

CRAY T3D™ Multiple-cabinet Air-cooled Mainframe

HR-04068

**CRAY T3D MCA Mainframe
HR-04068**

Cray Research, Inc.

Record of Revision

REVISION	DESCRIPTION
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CRAY T3D MULTIPLE-CABINET AIR-COOLED MAINFRAME

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CRAY T3D Multiple-cabinet Air-cooled Mainframe

This document describes the site planning specifications for the CRAY T3D multiple-cabinet air-cooled (MCA) mainframe. Use these specifications when designing the computer room, planning the floor layout, and installing the equipment.

The multiple-cabinet option enables customers who have existing Cray Research computer systems to add massively parallel processor (MPP) technology to their systems. In a multiple-cabinet configuration, the CRAY T3D system is physically separate from the host system but is linked by communication cables. Refer to Figure 1 for an illustration of the mainframe chassis (MFC) and to Figure 2 for an illustration of a typical computer room floor plan.

Table 1 provides the MFC specifications. Refer to Figure 3 for an illustration of the mainframe shipping configuration.

Table 1. CRAY T3D MCA Mainframe Chassis Specifications

Characteristic	Specification
Height	75.75 in. (1924 mm)
Width	47.60 in. (1209 mm)
Depth	74.40 in. (1890 mm)
Weight	4,585 lbs (2,079 kg)
Floor loading	379 lbs/ft ² (1,850 kg/m ²)
Access requirements:	
Sides	3 ft (0.9 m)
Front	4 ft (1.2 m)
Power consumption †	17.50 kW to 52.80 kW
Heat dissipation to air †	3.68 kW to 13.20 kW
Shipping size:	
Height	78.25 in. (1988 mm)
Width	34.00 in. (864 mm)
Depth	100.50 in. (2553 mm)
Shipping weight	4,699 lbs (2,131 kg)

† Refer to a machine unit specification (MUS) for the actual power consumption and heat dissipation values for your system configuration. Obtain an MUS from your site planning representative.

