

Q-SDD-Engineering Survey & Interference Report for Building 704-7D, D-Area Maintenance Building



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1.0 Introduction

The purpose of this survey / report is to provide guidance for the safe demolition of Building 704-7D, a standard, single story office structure. located northwest of the 484-D Powerhouse in 400-Area, as well as meeting the requirements of OSHA Standard 1926.850(a).

2.0 Background

2.1 Facility Description

This document addresses Building 704-7D, D-Area Maintenance Building and the following ancillary structures:

- Portable skid-mounted shed (PB00277)
- Electrical Feeder Boxes
- Fencing
- Building 704-7D is a standard, single story office structure. While it is called a maintenance building, it has been an office structure for powerhouse operations and the different maintenance and construction trades since it was put in place in 1991. The structure initially started as the 2,110 square foot main structure to the north. Shortly after its construction, offices and bathrooms were added to the back of the structure for the maintenance and construction trades. The original building and addition are considered one structure.
- The main building is a prefabricated unit that contained office space and office furniture, storage, computers, telecommunications equipment, restrooms, and a small kitchenette. Construction of the facility was completed circa 1991.
- The main building is a wood and steel, light-frame structure, with exterior dimensions of approximately 35' X 60'.
- Interior walls are paneled. Flooring is standard tile/linoleum. Exterior siding is vinyl. Roofing is asphalt shingle. The building sits on concrete footings.
- The addition is approximately 25'x 65' and is a light construction unit with no interior doors. All doors open to the exterior of the building to landings typically shared by two adjacent rooms in the addition. The addition's interior walls are paneled. The roof is asphalt shingle. The flooring is standard tile/linoleum.
- Electrical service to both Building 704-7D and its ancillary shed, PB00277, has been disconnected.
- There is a pad on the outside of the structure where a heating, ventilation and air-conditioning (HVAC) unit was once installed, but the unit was removed, and the ductwork was abandoned in place.
- There is a concrete pad at the southeast corner of the original structure containing abandoned electrical disconnects, and a dry type transformer.
- Adjacent to the pad are a signal box, two telephone junction boxes and 4 bollards.
- The area is partially fenced as shown in Appendix A, Figure 2.

2.2 Facility Condition

Based on visual inspection on June 3, 2020, the structure as defined in References 5.1 and 5.2 is in poor to fair condition and has been determined to be unsafe to enter due to the deteriorated condition of the floors. It has also been determined there is no potential for an unplanned collapse of the structure either due to forces of nature and/or vibrations created by movement of heavy equipment in proximity to the building.

The proposed decommissioning end-state for this facility which has no defined or anticipated future missions, is decommissioning of the above grade structure(s) to grade.

On October 30, 2019, an asbestos inspection was conducted on Building 704-7D (Q-APG-D-00016, Reference 5.3), with the results being that approximately 50 square feet of roofing sealant in the valleys and around penetrations tested positive as Asbestos Containing Material (ACM). All ACM shall have been abated in accordance with the statement of work for asbestos abatement, SOW-D-00009 (Reference 5.4) prior to building demolition. See also Reference 5.5 for deactivation activities completed prior to building demolition.

- There are no potential hazards from other structures in the area.
- There are no overhead or underground powerlines proximate the building.
- Any underground lines in the general vicinity of the building are deep enough that there is no potential for damage due to heavy equipment.
- There are no fall hazards associated with Building 704-7D.

3.0 Discussion

3.1 General

All demolition work shall meet the requirements of 29CFR1926 Subpart T and SRS Manual 8Q, Procedure 104. All personnel performing demolition work shall be knowledgeable of these documents.

Other hazards not specifically identified in the engineering survey are mitigated or prevented by site programs as described in SRS Manual 1-01, MP 1.22 Integrated Safety Management system.

As noted in Section 2.2 Building 704-7D has been determined to be unsafe to enter; therefore, all demolition activities on this building shall be accomplished utilizing heavy equipment until such time as the building has been demolished.

Decommissioning work shall also include the electrical disconnects, dry type transformer, signal box, telephone connection boxes and all bollards surrounding these commodities and others located on the south end of 704-7D.

.2 Interferences

As noted in Section 2.2, all exterior electrical components were removed during deactivation in 2013. There are no electric lines, poles and guy wires or communications lines close to or associated with this building. Prior to decommissioning, 704-7D shall be confirmed isolated and disconnected from any associated utilities and rendered cold and dark (C&D) in accordance with EC&ACP guidelines and as noted in References 5.6 and 5.7.

