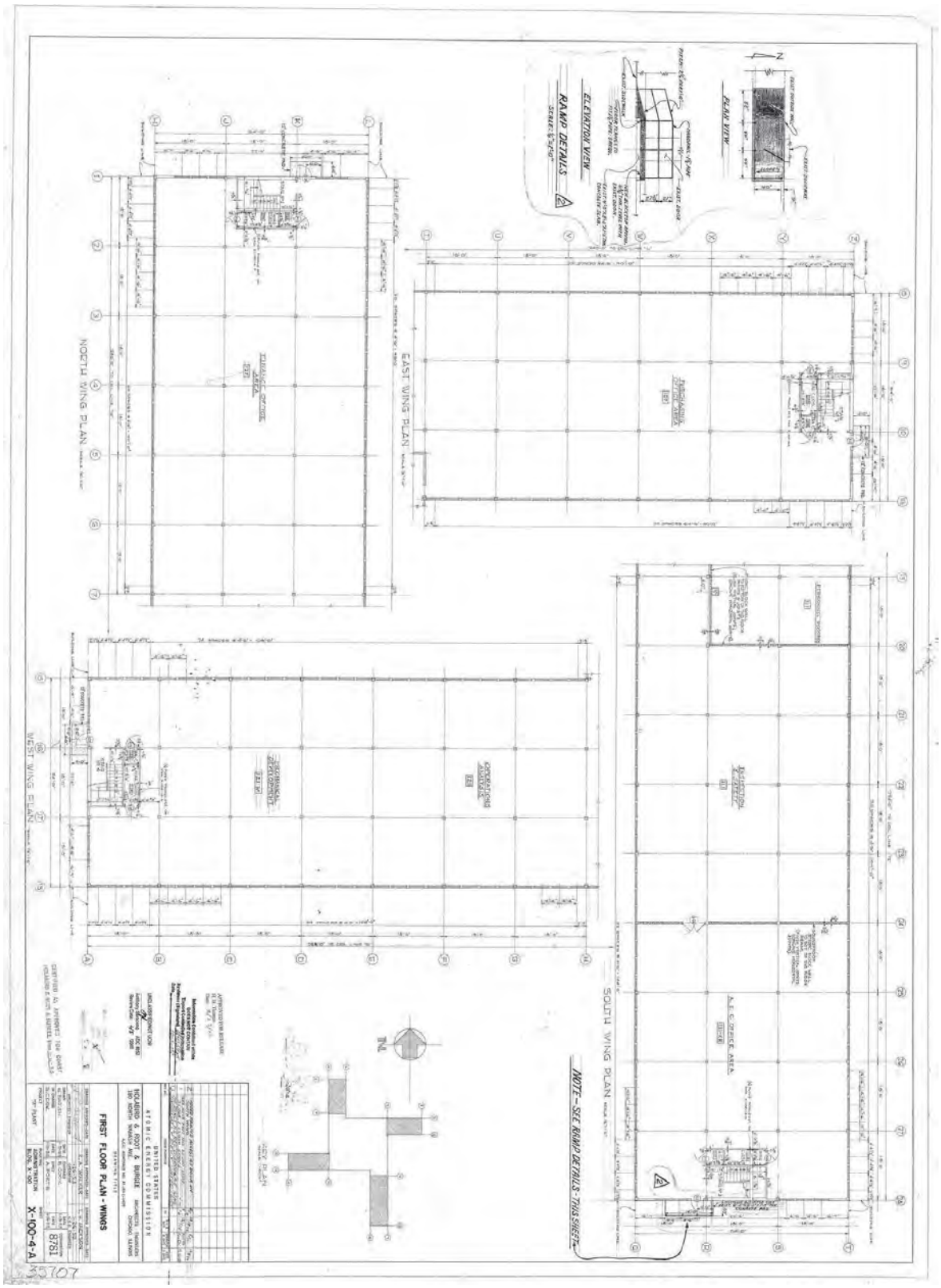

Figure 21: First Floor Plan – Wings

