**6. ENGINEERING SYSTEMS REQUIREMENTS**

**E10 EQUIPMENT**

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SYSTEMS REQUIREMENTS  
EQUIPMENT TEMPLATE 09/22  
  
Instructions for using this template: There are template files for each UNIFORMAT Level 2 Group Elements. This template is for Group Element E10-EQUIPMENT. Text such as this is hidden text that will not print when the hidden text box in "Print/Options" is un-checked.  
  
The Architectural Member must edit this template for the requirements of the project. The SYSTEMS REQUIREMENTS are intended to define items that are required throughout the facility or on a system wide basis that is common to several rooms. Room-specific requirements are defined in the Part 3 Chapter 5 ROOM REQUIREMENTS section. Coordinate with the lead programmer for ROOM REQUIREMENTS. Editing is required where brackets [ ] appear. Delete all building elements that are not required for the project. If additional elements or sub-elements are required for the project that do not appear in the template, refer to the NIST UNIFORMAT II publication for additional building element numbers and descriptions. The Uniformat II Work Breakdown Structure can be found at** [**www.wbdg.org/ndbm/**](http://www.wbdg.org/ndbm/) **. Coordinate with the PERFORMANCE TECHNICAL SPECIFICATION SECTION E10 to ensure that performance requirements are provided for all of the Building Elements listed here and that paragraph numbering matches.  
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NOTE: Edit the following paragraphs to suit the project, or create your own, to describe the EQUIPMENT for the project. Equipment that is typically included in a construction contract includes security and vault equipment such as vault doors and day gates, loading dock equipment such as dock levelers, and food service equipment. Coordinate this section carefully with other portions of the RFP.  
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**GENERAL SYSTEMS REQUIREMENTS**  
 **E1010 COMMERCIAL EQUIPMENT**

[Obtain the services of equipment specialists to specify [audiovisual] [shop] [fitness equipment] [or] [\_\_\_\_\_\_\_(other specialty equipment)]. Equipment specialists must not have any affiliation with the product specified.]

[All specialty equipment must be installed by qualified installers regularly engaged in installing the specialty equipment.]

Provide energy using equipment in accordance with criteria listed in Part 2 UFGS Section 01 33 29, *Sustainability Requirements and Reporting*.

**E101003 VENDING EQUIPMENT**

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NOTE: Provide a list of anticipated vending equipment for the project. List any special utilities that are required.  
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Design the facility to provide space, utilities, and cooling to accommodate the following vending equipment;

a. [\_\_\_\_]

b. [\_\_\_\_]

**E1020 INSTITUTIONAL EQUIPMENT**

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NOTE: Consider the following paragraph for facilities that will include laboratory equipment. Provide as detailed a list as can be obtained from the using activity. This information could also be included in the Room Requirements.  
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**E102009 AUDIOVISUAL EQUIPMENT**

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NOTE: For Navy projects choose the first bracketed option below and delete the second option. For Marine Corps Projects choose the second bracketed option below and delete the first option.  
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[Coordinate design requirements with the end user/Command Information Technology (IT) personnel, and provide Audiovisual (AV) equipment. Provide the services of an audiovisual equipment specialist to design and specify the audiovisual equipment.

AV Equipment including electronics potentially connected to data/IT, must be coordinated with design and construction but planned for and funded by the user or Budget Submitting Office sponsoring the user. AV equipment includes, but is not limited to: intercom/sound systems, smartboards, flat screens, projectors, video teleconferencing, interactive wall systems and Closed-Circuit-Televisions (CCTVs).

AV equipment will not be funded as part of the Furniture, Fixtures, & Equipment (FF&E) Package.

AV Equipment will be purchased using separate funding. The AV Equipment will be identified as a separate line item, and priced separately from the FF&E. AV Equipment will be funded as an option.]

[Coordinate design requirements with the end user/Command Information technology (IT) personnel, and provide Audiovisual (AV) equipment. Provide the services of an audiovisual equipment specialist to design and specify the audiovisual equipment.

AV Equipment including electronics potentially connected to data/IT, must be coordinated with design and construction but planned for and funded by the user or Budget Submitting Office sponsoring the user. AV equipment includes, but is not limited to: intercom/sound systems, smartboards, flat screens, projectors, video teleconferencing, interactive wall systems and CCTVs. The AV equipment will be funded as part of the FF&E Package.]

**E1030 VEHICULAR EQUIPMENT**

[Provide loading docks with [dock bumpers], [truck-trailer restraining devices], [and] [dock levelers].

[Base the minimum performance characteristics for the dock leveler on the following:

a. Service Period:  
  
(1) Number of shift operations of [1] [2] [3].  
(2) Maximum number of trucks per shift opening of [\_\_\_\_\_].  
(3) Maximum number of days per week of [\_\_\_\_\_].

b. Fork Lift Loads:  
  
(1) Design levelers to accommodate [3] [4] wheel fork trucks.  
(2) Design levelers to handle [\_\_\_\_\_] gross dynamic load.  
(3) Base load leveler design on number of cycles per  
loading/unloading operation per truck and of [\_\_\_\_\_].]

