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THE NAVAL RESERVE CENTER FACILITY MANAGEMENT SYSTEM

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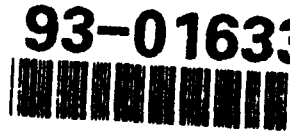
APPROVED:

G. Edward Gibson, Jr.

James A. Broaddus



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To Pamela,
Raydeen,
Dawn,
Seth,
Enoch,
Beth,
Wilson,
Gunnar,
and
Joshua

THE NAVAL RESERVE CENTER FACILITY MANAGEMENT SYSTEM

by

MICHAEL EDWARD DURANT, B.S.

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Chapter 1. Introduction

The Navy has a viable facility management system with which it manages over 220 Reserve Centers. However, Reserve Centers have significant real world problems that result in deviations from optimum facility management practices. In turn, the results of these problems affect other organizations and commands. Is the Naval Reserve Center facility management system healthy? Frustrations with the facility management system are expressed at all organizations and command levels. Exactly what and how extensive are the difficulties? Two issues, the facility management system and facility physical plant problems, are the focus of this study.

In the process of identifying and quantifying difficulties it is necessary to take a critical look at the system and how it is used. It is important to remember that the intention of this study is not to criticize anyone or any organization, but to clearly and completely identify the problems so that remedies can be prescribed.

The Naval Reserve mission is not facility management. Facilities are not ships or training and will never receive the same resource levels. Although facility problems rarely stop the mission, they may interfere with it. Facilities are not the most important thing for a Reserve Center Commanding Officer (Reserve Center CO) to worry about, but they can be a source of significant trouble at times - usually the wrong times.

This study will look at the Reserve Center maintenance and repair management system by conducting a Reserve Center-wide survey and extensive interviews and analyzing perceived problems. The structure of the thesis will be as follows. Chapter 2 will define the objectives and boundaries of this study. Chapter 3 will provide background material, as well as attempt to describe the Reserve Center facility management system as it currently exists. Chapter 4 will outline the research methodology used. The data gathered in interviews and questionnaires

concerning the perceptions of the Reserve Center system participants will be presented in Chapter 5 and analyzed in Chapter 6. Finally, Conclusions and Recommendations will be given in Chapter 7.

Chapter 2. Scope

Southern Division, Naval Facilities Engineering Command (Southern Division NAVFAC), provides engineering services to several commands (facility owners) in their geographical area. Southern Division NAVFAC initiated this study by submitting it to the Naval Facilities Engineering Command (NAVFAC) so it would be included in a list of suggested study topics for Civil Engineer Corps (CEC) officers attending post-graduate schools. Although Southern Division NAVFAC's immediate concerns were the vague scopes of work it received for projects from the Naval Reserve Force, they supported a study to research the difficulties encountered in the Reserve Center facility management system - which is outside their organizational chain of command. The premise of this thesis is that problems addressed in the Reserve Center system will benefit every organization inside and outside the Naval Reserve Force, e.g., Southern Division NAVFAC would get more detailed and complete scopes of work for Reserve Center projects.

The objectives of this study are therefore to:

1. Describe the Reserve Center facility management system as it currently exists.

2. Identify system/process type problems as they relate to facility maintenance and repair management of Reserve Centers.

3. Identify Reserve Center physical plant problems and their perceived significance.

4. Identify, if possible, the costs of the system problems.

5. Make recommendations for further study and improvements to the system and physical plant.

This study encompasses the entire Reserve Center facility management system. Every principal facility management person including all Naval Reserve Engineering Field Division Commanding Officers (Naval Reserve EFD CO's), all Director of Facilities (DIRFAC's), all Staff Civil Engineers (SCE's), all Facility Support Officer Coordinators (Facility Support Officer Coordinators), all Reserve Center CO's, and all Facility Support Officers (Facility Support Officers) were included in the survey.

From this study it is hoped that the Naval Reserve Force and Reserve Division Naval Facilities Engineering Command (Reserve Division NAVFAC) will be able to determine which system and physical plant problems they want to pursue in their quest for continuous improvement. Actual details concerning process barriers and recommended changes to remove barriers are not included as a part of this study.

Chapter 3. Background

3.1 Introduction

In this chapter, the Reserve Center facility management scheme as it currently exists, will be presented. In the first part of this chapter an overview of the Navy organizations, Reserve and Active Duty, both directly and indirectly associated with Reserve Center facility maintenance and repair management, is examined. Next, an overview of the key positions directly involved with Reserve Center facility management are described. Additionally, the 'working organization' complexities are demonstrated through examples of the Reserve Center CO's organizational perspective and a compiled working organization interface. Finally, a general overview of the system's facility maintenance and repair process is presented along with some funding controls and guidelines.