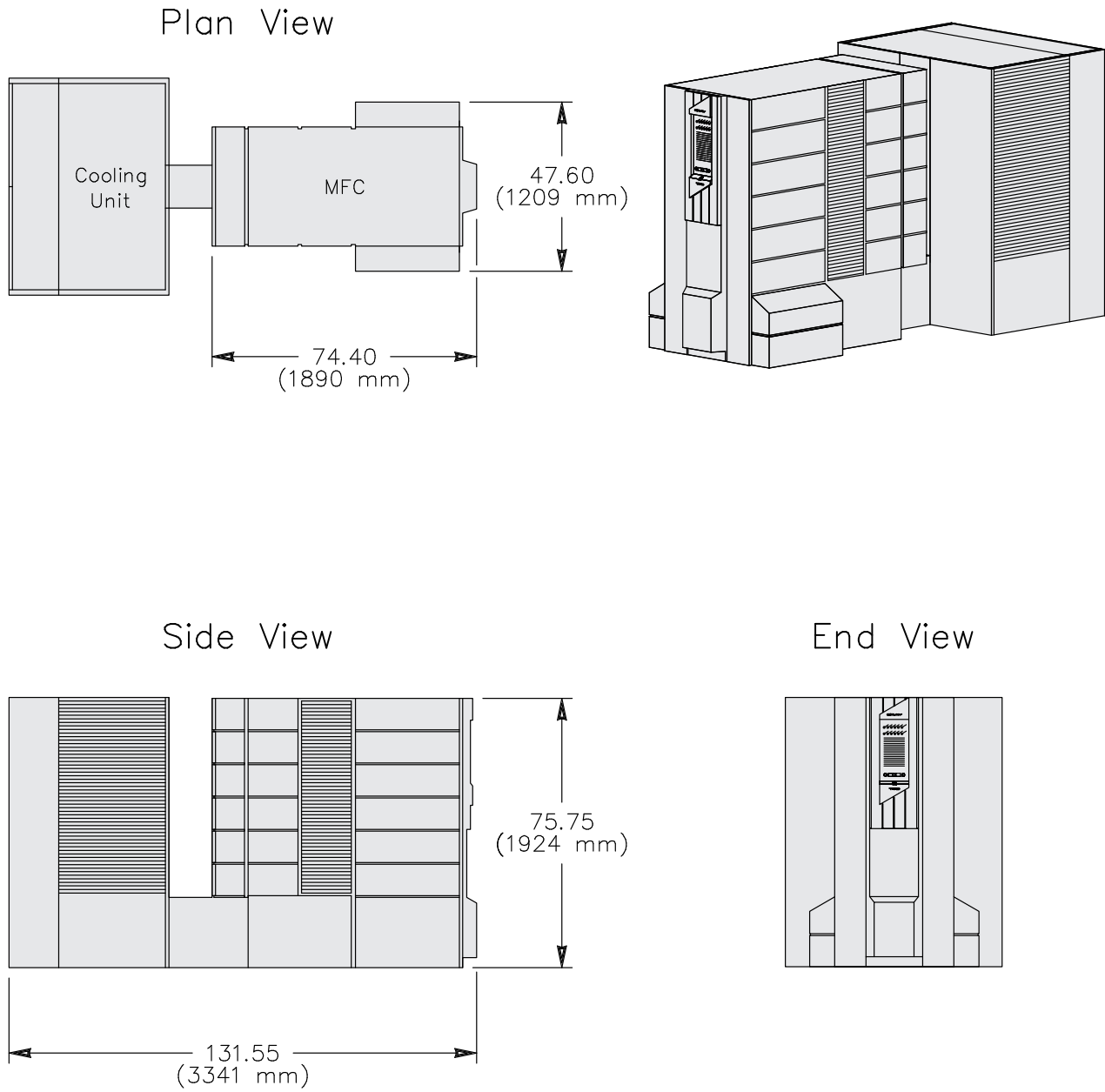


Figure 1. CRAY T3D MCA Mainframe Chassis

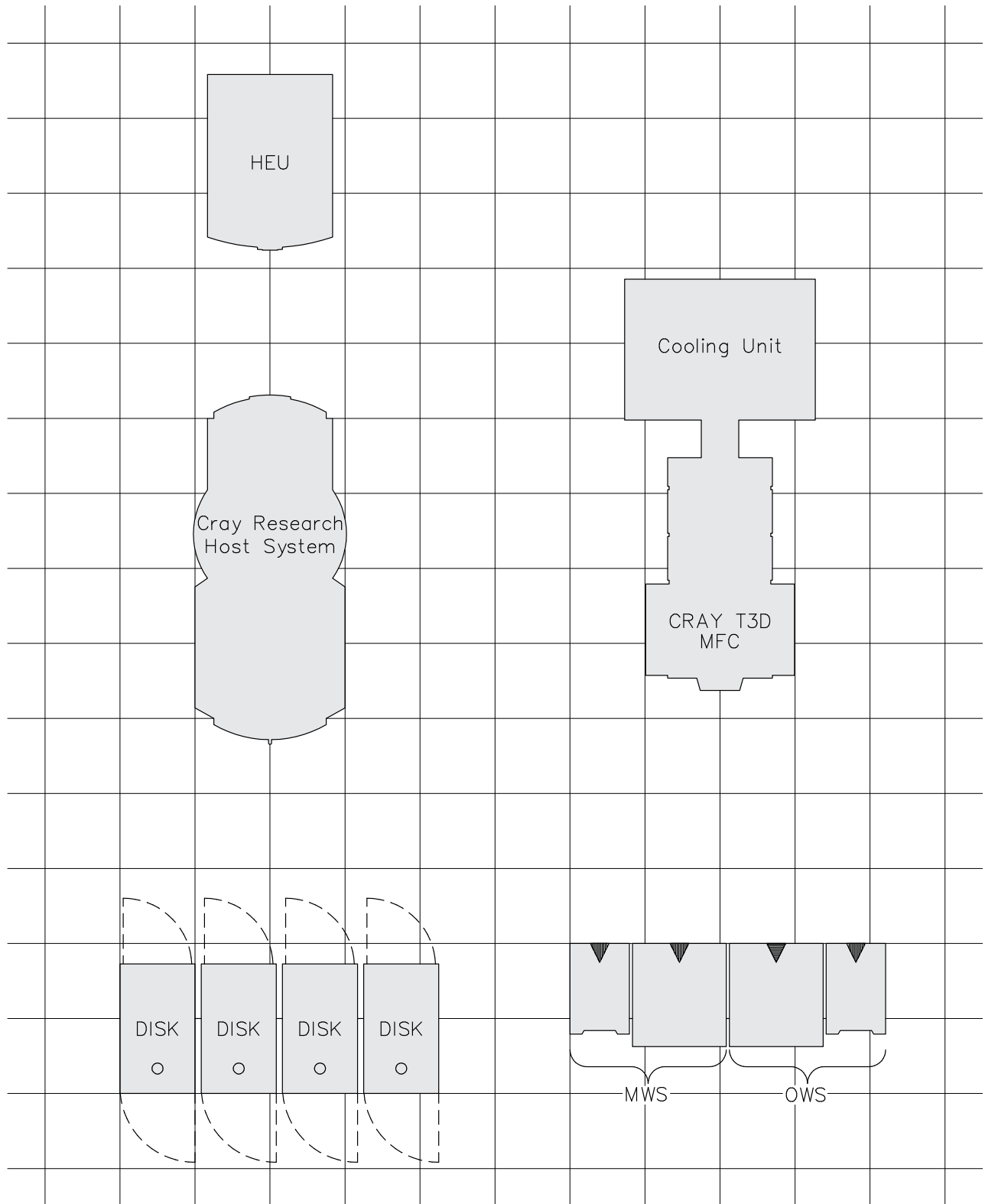


Figure 2. Typical CRAY T3D MCA Computer Room Floor Plan

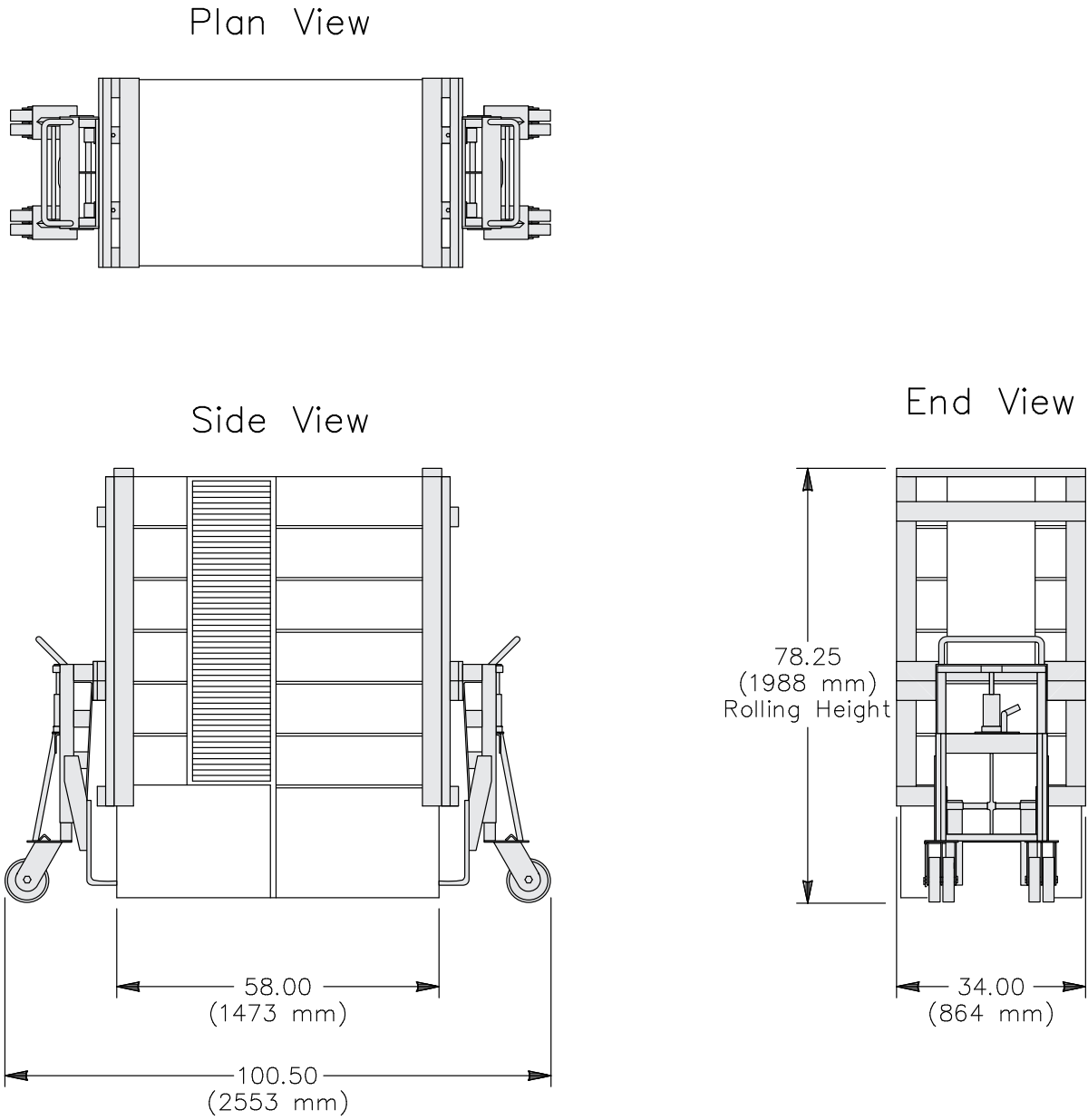


Figure 3. CRAY T3D MCA Mainframe Shipping Configuration

Floor Preparation

Cray Research recommends that you install the system in a computer room that has a raised floor. When properly designed and constructed, the raised floor provides space to route power cables, signal cables, and coolant piping; and it provides an air space that facilitates equipment cooling. The raised floor also serves as a signal reference grid for your computer system.

Cray Research recommends a minimum raised-floor height of 8.00 in. (203 mm). You should be aware, however, that some Cray Research products require minimum floor heights of 12.00 in. to 18.00 in. (305 mm to 457 mm), depending upon the system model. If a raised floor is not used, Cray Research will supply a kit that enables you to route cables between the Cray Research equipment.

You must supply and install additional floor support pedestals for the MFC. The additional pedestals accommodate the concentrated floor-loading characteristics of the MFC. Depending on stringer style and floor panel size, some sites may require more floor support pedestals to restore the structural strength of the floor.

You must prepare three floor cutouts for the MFC. These cutouts accommodate the routing of data, power, and cooling system connections, and must be free of burrs and sharp edges. Your site planning representative will supply full-scale floor cutout templates for preparing the cutouts.

If your computer system operates at 50 Hz, you must prepare an additional floor cutout beneath the blower box of the cooling unit. This floor cutout provides supplemental cooling air for the cooling unit.

Refer to Figures 4 through 6 for the floor pedestal and floor cutout locations for floor plans that use 24 in. x 24 in. floor panels, 450 mm x 450 mm floor panels, or 600 mm x 600 mm floor panels, respectively.

