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H. Emergency Facilities and Equipment

H.1 Technical Support Center (TSC)/Operations Support Center (OSC)

H.1.a Control Room. The Control Room is utilized for evaluation and control of the initial phase of an emergency, including corrective actions and notification and activation of Catawba, Duke Energy, state and local emergency response organizations. The Control Room has redundant (telephone and alternate) two-way communications with emergency centers and off-site agencies. See Figure F-1 for communication scheme.

H.1.b Technical Support Center. (Figure H-1) The Technical Support Center (TSC) is utilized for evaluation of plant status by knowledgeable plant, vendor, NRC and other support groups during an emergency. This center will also be utilized to direct the on-site and initial off-site aspects of an emergency. Anticipated occupants are defined in AD-EP-ALL-0105 Activation and Operation of the Technical Support Center (TSC). The TSC has the following capabilities:

1. Redundant two-way communications with the Control Room, the OSC, the Emergency Operations Facility and the Nuclear Regulatory Commission Operations Center. See Figure F-2 for communication scheme.

2. Monitoring for direct radiation and airborne radioactive materials with local readout of radiation level and alarms if levels are exceeded.

3. Display, printout or trend record of comprehensive data necessary to monitor reactor system status and to evaluate plant system abnormalities, in-plant and off-site radiological parameters and meteorological parameters are available. This capability is provided via the operator aid computer. Capabilities to access and display parameters, individually or in groups is provided.

4. Ready access to as-built plant drawings such as general arrangements, flow diagrams, electrical one-lines, instrument details, etc.

5. Radiological habitability during postulated radiological accidents to the same degree as the Control Room.

6. Provisions for staffing by the Station Manager (Emergency Coordinator), advisors and representatives from the Station as necessary. Room is also provided for NRC personnel. Space for up to 35 persons plus instrumentation displays is provided.

The TSC is located near the Control Room, on elevation 594, in the Service Building. The TSC is within two (2) minutes walking distance from the Control Room. This is a permanent facility.

H.1.c Operations Support Center. (Figure H-2) The Operations Support Center (OSC) is that place designated for Operations and Radiation Protection, Chemistry, Maintenance, IAE, and others as necessary, to report to in an emergency condition. This center will be used to brief and prepare station personnel for work assignments in support of the emergency condition. The OSC is located in the Service Building on the 609 elevation with the OCC. The OSC has adequate capacity and supplies including provisions for respiratory protection, protective clothing, portable lighting, portable radiation monitoring equipment and communications equipment. This is a permanent facility.

H.2 Emergency Operations Facility (EOF)

The Emergency Operations Facility (EOF) is utilized for direction and control of all emergency and recovery activities with emphasis on the coordination of off-site activities such as communications with local, state and federal agencies, and coordination of corporate and other outside support. Anticipated occupants are the EOF organization and appropriate state and federal agency representatives.

The EOF has the following capabilities:

a. The capability for obtaining and displaying plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves.
b. The capability to analyze plant technical information and provide technical briefings on event conditions and prognosis to licensees and offsite response organizations for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves.
c. The capability to support response to events occurring simultaneously at more than one nuclear power reactor site if the emergency operations facility serves more than one site.

The Common EOF in Charlotte serves as an alternate facility that would be accessible even if the site is under threat of or experiencing hostile action, to function as a staging area for augmentation of emergency response staff and having the following characteristics required collectively of the alternate facilities for use when onsite emergency facilities cannot be safely accessed during hostile action:

- The capability for communication with the emergency operations facility, control room, and plant security.
- The capability to perform offsite notifications.
- The capability for engineering assessment activities, including damage control team planning and preparation.

The EOF has redundant two-way communications with the Technical Support Center and appropriate off-site support agencies. (See Section F)

The EOF is located in the Energy Center at 526 South Church Street, Charlotte, North Carolina. The EOF layout and location are shown on Figures H-3 through H-5.

H.3 State and Local Government Emergency Operations Centers

See County and State Plans.

H.4 Activation and Staffing

Catawba emergency response facilities (TSC, OSC, EOF) are activated as required by the appropriate Emergency Response Procedure. Activation of the TSC, OSC, and EOF is required for Alert and higher emergency conditions. Timely activation and staffing of the Emergency Operations Facility is important to allow the Nuclear Station staff the ability to correct the situation with minimal interference from outside organizations. The Emergency Coordinator will perform the role and function of the EOF Director until activation of the EOF has taken place. The EOF Organization will be alerted and activated for Alert and higher emergency classifications.

H.5 Assessment Actions

On-site monitoring systems used to initiate emergency measures are defined in Section I. Those used for conducting assessment evaluations during any emergency condition are listed below:

H.5.a Meteorological, Hydrologic and Seismic. A description of the primary meteorological measurement facility is found in Appendix 2. These basic meteorological parameters are displayed in the Control Room. (See Figure H-8, Generalized Met System).