Appendix A provides a general lay-out of the area, interfacing facilities/utilities within proximity and defines the demolition boundary. All underground utilities are buried deep enough that the equipment may safely operate over them.

3.3 Hazardous Energy

There is no hazardous energy associated with Building 704-7D.

3.4 Unplanned Collapse

There is no potential for an unplanned collapse associated with the demolition and removal of Building 704-7D.

4.0 Summary / Conclusions

The building structure has no future mission and the end state is decommissioning of all above grade structures (References 5.1 and 5.2). The structures may be demolished using a track hoe mounted hydraulic shear; the shear will also size reduce the material and load into skip pans. A grapppler and front-end loaders may also be used to load material into skip pans. The area will be cleaned up. The equipment operators should utilize a flag person so as not to make contact with facilities/services within close proximity of the demolition area. This method of demolishing the structure with the hydraulic shear will ensure that most of the rubble lands inside the building footprint.

This engineering survey was performed to determine the condition of the structure prior to demolition. The results of the survey are that the structure is sound and conventional demolition (excluding entry into the building) may proceed.

5.0 References

- 5.1 G-FDE-D-00045, Rev. 0, April 27, 2020, "Facility Decommissioning Evaluation Building 704-7D, D-Area Maintenance Building"
- 5.2 V-PMP-D-00017, Rev. 1, dated 11/2/20, "Decommissioning End Points Document Building 704-7D, D-Area Maintenance Building"
- 5.3 Q-APG-D-00016, Rev. 0, dated November 18, 2019, "Baseline Asbestos Inspection Report of Building 704-7D"
- 5.4 G-SOW-D-00009, Rev. 0, dated 4/7/2020, "Statement of Work for the Abatement of Asbestos Containing Material in D-Area Buildings 480-3D, 482-2D, 484-4D, 485-5D and 707-4D"
- 5.5 V-PCOR-D-00042, Rev. 0, dated 7/1/2014, "Deactivation Project Final Report Building 484-D Powerhouse and Ancillary Buildings"
- 5.6 E-SDD-D-00001, Rev. 1, dated August 19, 2020, "Verification of Hazardous Energy Isolations for Building 484-D Powerhouse and Ancillary Buildings"
- 5.7 E-SDD-D-00002, Rev. 0, dated August 17, 2020, "Closeout of Verification Document for Building 484-D Powerhouse and Ancillary Buildings"