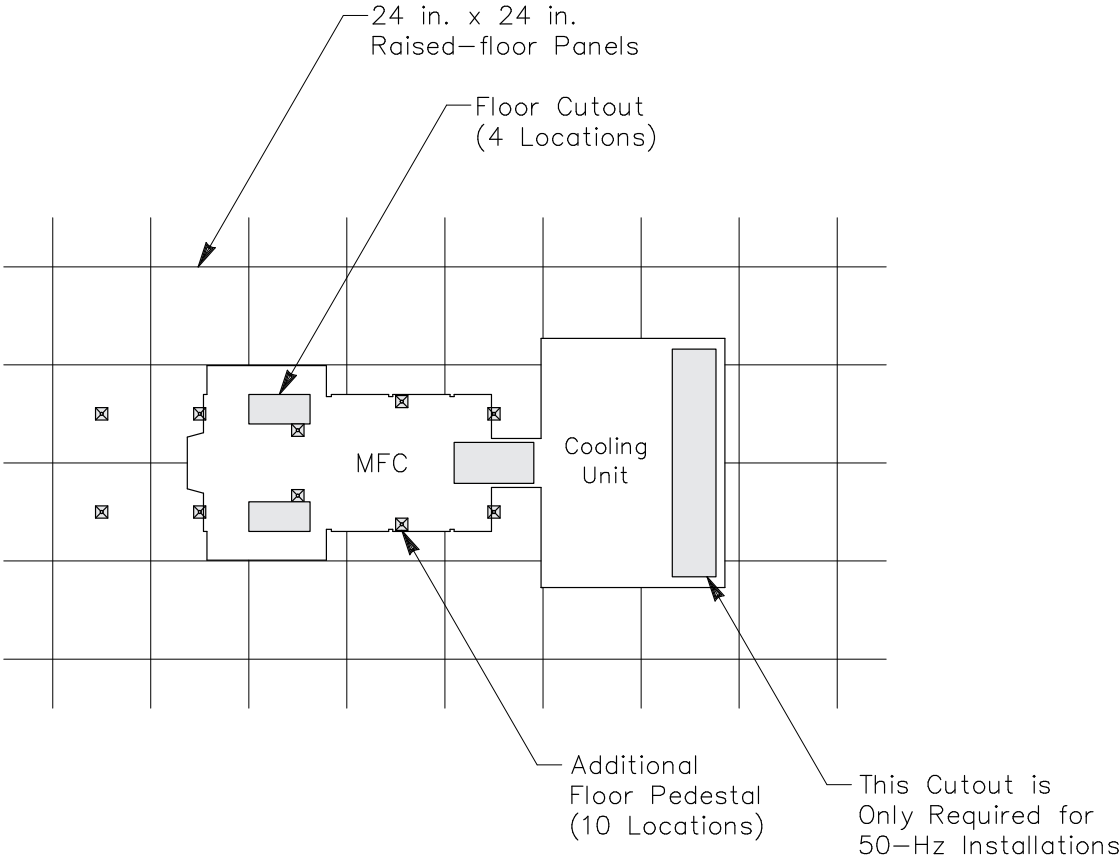


Figure 4. CRAY T3D MCA Floor Plan on 24 in. x 24 in. Floor Panels

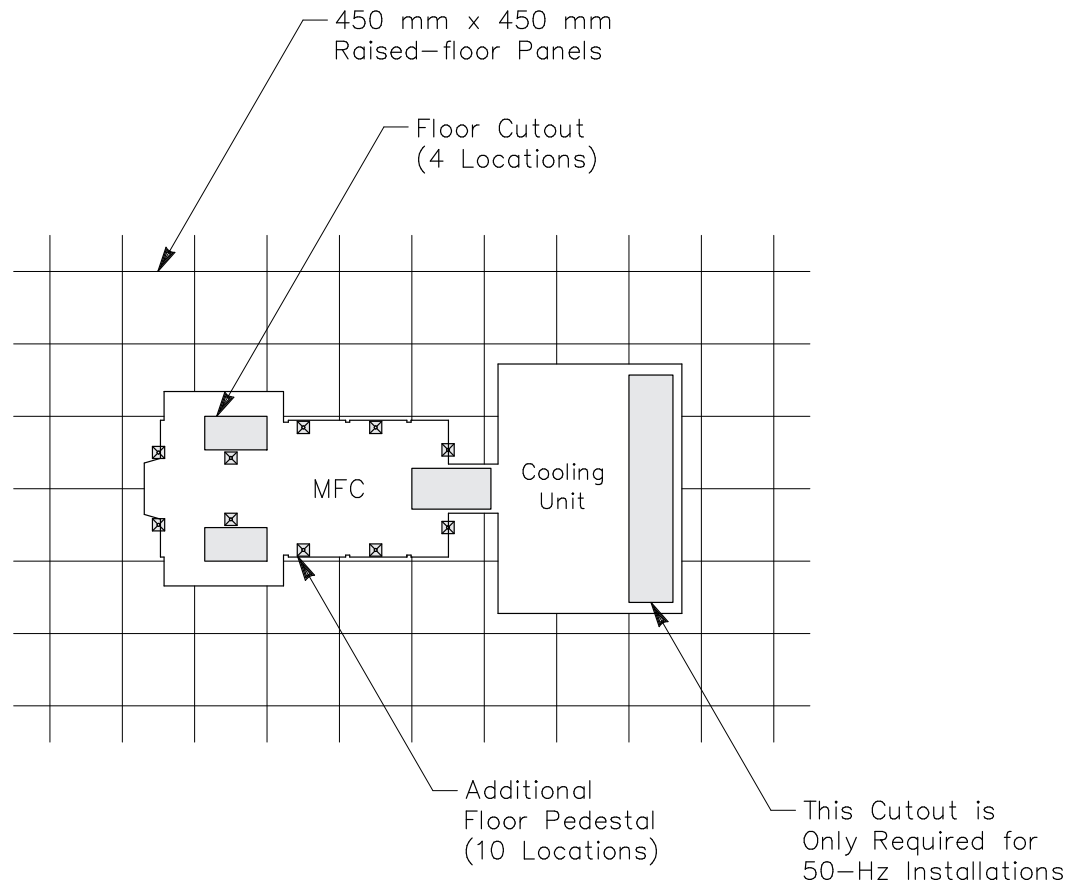


