

Chiller Plant Template User Guide

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1. Chiller Plant Template User Guide

1.1 Introduction

1.1.1 Purpose

The Facility Support Contract/Base Operations Support (FSC/BOS) Template provides a common framework for Navy-wide performance-based contracts. NAVFAC and DoD policy is to obtain FSC services in a “performance-based” manner. This User Guide describes how to apply the Template to Chiller Plant services. The Template is to be used for fixed-price negotiated procurements using source selection procedures. Users are encouraged to tailor the application of this template to the unique circumstances of their individual acquisitions. There are a number of things to keep in mind during the tailoring process:

1. Read the General Information User Guide in addition to this User Guide.
2. Pay particular attention to the annotation <<Note to Spec Writer>>.
3. Delete, add, or modify as required, but avoid adding unnecessary “how to” requirements and management prescriptions.
4. When tailoring, be careful not to create conflicts or ambiguities.
5. Be sure ALL the individual elements of the acquisition are consistent and designed for the best overall outcome.

1.1.2 Scope of Chiller Plant

The Chiller Plant Template includes all labor, management, supervision, tools, materials, supplies, equipment, and transportation required to provide chiller plant and air conditioning services. Included are services such as operating, maintaining and repairing the chiller plant and distribution system, chilled water testing and treatment, and provision of portable chiller systems to augment the chiller plant as necessary. The following service is not included in this Template, but is covered in the Sustainment, Restoration and Modernization (SRM) Template:

- Chiller and air conditioning plants serving only a single facility

1.1.3 Annex Alignment to Installation Management Accounting Project

Figure 1 below shows how the Chiller Plant sub-function aligns with the Navy’s Installation Management Accounting Project (IMAP) Core Business Model (CBM) and Cost Account Codes (CACs). For additional information on IMAP, see the General Information User Guide.

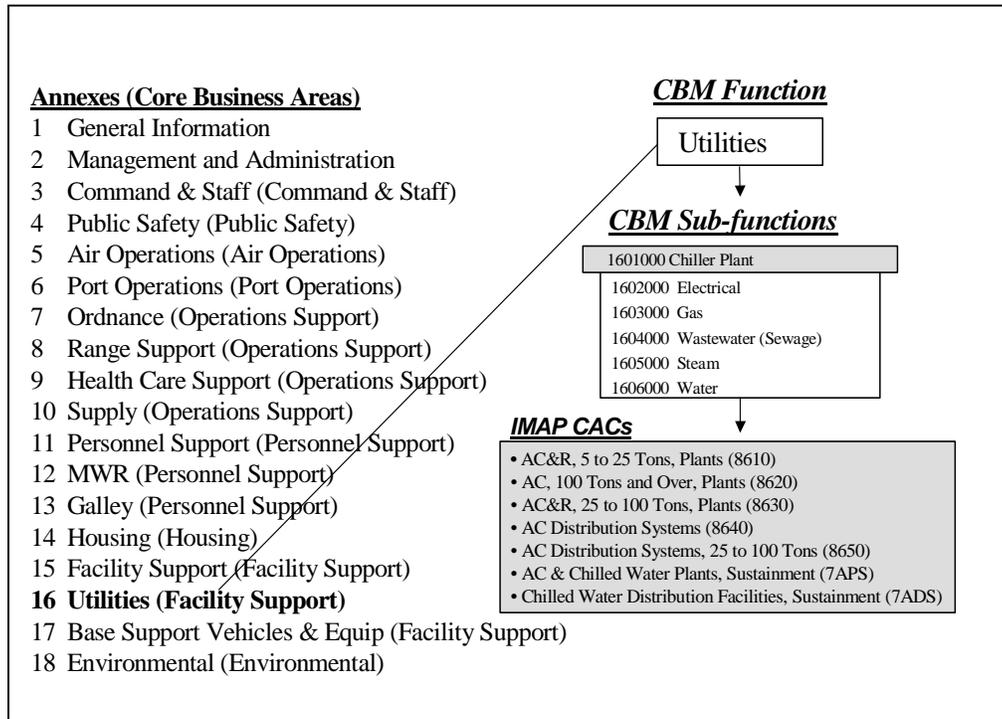


Figure 1. Annex Alignment to IMAP

1.1.4 CAC Definition

Table 1 below shows a partial list of the IMAP 2004 Chiller Plant CAC definitions. Since CACs change periodically, refer to the IMAP website for the latest. The Chiller Plant Template may accommodate different cost models such as the Installation Process Model (IPM) used by the Marine Corps.