Appendix A – General Layout and Interfacing Facilities

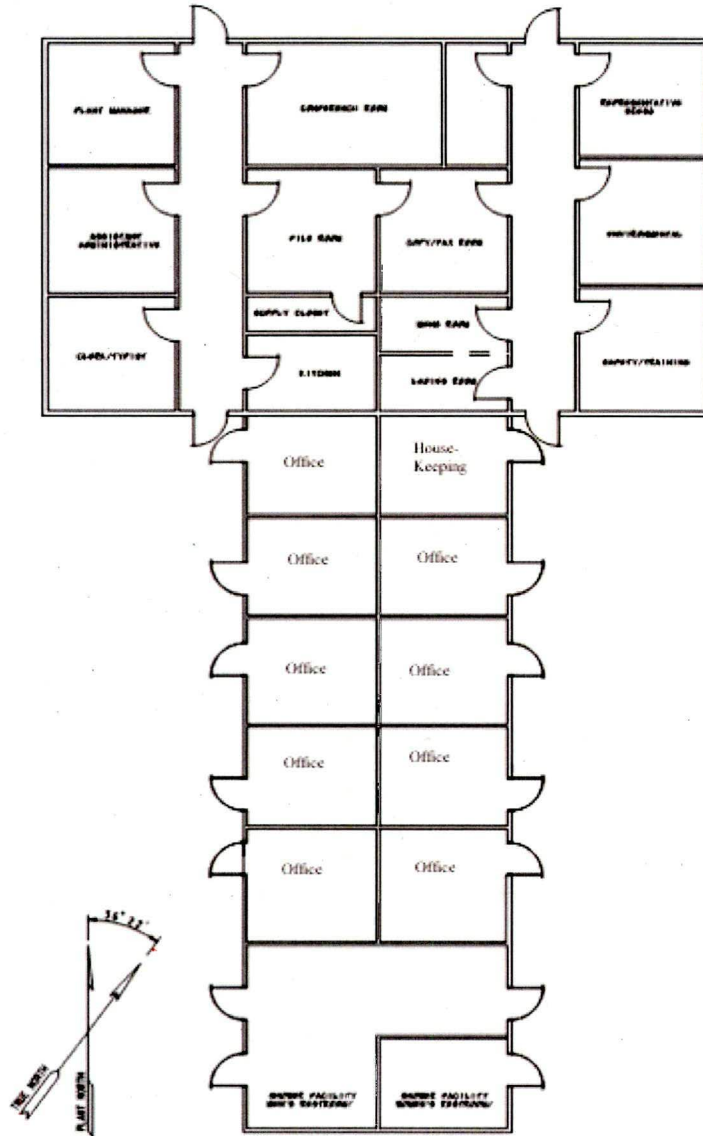


Figure 1: Building 704-7D, Maintenance Building Layout

Appendix A – General Layout and Interfacing Facilities

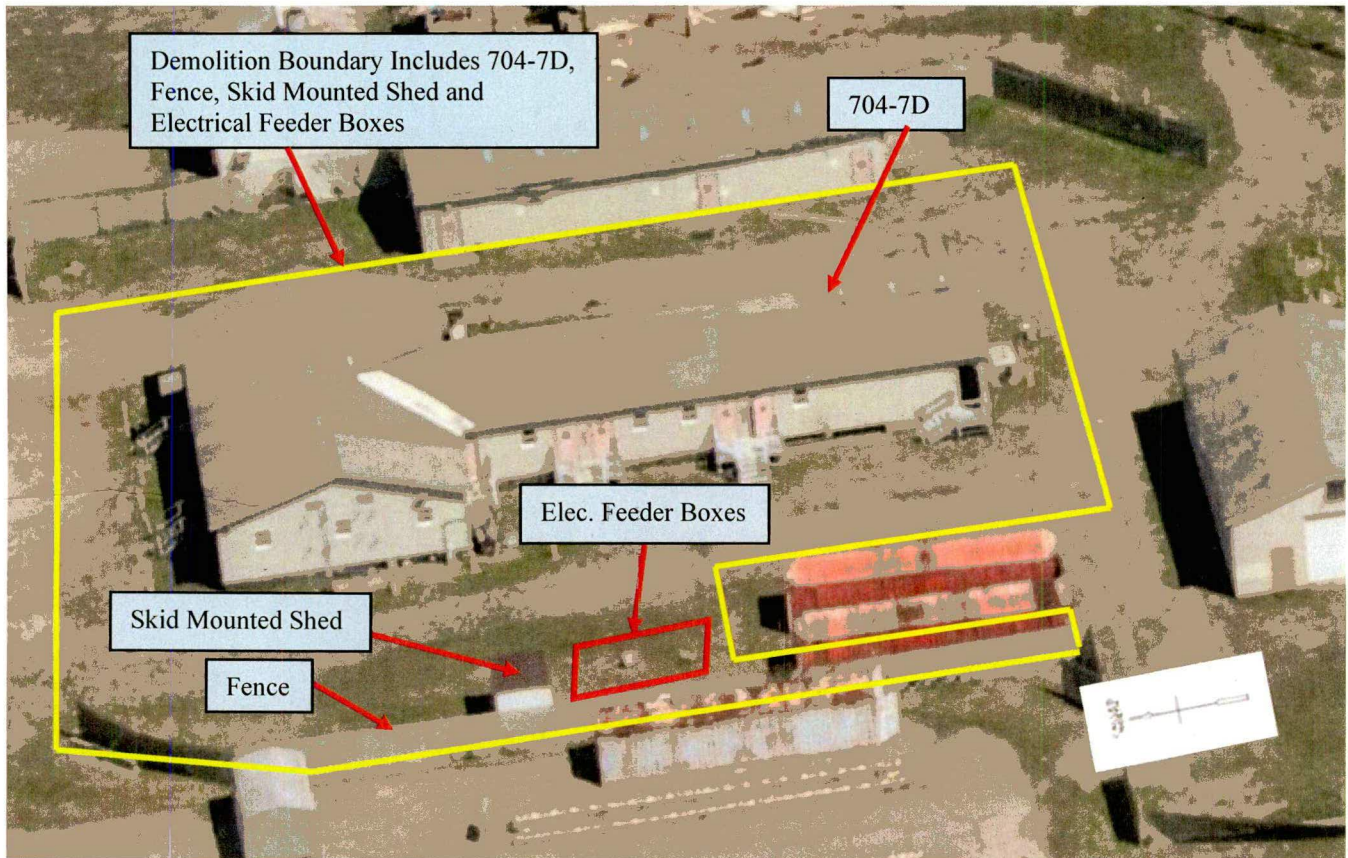