1. During periods of primary system unavailability, an alternate source of meteorological data is established at the NWS (NATIONAL WEATHER SERVICE) office. Wind direction and speed are from standard NWS instrumentation at conventional heights.

   The following information is applicable to off-site dose calculations when NWS meteorological information is being utilized:

   - Wind direction from the NWS can be used in lieu of the 60 m tower wind direction indication
   - Wind speed from the NWS can be used in lieu of the 10 m tower wind speed indication.
   - Atmospheric stability class determination is based on the time of day as detailed in the applicable procedures
   - Wind speed from the NWS can be used in lieu of the 60 m tower wind speed indication for transport considerations.

   A monthly telephone contact, initiated by plant personnel, with the NWS office will be established to insure that this basic meteorological information can be accessed. See PT/0/B/4600/005A, Monthly Communications Verification.

2. The following field checks will be performed each week by plant personnel:

Wind Direction and Wind Speed Recorder

(a) Recorder Time Accuracy
(b) Recorder Zero and 100% Scale Marks
(c) High and Low Test Values

Ambient Delta Temperature

(a) Recorder Time Accuracy
(b) Recorder Zero and 100% Scale Marks
(c) High and Low Test Values

OAC

(a) High and Low Test Values of Analog Points
(b) Process controlled by OAC and meteorological processes

3. Onsite meteorological instruments will be calibrated at a frequency specified by Selected Licensee Commitments. During calibration periods, basic meteorological data, characteristic of site conditions, will be accessible from the NWS. These instruments will be calibrated in accordance with approved procedures.

Hydrologic

A hydrological description of the Catawba Nuclear Station site is located in the CNS UFSAR, Section 2.4.

Seismic

A description of the seismic monitoring instrumentation and area seismology studies are found in Catawba UFSAR, Sections 3.7 and 2.5 respectively.

H.5.b Radiological monitors including process monitors, area monitors, post-accident monitoring equipment, effluent monitors, personnel monitoring devices, portable monitors and sampling equipment are described in various Radiation Protection procedures, the Catawba UFSAR, Emergency Plan Implementing Procedures and Safety Evaluation Report.

H.5.c. Equipment and instrumentation are available to monitor plant parameters such as reactor coolant pressure, temperature, levels, containment pressure, temperature, humidity, sump levels, hydrogen concentrations, system flow rates, status, and line-ups. Equipment is provided in the TSC to display and trend these parameters. The Operator Aid Computer is the source of this information.

H.5.d Fire detection devices of the ionization-chamber and thermal type are located throughout the station.

H.6 Data, Monitoring Equipment and Analysis Facilities

Provisions have been made and exist to obtain data from off-site agencies or monitoring equipment and analysis facilities. The provisions are described below:

a. Meteorological information is available from the National Weather Service as described in Section H.5.a. Monitoring of the Catawba River for hydrologic data is conducted within the Duke System of dams and hydro-electric facilities. Seismic data is available from the U.S. Geological Survey Office as provided for in the Catawba Procedure RP/0/A/5000/007, Natural Disaster and Earthquake.

b. Environmental Radiological Monitoring equipment includes five radioiodine and particulate continuous air samplers and forty thermoluminescent dosimeters. The thermoluminescent dosimeters are posted and collected in accordance with Table 1, Branch Technical Position, Rev. 1 of November, 1979. The Catawba Nuclear Station Offsite Dose Calculation Manual (ODCM) lists locations of posted thermoluminescent dosimeters and air samplers.

c. Radiological Laboratories - See Section C.3.

H.7 Off-site Radiological Monitoring

As described in H.6.b above.

H.8 Meteorology Instrumentation and Procedures

See Section H.5.a

H.9 Operations Support Center

See Section H.1.c.

H.10 Emergency Equipment/Instrumentation Inspection, Inventory, Operational Check, Calibration