Title	CAC	Definition
Air Conditioning and Refrigeration, 5 to 25 Tons, Plants	8610	Includes cost of operation of air-conditioning plants that serve more than one building. Excludes costs for maintenance of plant, equipment, and distribution system. (Operation of facilities included in DoD/ Navy Category Codes 826-10/20/25/30, 826-40, and 890-42/43).
Air-Conditioning, 100 Tons and Over, Plants	8620	Includes the cost of operation of air-conditioning plants. Excludes costs of the maintenance of the plant, equipment and distribution systems. (DoD/Navy Category Codes 82625 and 82640).
Air-Conditioning and Refrigeration, 25 to 100 Tons, Plants	8630	Includes the cost of operation of air-conditioning plants. Excludes costs of the maintenance of the plant equipment and distribution systems. (DoD/Navy Category Codes 82620 and 82630).

Table 1. IMAP CACs for Chiller Plant

1.1.5 Standard Numbering for Chiller Plant

Figure 2 below shows the standard numbering convention for Chiller Plant. Annex 16, Utilities has six first-tier sub-annexes. Specification 1601000 will always represent Chiller Plant in NAVFAC contracts. Users are not authorized to edit the numbering convention.

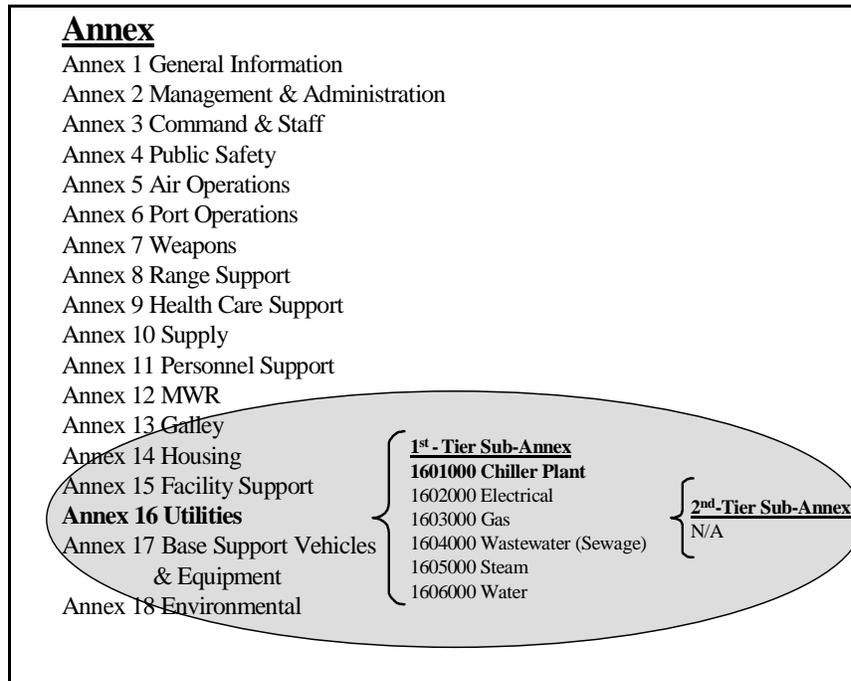


Figure 2. Standard Numbering Convention Example

The numbering convention for specification number xxyyzz0 is:

- The first 2 digits xx represent the annex number (varies from 01 to 18)
- The next 2 digits yy represent the first tier sub-annex number
- The next 2 digits zz represent the second tier sub-annex number (00 when N/A)
- The last digit is reserved for future use

1.2 Chiller Plant Template Elements

The Chiller Plant Template includes specifications and supporting documentation that *supplement* all other required contract regulations, policy and procedures as shown in Table 2 below.

Section	Title	Description
C	Performance Work Statement	Section C contains technical specifications expressing expectations of the work to be performed stated as performance objectives, related information and measurable standards. Annexes 1 and 2 will be included in every solicitation. See General Information User Guide.
J	List of Documents, Exhibits, and Other Attachments	Section J contains sample attachments (e.g., historical data, inventory, and ELINs).
L	Instructions, Conditions, and Notices to Offerors or Respondents	Section L contains sample technical proposal questions specific to Chiller Plant.
-	Functional Assessment Plan (FAP)	The Chiller Plant FAP provides suggested methods of assessment and sample sizes for accomplishing tiered performance assessment. For additional guidance see the General Information User Guide.