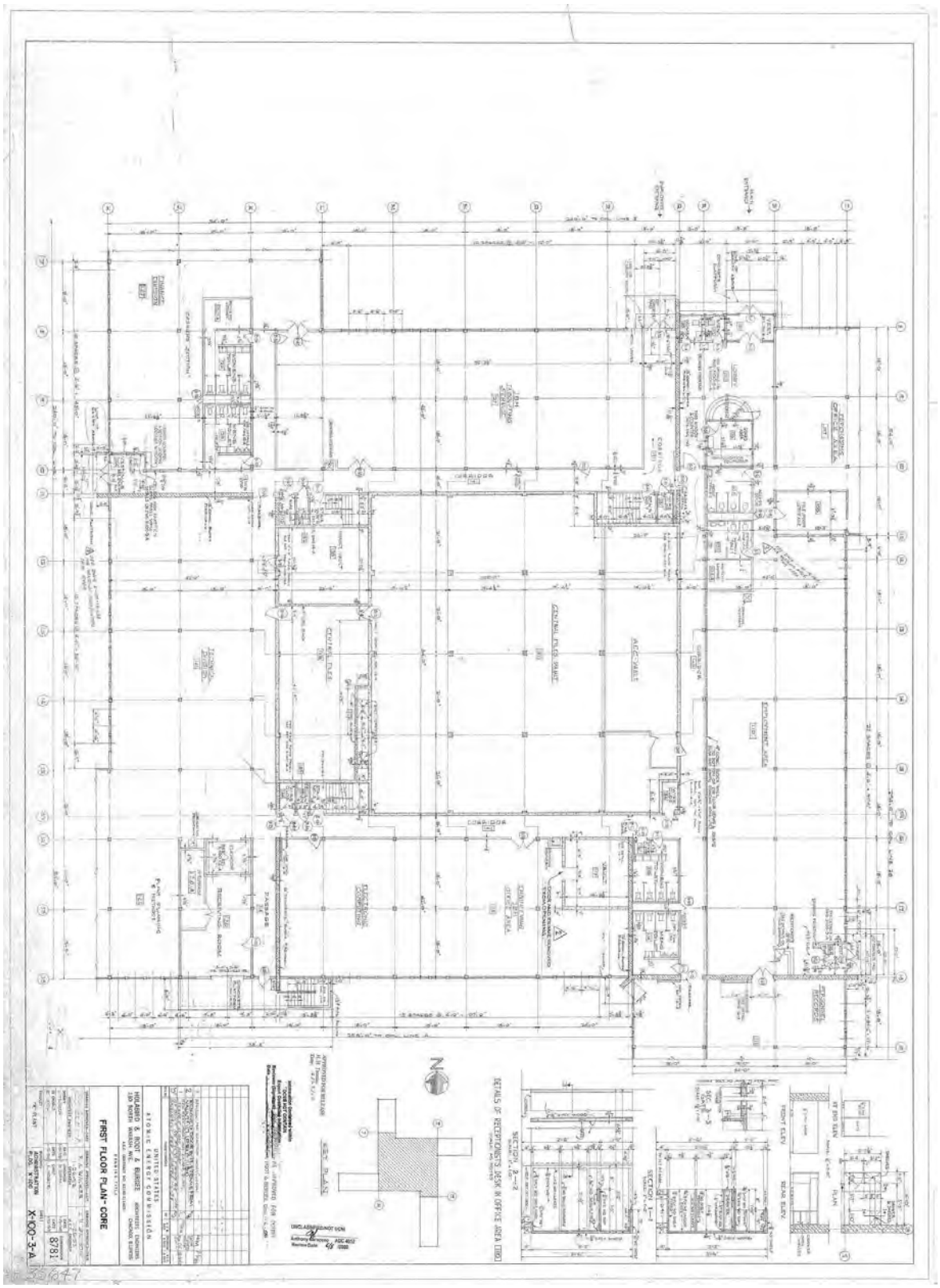

Figure 22: First Floor Plan – Core