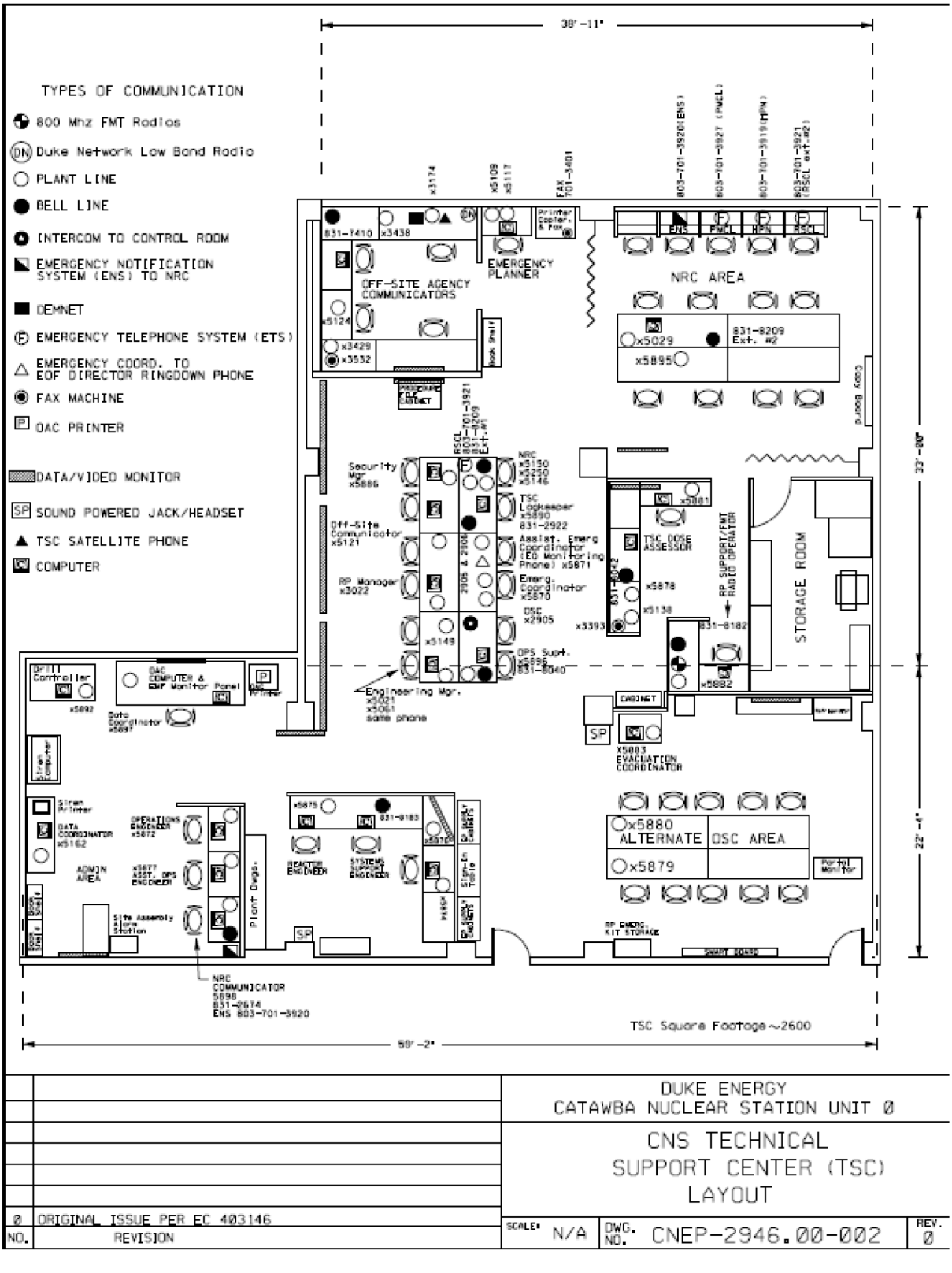
Catawba Procedure HP/0/B/1000/006, Emergency Equipment Functional Check and Inventory, defines the location, inspection, inventory and operational checks required of emergency equipment. Various Radiation Protection procedures define the criteria for calibration of all monitoring equipment located in the emergency kits.

H.11 Radiological Emergency kits are described in HP/0/B/1000/006, Emergency Equipment Functional Check & Inventory. TSC emergency kit (non-radiological) contents are referenced in PT/0/B/4600/004.

H.12 Receipt and Analysis of Field Monitoring Data

Duke Energy's Emergency Operations Facility (Radiological Assessment Manager) is designated the central point for the receipt of off-site monitoring data results and sample media analysis results collected by Duke personnel. Resources exist within the organization to evaluate the information and make recommendations based upon the evaluations. The Radiological Assessment Manager's group will perform these evaluations and make recommendations to the EOF Director for protective actions. The EOF Director is the individual responsible for making protective action recommendations to off-site agencies after activation of the EOF.

FIGURE H-1
DUKE ENERGY
Catawba Nuclear Site Technical Support Center



		DUKE ENERGY CATAWBA NUCLEAR STATION UNIT Ø	
		CNS TECHNICAL SUPPORT CENTER (TSC) LAYOUT	
Ø	ORIGINAL ISSUE PER EC 403146	SCALE: N/A	DWG. NO. CNEP-2946.00-002 REV. Ø
NO.	REVISION		