Table 2. Chiller Plant Template Elements

1.3 Using the Chiller Plant Template

The Template is intended to be tailored to meet client requirements for Chiller Plant services. Users should read and understand the entire User Guide before starting the tailoring process. Users must consider all relevant guidelines to ensure that all appropriate topics are addressed.

Throughout the Template you will find the annotation <<Note to Spec Writer>>. Text within these symbols provides additional information and/or advises the user to insert appropriate information such as installation name, dollar limits, percentages, and seasonal requirements.

1.3.1 Defining Client Expectations

Pre-Planning Meetings and Analyses. The first step in the tailoring process is to determine the client’s expectations in terms of specific performance objectives and standards. An initial review of inventory and existing conditions will provide a better understanding of client expectations. Care must be taken to ensure that the client realizes the tradeoff between contract cost and “service level” expectations. In general, it will cost more to get service levels that satisfy higher expectations. Concurrent with understanding client expectations, it is essential to conduct market surveys. This statutory requirement is intended to compare the client’s desired outcomes against the technical, management and pricing alternatives available in the marketplace for satisfying the Government’s requirements.

The next step is to determine whether the client’s requirements are currently contracted, if they are a new requirement, or if they are a result of an outsourcing effort (e.g., OMB Circular A-76). Comparisons should be made with any existing acquisition strategy, in order to optimize requirements for the greatest overall good of all clients and geographic areas. Pre-planning meetings shall be held as necessary to develop a full understanding of all expectations.

The Chief of Naval Operations (CNO) Integrated Process Team (IPT) has developed standard service levels for several functional areas. Service levels will be used for resource programming and budgeting and may require the fund recipients to use the funded service levels in their solicitation. For further guidance see Section 1.3.3, *Service Levels*.

If a Client is not required to use service levels, the appropriate changes must be made to Sections C and J.

Comparison of Template WBS with Client Expectations. The next step is to evaluate site-specific requirements in conjunction with the existing Chiller Plant Work Breakdown Structure (WBS) for Section C. The WBS is the basis for communication throughout the acquisition process. A WBS defines an acquisition in product terms, and relates them in a tree diagram that displays the relationships of the products and services to each other and to the overarching performance outcomes.

Once the client's expectations are fully understood and the WBS has been tailored, the performance objectives and performance standards for firm fixed-price work may be reviewed and tailored to align with clients' expectations.

Figure 3 below is the WBS for the chiller plant firm fixed-price work:

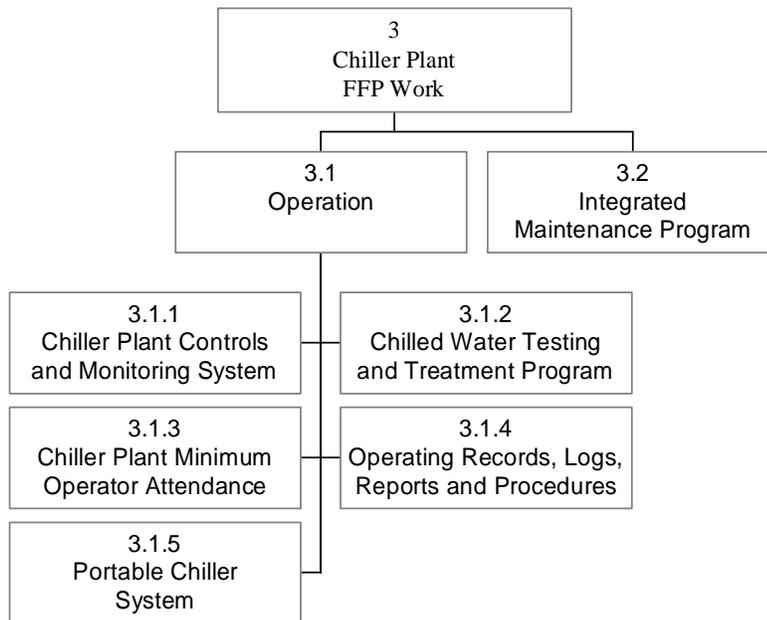


Figure 3. Chiller Plant WBS

Client requirements that are not included in the WBS should be added and those that do not apply should be removed. For example, assume client requirements have been identified and there is a need to alter the WBS to delete the requirement for portable chiller systems. The revised WBS would look like Figure 4 below.

