

DESIGN INFORMATION  
SUBMITTAL #2  
STRUCTURAL REORIENTATION

FEBRUARY 23, 1979

7905070470

55pp.

## Structural Licensing Information Submittal

### 1.2.2 Plant Arrangement

The Forked River Nuclear Station consists of a pressurized water reactor nuclear steam supply system that produces approximately 3410 MWT, net. The station features the following major structures:

1. Containment Building
2. Fuel Handling Building
3. Auxiliary Buildings I & II
4. Turbine Building
5. Nuclear Services Pump House
6. Other Structures

Figure 1 shows the general site arrangement. Figures 2 through 39 are the current general arrangement drawing for these major structures.

#### 1.2.2.1 Containment Building (Seismic Category I)

(Figures 2-6)

The Containment Building is a concrete structure composed of cylindrical wall with a flat foundation mat and a dome roof. The structure will provide biological shielding for normal and accident conditions. It will enclose the reactor and the reactor coolant system and will be designed to ensure that an acceptable upper limit of radioactive material leakage will not be exceeded under any design basis accident, including the maximum hypothetical loss-of-coolant accident or main steam line

break conditions. The evaluation of peak containment pressure resulting from design basis accidents was provided to the NRC in Design Information Submittal #1 (October 6, 1977).

The foundation mat is a reinforced concrete slab. The cylindrical wall and the dome roof are prestressed with a post-tensioning system employing grouted tendons.

The inside surface of the Containment Building will be lined with an ASME SA516 steel liner to ensure the leak rate is limited to 0.1 percent of the contained weight in 24 hours under accident conditions. The liner plate thickness will be 3/8 inches for the cylinder, 1/2 inches for the dome, and 1/4 inches for the base. The design of the liner will conform to the requirements of the ASME Boiler and Pressure Vessel Code, Section VIII, with the following additional conservatism:

1. ASME Code Section III, Subsection NE, is used as the basis for establishing allowable liner plate strains.
2. Although the ASME Code allowable stresses would permit an allowable average strain of approximately 2 percent for one significant thermal cycle (i.e. LOCA), the maximum value of average strain was conservatively set at 0.5 percent.

3. The liner plate material, 5/8" or thicker, will be impact tested in accordance with ASME Code Section III, Subsection NE.
4. The liner welds will be examined in accordance with the requirements delineated in Reg. Guide 1.19.
5. Mechanical/electrical penetrations, equipment hatch and personnel airlock are designed in conformance with ASME Code Section III, Div. 1, Subsection NE.

Access to containment through the Auxiliary I Building is provided by personnel air locks and equipment hatch. Two personnel airlocks (9'-0" in diameter) are provided one at El. 36'-8" and the other at El. 78'-8". The equipment hatch has an inside diameter of 23 feet and enables passage of large equipment and components. Personnel airlocks and equipment hatches are designed in accordance with Section III of the ASME Code.

The foundation slab will be approximately 20 feet thick with a 5 foot thick structural concrete slab above the bottom liner plate. The cylinder portion will have an inside diameter of 130 feet, wall thickness of 4 feet, and a height of 160 feet from top of foundation slab to the dome spring line. The roof will be a 3 foot - 6 inch thick shallow dome with a large inside radius of 110 feet and a transition radius of 20 feet 6 inches. (See Figure 5)



The configuration of the tendons in the dome is based on a three-way tendon system consisting of three groups of tendons oriented at 120 degrees with respect to each other. Dome tendons will be stressed from both ends so as to reduce the friction losses. A conventional reinforced concrete ring girder is provided at the intersection of the dome and wall in order to develop sufficient restraint for the dome when subjected to all load combinations. The cylindrical wall is prestressed with a system of vertical and horizontal tendons. The horizontal (hoop) tendons will consist of 180° sections anchored in four (4) buttresses along the periphery of the cylinder thus creating full prestressed rings. The anchorages of any adjacent rings are staggered with respect to the buttresses. Each horizontal wall tendon is stressed from both ends so as to reduce the friction losses. The vertical system consist of vertical tendons anchored in the foundation slab and ring girder.

The Containment Building is designed for loading combinations that provide safety margins consistent with Standard Review Plan 3.8.1 "Concrete Containment". Seismic design conforms to the Forked River PSAR Chapter 5, Appendix 5A "Seismic Design Bases."

1.2.2.2 Fuel Handling Building  
(Figures 7-26)

The Fuel Handling Building will be oriented in the north-

south direction to allow greatest accessibility to the Containment Building (northeast quadrant) during building construction. The Fuel Handling Building will house the fuel storage pools, transfer canals, fuel and cask handling equipment, NSCW piping and valves, building sump pumps and surge tank for the fuel storage pools. The cask handling system is arranged so that the fuel casks cannot travel over stored fuel or tip over into the storage pool. The fuel pools are designed for loads imposed by high density storage racks. Pool gates segregate the spent fuel storage pools, fuel transfer equipment, and cask handling areas to provide functional separation and flexibility for all fuel associated operations.

A common reinforced concrete mat foundation is provided for the Fuel Handling Building, Auxiliary I Building and Auxiliary II Building.

The superstructure floors and walls are of reinforced concrete construction and provide all required radiation shielding. Exterior walls and doors will be designed to provide protection from tornado missiles where required. The roof of reinforced concrete construction will be

designed to withstand a high trajectory turbine missile as described in Section 1.2.2.4 below.

The Fuel Handling Building structural design criteria is in accordance with Standard Review Plan 3.8.4, "Other Seismic Category I Structures." Thermal loads on the pool walls and base slab are based on maximum temperature distributions.

#### 1.2.2.3 Auxiliary Building I & II

(Figures 7-26)

The Auxiliary Building is divided into two sections identified as Auxiliary I Building and Auxiliary II Building. The distinction between these two sections is based on the equipment contained in each. The Auxiliary I Building will house equipment and components required for reactor operation and shutdown while the Auxiliary II Building will house only non-safety related systems. The Auxiliary Building will share a common Seismic Class I foundation with the Fuel Handling Building. Seismic design criteria of the Auxiliary Building are described in section 1.2.2.3.3. The Auxiliary Building is designed as a structural steel system supporting concrete slabs on metal decking. Reinforced concrete walls and floor diaphragms are designed to resist all horizontal forces. The roof will be a reinforced concrete slab designed to withstand turbine missiles (Section 1.2.2.4) and tornado loads for the Auxiliary I Building.

#### 1.2.2.3.1 Design Features of Auxiliary I Building

Equipment and components located within the Auxiliary I Building include the Chemical and Volume Control System, the Component Cooling Water System, the Spent Fuel Cooling System, the Safety Injection pumps, the Shutdown Cooling System, the Emergency Diesel Generators, portions of the Gaseous Waste Management System, Containment personnel and equipment hatches, and the Control Stack.

The Control Stack is a 5 level vertical portion of the Auxiliary I Building housing the control room complex, two cable spreading rooms, two switchgear rooms, two relay rooms, four battery rooms, monitoring Center I, and the remote shutdown room. The control room is located at EL. 57'-0" in the central level and segregates the safety related electrical channels above and below. This enhances the separation of the redundant red/green safety channels from common hazards in the stack and is carried over into the plant electrical routing. Below the control stack, on the 6' elevation, the main feedwater tunnel from the Turbine Building to the Containment Building provides housing for the feedwater regulating station and the dual isolation portion of the feedwater train. The steam lines return from the Containment Building to the Turbine Building over the Auxiliary I Building roof.

An enclosure on the roof of the Auxiliary I Building

provides protection for the main steam isolation and relief valves and the main steam piping between the isolation valve and the containment wall. The enclosure is designed to withstand the full effects of a steam line break. The enclosure has a partial dividing wall between two areas each containing the isolation and relief valves associated with the respective steam generator. The barrier between these areas is designed to withstand all the effects of a main steam line break. The exterior is designed to withstand tornado missiles and tornado wind loads. In addition, the roof is capable of resisting the effects of a high trajectory turbine missile.

The Auxiliary I Building structural design criteria are in accordance with Standard Review Plan 3.8.4, "Other Seismic Category I Structures." Exterior walls and the roof slab of the Auxiliary I Building are designed to withstand tornado loads as well as turbine and tornado generated missiles (Section 1.2.2.4), and the full effects of a main steam line break. The design of the interior structures takes into account the radiation shielding and internally generated missile protection requirements.

The Auxiliary I Building is designed to withstand the effects of postulated pipe breaks. This includes internal flood protection at EL. 6'-0" for ESF compartments, and the emergency feedwater and charging pumps, and diesel generator area.



#### 1.2.2.3.2 Design Features of Auxiliary II Building

The Auxiliary II Building houses the Radioactive Liquid Waste Management System, Steam Generator Blowdown System, Personnel Monitoring area, locker rooms, laboratories, sampling facilities, machine shops, storage areas and a portion of the plant office facilities.

The interior structures provide radiation shielding from the radwaste and nuclear sampling systems. The Auxiliary II Building is designed to remain watertight below grade to assure no leakage of radioactive liquid to the environment could result from a failure in the radwaste systems.

#### 1.2.2.3.3 Seismic Design of Auxiliary Building I & II

The entire Auxiliary I Building and Auxiliary II Building, up to elevation 31 feet, the 31 foot elevation floor slab, and the common wall between Auxiliary I and Auxiliary II are Seismic Category I structures. The remainder of the Auxiliary II Building above grade is designed according to the BOCA Basic Building Code\*, and checked to withstand the Design Base Earthquake (DBE) within 90% of the collapsable load. This design requirement on the non-Seismic Category I portion of the Auxiliary II Building is used to assure the building will not collapse under the DBE. \_\_\_\_

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\*Basic Building Code contains seismic design provisions similar to that of Uniform Building Code.



#### 1.2.2.4 Turbine Building

(Figures 27-34)

The Turbine Building will house all the steam and power conversion systems downstream of the main steam isolation valves. The foundation is a reinforced concrete mat. The superstructure is designed as a rigid steel frame resisting lateral wind and crane loads. Bracing will be provided to resist longitudinal lateral loads. Floors will be cast in place concrete on steel decking supported by steel floor framing.

The Turbine Building, a non-Seismic Category I structure, is designed in accordance with the Uniform Building Code. The Turbine Building is physically separated, including foundation mat, from the adjacent Auxiliary Building by a minimum 2" gap.

The Auxiliary Boiler Building will be located at the west corner and along the south wall of the Turbine Building. Its dimensions are approximately 64 feet x 52 feet as shown in Figure 39. The Auxiliary Boiler Building will house two auxiliary boilers, one steel stack and a deaerator tank. The building is designed as a non-Seismic Category I structure. The top of the foundation mat is at El. 31'-0". The superstructure is of steel framing with built-up roof and insulated metal siding walls.

#### 1.2.2.4.1 Turbine Missile Protection

(Figures 28-29)

Protection to plant safety-related systems & components is provided for both high and low trajectory turbine missiles. Roofs of the Containment, Fuel Handling, and Auxiliary I Building are designed to withstand the effects of high-trajectory turbine missiles impact. Protection from low-trajectory turbine missiles is provided by the Containment Building wall and the Auxiliary I Building wall facing the Turbine Building. Shadow barriers are located inside the Turbine Building to prevent potential missiles from going through the doorways between the Turbine Building and Auxiliary I Building. Figure 35 illustrates the barrier locations. Details of the missile (size and velocity) are found in the Forked River PSAR, Appendix 5G.

#### 1.2.2.5 Nuclear Services Pump House

(Figures 36-37)

The Nuclear Services Pump House, (NSPH) located 2500 feet ENE of the containment, centerline will contain all the equipment required to supply cooling water from the Oyster Creek Canal for normal and emergency station service.

The foundation will be a conventional reinforced concrete mat. The substructure will include reinforced concrete walls to form screen and pump chambers and support the operating floor.

The superstructure will consist of a reinforced concrete floor slabs, walls and roof. Exterior walls and roof will be designed to provide tornado missile protection. Exterior wall openings will be shielded against tornado missiles. The NSPH will be designed to resist the Forked River plant seismic loads. The Nuclear Services Pump House structural design criteria are in accordance with Standard Review Plan 3.8.4, "Other Seismic Category I Structures".

Flood protection is provided by locating entrances to the Pump House and critical equipment above the Probable Design Basis Flood elevation of 27 feet, Mean Sea Level. Safety-related electrical equipment located below the operating elevation is protected from internal flooding from postulated pipe breaks by elevating the entrances to the electrical equipment rooms.

#### 1.2.2.6 Other Structures

##### 1.2.2.6.1 Fire Protection Pump House Structure

(Figure 38)

The fire protection pump house will be a conventional structure housing one motor driven and two diesel driven fire pumps. The pump house structure will be located at the fresh water pond 2200 feet southeast of the containment. The floor of the fire protection pump house shall be one foot above the hundred year flood level.

#### 1.2.2.6.2 Cooling Tower

Most of the waste heat generated during plant operation will be dissipated through a hyperbolic, natural draft cooling tower. The cooling tower will be located approximately 900 feet south and 220 feet east of the Containment Building. The cooling tower will be reinforced concrete construction, designed as Non-Seismic Category I structure.

#### 1.2.2.6.3 Radwaste Solidification Building

The Radwaste Solidification Building will be located north of Auxiliary Building II. The size of this building will not be finalized until the specific radwaste volume reduction system is selected. The Radwaste Solidification Building will contain volume reduction and solidification systems, a storage area and a truck bay

The Radwaste Solidification Building will be constructed on a Seismic Category I foundation. The walls will be Seismic Category I to a height sufficient to contain the liquid inventory of the building. The balance of the building will be designed to the BOCA (Building Official and Code Administrator International, Inc.) Basic Building Code.

#### 1.2.2.6.4 Field Tanks

(See Figure 1 for location)

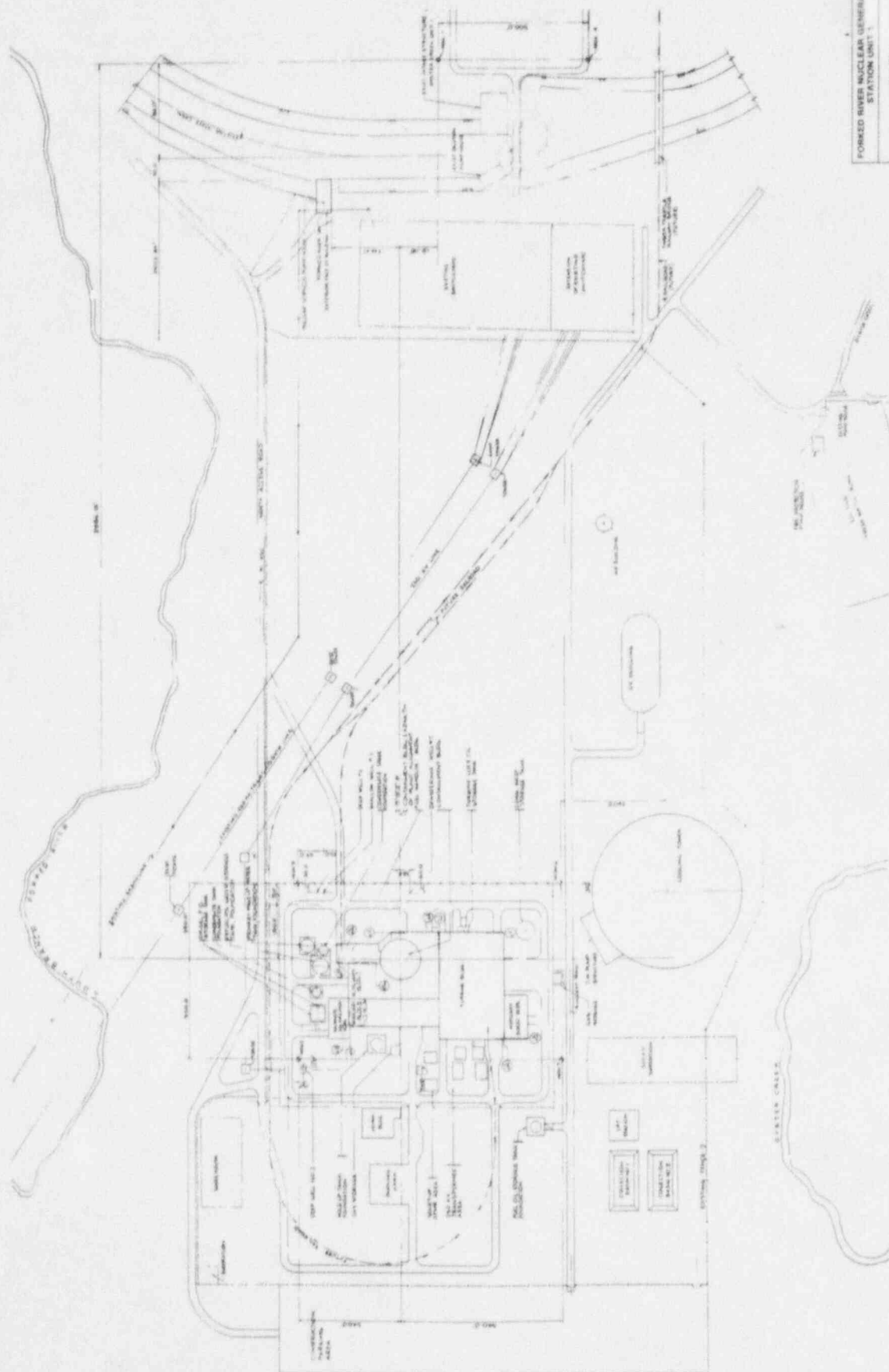
#### 1.2.2.6.4.1 Non-Safety Related Tanks

Non-Safety related tanks consist of one Demineralized Water Storage Tank (1,000,000 gallons), one Fuel Oil Storage Tank (150,000 gallons), one Holdup Tank (370,000 gallons), and one Primary Makeup Water Storage Tank (480,000 gallons). The Holdup Tank (part of the Chemical and Volume Control System) and Primary Makeup Water Storage Tank are enclosed in a structure for weather protection and surrounded by a dike for the collection of potential leaks. The Fuel Oil Storage Tank is also diked.