FIGURE H-2
DUKE ENERGY
Catawba Nuclear Site Operations Support Center

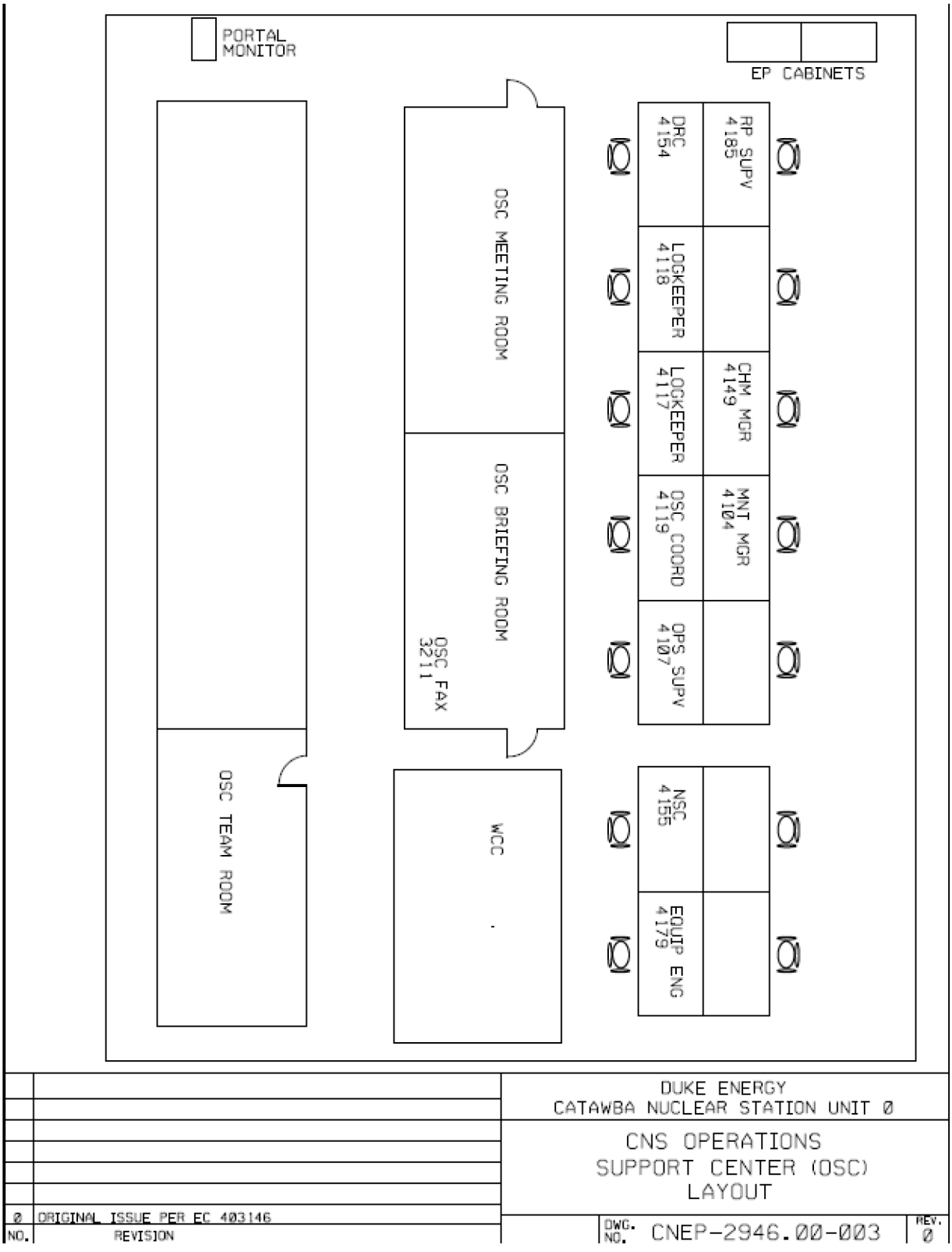


Figure H-3
Duke Energy
Emergency Response Facility
McGuire/Catawba/Oconee EOF
General Location