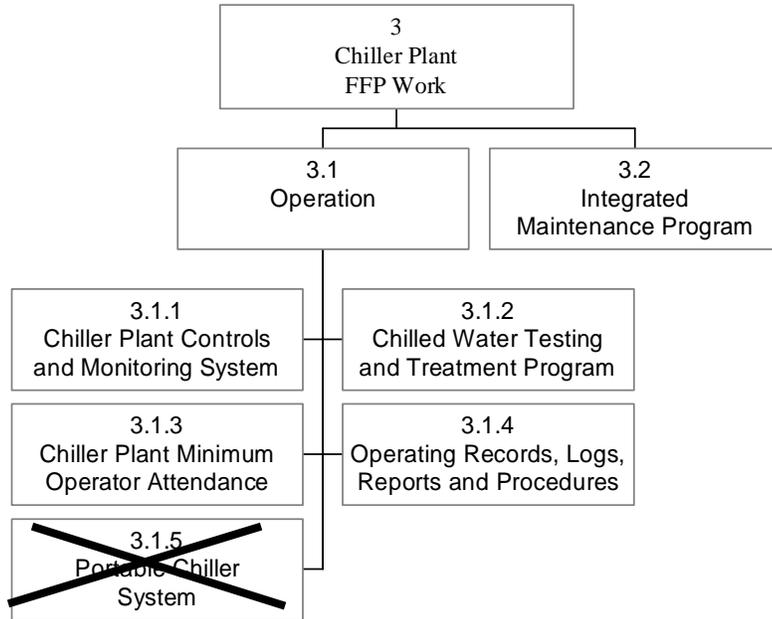


Figure 4. WBS Tailoring Example

1.3.2 Tabular Format

Section C is arranged in a tabular format that facilitates methodical arrangement of requirements, clear definition of expectations, and alignment of objectives with related information and measurable standards. The tabular format shown in Table 3 below provides a small extract of the Chiller Plant specification and includes five columns of required information: Spec Item, Title, Performance Objective, Related Information, and Performance Standard.

Spec Item	Title	Performance Objective	Related Information	Performance Standard
3.1.1	Chiller Plant Controls and Monitoring System	The Contractor shall operate the Chiller Plant Controls and Monitoring System to efficiently produce and distribute chilled media.	<<Note to Spec Writer: Insert specific requirements for operation of the Chiller Plant Controls and Monitoring System and any chilled media temperature limits as applicable.>>	Chilled media is continuously maintained within specified limits. Temperature and humidity control requirements specified in J-1601000-02 are met.
3.1.2	Chilled Water Testing and Treatment Program	The Contractor shall provide and implement, where water is used as the chilled media, a Chilled Water Testing and Treatment Program to ensure optimum equipment operation and efficiency.	The Contractor shall develop and submit, to the KO for approval within 30 days following contract award, a Chilled Water Testing and Treatment Program in accordance with manufacturers' recommendations for applicable equipment to include collection of samples, testing and treatment of chilled water.	Test results confirm that Chilled water meets the testing schedule and chemical residual limits per the Contractor's incorporated Chilled Water Testing and Treatment Program.

Table 3. Tabular Format

Spec Items shown in Table 3 above provide examples of firm fixed-price requirements. However the tabular format for every Section C will actually address four distinct categories of work:

- **Spec Item 1** will always include general information unique to understanding the technical requirements of the spec. This item will not require pricing by the offeror.
- **Spec Item 2** will always include management and administrative requirements unique to the planning, execution, management and administration of the performance requirements of the specification. The cost of this item will be included the offeror's total contract price. Some management conditions are necessary to ensure successful performance, e.g., Government regular working hours and environmental protection, while others are excessive, e.g., requiring ISO 9000 with no equivalent and 10 minute service call response time.
- **Spec Item 3** will always include firm fixed-priced performance requirements. For example, in Table 3 above, items 3.1.1 and 3.1.2 for Chiller Plant are shown.
- **Spec Item 4** will always include IDIQ work requirements.