#### 1.2.2.6.4.2 Safety Related Tanks

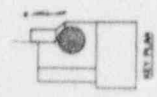
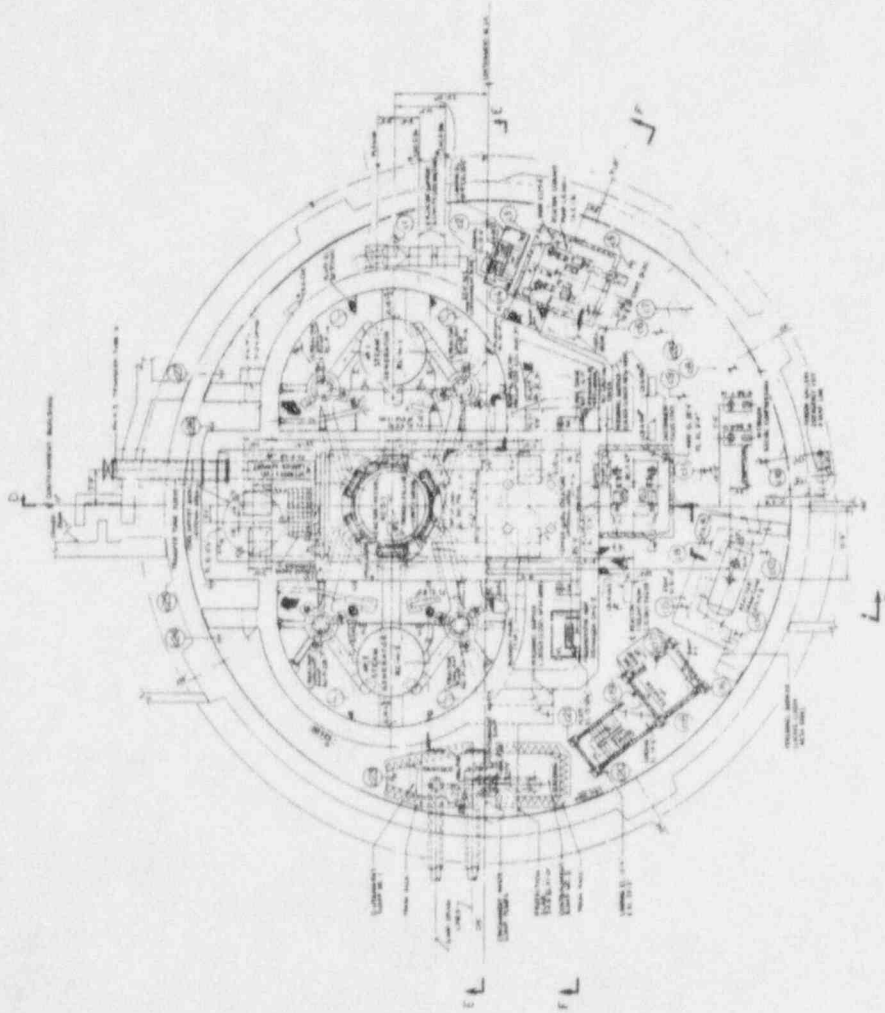
Safety related tanks consist of one Refueling Water Tank (750,000 gallons), two Emergency Diesel Fuel Oil Storage Tanks (100,000 gallons each), and two Condensate Storage Tanks (250,000 gallons each). All these tanks are located on Seismic Category I foundations. The Emergency Diesel Fuel Oil Storage Tanks are seismic category I tanks and are buried. The Refueling Water Tank is enclosed in a Seismic Category I structure that provides missile protection. Tornado and turbine missile protection of the condensate storage tanks shall be considered in the design.





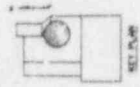
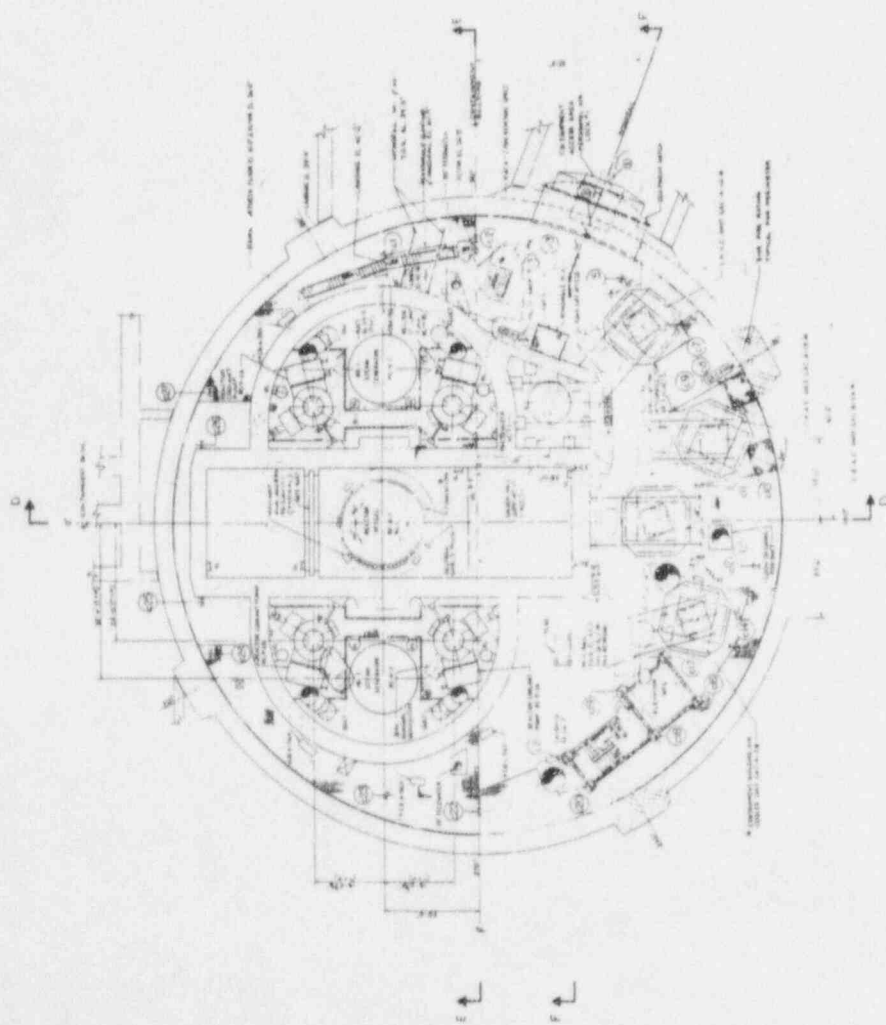
FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Site Plan  
 Figure 1



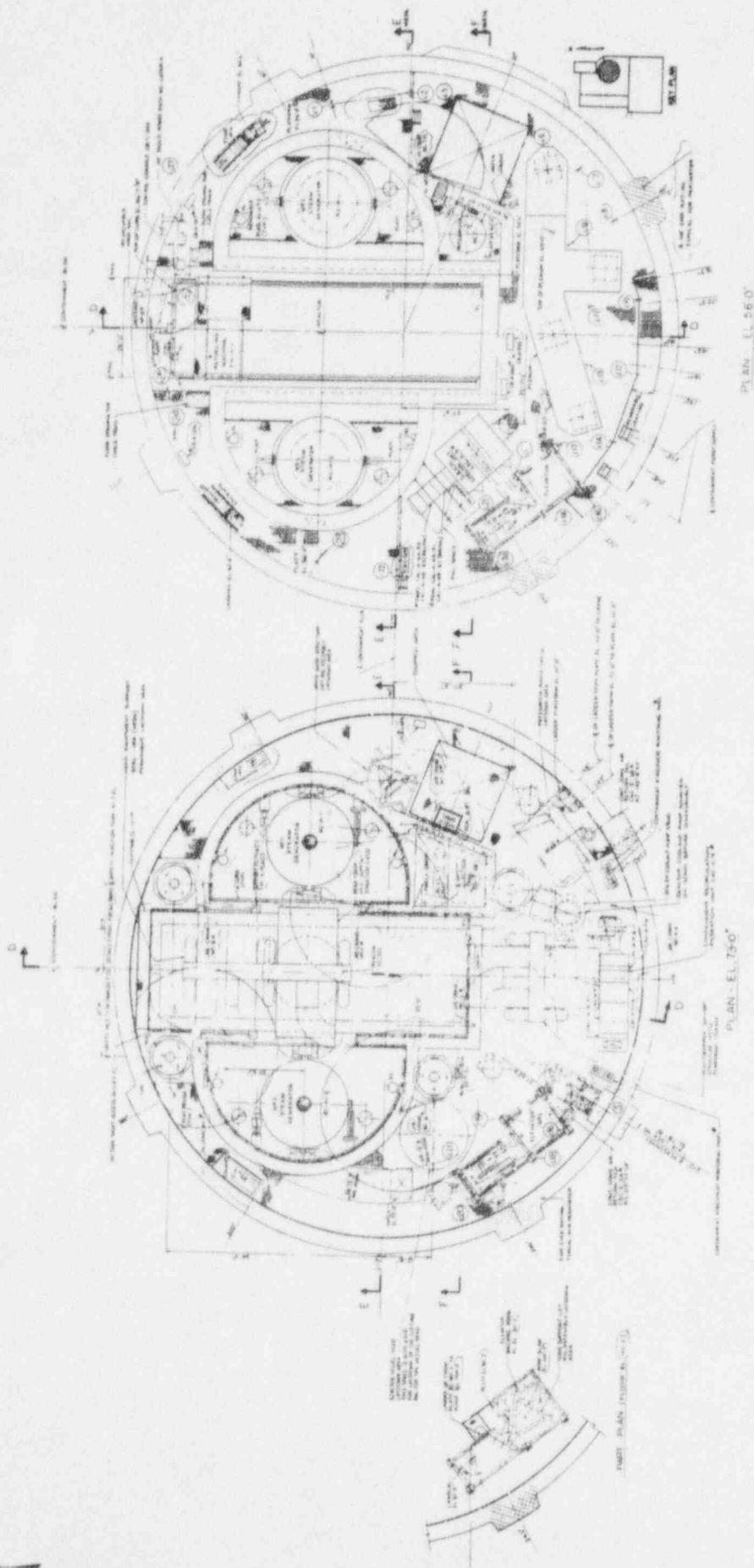


FORKED RIVER NUCLEAR GENERATING STATION UNIT 1 Component Building Elevation 8-6 General Arrangement
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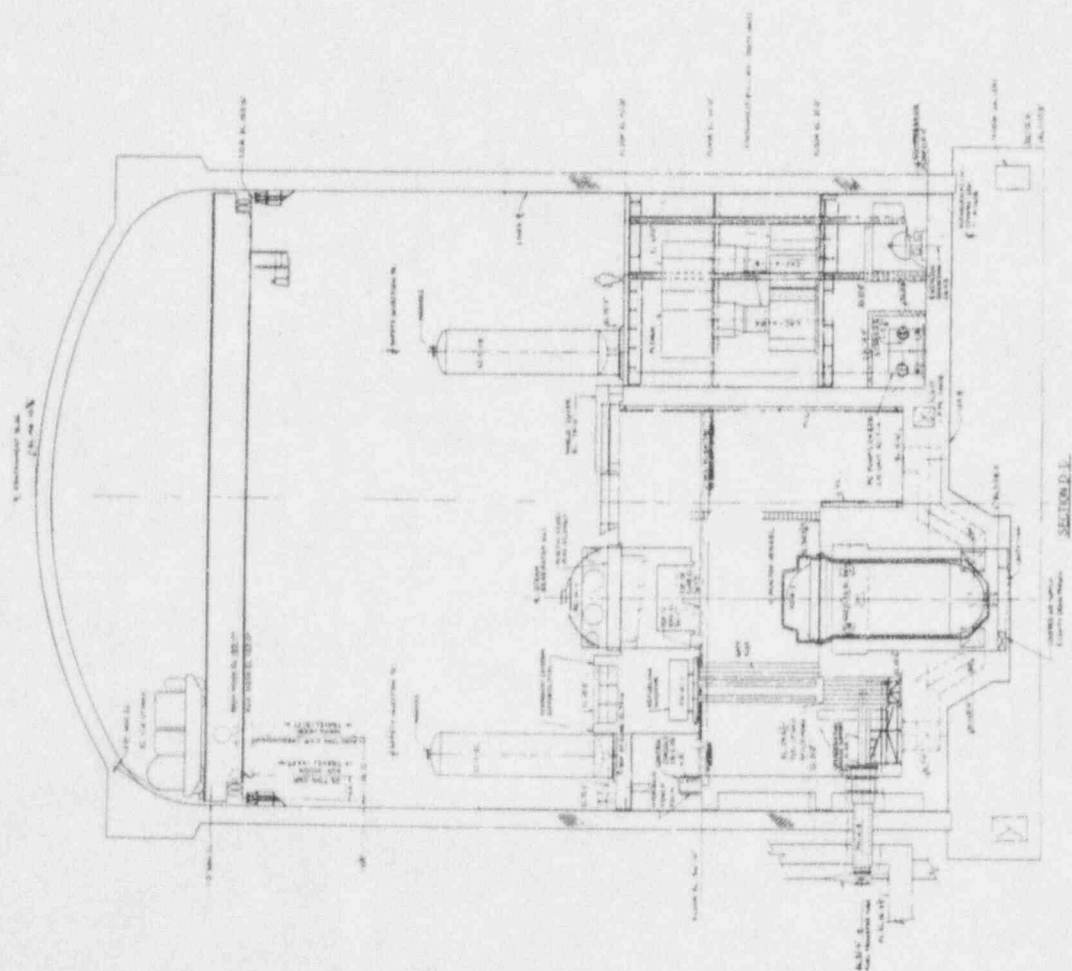
Figure 2



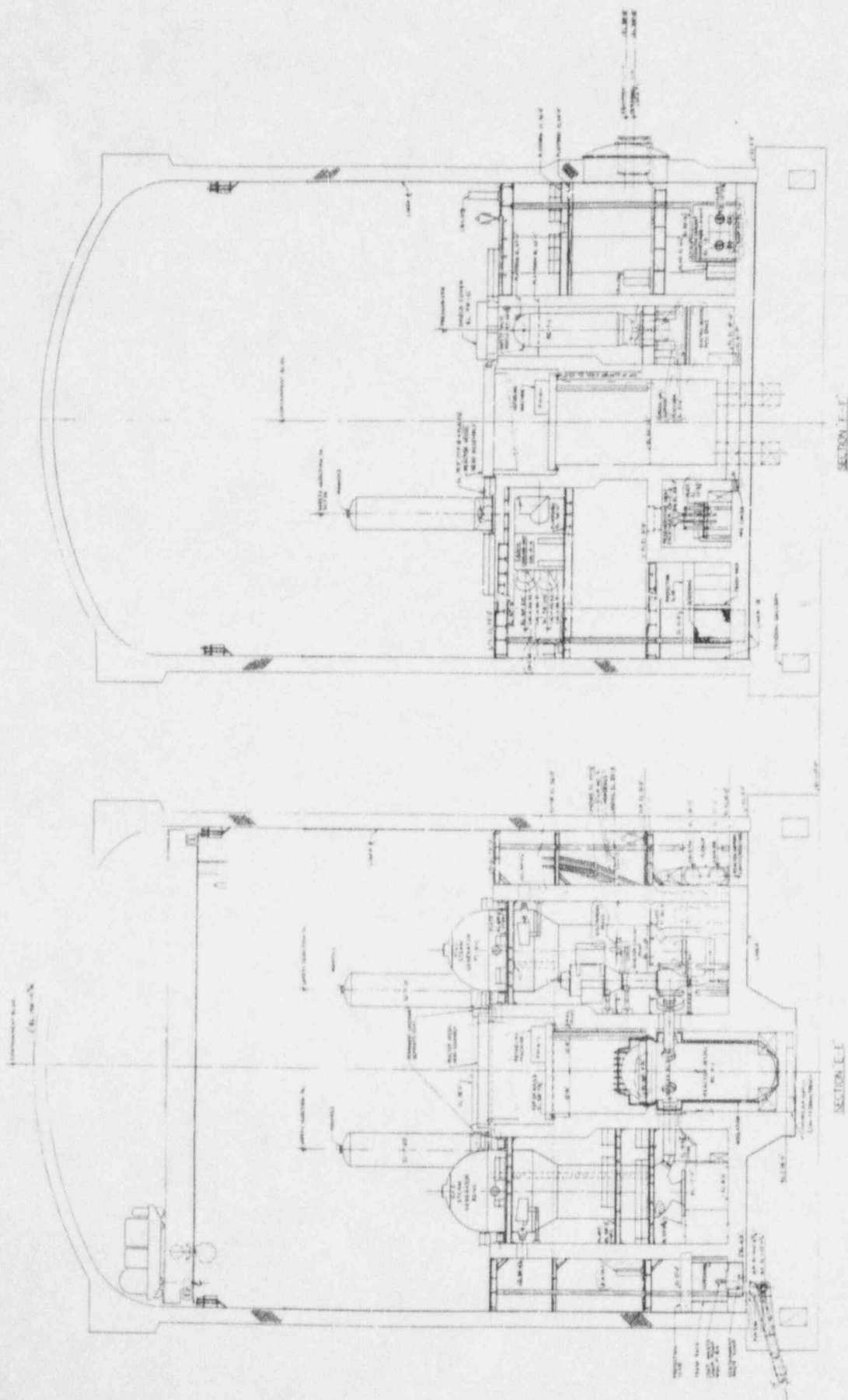
FORKED RIVER NUCLEAR GENERATING STATION UNIT 1 Containment Building Elevation 31-0 General Arrangement
Figure 3



<p><b>FORKED RIVER NUCLEAR GENERATING STATION UNIT 1</b></p> <p>Containment Building Elevation 56'-0" &amp; 75'-0"</p> <p>General Arrangement</p> <p>Figure 4</p>
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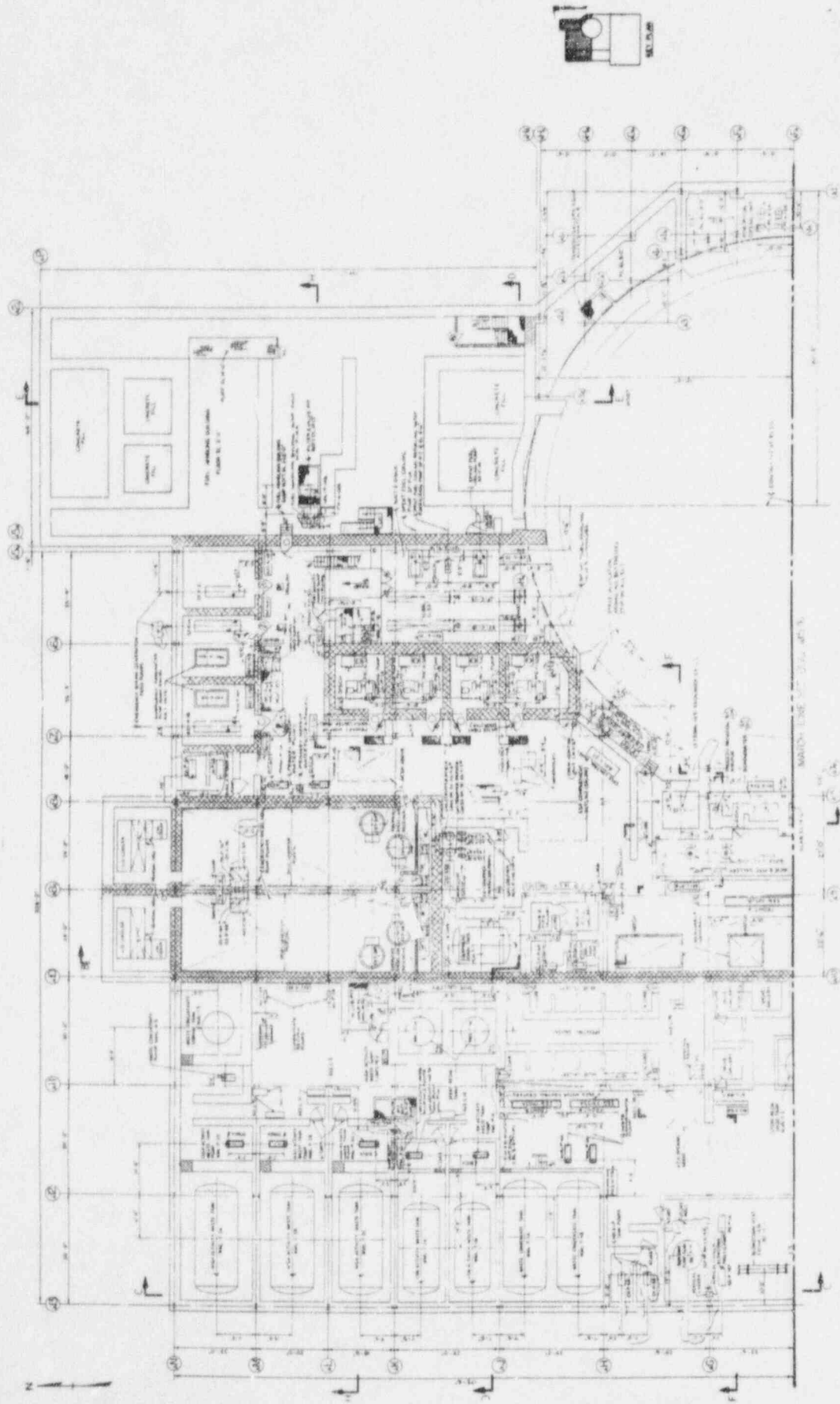