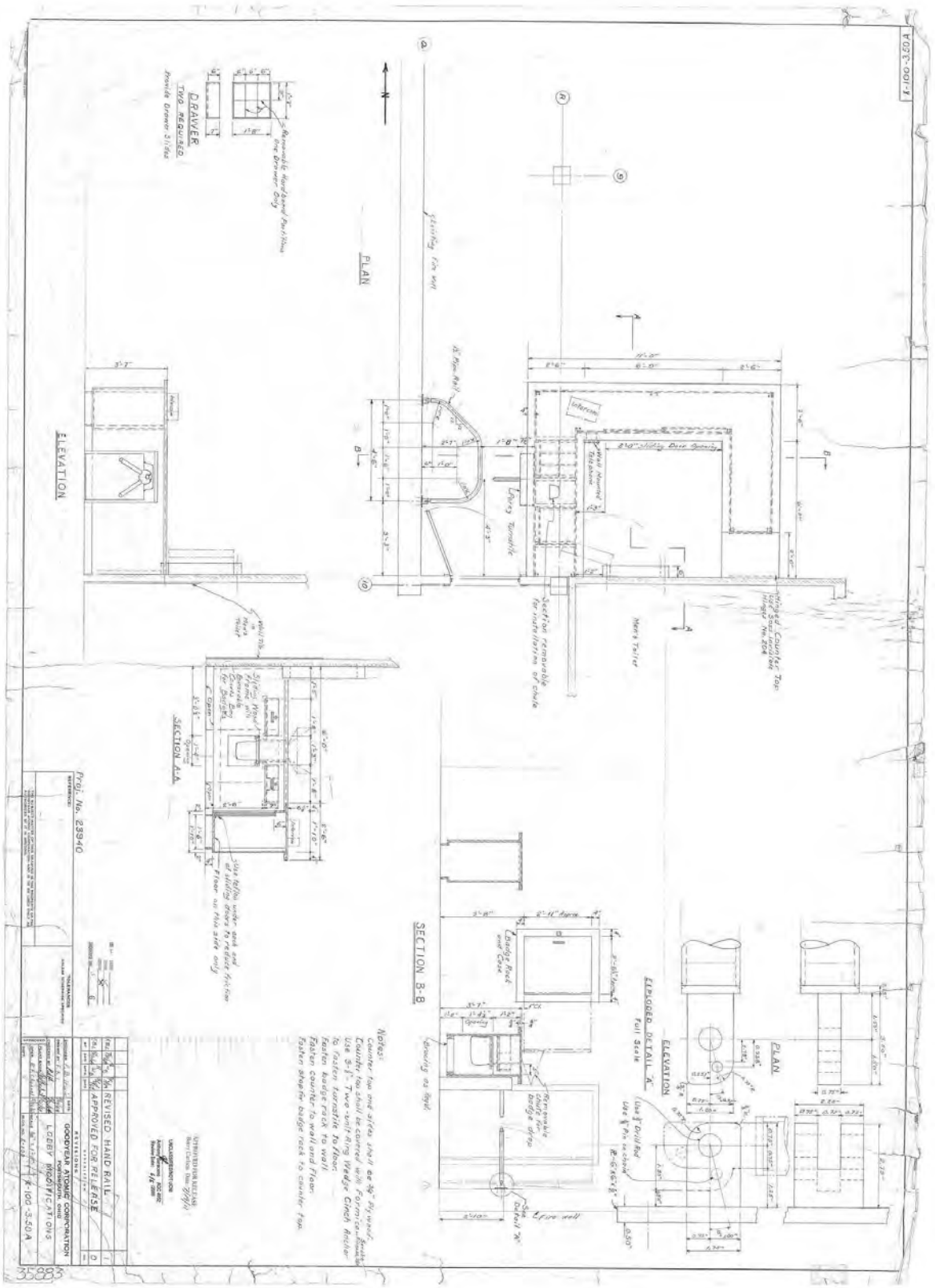

Figure 23: Lobby Modifications

