

## CHAPTER 7

### Facilities Requirements Determination

7-1. Introduction. Army facility planners must serve as facilitators, translators, and interpreters between the many interests involved in procuring, using, operating, and cleaning up and closing base camp facilities. This is especially true in the case of determining facility requirements (see Figure 7-1). The planning team must translate facility allowance information into terminology that prospective base camp users can understand and relate to their base camp needs. Planners must listen carefully, question thoroughly, and understand completely what the users say regarding any special base camp and operational needs associated with their respective unit. They must do the same regarding HN needs and preferences, if applicable. Finally, planners must translate all of this into the very precise, quantitative language used by those who will execute the base camp development plan—the project programmers (and other engineering budget planners), designers, other engineers, and the constructors. See Appendix F, Table F-1 (page F-1), for an example facilities requirements planning team checklist.

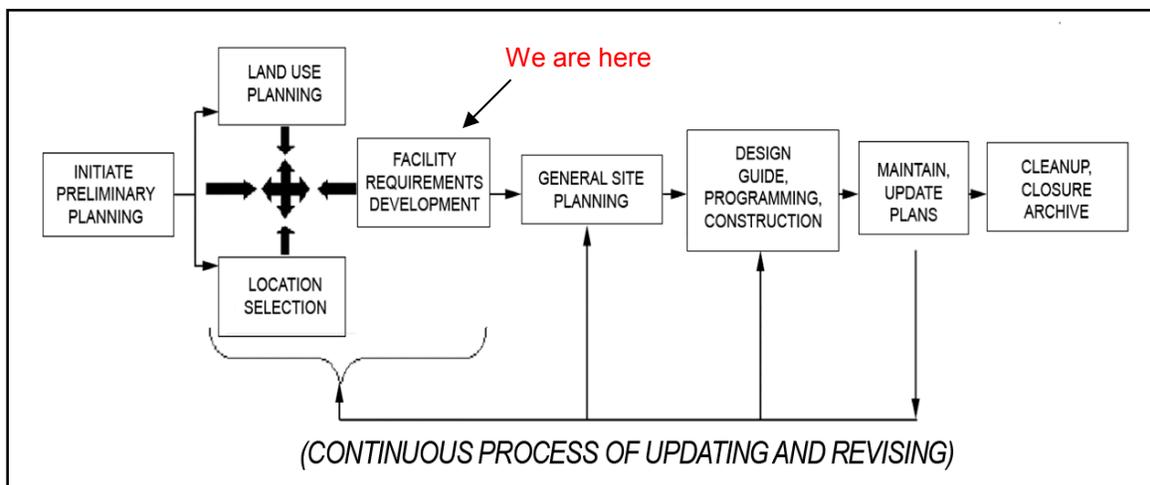


Figure 7-1. The base camp development planning process

a. As discussed in Chapter 4, the planning team has analyzed the mission and the force structure (population and equipment) of the prospective base camp users, made use of the automated TCMS, referred to standards and allowances from recent deployments, and prepared a list of facilities allowances. However, it must be absolutely understood that these allowances are, at best, a preliminary estimate of what might be needed at a base camp; they are not true requirements.

b. Facilities requirements are determined by coordination and dialogue between the planning team, the prospective base camp users and, if the situation allows, HN representatives. Facilities requirements are command-vetted and are an approved list of

existing and proposed facilities and infrastructure that must be present on the base camp to support the mission.

7-2. The Facilities Requirements Development Process. The mechanics of the facilities requirements determination process are shown in Appendix F, Figure F-1 (page F-2). The steps in the process for developing facilities requirements are summarized in the following sections.

a. Inventory existing assets. As an initial and vital step in the requirements development process, an accurate inventory of existing land, facilities, infrastructure, and associated assets should be obtained or conducted. Together with the users and, if possible, the HN representatives, planners inventory and analyze existing facilities and determine which will be used to meet some of the user's facility needs. Plans are made to use these facilities to the maximum extent possible. A thorough inventory is facilitated by obtaining or preparing accurate maps of the base camp area, to include the entire land area, its boundaries and adjacent areas, and the location and configuration of existing facilities. The inventory must be on a building-by-building, system-by-system, and land parcel-by-land parcel level of detail. Automation systems should be used to record the data and to keep it updated. Example lists of the types and measures of data that should be portrayed by a real property inventory are contained in Appendix F, Table F-2 (page F-3).