FORBES RIVER NUCLEAR GENERATING  
STATION UNIT 1  
Containment Building Section D-D  
General Arrangement  
Figure 8



FURNED RIVER NUCLEAR GENERATING STATION UNIT 1
Containment Building Sections I-I' & II-I'
General Arrangement
Figure 1

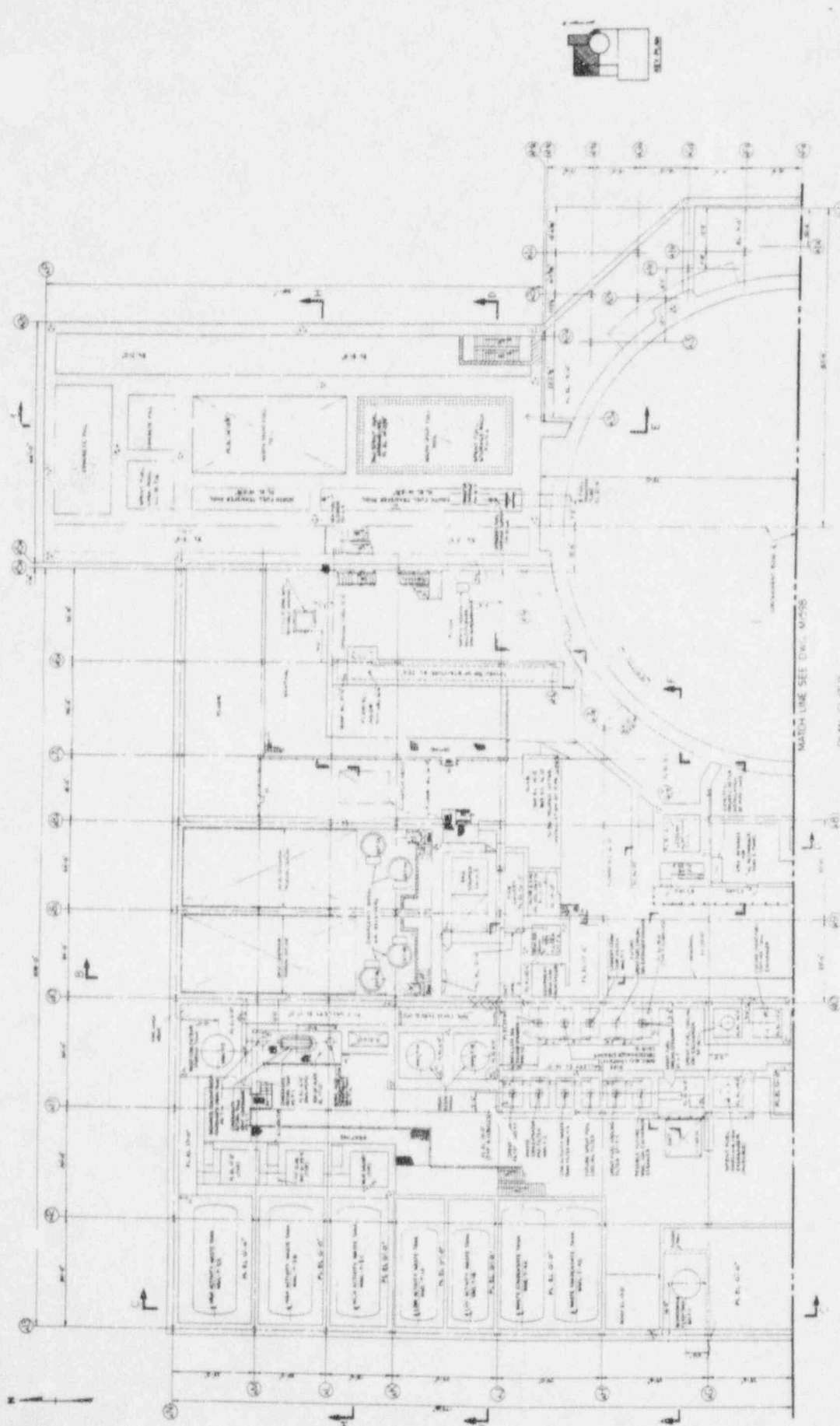




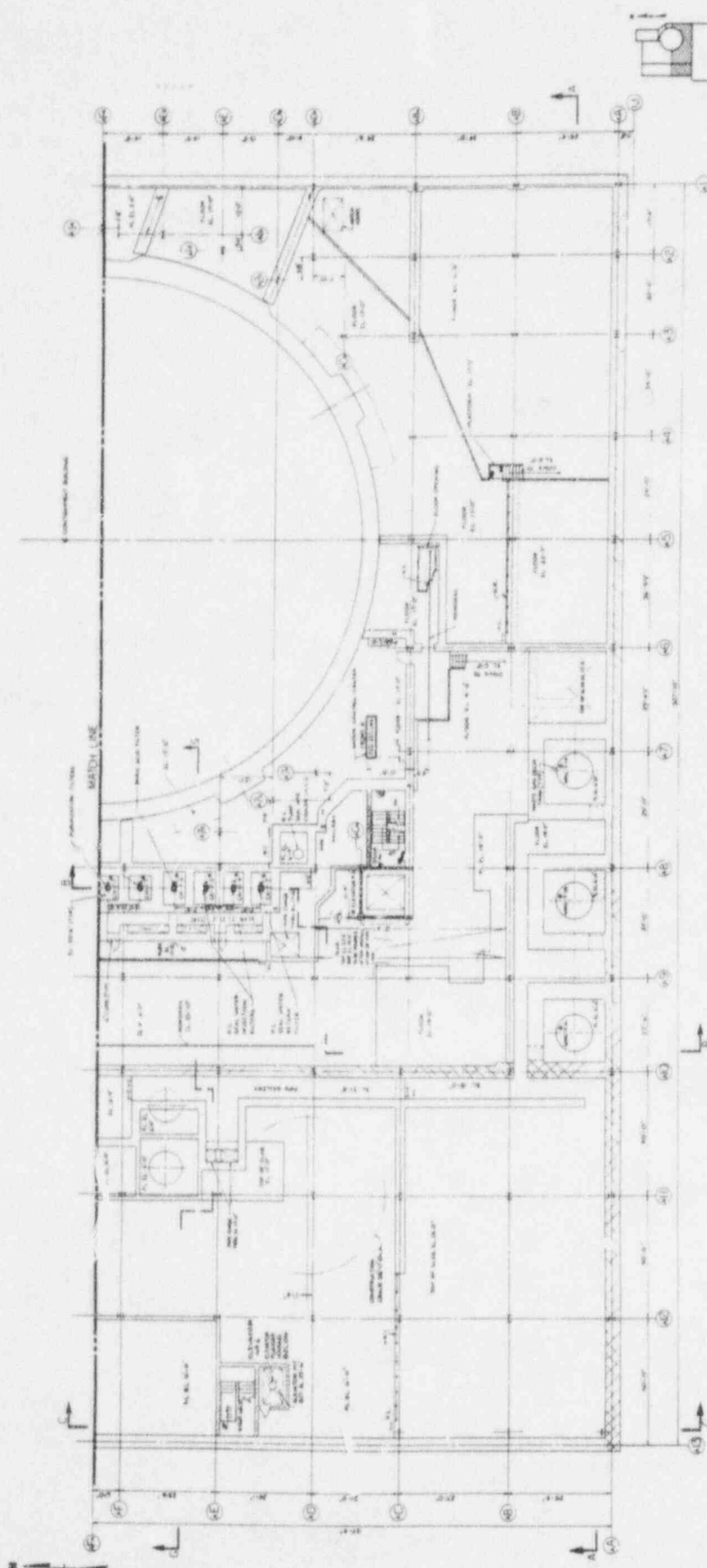
FORMED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary & Fuel Handling Building  
 Elevation 6-0 North - General Arrangement  
 Figure 7



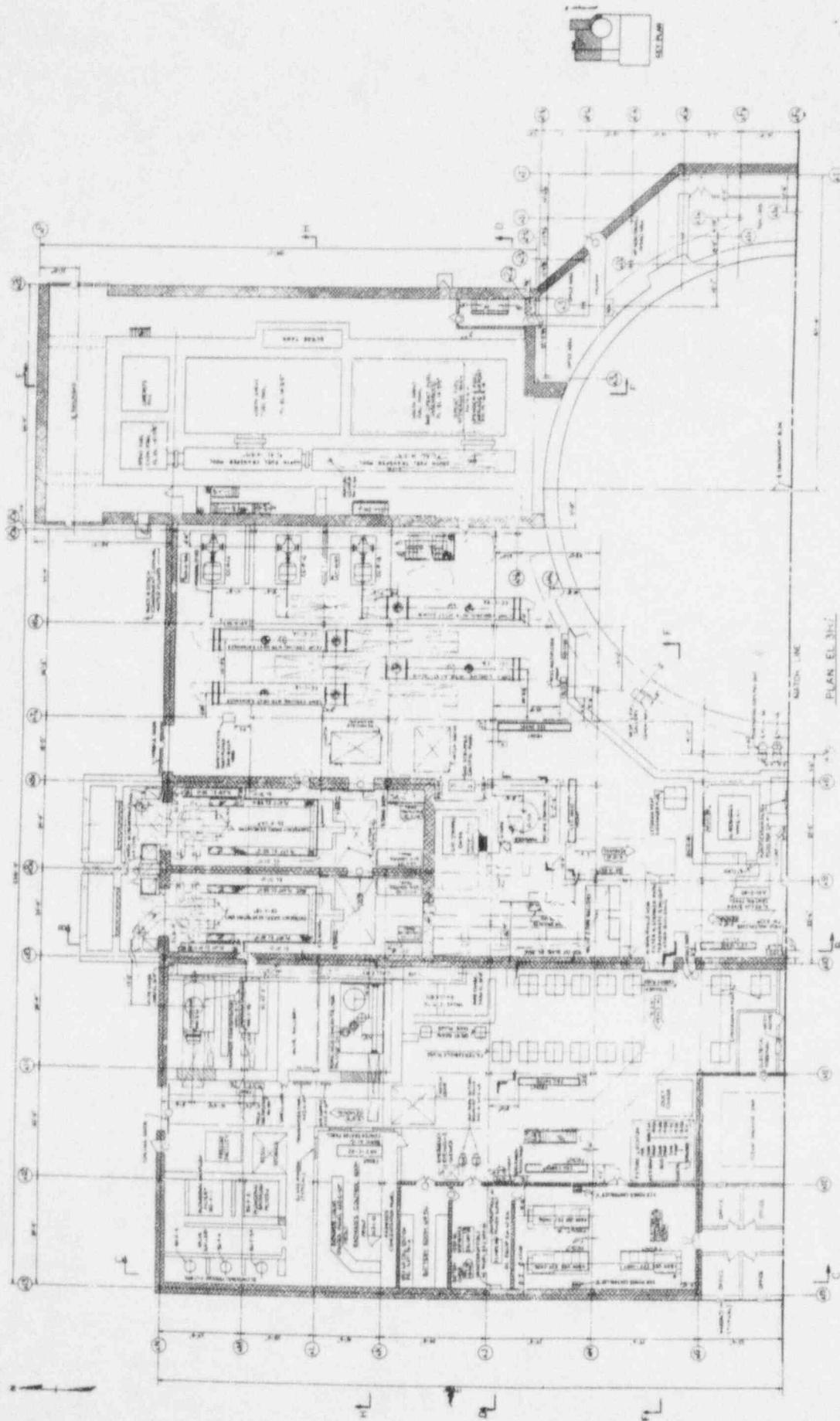




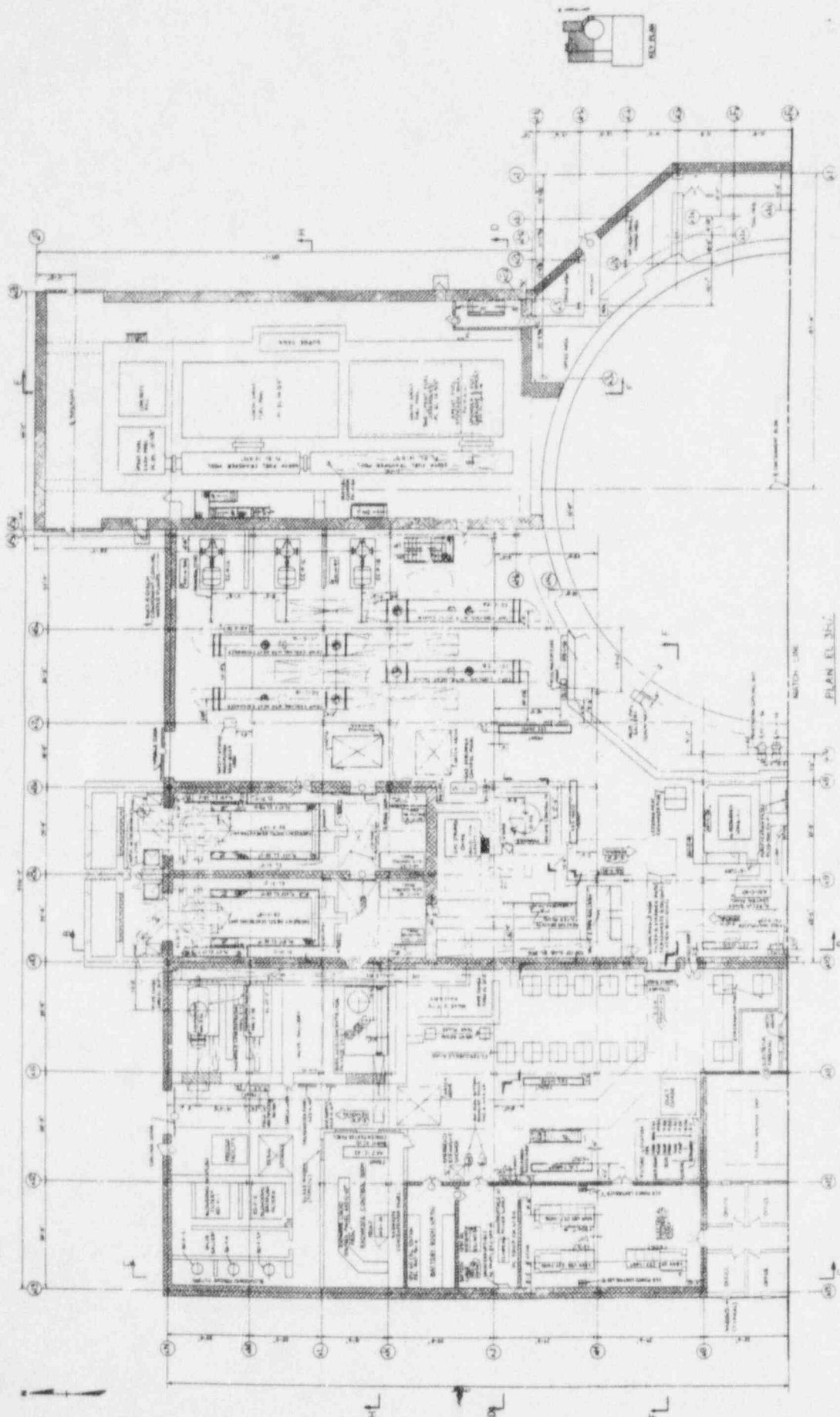
FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary & Fuel-Handling Intermediate  
 Division 11.0 North - General Arrangement  
 Figure 9  
 FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1



FORKED RIVER NUCLEAR GENERATING STATION UNIT 1	Auxiliary Building Intermediate Elevation (17.5 South General Arrangement)	Figure 10
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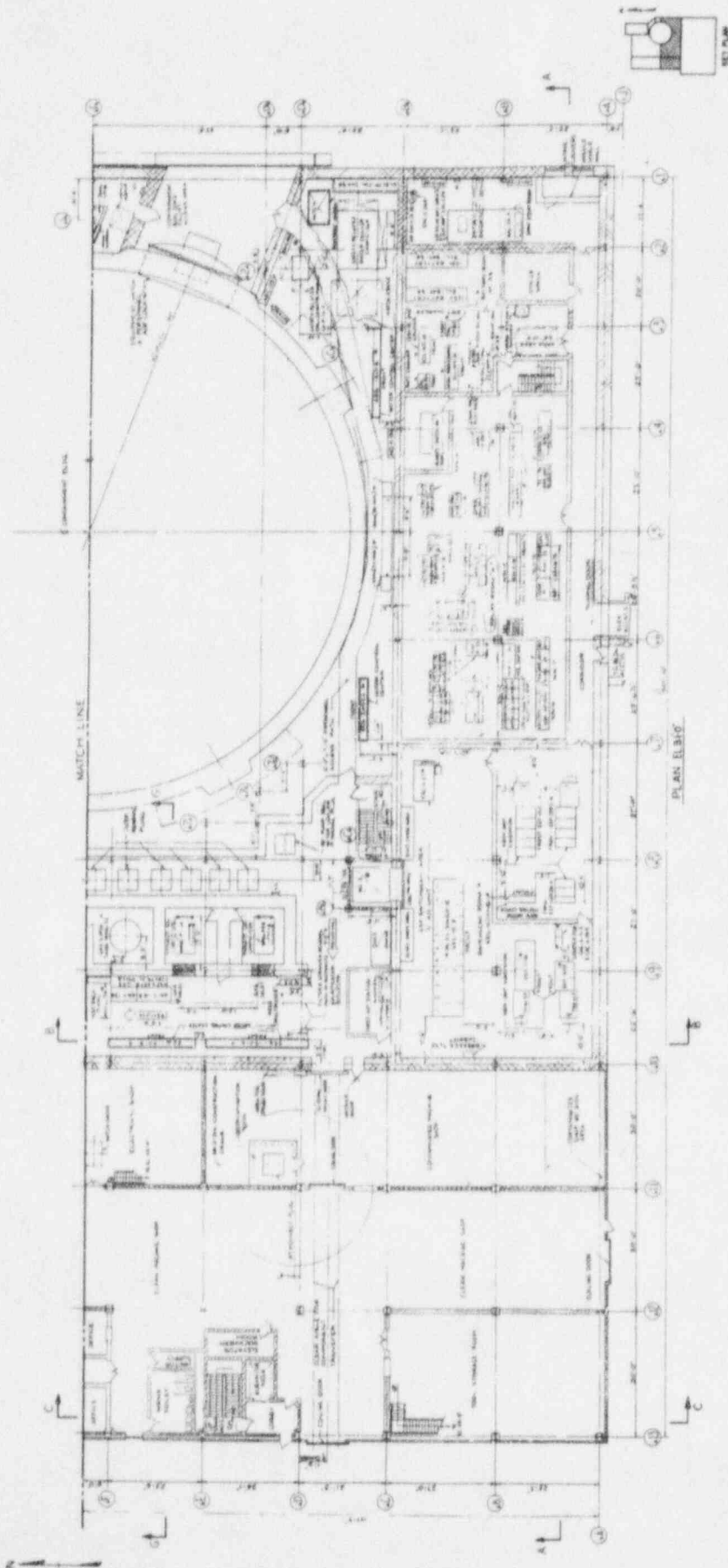
FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary & Fuel Handling Building  
 Elevation 31-0 North - General Arrangement  
 Figure 11



FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary & Fuel Handling Building  
 Elevation 31-1 North - General Arrangement