**E1040 GOVERNMENT FURNISHED EQUIPMENT**

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NOTE: Choose second bracketed option and edit appropriately when Government Furnished Contractor Installed equipment is part of RFP. Include building number and approximate distance from site in bracketed spaces. When equipment is furnished by the Government, include Shop Drawings and Product Data sheets with information defining equipment and requirements in Part 5 of the RFP documents. Choose first option for all other projects.  
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NOTE: List all Government furnished Food Service Equipment within Section E109002, Food Service Equipment.   
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

[There is no Government Furnished equipment in this project.]

[Rough-in and provide connections for Government-furnished equipment such that equipment will operate as intended, including providing miscellaneous items such as plugs, receptacles, wire, cable, conduit, flexible conduit and outlet boxes or fittings. [Pick up equipment at [ ] and transfer to site for storage until ready for installation.] [Equipment will remain under the control of the Government until such time as the Contractor is ready to install. Provide 30 days advance notice of expected installation date and pick up equipment at [ ] and transfer to site for installation.] Testing requirements of Government Furnished equipment is the responsibility of the Contractor and must follow the same guidelines as though the Contractor had provided the equipment. Install the following Government furnished items: [ ], [ ], [ ]]

Refer to section E109002 Food Service Equipment for information on Government furnished status of Food Service Equipment.

**E1090 OTHER EQUIPMENT**

**E109002 FOOD SERVICE EQUIPMENT**

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NOTE: Provide the following information as part of the Project Program if the Contractor's Designer of Record (DOR) is to design the kitchen:  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

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NOTE: Provide the following information as part of the Project Program. The quantity and type of equipment will be based on the FC 4-722-01N and the project specific planning criteria for a Dining Facility. The answers to the following table of questions are required to modify the FC 4-722-01N standard areas for the specific mission.   
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

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NOTE: See FC 4-722-01N Appendix A and B, References and Best Practices to become familiar with the basis for the requirements for Dining Facility design.  
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Provide the type, quantity and size of equipment necessary and with sufficient redundancy and/or multi-function features to develop meals based on the following requirements:

- The facility's 21-day menu;

- The facility's staffing plan;

- The facility's hours of operation, meal schedule and duration;

- Normal maintenance requirements;

- The standard of quality required in UFGS sections concerning Food Service Equipment; specifically but not limited to the following sections:

11 31 13, *Electric Kitchen Equipment*

11 41 11,  *Refrigerated and Frozen Food Storage Equipment*

11 42 00,  *Food Preparation Equipment*

11 44 00,  *Food Cooking Equipment*

11 46 00,  *Food Dispensing Equipment*

11 47 00,  *Ice Machines*

11 48 00,  *Cleaning and Disposal Equipment*

And the following information contained in the chart below:

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*   
NOTE: See FC 4-722-01N Ch.2, Table 2-1 "Personnel to be Served by Mission" in conjunction with input from the Activity in order to calculate the "Net Number of Personnell to be served" and insert in the chart below.  
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|  |  |
| --- | --- |
| Net Number of Personnel to Be Served per meal period |  |
| Storage requirements | Dry Goods [ ] Cubic Feet (CF)Refrigerated [ ] CFFreezer [ ] CFSoda Syrup [ ] [CF] [SF]Paper [ ] CFJanitorial [ ] [CF] [SF] |
| Payment Style | [cafeteria style] [ala carte'] |
| Form of Payment | [ID card], [cash], [credit card], [smart card], [other method - to be determined] |
| Food Delivery and Eating Methodology | Patrons will obtain meals via [straight line], [scatter line], [takeout/Meal replacement walk-up window]. |
| Hours of Operation and Meals Served | [Breakfast] [insert start and finish times][lunch] [insert start and finish times][dinner] [insert start and finish times][continuous] [insert start and finish times] |
| Days of Operations | [ ] |
| Other Facility Functions- Meals Per Week | [Enter typical meals per week for each category] |
| Define Available Utilities | [High pressure clean steam 16-50 psi], [Low pressure clean steam 10-15 psi], [High pressure contaminated building steam 16-50 psi], [Low pressure contaminated steam 10-15 psi], [Natural gas], [Propane gas], [Closed loop chilled water 40-55'F], [Closed loop chilled water 34-40'F], [480V 3 phase], [208V 3 phase], [208V single phase], [120V single phase] |

Coordinate with other disciplines to incorporate the following kitchen specific items: Trash/garbage areas: Provide space, paving, grease-proof drained surface, drainage, power for rodent control, and access to a hot water hose bibb. Locate requirements of trash/garbage disposal areas shall be provided for [dumpster] [compacting dumpster] [ local storage room] for cardboard [ ] cu meters (cu yard), trash dumpster [ ] cu meters (cubic yard) with pick-up every [ ] days.

Provide food service equipment as required for a commercial kitchen to meet the above critical assumptions. A conceptual list of typical equipment for Dining Facilities and source of supply is provided in the UFC 4-722-01, Appendix, Best Practices. NOTE: THIS LIST IS CONCEPTUAL ONLY AND CANNOT BE USED AS A REQUIREMENTS LIST.

The 21 day menu is as follows:

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NOTE: Obtain the 21-day menu from the Activity and include here.  
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--End of Section--