Figure 5. CRAY T3D MCA Floor Plan on 450 mm x 450 mm Floor Panels

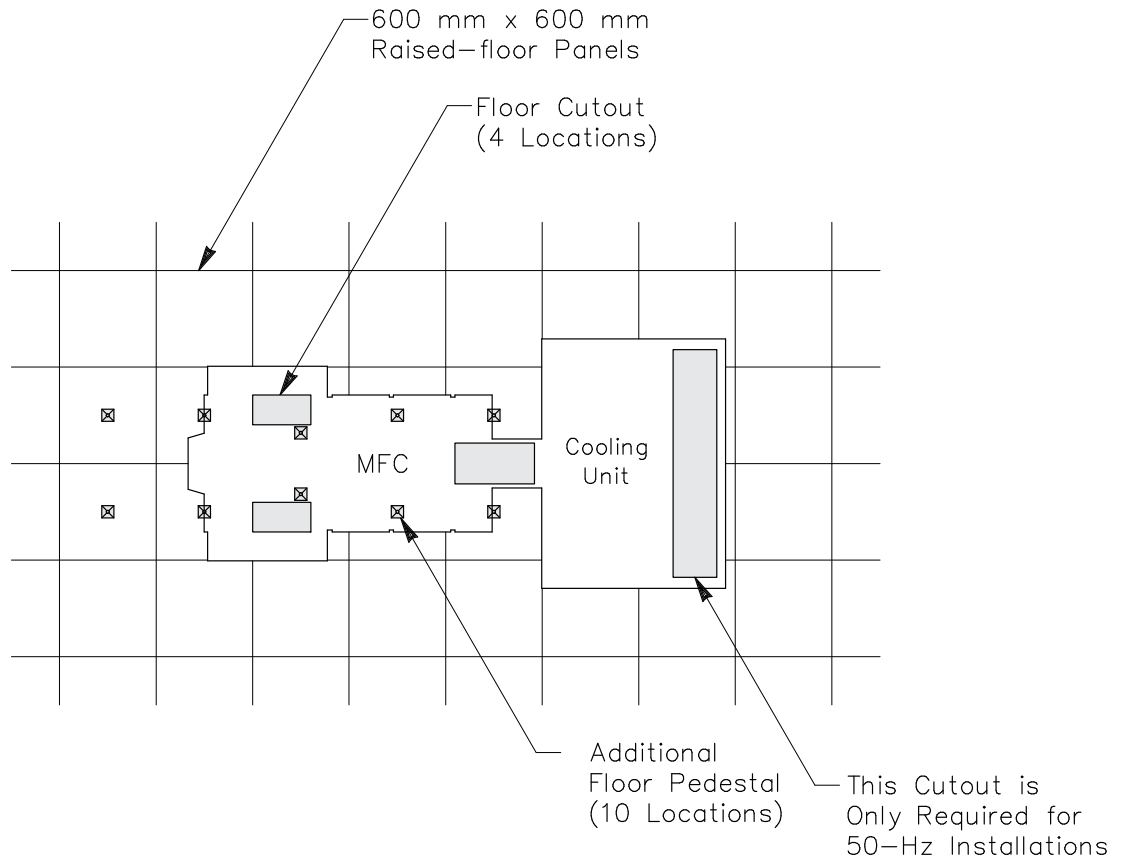


Figure 6. CRAY T3D MCA Floor Plan on 600 mm x 600 mm Floor Panels