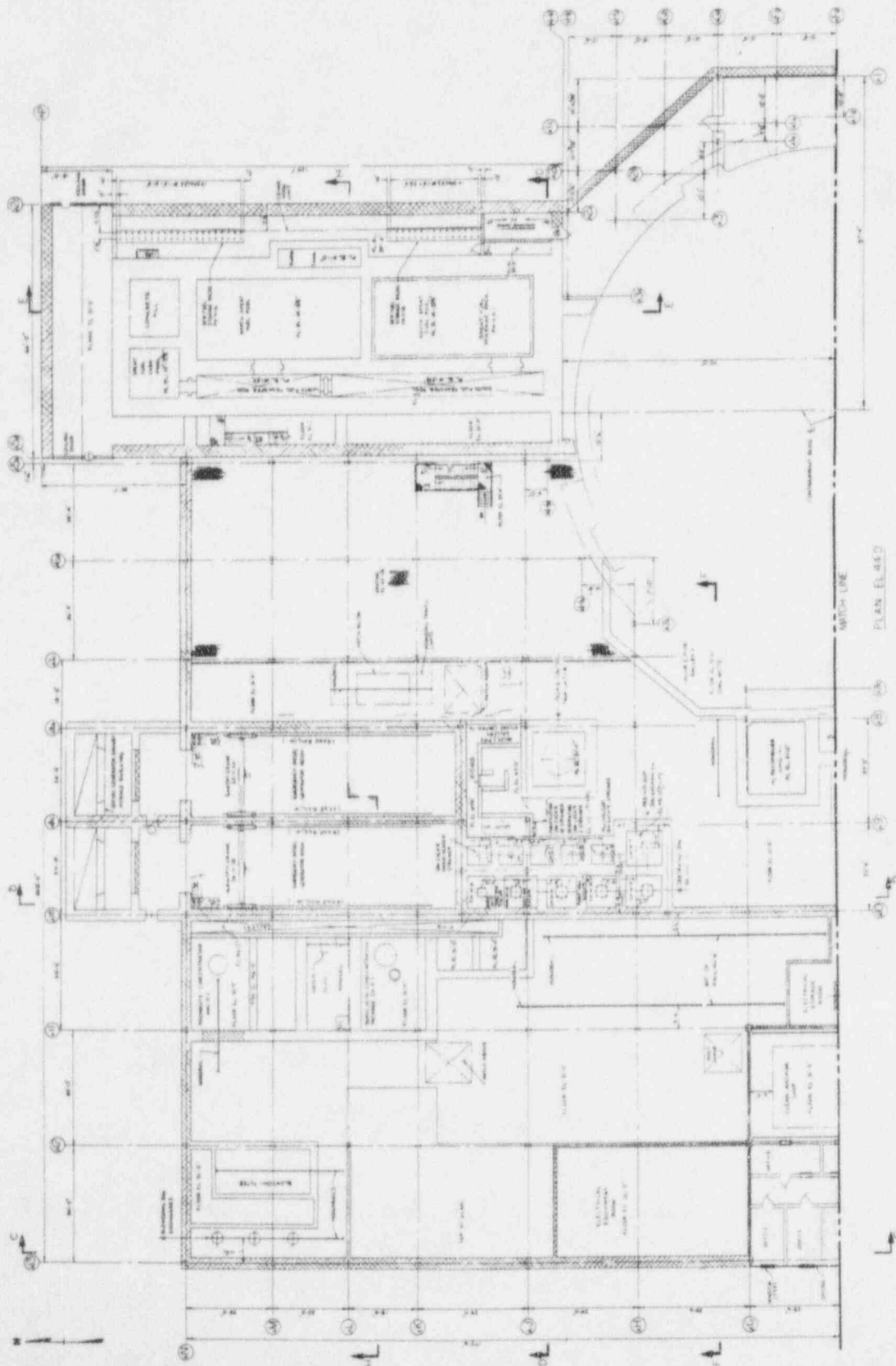
Figure 11



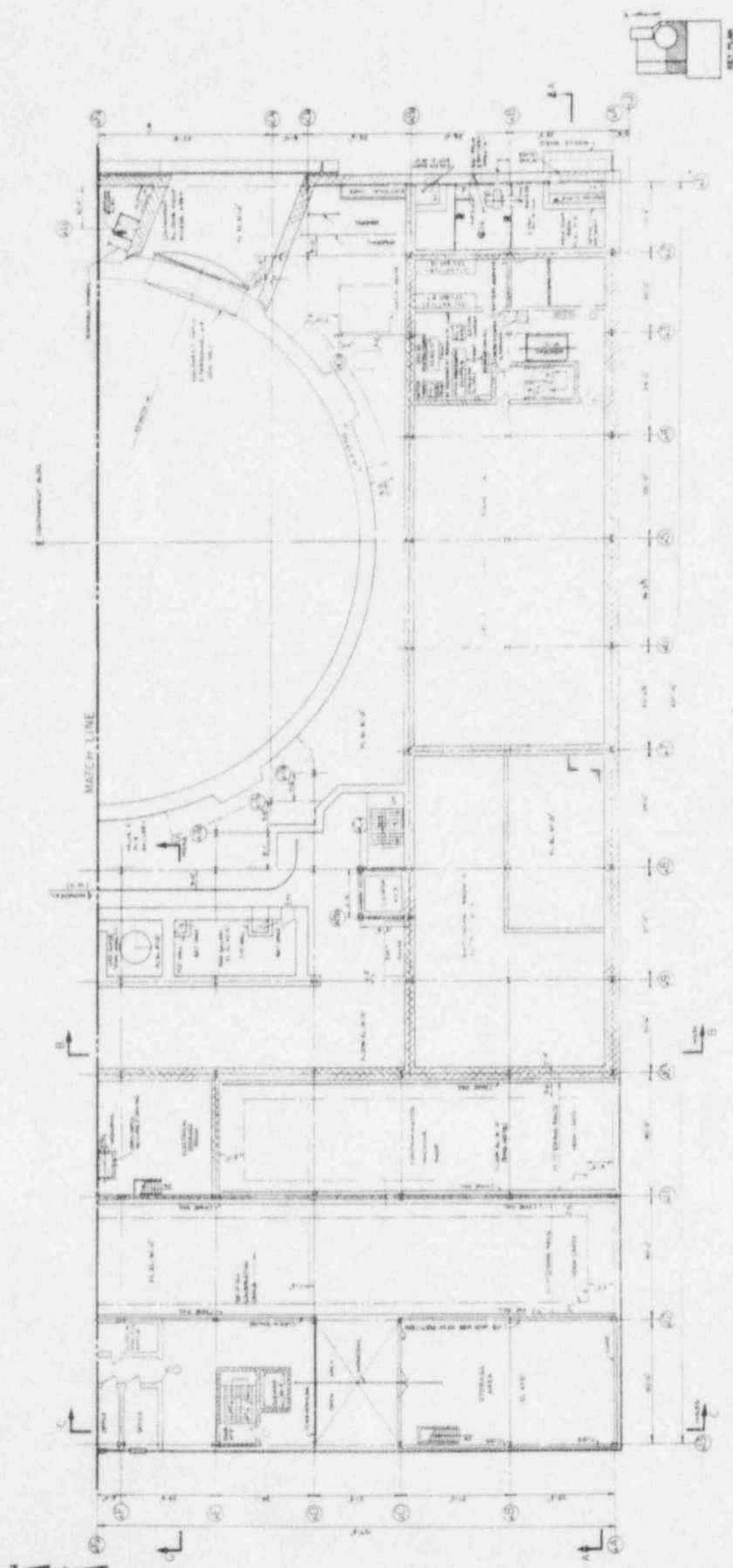


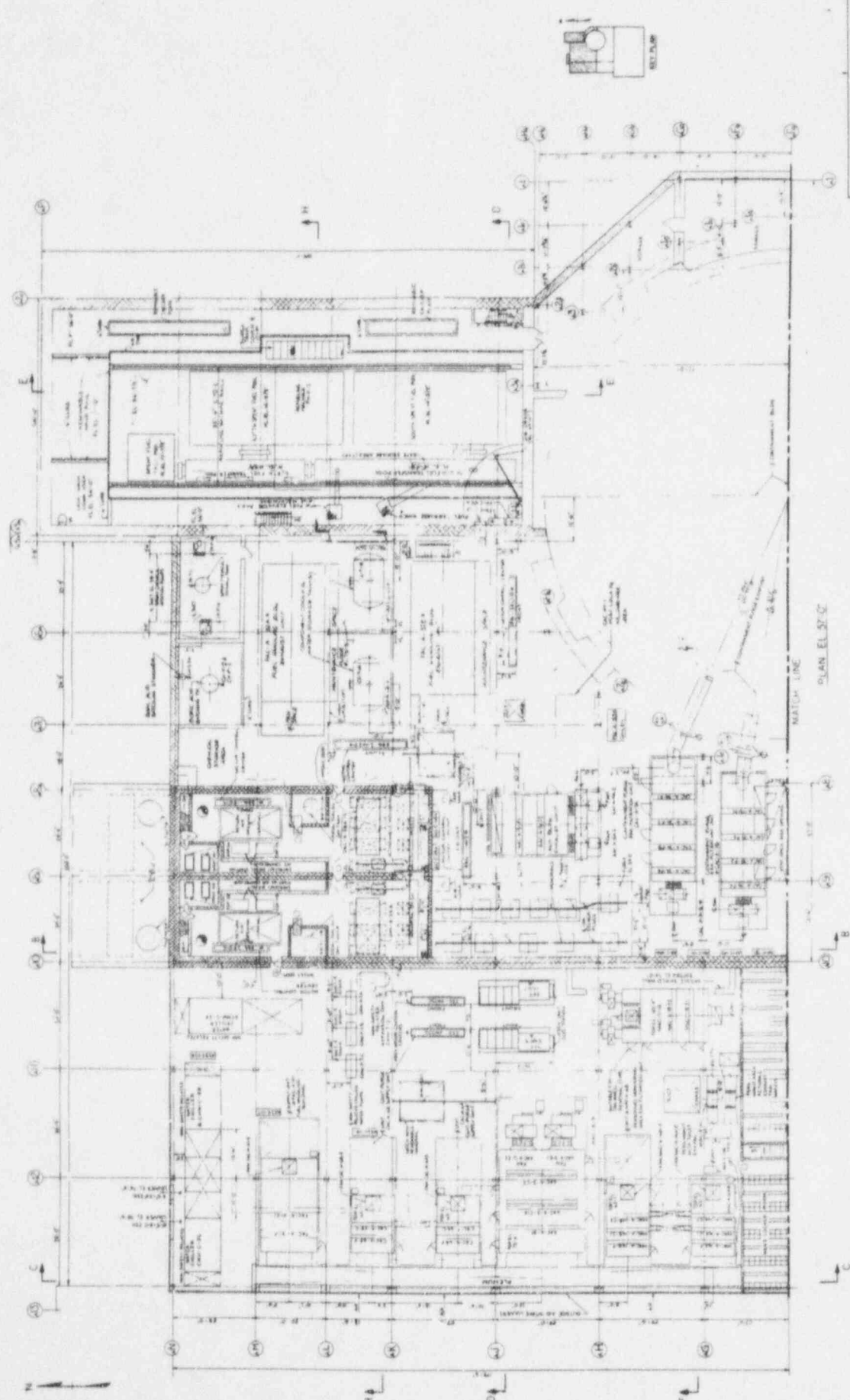
FORKED RIVER NUCLEAR GENERATING STATION UNIT 1 Auxiliary Building Elevation 31-0 South General Arrangement
Figure 12





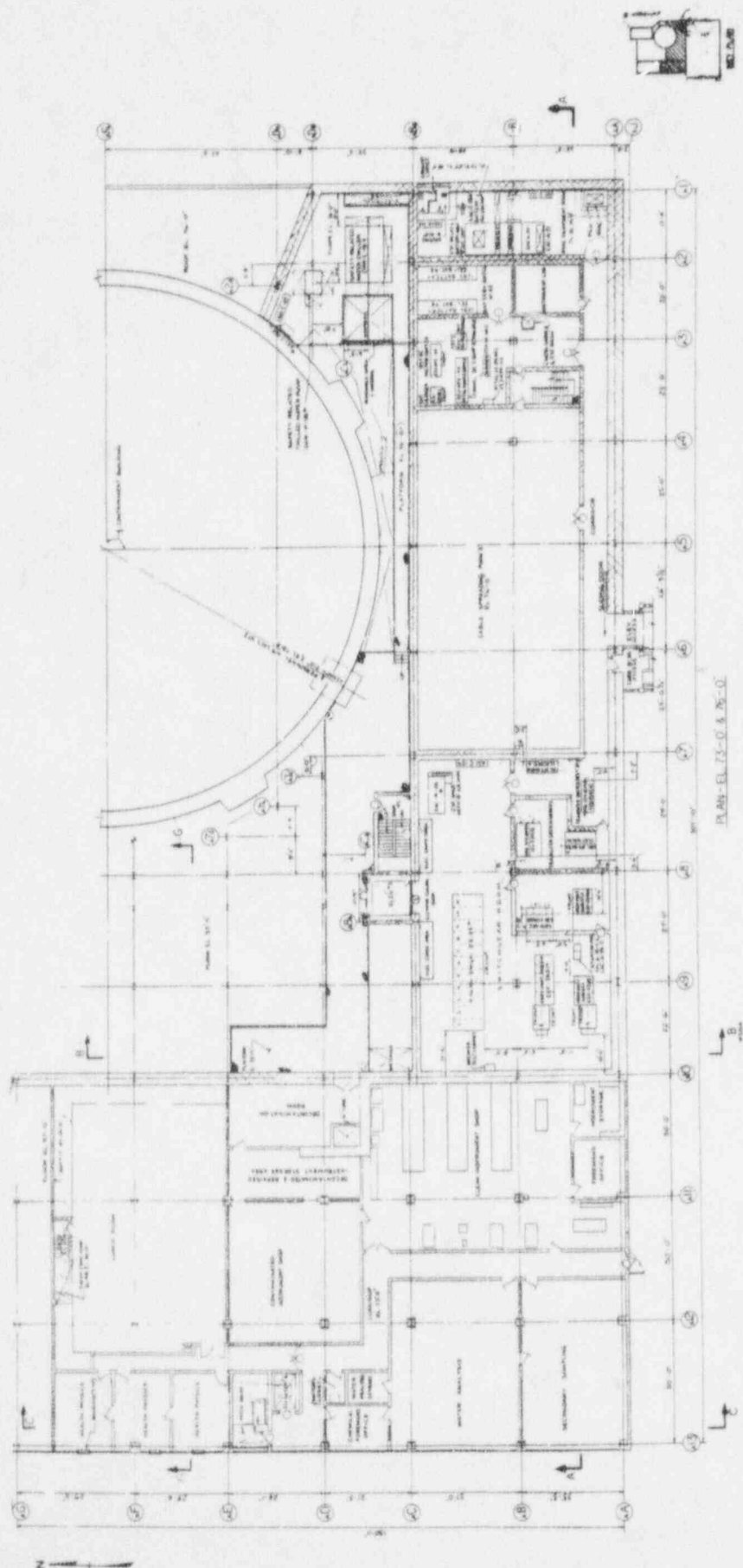
FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary to Fuel Handling Building Intermediate  
 Elevation 44.0 North - General Arrangement  
 Figure 13





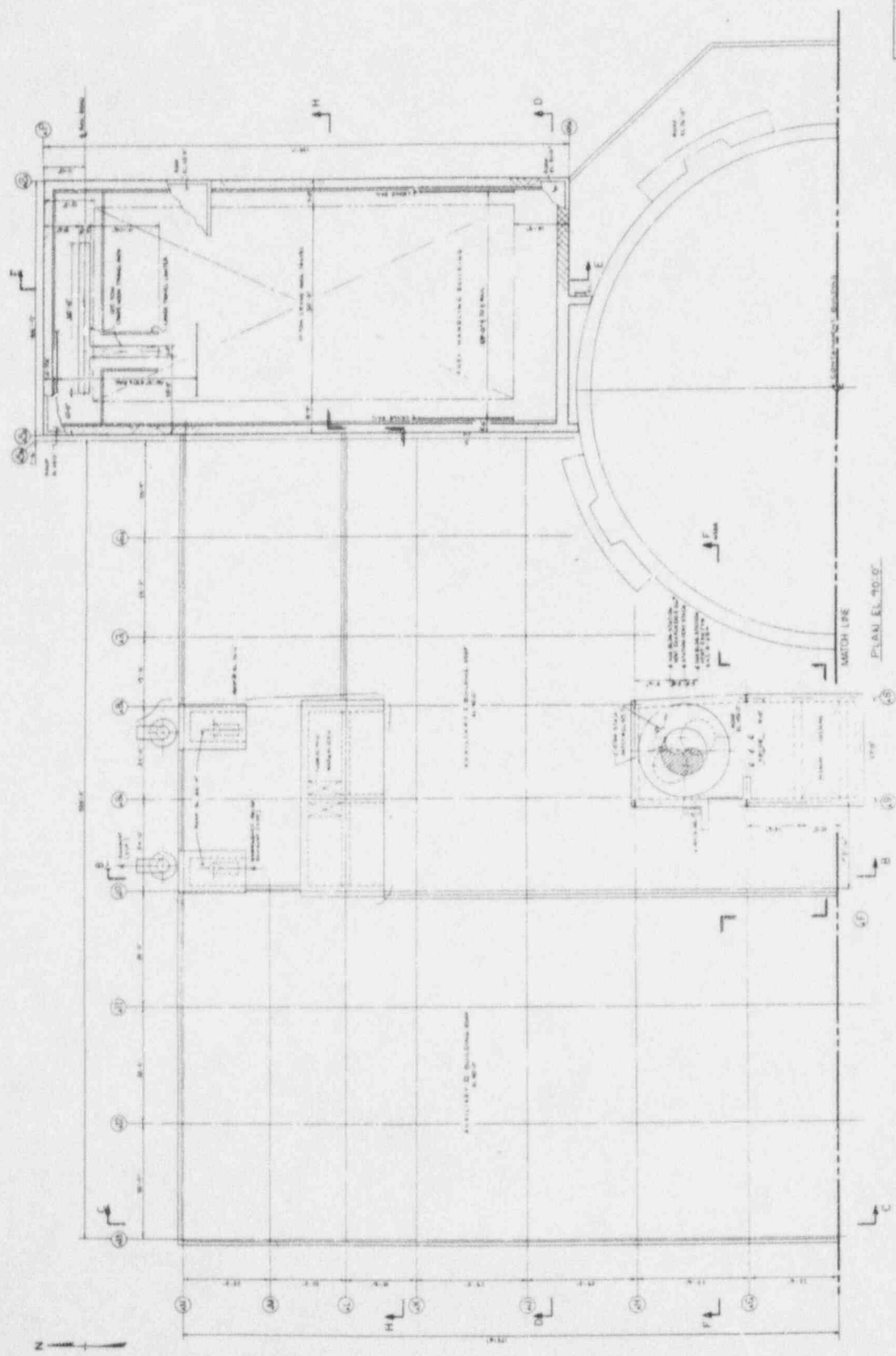
FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary & Fuel Handling Building  
 Elevation 27'0" North - General Arrangement  
 Figure 15