Figure 2: Aerial View of 704-7D and Surrounding Buildings/Facilities

Appendix A – General Layout and Interfacing Facilities



Figure 3: Building 704-7D Photo

Appendix A – General Layout and Interfacing Facilities

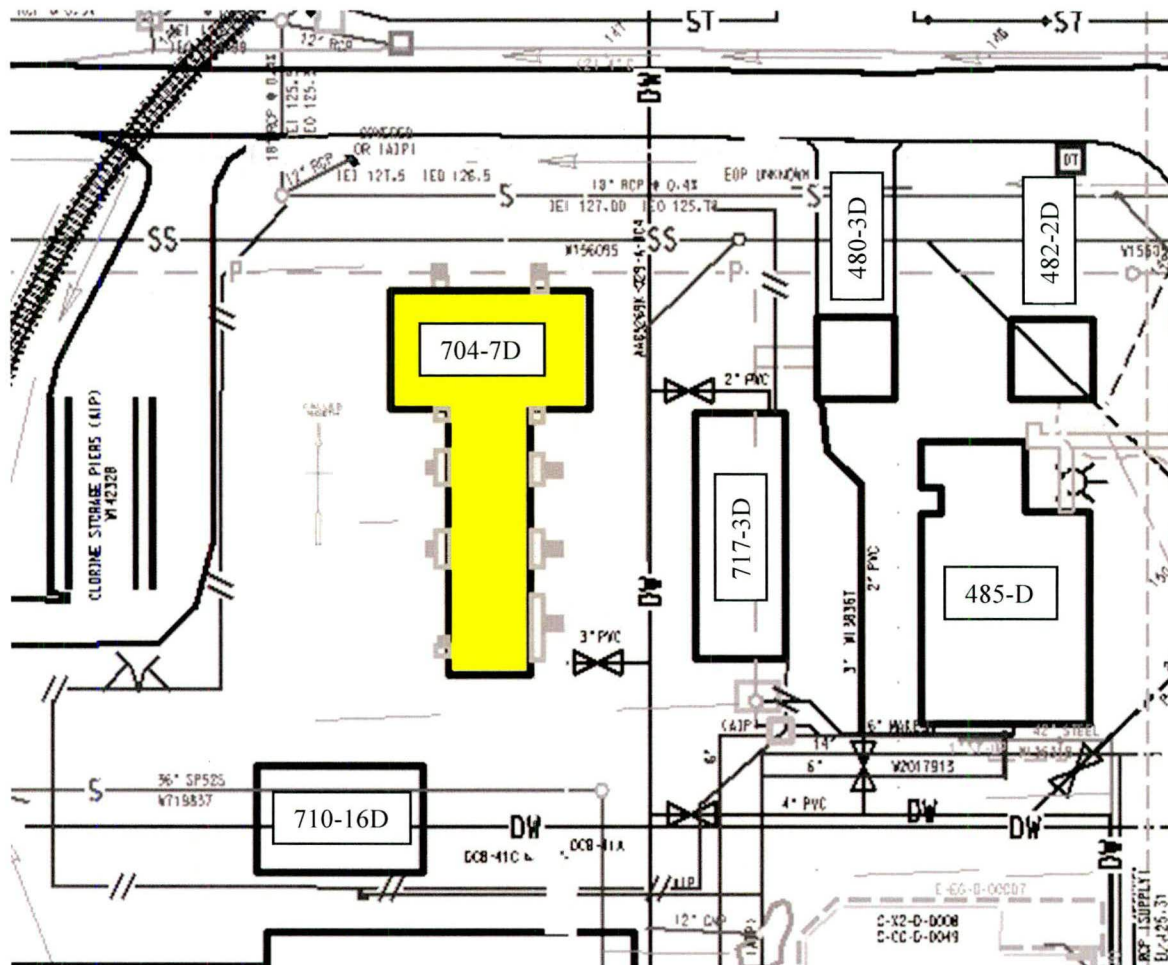


Figure 4: Building 704-7D and Surrounding Buildings/Facilities