The Performance Objective is an end state that someone wants to achieve. Objectives are often expressed in terms of specific accomplishments by an organization, levels of service provided to customers, or improvements in performance of some activity when measured against an established baseline. A performance objective for chilled water testing and treatment program would be the following statement: *The Contractor shall provide and implement, where water is used as the chilled media, a Chilled Water Testing and Treatment Program to ensure optimum equipment operation and efficiency.*

Related Information consists of information for the Contractor that is specific to a performance objective. Most tailoring occurs in the Related Information column. An example of related

information for chilled water testing and treatment program would be the following statement: *The Contractor shall develop and submit, to the KO for approval within 30 days following contract award, a Chilled Water Testing and Treatment Program in accordance with manufacturers' recommendations for applicable equipment to include collection of samples, testing and treatment of chilled water.*

Once the performance objectives and standards have been tailored to reflect client expectations, related information may be added to further clarify requirements. Information contained in this column does not merit routine Government assessment or is too costly to individually assess for the level of risk that they present. Table 4 below identifies four types of related information:

Type of Related Information	Description
Informational Notes	Informational notes is information that is not intended to constitute a material representation by the Government. Information notes will always be the last entry in the Related Information column. An example would be <i>INFORMATIONAL NOTES: Historical continuous maintenance work, which has achieved a satisfactory level of operation, is provided in J-1601000-04.</i>
Clarifying Information	Clarifying information describes client expectations in a more detailed manner than the performance objective and performance standard alone. An example of clarifying information would be <i>Operation consists of "watch-standing" or attendance type work by qualified persons during a specified time period.</i>
Constraining Information	Constraining information describes limitations to the work performed to meet the performance objective and performance standard. An example of constraining information would be <i>The Contractor shall provide the reports electronically.</i>
Requirement Information	Requirement information further describes client requirements associated with each performance objective. Such requirements do not individually rise to a level that merits routine Government assessment against a separate performance standard. An example of requirement information would be <i>Attendance visits for operating chillers shall be of sufficient duration to observe a complete operational cycle and perform operator checks.</i>

Table 4. Related Information

Performance Standards are targeted levels or ranges of performance for each characteristic that the Government monitors. At least one performance standard must exist for each performance objective. Achievement of a performance standard will either demonstrate directly that the Contractor has met the performance objective, or will enable the Government to infer with a high degree of confidence that the Contractor has met the contract performance objective. A performance standard for chilled water testing and treatment program would be the following statement: *Test results confirm that chilled water meets the testing schedule and chemical residual limits per the Contractor's incorporated Chilled Water Testing and Treatment Program.*

Performance objectives, related information, and performance standards clearly describe client expectations. The Chiller Plant WBS is arranged with more subjective performance objectives and standards at higher levels (e.g., 3.1) and more quantitative performance objectives and standards at lower levels (e.g., 3.1.1). This tiered approach allows Contractor performance evaluation at higher levels provided the Contractor can demonstrate adequate performance at that higher level. Only after the Contractor has failed to perform at the higher level would we normally need to evaluate Contractor performance at lower levels of the WBS. The WBS structure lends itself well to tiered

performance assessment. For additional information on performance assessment refer to the General Information User Guide.

1.3.3 Service Levels

Service levels established by OPNAV N46 are not included in the Chiller Plant Template due to lack of existing connectional infrastructure to accommodate varying levels of utilities provision, e.g., distribution of chilled media only to critical facilities. However, if a client determines service levels are required, the following provisions will allow for upgrades or downgrades in service levels on an annual basis, at time of award and/or at the exercise of an option period. The option to change service level(s) requires a preliminary notice to the Contractor. It is very important to set a reasonable time period for this preliminary notice to allow the Contractor time to alter staffing and schedule work appropriately to be successful in meeting the new requirements. It is important to note that the shorter the notice, the riskier the start-up and the greater likelihood of higher prices. The following service level provision (NFAS approval pending) should be used for changing service levels on an annual basis. Use Alternate I if change in service levels is contemplated at the time of contract award for the base period:

Option to Change Service Level, Alternate I. Upon initial contract award the Government reserves the right to award options to increase or decrease service levels for the base period.