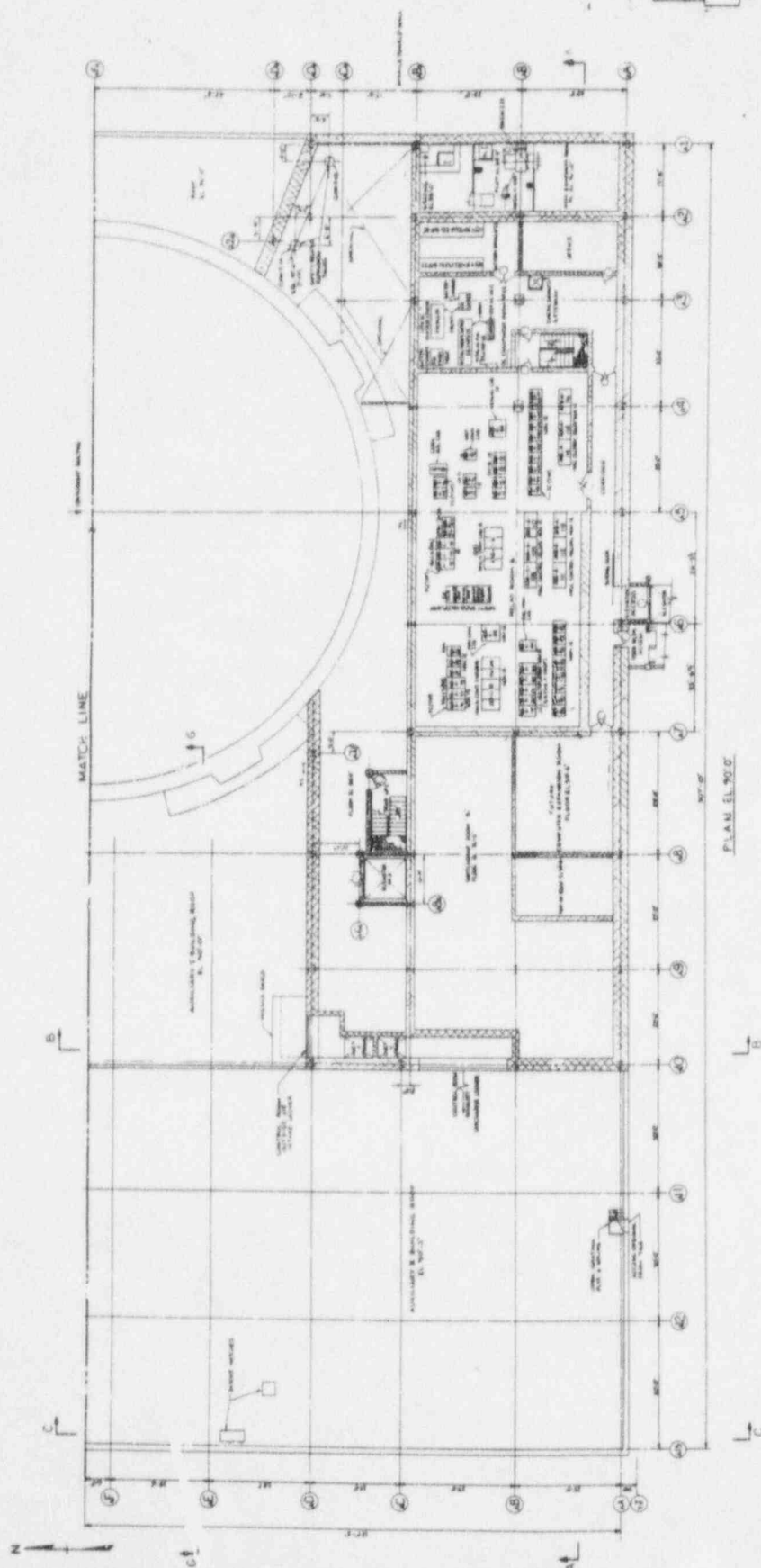


FORBAIRD RIVER NUCLEAR GENERATING  
STATION UNIT 1  
Auxiliary Building, Elevation 73.0 & 74.0 South  
(General Arrangement)

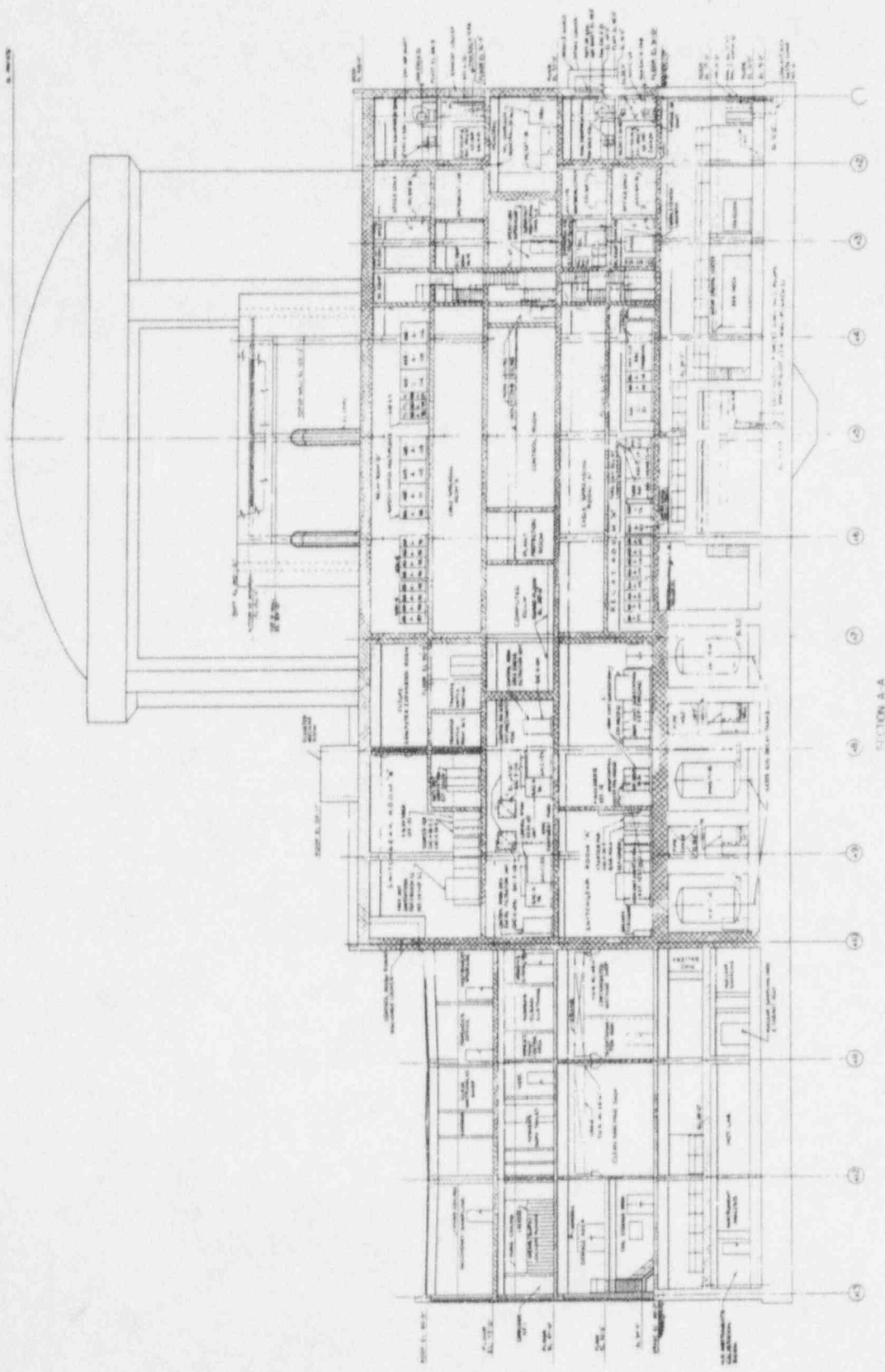




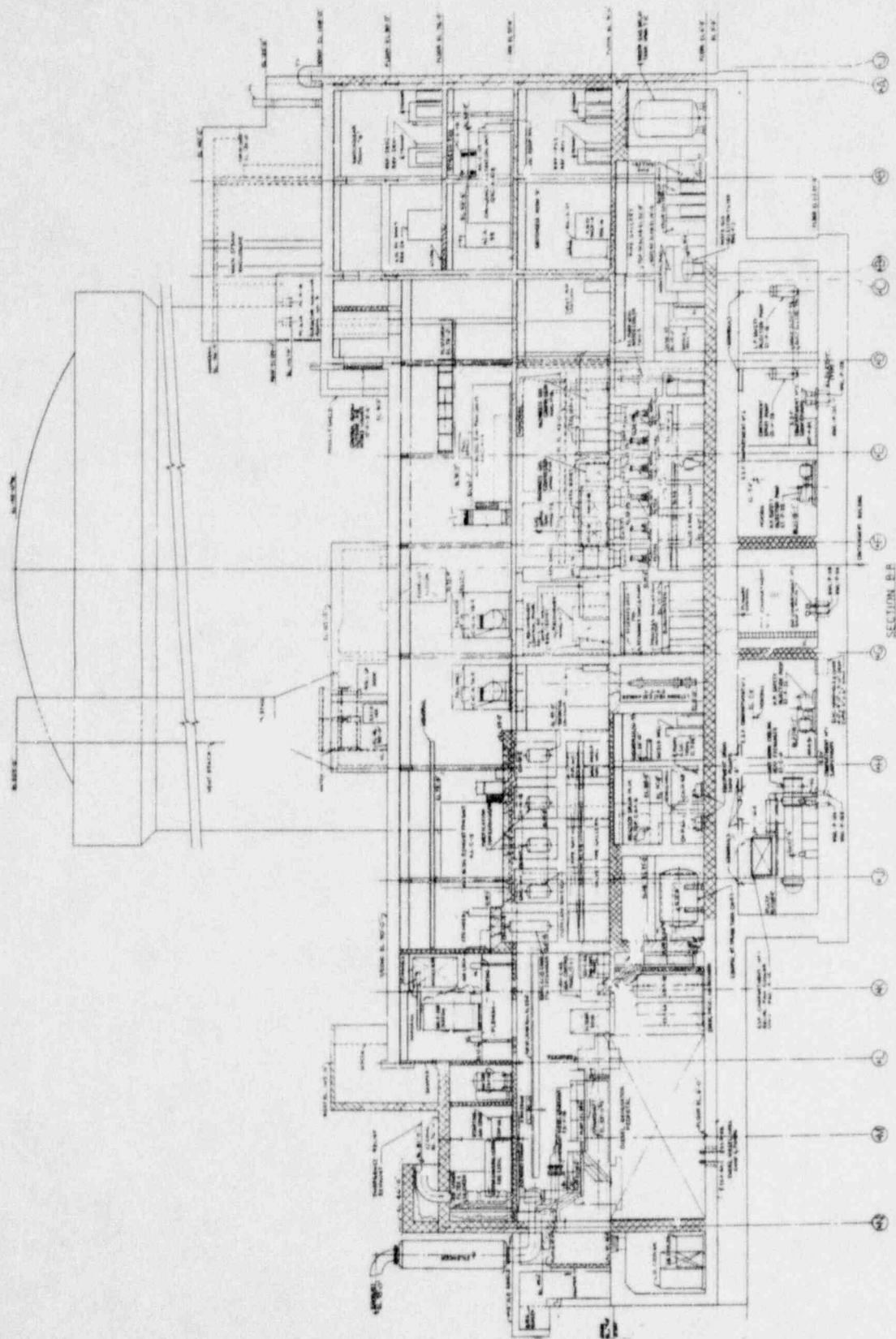
FORGED RIVER NUCLEAR GENERATING  
STATION UNIT 1  
Auxiliary & Fuel Handling Building  
Elevation 96'-0" North - General Arrangement  
Figure 18



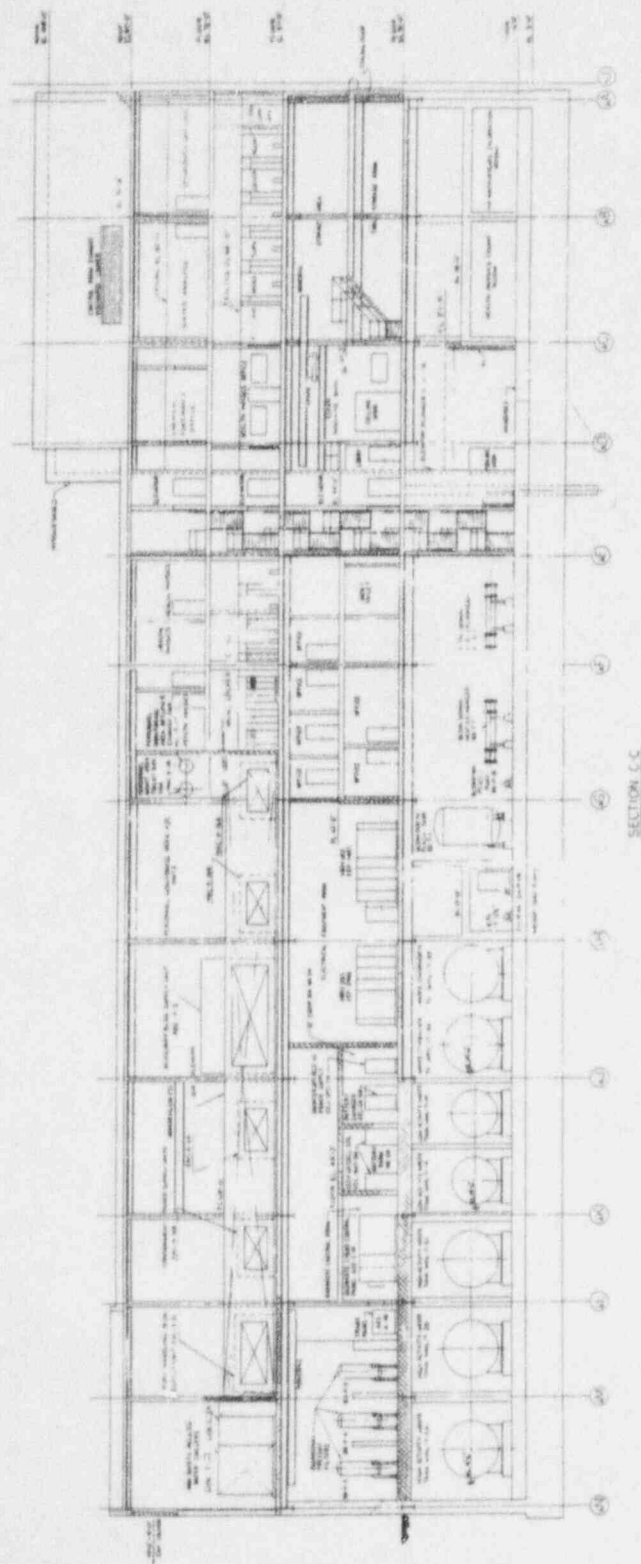
FORGED RIVER NUCLEAR GENERATING STATION UNIT 1
Auxiliary Building Elevation 90-0 South General Arrangement
Figure 19



FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary Building Section A-A  
 General Arrangement  
 Figure 20



FORMED UNIT: 12-2 LEAR GENERATING  
 STATION UNIT 1  
 Auxiliary Building Section B-B  
 General Arrangement  
 Figure 21