b. Analyze the mission. Before starting the process, the facilities allowances that were identified during the preliminary planning step are used as the starting point for a dialogue between the planning team, the prospective base camp users and, if possible, the HN's representative(s). In addition to the mission and population data derived from available OPORDs, MTOEs, TDAs, and standard databases, representatives from the units being assigned to the proposed base camp can provide and/or confirm critical unit strength and special support requirements data. Factors such as the mission, the population, the number and type of vehicles and equipment, the terrain, the climate, the EBS, and the planned life span of the base camp, will have a considerable impact on the base camp's facilities requirements. Communication between the planning team and the units they support during mission analysis will likely reveal some of the following, often overlooked allowance-adjusting factors:

(1) Full-time occupants of a base camp create different demands for facilities than part-time occupants, thus it is necessary to determine what percentage of these units' population will actually be full-time occupants. If there will be part-time occupants, knowing what type units will occupy the base camp and how often and for how long they will occupy it is extremely important as it could impact the planning of various utility systems. Commanders' preferences often determine if, and by how much, the requirements for housing and troop support facilities might be reduced to account for part-time residents. Some commanders want bed space for every service member, whether they are present at the base camp or out on operations. Other commanders might decide that permanent residents would be provided housing space and that sufficient

rotational housing space would be provided to accommodate those units that are part-time occupants.

(2) A unit may be allowed facilities that it does not want or need. For example, a particular location may not have enough people to justify those facilities or there may be a lack of funds or personnel to build, operate, and maintain them. This is often experienced in the MWR facilities allowances.

(3) A unit may have special requirements not immediately apparent from reviewing the MTOE or OPORDs. Some examples include specialized firing ranges or maneuver training areas, security facilities, additional entrances or exits, or highly technical equipment requiring exacting standards. Often these and similar unique requirements are not addressed by standard facility allowance criteria, thus the planning team must listen very closely and, at times, coax these special needs out of the base camp user.

(4) Many logistical support units and industrial-type functions require facilities that have no published allowances. Their requirements must be calculated individually and accomplished in close coordination with the headquarters designated to perform the tasks and operate the facilities.

(5) Commanders typically want an efficiency multiplier known as “unit integrity” in housing and associated facilities. Planners must understand both the positive and negative aspects of this concept during the adjustment of facilities allowances.

(a) Maintaining unit integrity enhances commanders' positive C2 of their troops and equipment. This is accomplished most effectively when a unit's troops and operations are consolidated in one area of a base camp. In particular, this applies to their administrative, operational, housing, maintenance, supply, dining, and some MWR facilities.

(b) Conversely, Congress, budget managers, DA planning criteria, and facility utilization policies often do not recognize and actively discourage unit integrity because it tends to waste building space.

(c) Maintaining unit integrity can cause a significant increase in housing and service member support facility requirements. For example, if the commander of a 550-person battalion was assigned to a brigade base camp that was built in a series of 150-person barracks blocks, it is obvious the battalion would not fit into an even number of blocks. Depending on the battalion, it would require 3.66 blocks. Insisting on unit integrity, the commander would occupy four blocks in order to maintain command, control and property security throughout the entire unit area. The commander would not permit troops from other units to live in the remaining 50 barracks spaces in that fourth block. The spaces likely would be used for that unit's nonhousing purposes. Multiply this by several battalions and the wasted barracks space becomes very significant. Planners must work with unit commanders to strike a reasonable balance between the preference for unit integrity and the need for efficient facility use. In the case of barracks, it is obvious

that housing structures with a low individual capacity can do much to offset the waste caused by unit integrity.

c. Determine allowances. Allowances are based on the anticipated life span of the base camp (see JP 3-34) and various theater guidance source documents such as the Red Book and the Sand Book. These sources, coupled with the TCMS, will provide the planner the initial planning guidance necessary to determine authorized facilities and the associated square footage for those facilities. The list of allowances will be adjusted to account for the needs that can be met by existing facilities. It is further adjusted to reflect the user's special requirements, allowed but unneeded facilities, command preferences, and other real-world needs and conditions.