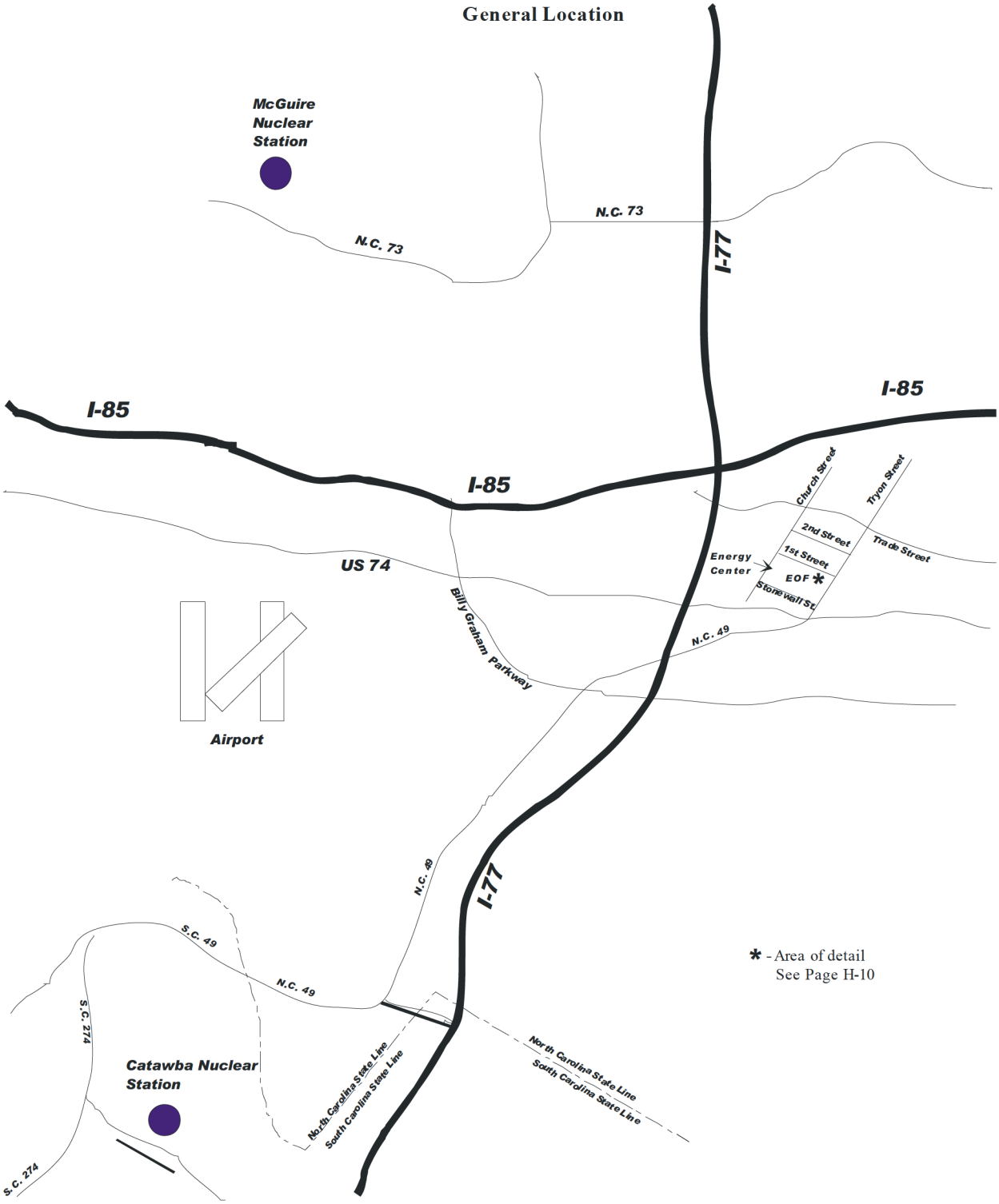