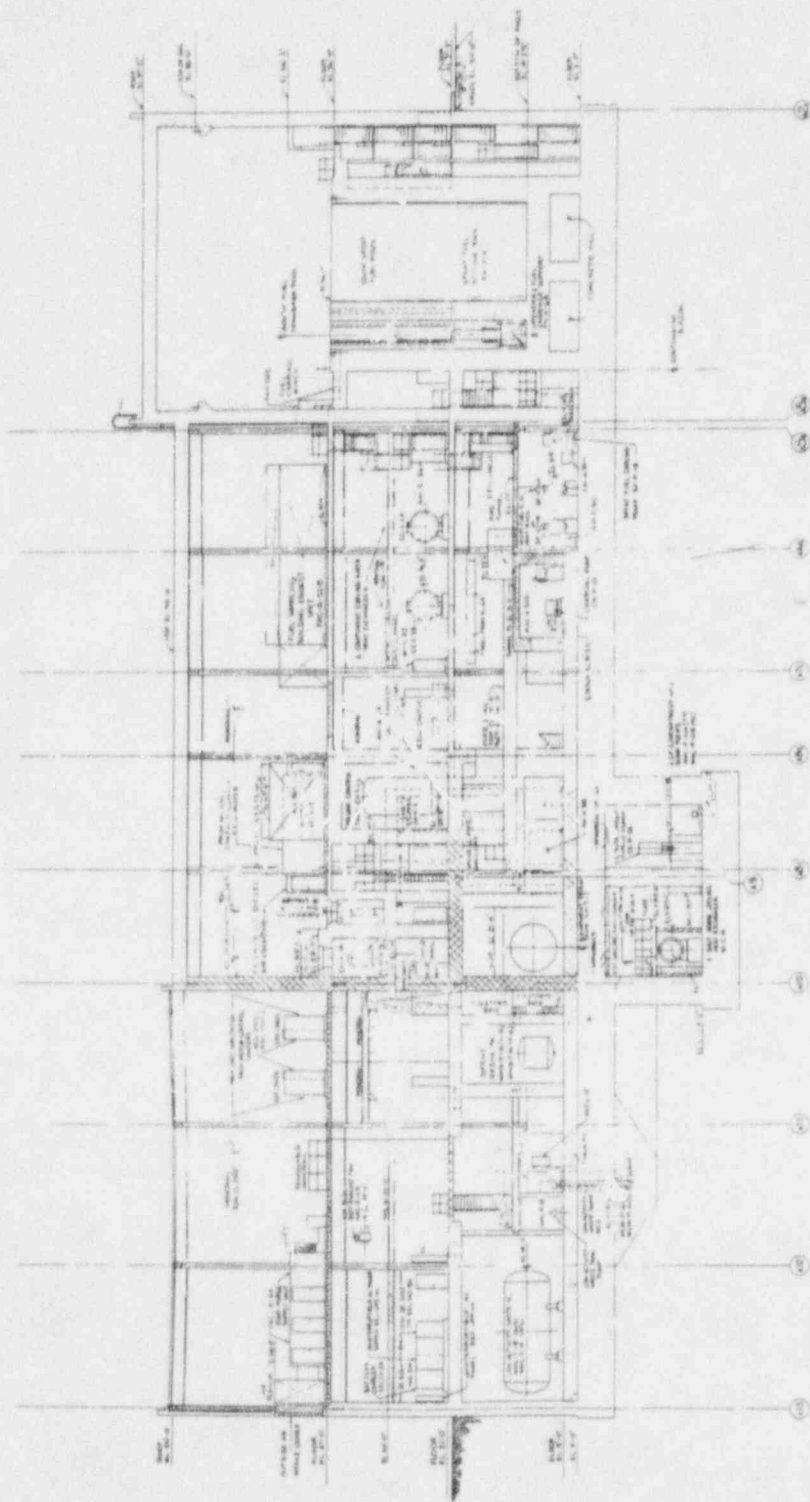


FORCED RIVEN NUCLEAR GENERATING  
STATION UNIT 1

Auxiliary Building Section C-C  
General Arrangement

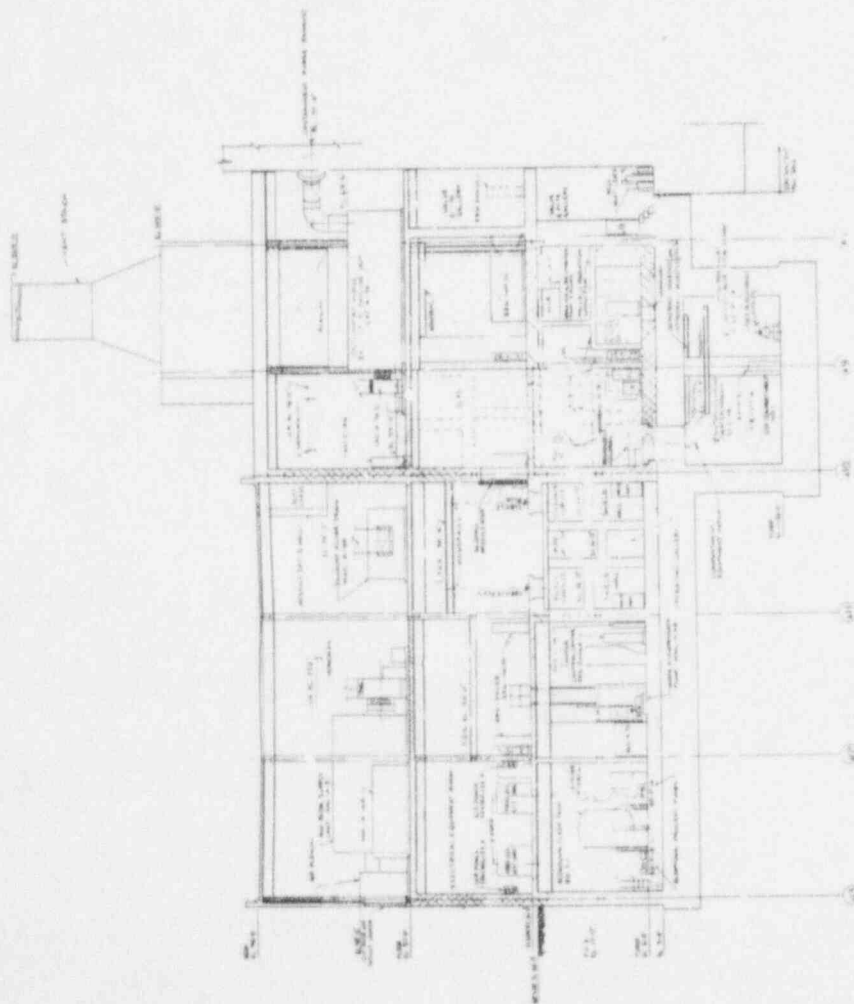
Figure 20



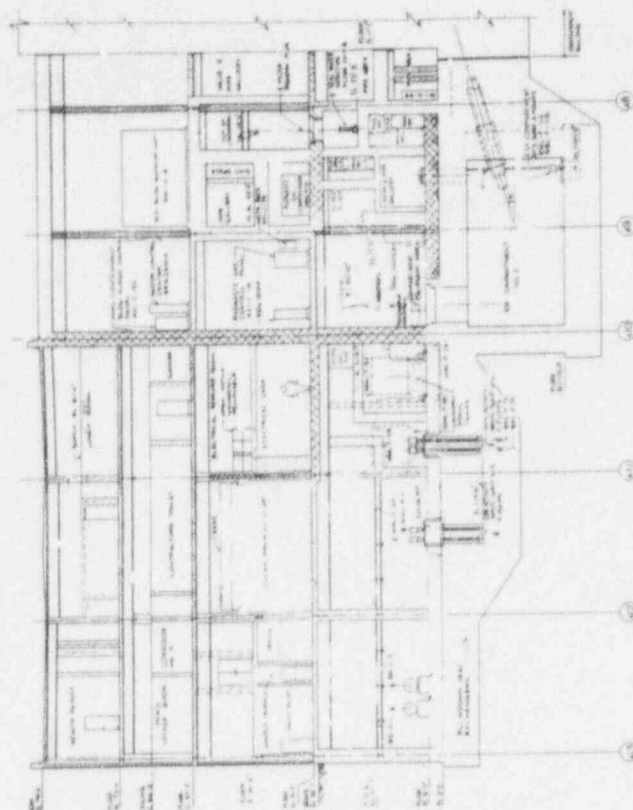


FORDING RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Auxiliary & Fuel Handling Building Section D-D  
 General Arrangement

Figure 23

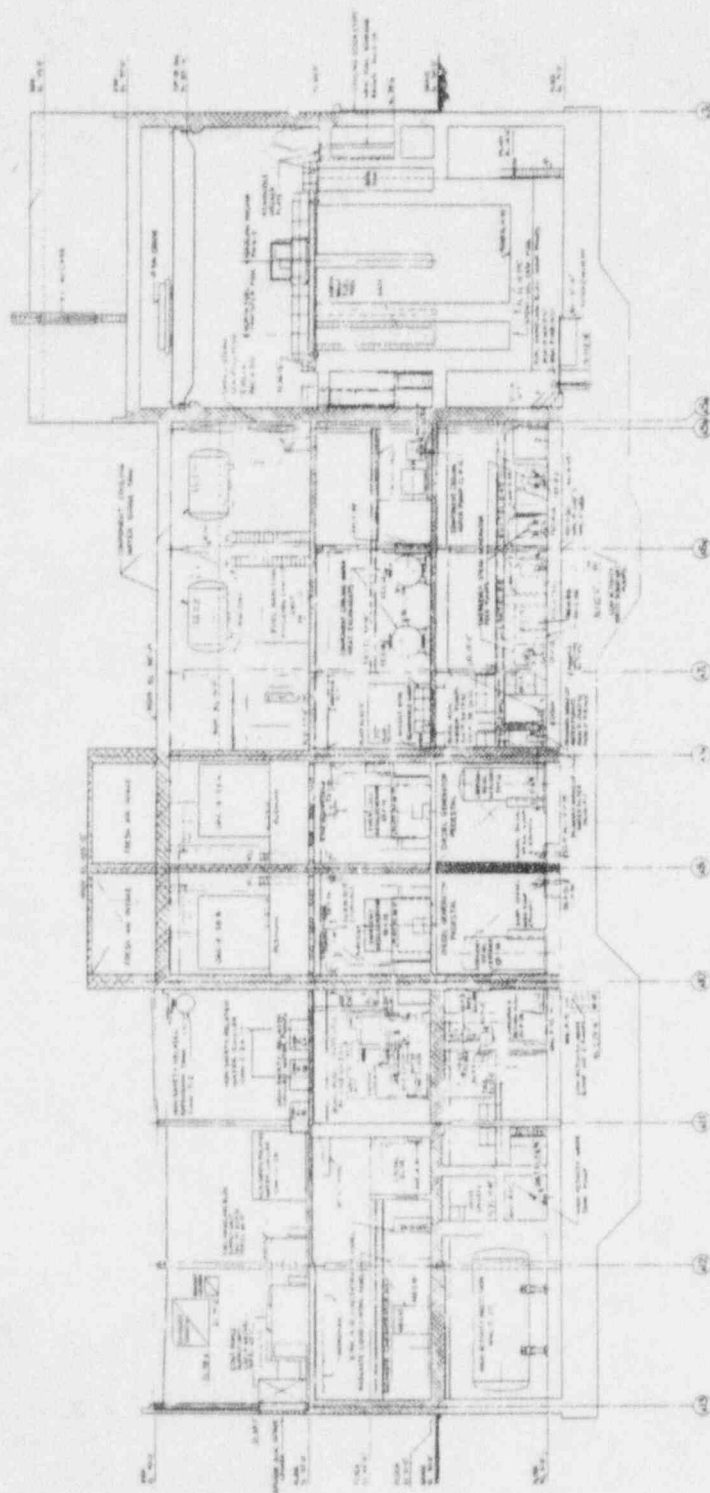


SECTION F-F



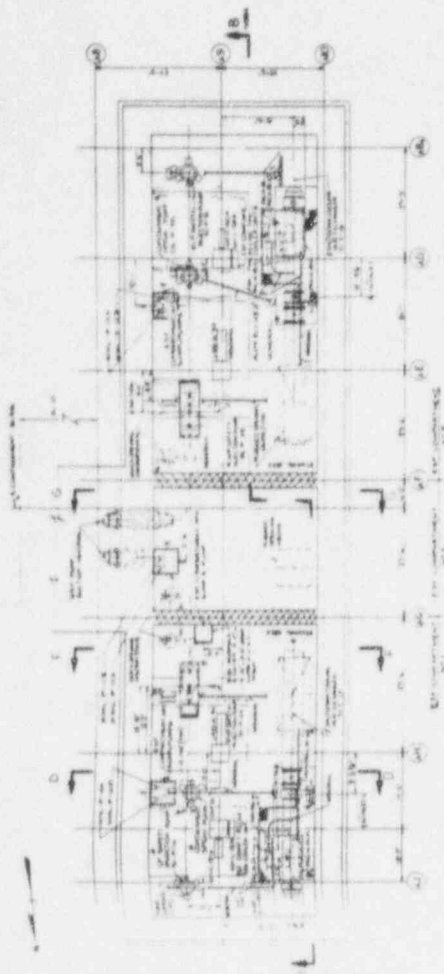
SECTION G-G

FORCED RIVER NUCLEAR GENERATING STATION UNIT 1
Auxiliary Building Sections F-F & G-G
General Arrangement
Figure 34

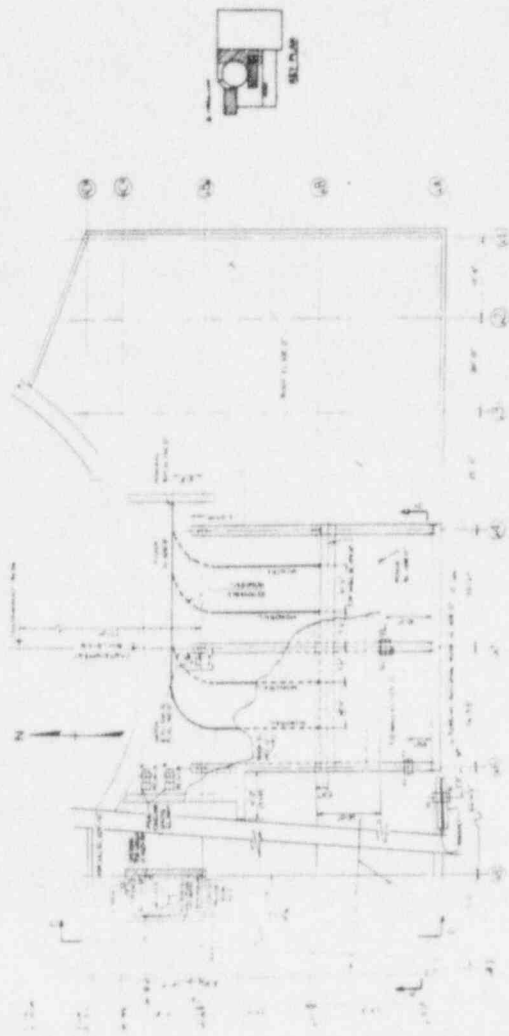


SECTION 11-11

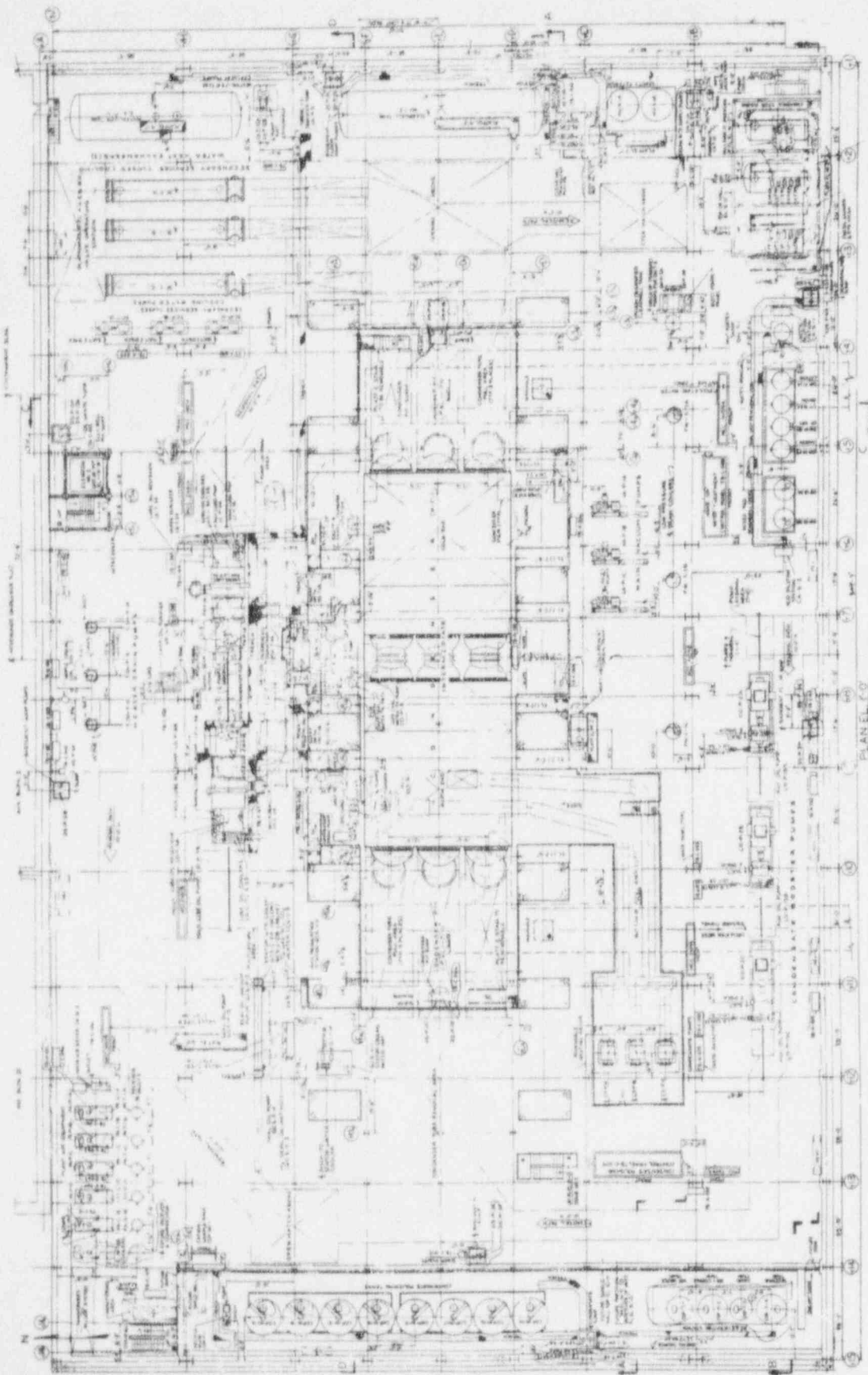
FORMER RIVER NUCLEAR GENERATING STATION UNIT 1
Auxiliary & Fuel Handling Building Section 11-11 (General Arrangement)
Figure 25



PLAN AT 1/4" = 1'-0"

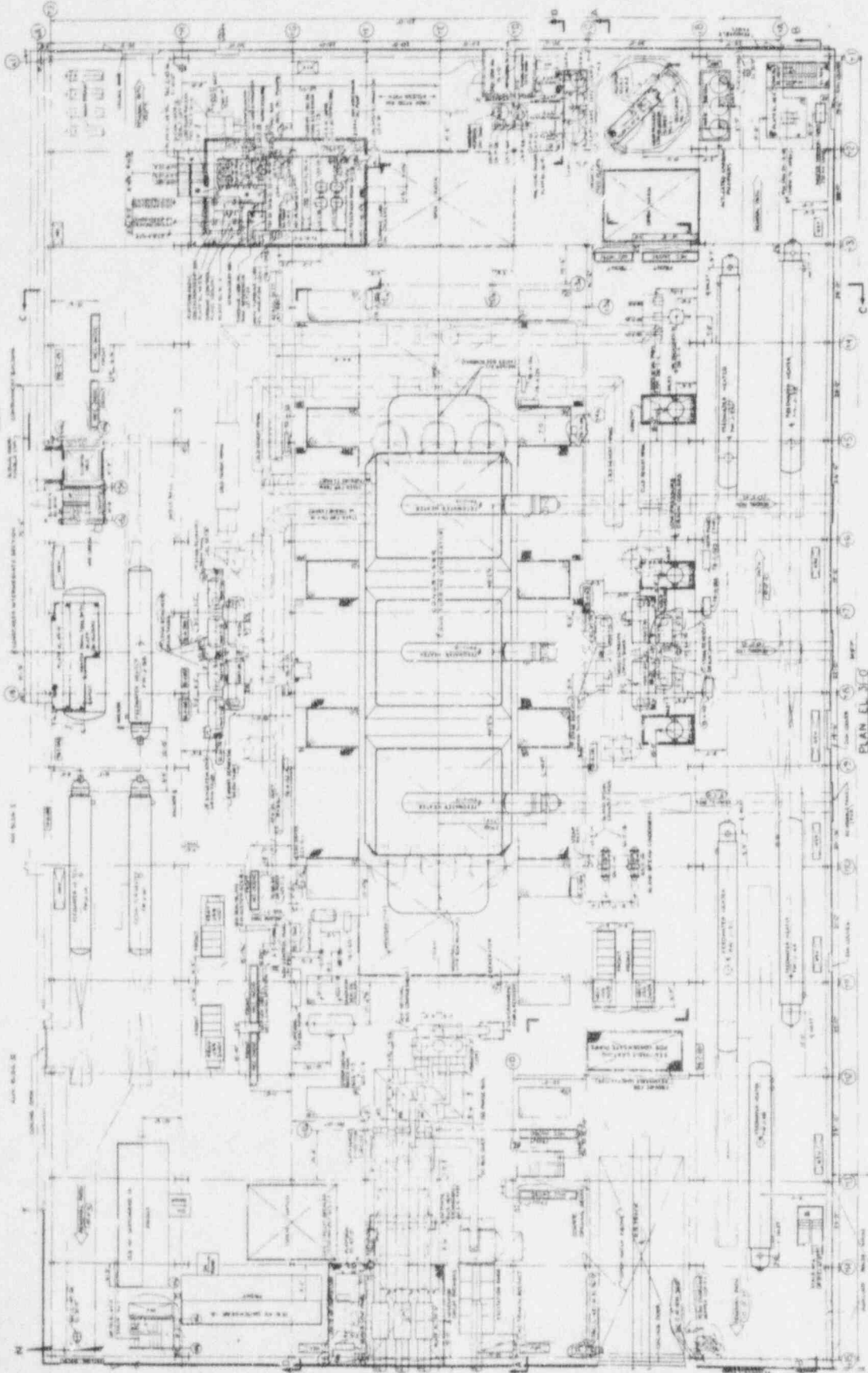


FORMED RIVER NUCLEAR GENERATING  
STATION UNIT 1  
Auxiliary & Fuel Handling E.O. Compartments  
Plan & Section  
Figure 26