Option to Change Service Level. The Government reserves the right to increase or decrease the service level for each client at the time it exercises its option to extend the contract at the prices indicated in the schedule. The Government will provide _____ [insert number of calendar days between 15 and 90] calendar days preliminary notice of its intent to change the service level. Notice of intent will be in writing but may be in the form of an e-mail attachment, facsimile letter, or official mail signed by a Contracting Officer.

1.3.4 Section J Attachments

Sample Chiller Plant attachments are provided in the Template. These sample attachments contain information to help Contractors determine the scope of work to be performed. Chiller Plant attachments include chiller plant and distribution system description and inventory, temperature and humidity control requirements for specific critical and non-critical equipment and locations, and portable chiller systems historical data, and are labeled J-1601000-attachment number (two-digit number from 01 to 99).

Sample Chiller Plant ELINs for firm fixed-price and IDIQ work are provided in the Template and labeled J-0200000-07. The Chiller Plant firm fixed-price ELINs are structured to capture costs by IMAP CAC. The IDIQ ELIN structure includes the following columns: CAC, short description title, and full description of the work to be performed including completion times to facilitate the uploading of the IDIQ schedule into DoD EMALL. DoD EMALL is a web-based tool that allows clients to order pre-priced line items directly from the contractor using their Government purchase card.

The ELIN structure closely adheres to the guidance provided in NAVFAC Memorandum of 07 Mar 02, CONTRACT LINE ITEM RESTRUCTURING GUIDANCE.

1.3.5 Section L Questions

In a performance based contract, the Government identifies what it requires (i.e., performance objectives and performance standards) and offerors propose the “how to” methods for accomplishing these requirements. Section L contains a clause entitled CONTENT OF PROPOSALS in which offerors are required to explain their proposed performance methods and associated costs. To aid in evaluating and negotiating these proposals, it may be helpful to include in Section L specific questions for offerors to address.

Every effort should be made to minimize the number of questions. However, where information regarding the contractor’s method for performing the work poses an unacceptable risk to the Government, a specific question should be asked. Sample questions are shown in Table 5 below.

Spec Item	Questions for Chiller Plant, Specification 1601000
2.3.1 3.1.3	What are the skills, experience, training, and certifications of proposed HVAC technicians and chiller plant operators?
3.1	What are your operating approaches for the plants and systems included in this solicitation?
3.1 3.2	What is your approach to ensure a safe operating plant and distribution system, and a safe Integrated Maintenance Program?

Table 5. Section L Questions for Chiller Plant

2. Conclusion

The use of the Chiller Plant Template will facilitate performance-based contracting, use of standard service levels, IMAP accounting, and tiered performance assessment. For Template documents, training and additional assistance using the Template, contact the local Engineering Field Division (EFD).

3. Web References

Table 6 below provides helpful web references.

Title	URL	Description
OPNAVINST 4860.7	http://ned.s.nebt.daps.mil	Guidance on implementing CA program requirements
OMB Circular A-76 Supplemental Handbook	http://emissary.acq.osd.mil/inst/share.nsf	Guidance on implementing CA program requirements
IMAP website	https://ucso2.hq.navy.mil/IMAP/	Contains the latest IMAP Core Business Model
NAVFAC Acquisition	http://acq.navfac.navy.mil	NAVFAC Acquisition home page
Seven Steps to Performance Based Services Acquisition	http://oamweb.osc.doc.gov/pbsc/	Guidance for performance-based acquisition: Team Approach, Etc.
DoD PBSA Desk Guide	http://www.acq.osd.mil/ar/doc/pbsaguide010201.pdf	Department of Defense Performance-Based Services Acquisition Desk Guide.
OFPP Best Practices Guide	http://www.arnet.gov/library/OFPP/bestpractices/PPBSC/bestPPBSC.html	Office of Federal Procurement Policy best practices guide to implementing performance-based services contracting.
HHS KnowNet	http://knownet.hhs.gov/aboutKnowNet.htm	The Health and Human Services information repository of performance support.
USDA performance based service contracting	http://www.usda.gov/procurement/textonly/toolkit/pbsc.htm	United States Department of Agriculture performance based contracting toolkit
NAVFAC Facility Support Contracts	http://www.navfac.navy.mil/pw/fsc	FSC Product Line Plan initiatives and documentation.

Table 6. Web References