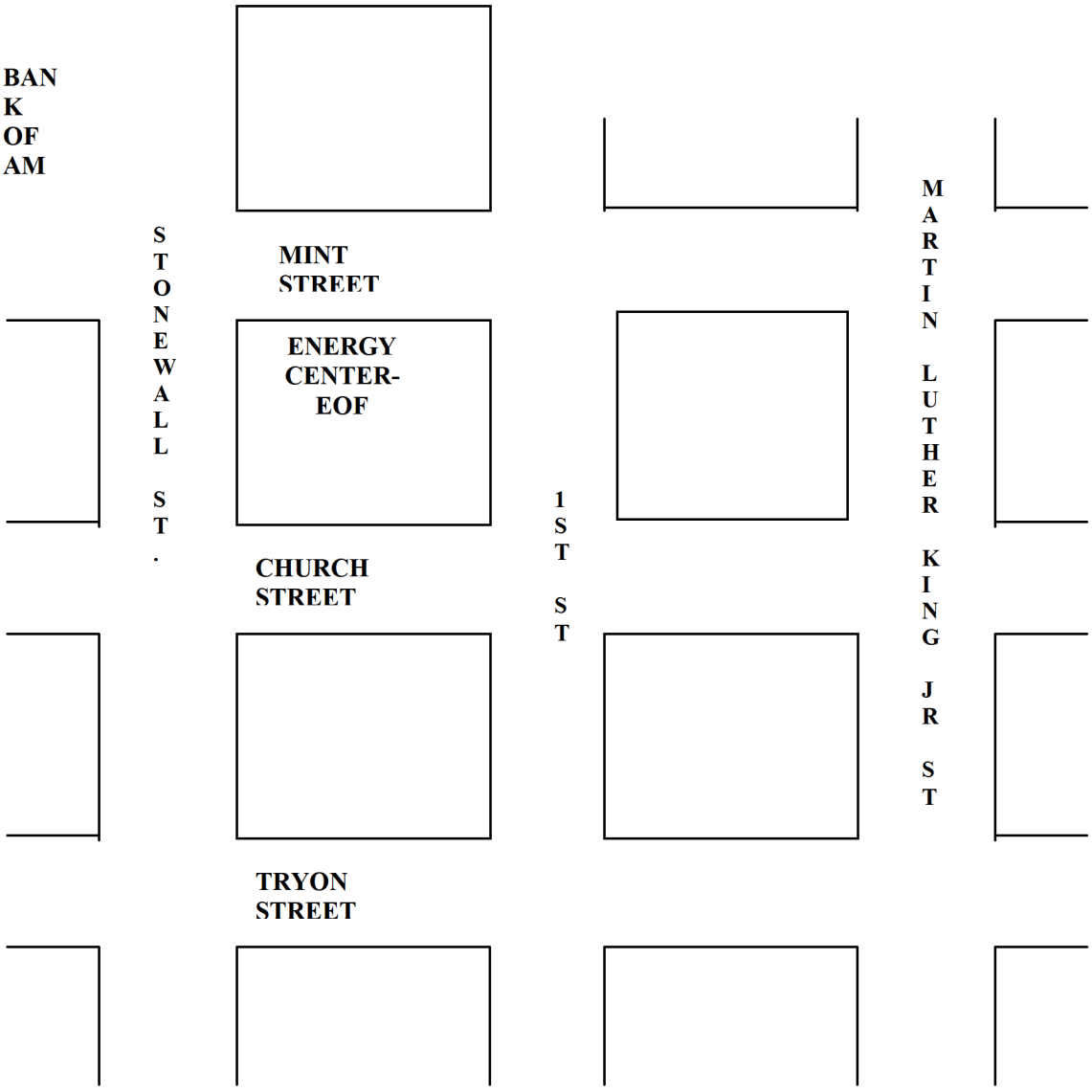