d. Coordinate with the customer. While identified as step 4 of the facilities development requirements process, the planner should strive to meet with the user earlier in the process to assist in confirming assumptions and gain a clear understanding of user needs and preferences. Simply stated, coordination with the customer throughout the process is critical to a successful plan and subsequent base camp that fully supports user needs.

e. Determine requirements. Military units that deploy to base camps are often uniquely and specially tailored. Therefore, a unit may not need the "same" facilities identified in allowance criteria and, in fact, may need substantially different or additional ones. Planners must continue to revisit the mission analysis, coordinate, confirm, and negotiate with the using units and, at times, obtain theater command guidance and adjudication regarding the types and sizes of needed facilities. Appendix F, Figure F-2 (page F-4), provides a graphic of the requirements determination process. Tradeoffs among ideal arrangements in a base camp may be made after facility criteria are compared to a unit's real functional requirements. The realities of a base camp development budget almost always mean that a base camp's facility requirements must be rank ordered, based on the importance of each requirement to the base camp's mission. Also, special facilities have unique planning, programming, design, construction, and acquisition standards. These facilities include airfields and aviation support, fuel and munitions storage and handling, standard ranges and training facilities, medical and dental facilities, chapels, commissaries, PXs, working dog kennels, detainee facilities, some types of MWR facilities, special maintenance facilities, AT/FP features, and utility systems. Any adjustments must be reviewed and approved by the respective facility proponents for these types of facilities. Appendix F, Table F-3 (pages F-4 through F-6), provides an example of operational requirements that produce functional requirements.

f. Document existing and required facilities. Facilities requirements are recorded in a TAB. The TAB must have sufficient detail to mesh with the exacting processes of construction project programming (if required), design, and construction. Paragraph 7-3 of this chapter describes the details of developing the TAB.

g. Analyze shortfalls and excesses. The planning team, in coordination with the base camp users and the HN representatives, if applicable, and with solid command support, must analyze the inventory to identify shortfalls and excesses. A fundamental principle for conducting this analysis is to reduce the need for construction by making innovative use of as many existing facilities as possible.

(1) The analysis should include the following tasks:

- Evaluate the condition and adequacy of the existing facilities and eliminate from the inventory those facilities that do not meet health, structural, and safety standards, are not economically repairable, or cannot be renovated or modified to meet user needs. This analysis should include both horizontal (roads and utilities) and vertical construction. In a HN, this typically means negotiating to either demolish the facilities or to mothball them until the base camp area is returned to the HN.
- Encourage commanders to maximize facility use, taking full advantage of those facilities determined to be adequate and able to support the mission. Once use is approved by the commander, ensure that the facilities are completely safe and floor space usage is optimized.
- If the situation warrants, recommend unit and personnel reassignments to improve facility use. In cases where U.S. forces occupy a series of existing base camps, commanders and staffs can work to maximize the use of facilities across more than one base camp, potentially reducing or eliminating theater construction requirements. This practice, called “cross-leveling,” can achieve a better fit between facility assets and unit requirements.
- Identify facility repair and renovation requirements. Repairs or renovations may be required on some existing facilities to bring them to an acceptable standard for their intended use. Such requirements should be noted and identified in the TAB.
- Recommend conversion or diversion of current facilities to meet new requirements. As a base camp’s mission matures and changes over time, a way to solve the problem of providing new or different facilities is to convert and divert existing facilities to meet the new requirements whenever possible. A *conversion* involves a physical alteration of a current facility so that it can serve a different purpose. An example of a conversion is changing a DFAC into transient quarters by adding partitions, doors, hallways, a recreation room, and latrines. A *diversion* involves using a facility for a purpose other than its intended purpose without having to make any physical changes to the building. An example of a diversion is using a former school as administrative space for a personnel services detachment.
- Consider using one facility for more than one purpose as a way of meeting some temporary base camp requirements. For example, the dining area of a DFAC could be used as administrative, conference, or recreational space when it is not being used for its primary purpose.

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- Identify additional HN facilities that could be leased or otherwise obtained if needed. Careful analysis of these potential assets, with special consideration of AT/FP, health, and safety adequacy, could reduce or eliminate the need for new construction.