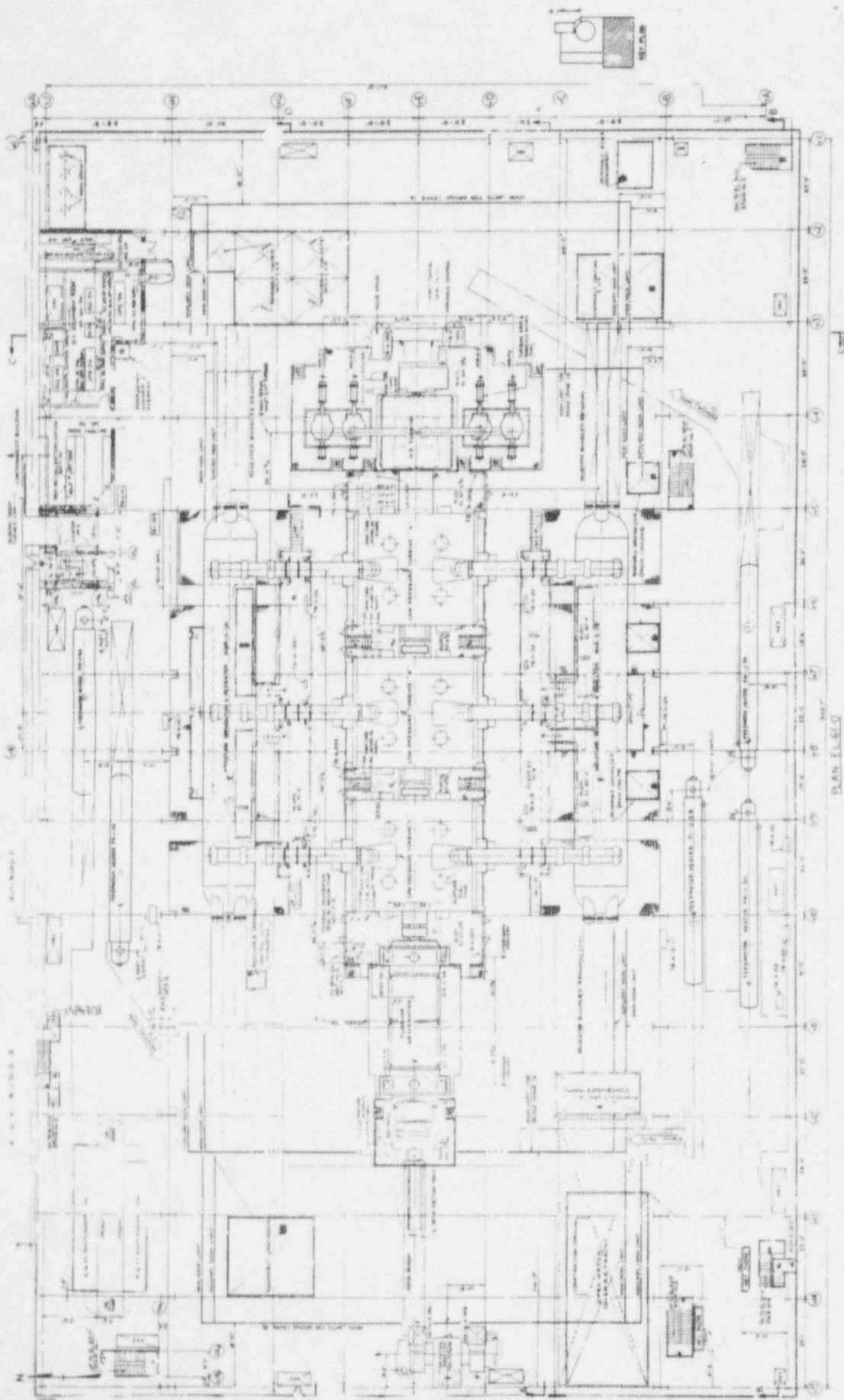


FORDING RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Turbine Building Basement  
 General Arrangement  
 Figure 37

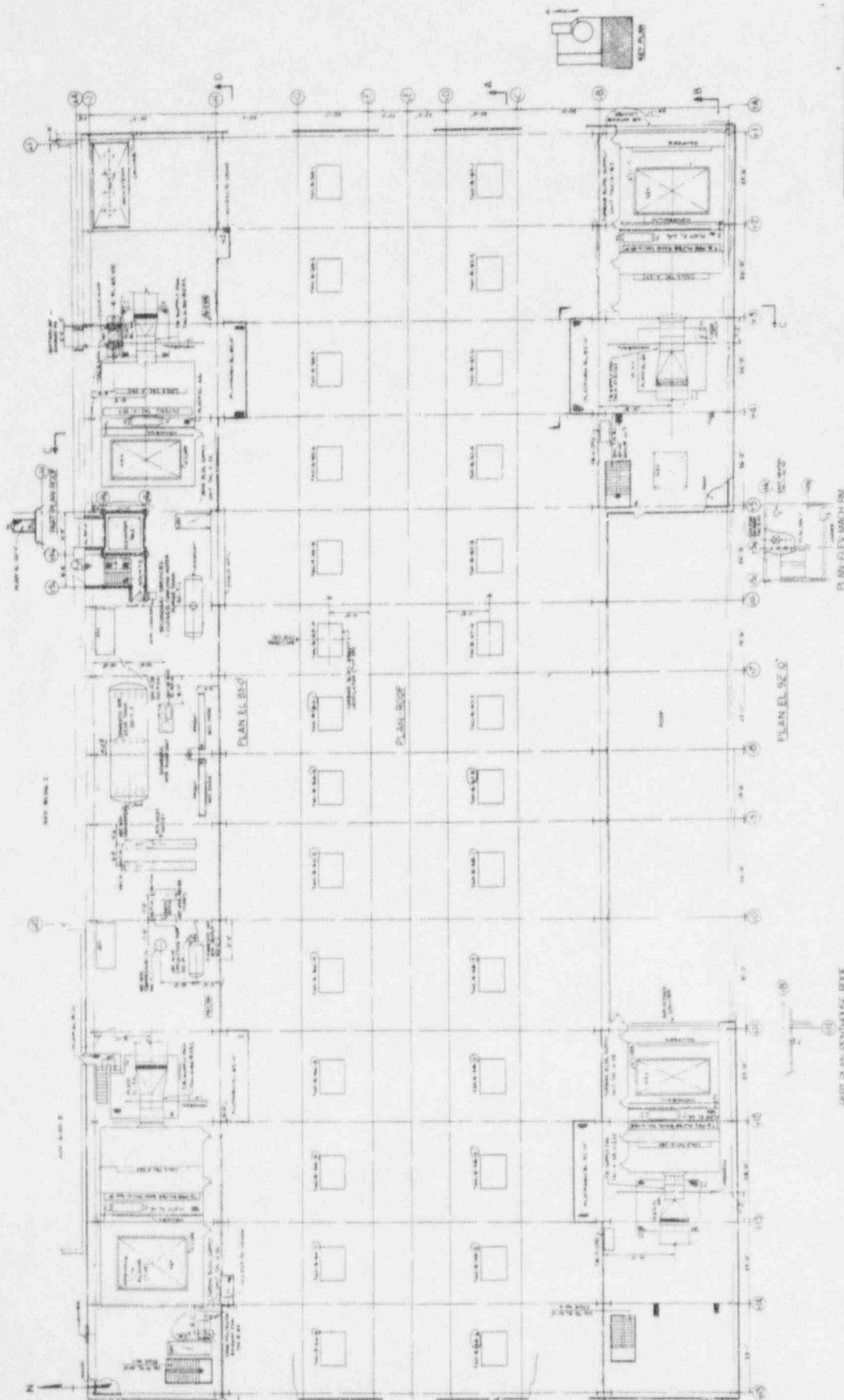




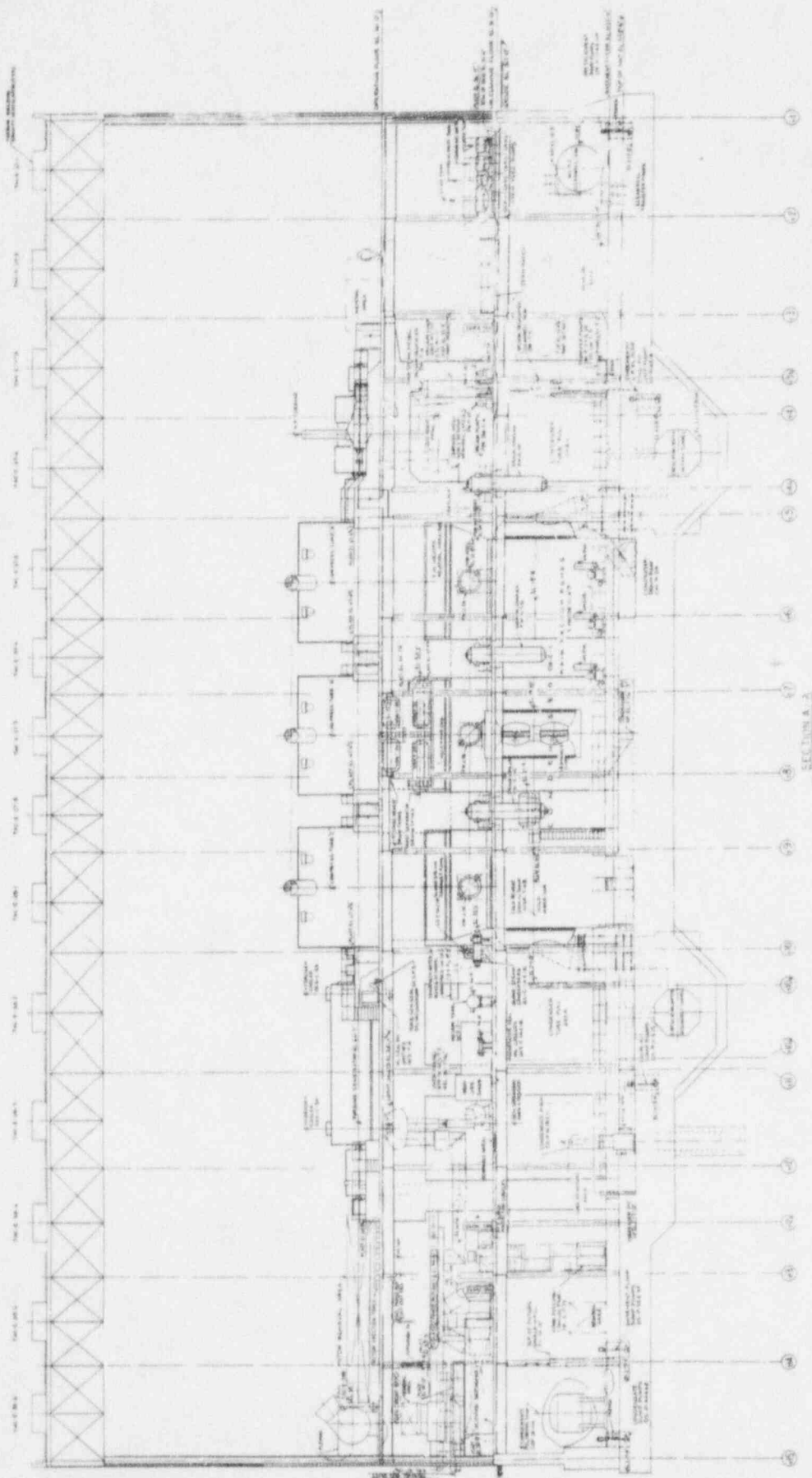
FORT BELVOIR NUCLEAR GENERATING  
 STATION UNIT 1  
 Turbine Building Maze Floor  
 General Arrangement  
 Figure 28

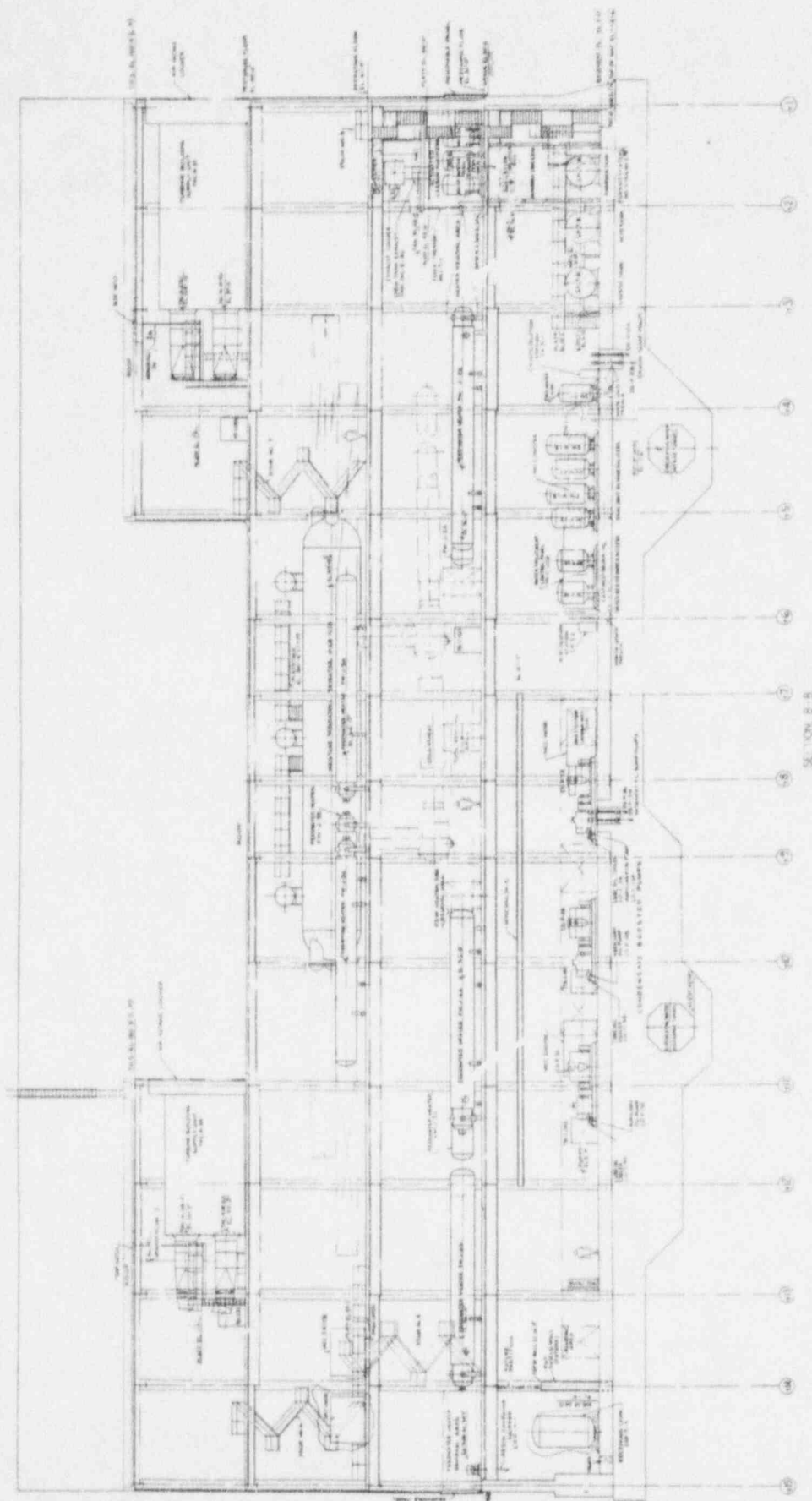


FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Turbine Building Operating Floor  
 General Arrangement  
 Figure 25



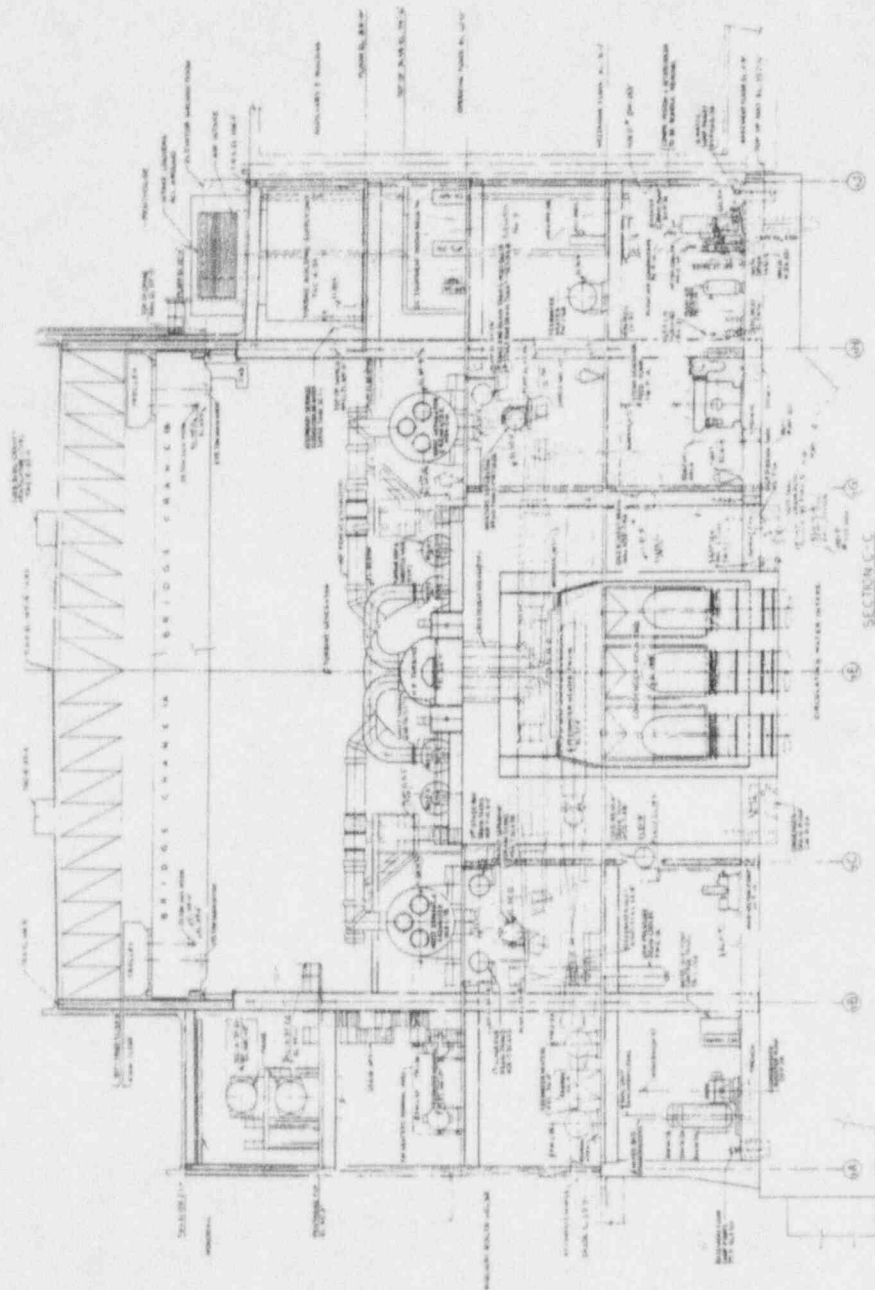
FORTIFIED RIVER NUCLEAR GENERATING  
 STATION - 31  
 Turbine Building Elevation 83'-0" to 92'-0"  
 General Arrangement  
 Figure 30