Figure H-4
DUKE ENERGY
GENERAL OFFICE RESPONSE FACILITY

McGUIRE/CATAWBA/OCONEE EOF
SPECIFIC LOCATION

GENERAL OFFICE BUILDING LAYOUT - CHARLOTTE, NC



The Media Center & Joint Information Center are in the Energy Center on the first floor. The EOF is in the Energy Center on the third floor

Figure H-5
DUKE ENERGY
EOF General Arrangement

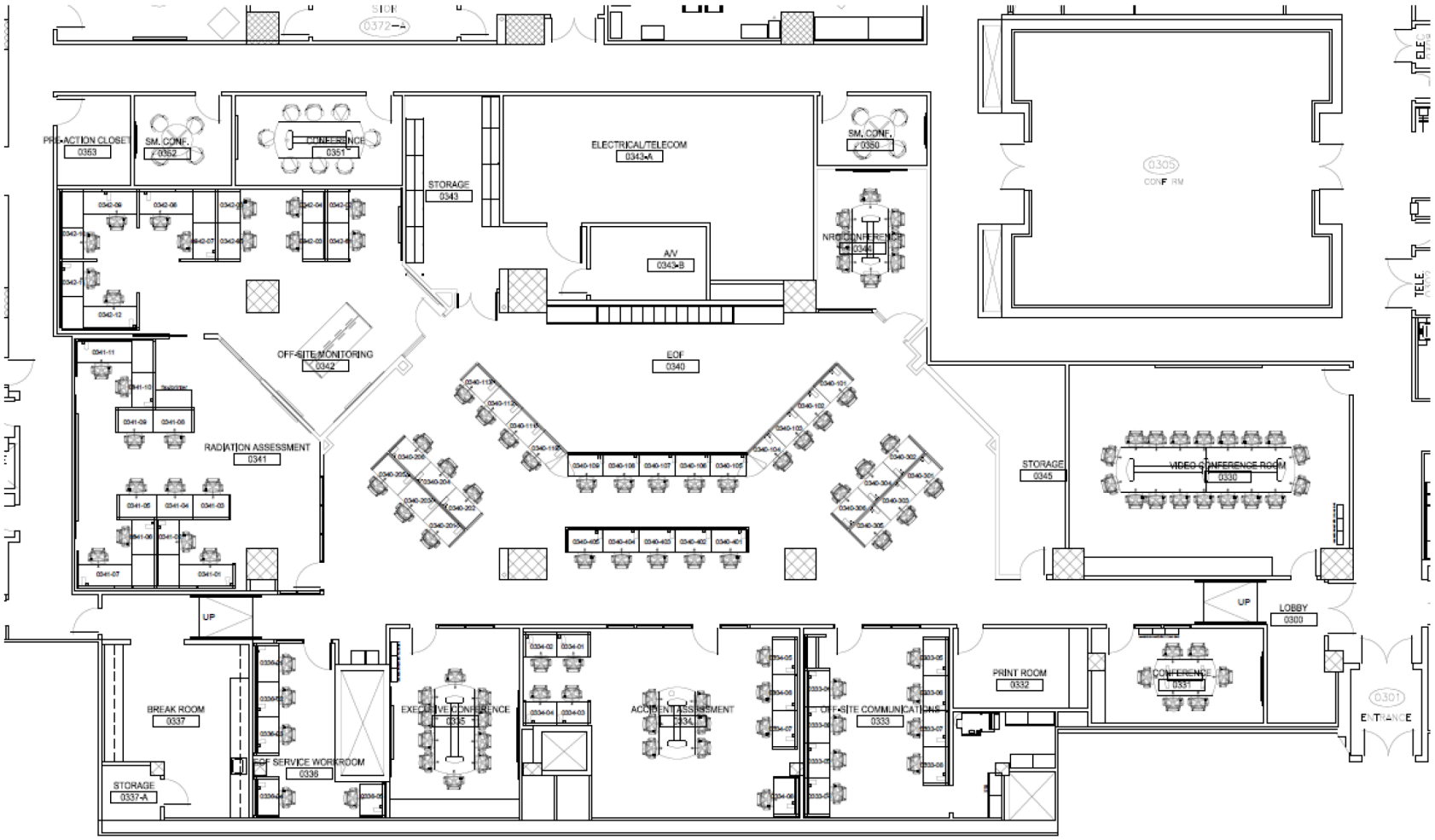


FIGURE H-6
DUKE ENERGY
MEDIA CENTER

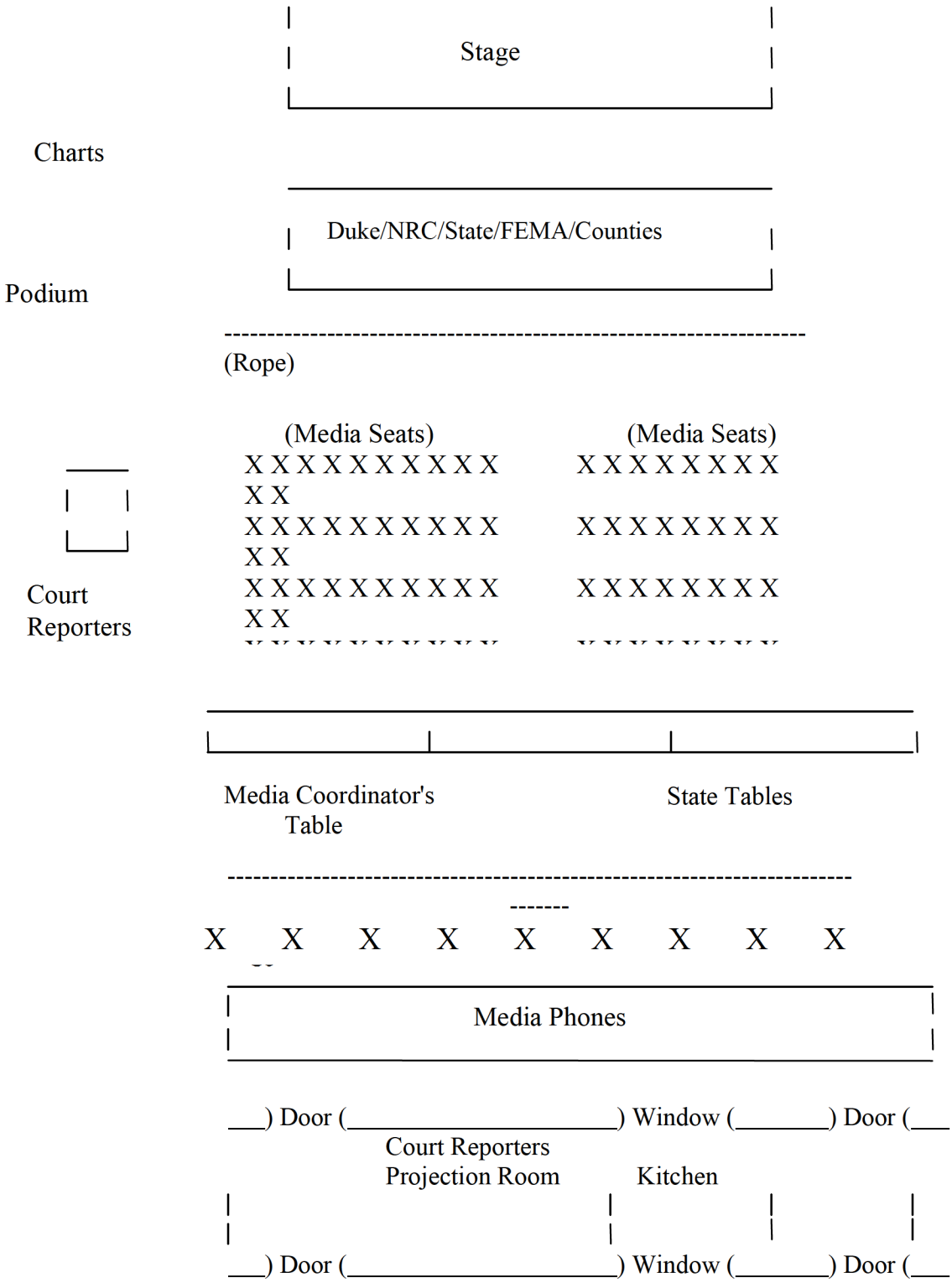


FIGURE H-7
DUKE ENERGY
JOINT INFORMATION CENTER (JIC)

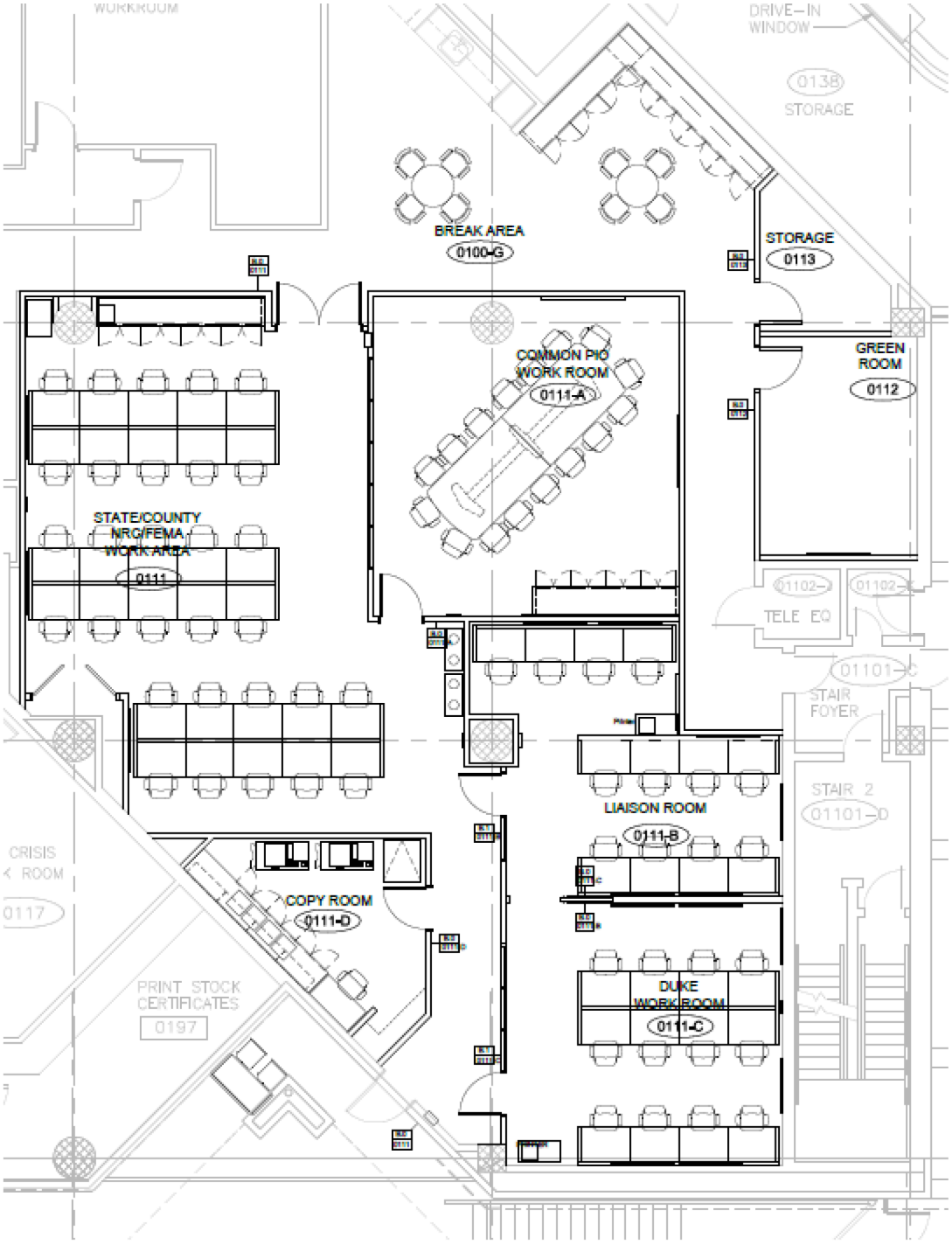


FIGURE H-8
CATAWBA NUCLEAR SITE
GENERALIZED MET SYSTEM