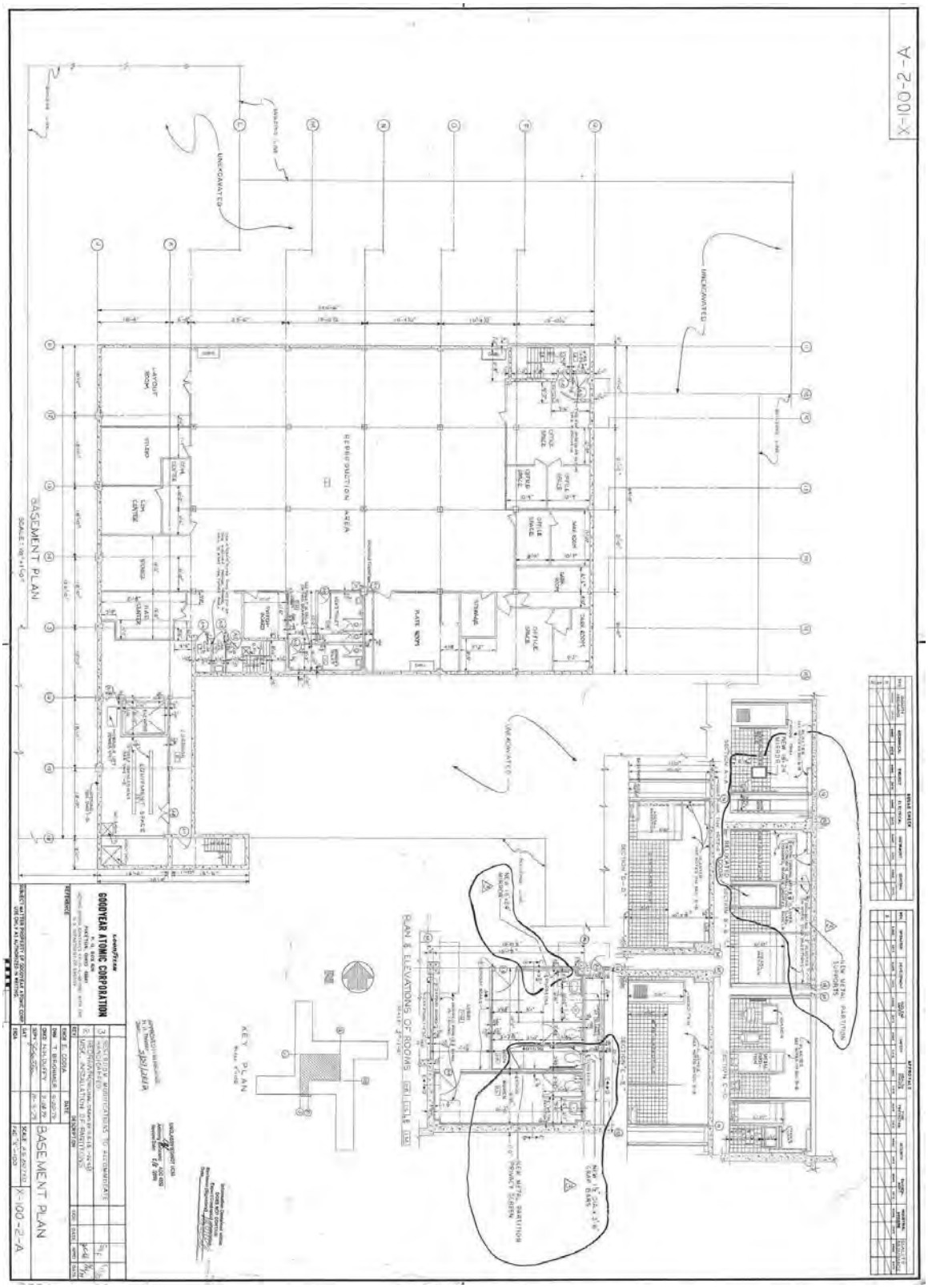

Figure 24: Basement Plan