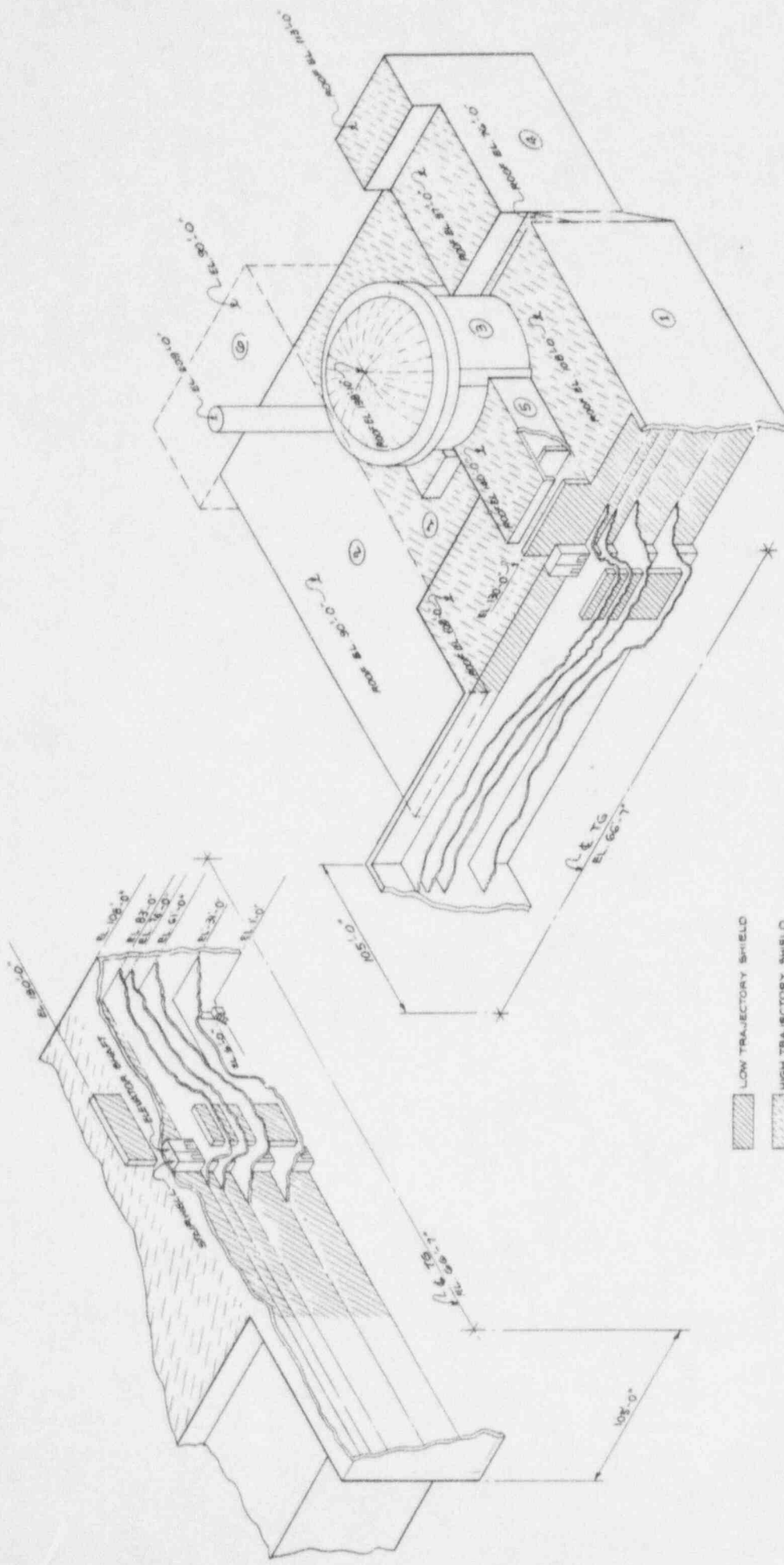
FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Turbine Building Section B-B  
 General Arrangement  
 Figure 33





FORKED HILLS NUCLEAR GENERATING  
 STATION UNIT 1  
 Turbine Building Section C-C  
 General Arrangement  
 Figure 33

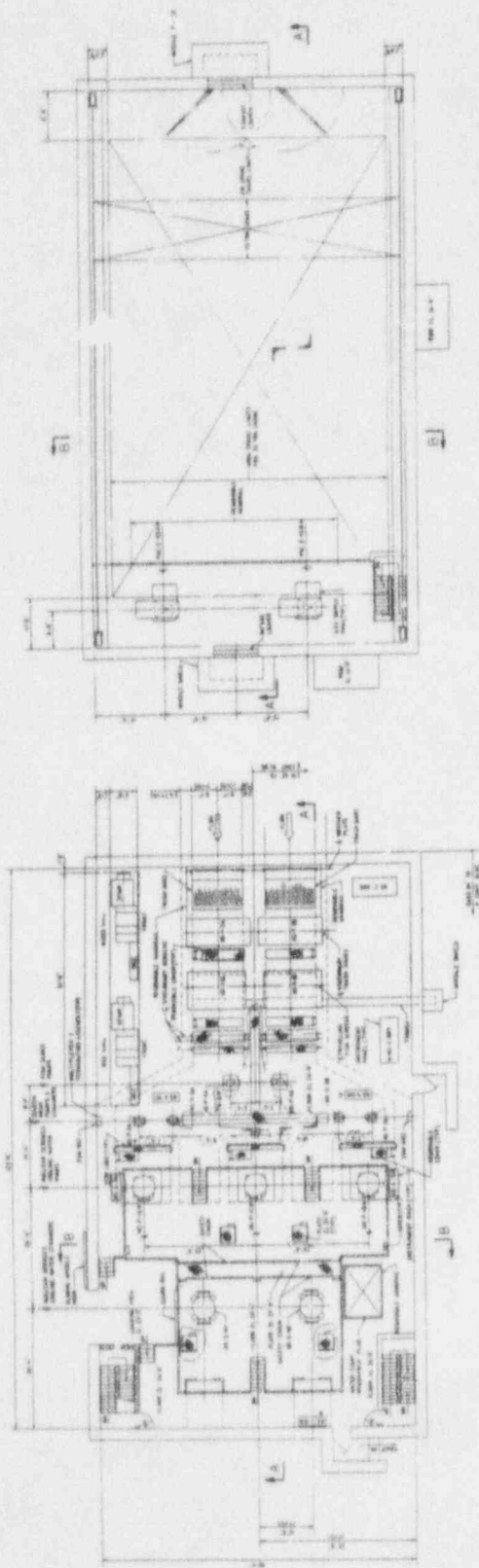




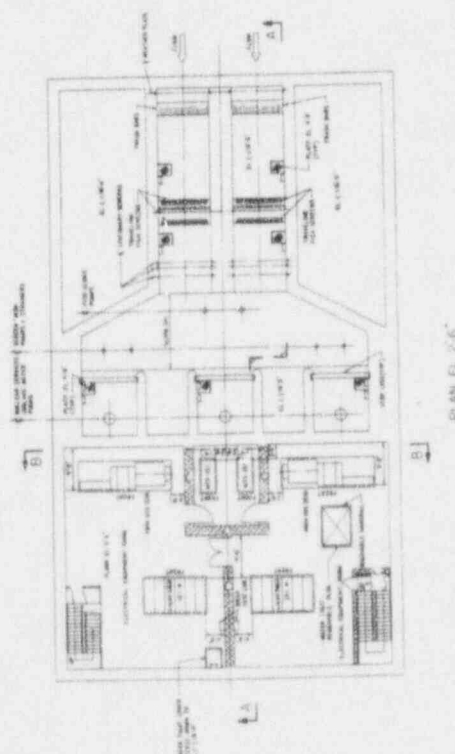
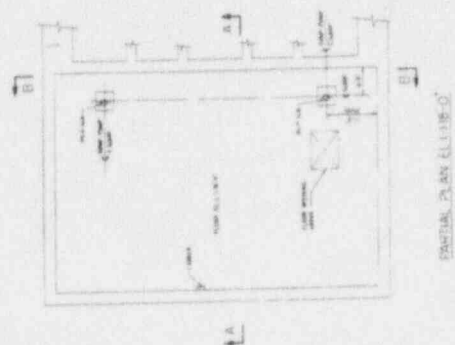
NOT TO SCALE

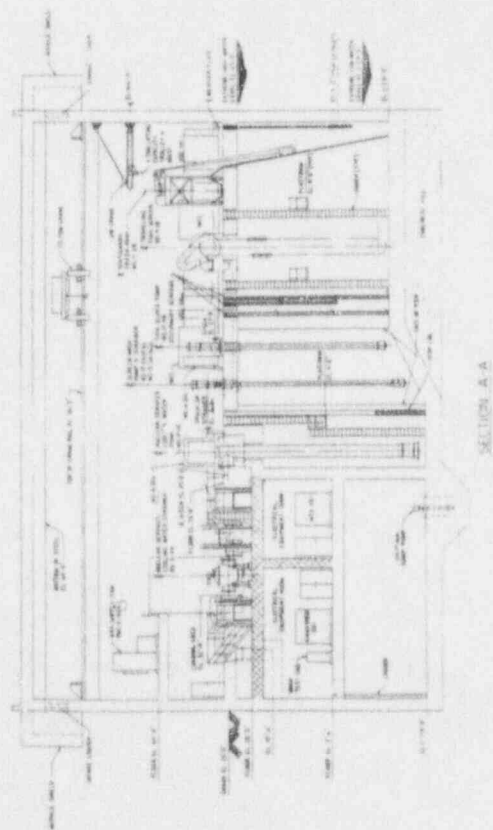
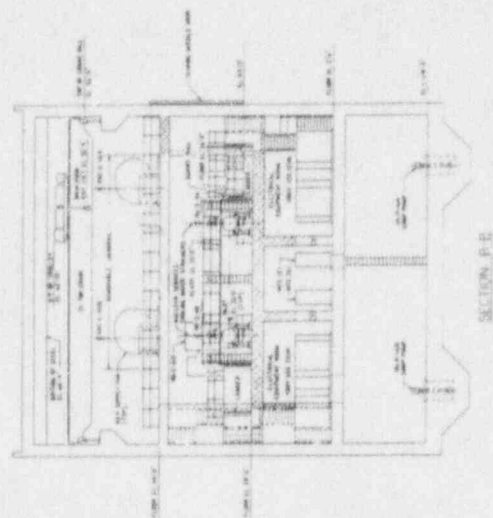
- LOW TRAJECTORY SHIELD
- HIGH TRAJECTORY SHIELD
- ① AUXILIARY I BLD'G
- ② AUXILIARY II BLD'G
- ③ CONTAINMENT BLD'G
- ④ FUEL HANDLING BLD'G
- ⑤ MAIN STEAM LINE ENCLOSURE (PENTHOUSE)
- ⑥ RADWASTE SOLIDIFICATION BLD'G

FORKED RIVER NUCLEAR GENERATING  
 STATION UNIT 1  
 Turbine Module Bldg.  
 Figure 35



PLAN EL. 25'-0"



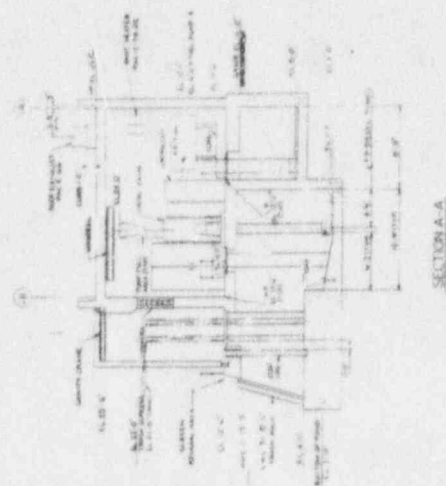
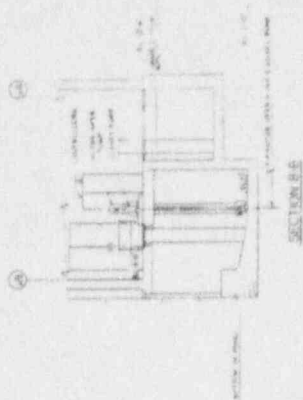
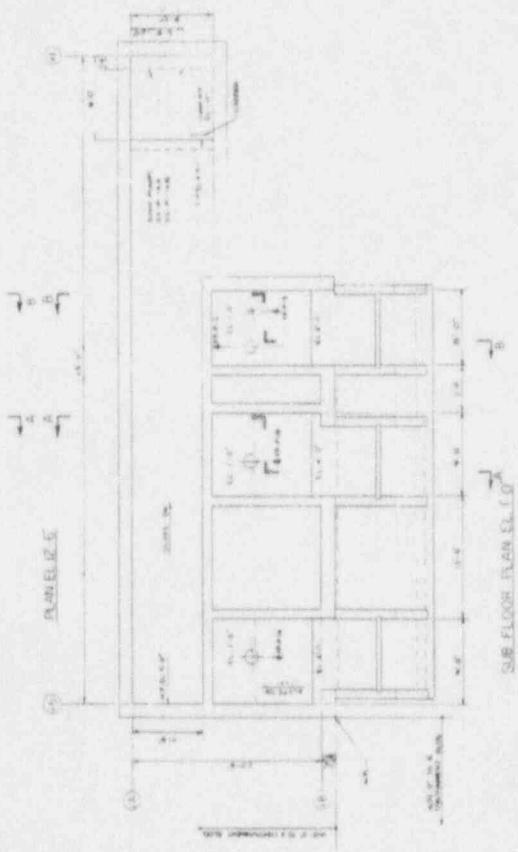
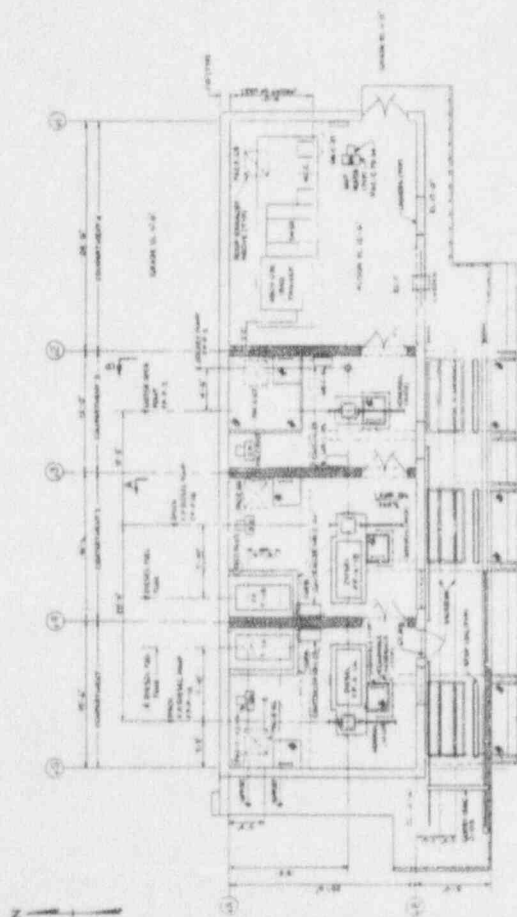


FORKED RIVER NUCLEAR GENERATING  
STATION UNIT 1

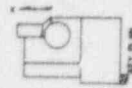
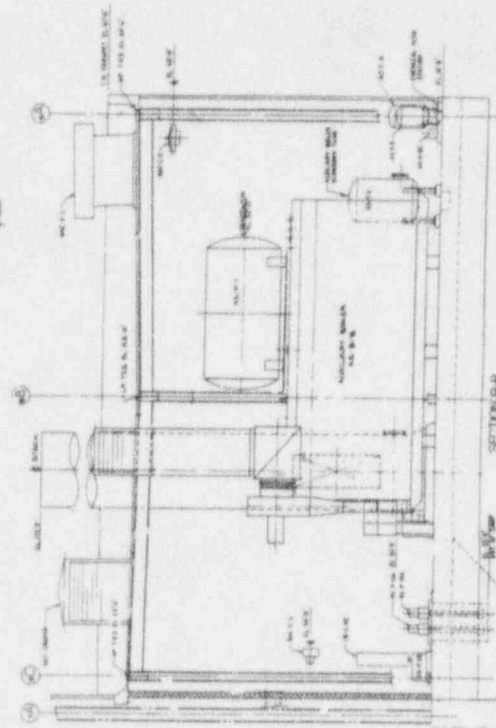
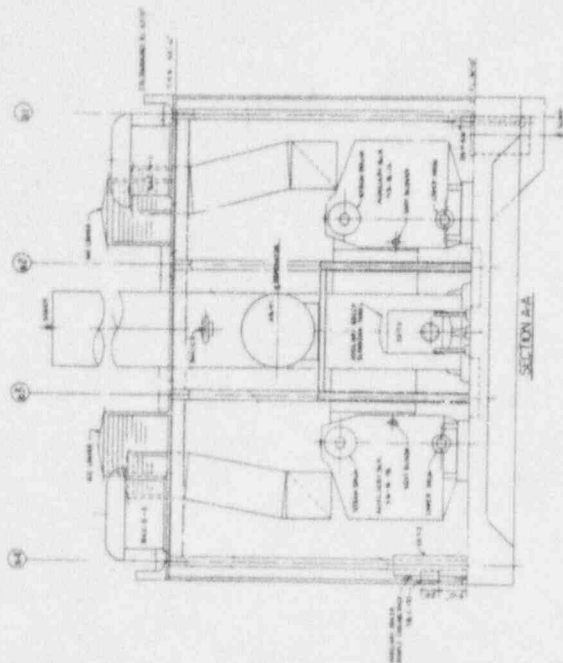
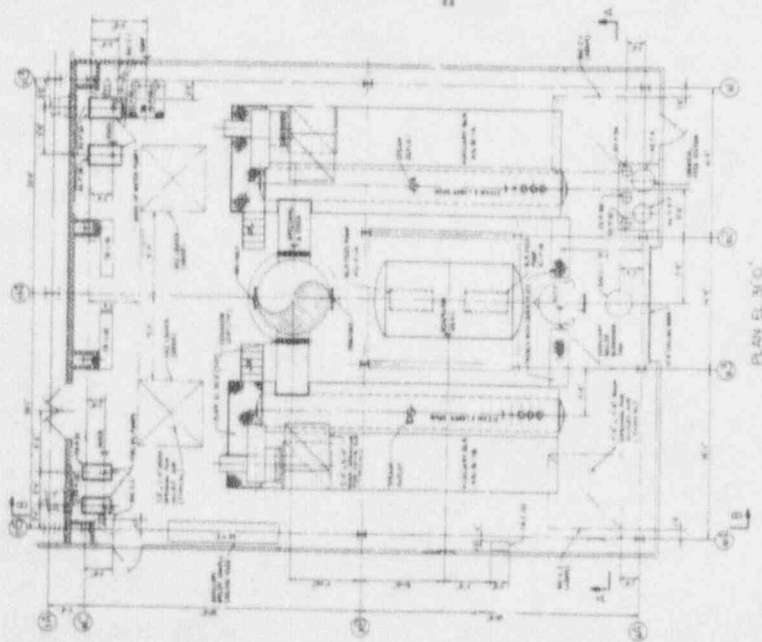
Nuclear Services Pump/Process Sections  
General Arrangement

Figure 37





FORNED RIVER NUCLEAR GENERATING  
STATION UNIT 1  
Fire Protection Pumphouse  
General Arrangement  
Figure 18



FORCED FLOW NUCLEAR GENERATING  
STATION UNIT 1  
Auxiliary Boiler House  
General Arrangement  
Figure 20

B H G



Jersey Central Power & Light Company  
Madison Avenue at Punch Bowl Road  
Morristown, New Jersey 07960  
(201) 455-8200  
File: 2431.4

March 5, 1979

Mr. Steven A. Varga, Chief  
Light Water Reactor Branch No. 4  
Division of Project Management  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Varga:

SUBJECT: FORKED RIVER NUCLEAR GENERATING STATION  
DOCKET NO. 50-363, LICENSE NO. CPPR-96  
DESIGN INFORMATION SUBMITTAL #2 -  
STRUCTURAL REORIENTATION

Enclosed are 40 copies of the Forked River Structural Reorientation Information Submittal. This information was generated to show the current Forked River design features that reflect the new licensing concerns of the post-Construction Permit period. Four sets of full size drawings have also been enclosed to aid your review of the submittal.

The submittal provides a summary description of the principle architectural and structural features of the unit. The information contained in the submittal is intended to satisfy the requirements of Section 1.2 of Regulatory Guide 1.70, Rev. 3 with regards to the general arrangement of the unit. The additional site characteristics, design criteria, operating characteristics, and safety considerations of the unit will be described fully in the FSAR submittal for Forked River. Although there may be changes between this submittal and the FSAR descriptions, they should be minimal and are not expected to significantly alter the arrangement of the unit.

As described in our meeting of May 3, 1977, your review of this submittal is requested, providing the opportunity to identify any major concerns that could be resolved prior to their impacting construction. This process was used for review of the Forked River Containment Pressure Analysis submitted as Design Information Submittal #1 in October 1977 and proved to be useful for both JCP&L and the NRC staff.

We feel this is the best method of communication to insure that all parties concerned are aware of the acceptability of the Forked River arrangement. If there is anything that can be done to aid in your review, do not hesitate to ask.

Very truly yours,

*Ivan R. Finfrock* BP3  
Ivan R. Finfrock, Jr.  
Vice President

7905070466

2pp.

asb  
Enclosures

Jersey Central Power & Light Company is a Member of the General Public Utilities System

50-363  
79-02

cc: Mr. Boyce H. Grier  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555