(2) The planning team, in coordination with base camp users, should consider using the following steps to accomplish an analysis of each facility type for which a requirement has been identified:

(a) Determine if a shortfall is a temporary one. For example, there could be a situation where some of the assigned units of a BCT would not be scheduled to join the unit in the base camp. This would eliminate a facility requirement, or another facility action would result in the shortfall being met, where the overall result is that a particular set of required facilities would not have to be constructed.

(b) Except for the above, all other shortages would be considered longer term, and because they represent raw requirements, they should be further refined to account for the realities of each particular situation. Some examples are—

- As discussed earlier, those portions of a base camp's population that operate in the field or have some of its members assigned to other locations would represent a fractional, or reduced, requirement in terms of utilities demand. The same would apply to day workers and transient personnel. If the base camp commander agrees that housing facilities would be provided for the base camp's permanent residents and rotational housing for just one unit that would be standing down from field operations, then a considerable downward adjustment could be made in the housing construction requirement. Still other service members might be required to live in combat vehicles or occupy guard posts and fighting positions for operational security reasons. This might reduce the housing requirement even further.
- Existing surplus building space could be either diverted or modified (converted) to meet new space requirements. Generally, this approach is more cost-effective and time saving than new construction.
- HN assets could meet part of a facility requirement. Leasing space from the HN or negotiating other use agreements with the HN could be a sound way of satisfying some space requirements. Utility support might also be provided by the HN.
- The alternative of new construction or land acquisition actions would be initiated only after all other workable alternatives were examined and discounted.

(c) As shortfalls and excesses are identified and analyzed, they should be incorporated into a series of alternatives or COAs. In the initial stages of any shortfall and excesses analysis effort, it is conceivable that a large number of COAs would be considered for a particular component of a plan, such as a utility system or a traffic

circulation system. As the COAs are further analyzed, planners should conceptualize two or three COAs for each facility type in which a deficit is identified. Each COA should be a logical and workable approach to satisfying a facility requirement. While it is typically enough to consider only three COA schemes for each requirement, the uniqueness of a particular mission may require that more than three COAs be considered.

(d) The COA selection process should begin with an analysis of the COA that has the simplest solution to the facilities requirement. The analysis process should continue by considering the remaining COAs in order of increased complexity and cost. The goal of COA analysis should be to find the best combination of practicality and cost-effectiveness while still meeting the facilities requirement. The realities of such factors as AT/FP, safety, service member quality of life, constructability, budget, materials, labor, and HN limitations and preferences should guide the review, and a dialogue should continue until the most advantageous COA is determined. In close coordination with the prospective user and, if possible, HN representatives, the planner should—

- Determine possible ways and means to meet temporary requirements.
- Identify the refinement calculations that would be used to account for interim, special users.
- Determine the best ways to meet facility requirements using existing assets acquired from the HN or the allies, or as a result of reassigning space.
- Identify those COAs that best meet the land and facilities requirements and that require land acquisition or new construction. Together, they constitute the recommended COA.

h. Recommend the best alternative (course of action). The results of this COA analysis and review process should be brought before the commander, his staff, and the base camp planning board, if one has been established. The most often used method for obtaining approval of planning proposals is to schedule and present a decision briefing for the appropriate decision maker. As with other decision briefings that may be given during the base camp development process, the format is based on an evaluation of alternatives or COAs, the reasoning as to the preferred COA, and a request for a decision or an approval. After the commander's verbal decision or approval, the selected COA must be documented in a dated memorandum for record or similar document. The written record is usually prepared by a member of the planning team for the signature of the commander, and the signed document is placed in the base development planning record.

7-3. The Tabulation of Existing and Required Facilities. A TAB is a summary of the mission; planned population data; plan-shaping vehicles and equipment; existing assets; facility allowances; and facilities requirements, excesses, and shortfalls. It is the fundamental detailed record of the facilities requirements development process.

a. The purpose of a TAB is to depict, in one cohesive document, a base camp's mission, unit strength, and major equipment so that the planner can present a detailed account of the base camp's existing assets, its facility allowances, and its actual facilities

requirements. The TAB promotes the efficient use of existing assets and serves as a basis for programming (or other funding), designing, and constructing the base camp's required facilities.

b. The building blocks of a TAB, as shown in Figure 7-2, are used to finalize the development and portrayal of facility requirements, using either a manual or automated means. The building blocks of a TAB include the portrayal and analysis of the—

- Mission and population data.
- Major and significant, plan-shaping vehicle and equipment data.
- Consideration of operational, functional, and special requirements.
- Inventory and proposed use/disposition of existing assets.
- Allowed facilities, based on standards, allowances, and criteria.
- Required facilities.