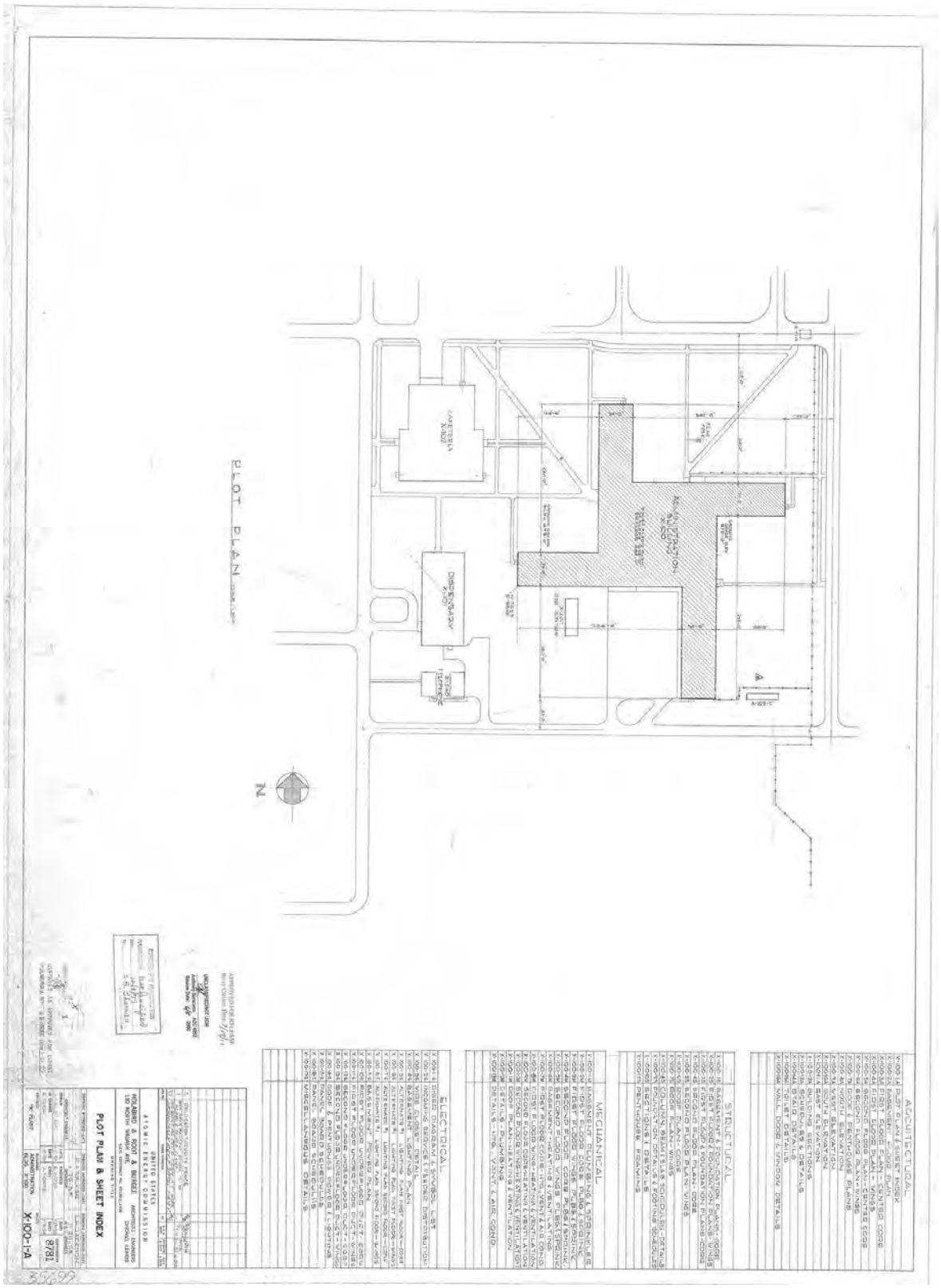

Figure 25: Plot Plan and Sheet Index