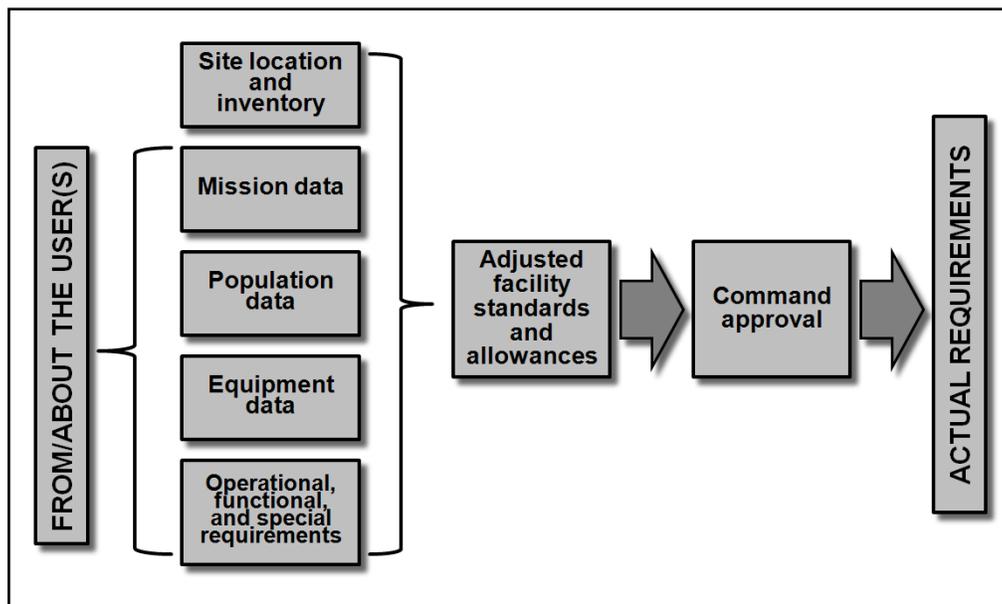


Figure 7-2. The TAB building blocks and process

c. A TAB consists of the following five sections. The first four sections portray the mission, population, organizational, and equipment data initially derived from MTOEs and TDAs (see Chapter 4) and the adjustments that were made to reflect the actual requirements of the prospective base camp users.

- Section I: The Mission Statement.
- Section II: Population Data.
- Section III: Organizational Elements Data.
- Section IV: Plan-Shaping Equipment Data.
- Section V: Facilities Requirements Data. This section is the actual portrayal of existing, allowed, and required facilities. Remarks are added to identify and

explain the requirements, especially the adjustments that significantly deviate from published facility allowances or the rationale for a particular facility requirement.

d. The TAB format will vary depending on the situation. However, it should be prepared making use of commonly available desktop software or TCMS. Whichever technique is used, the user must ensure that it reflects or is modified (in the case of a TCMS TAB) to provide all necessary items such as other units, tenants, contractors, and support requirements. Since the data and other information will change regularly, the user should be very familiar with the selected software. An example of a TAB is presented in Appendix F, Table F-4 (pages F-7 through F-21), and is intended only as one suggested format. The format should be altered by the user to suit the situation.

7-4. Final Review and Approval. The review and approval process for the base camp facilities allowances would most likely consist of a series of information and decision briefings to command groups at appropriate levels. The approval granted would be recognized as being that of a preliminary approval of the facilities that might be required at the proposed base camp. In a typical situation, assuming that a theater command is in place, the review and approval chain likely would proceed from the base camp to the appropriate intermediate headquarters, the theater command headquarters, and perhaps to HQDA. Special reviews and approvals, such as those required for aviation, munitions, ranges, and training facilities, likely would be obtained, or be underway, before submitting the requirements document through the command approval chain. In special cases, there might be Executive Office, Cabinet-level, or Congressional oversight of a plan to establish a base camp in a HN. Therefore, a planner might be asked to provide information beyond that which is customarily associated with the development of the facilities requirements portion of BCDP.