3.2 Navy-Wide Organization for Reserve Center Maintenance and Repair Management

Figure 3.1 identifies the Navy organizations that participate in Reserve Center maintenance and repair. All the organizations fall under at least one of three commands: (1) the Naval Reserve Force; (2) one of the two Fleet Commander-In-Chiefs (CINCLANTFLT/CINCPACFLT); or (3) the Naval Facilities Engineering Command (NAVFAC). The extent of automatic participation, by each of the three commands, varies.

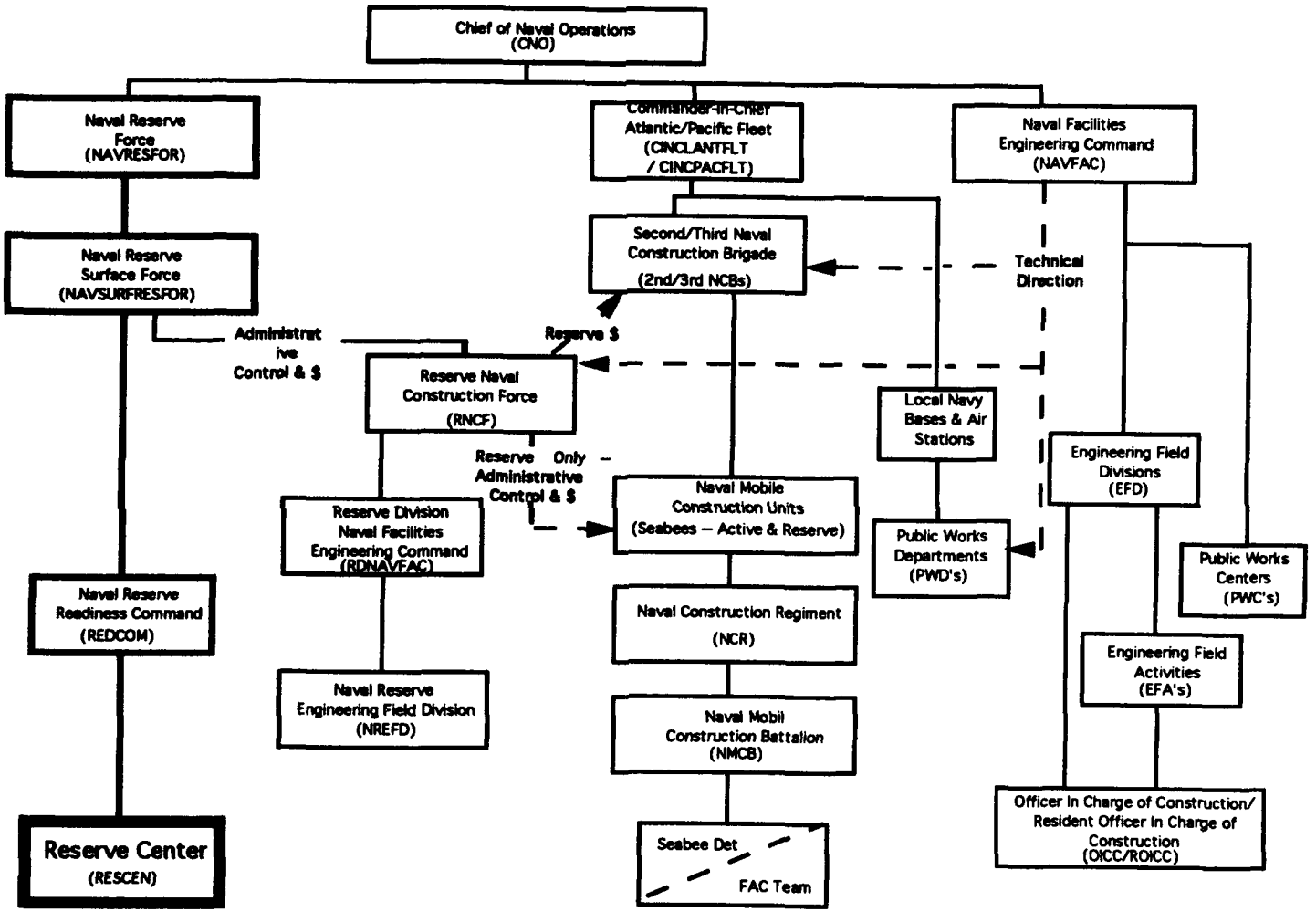

Figure 3.1 Navy Organization for Reserve Center Maintenance and Repair Management

The ownership of the Reserve Centers, and thus control and management of Reserve Center repair and maintenance system, remains with the Naval Reserve Force. NAVFAC, through Engineering Field Divisions (EFD's) and the Public Works Centers (PWC's), provides facility inspection, planning (including real estate matters), engineering, contracting, and contract administration service and technical advice for maintenance and repair of Reserve Centers. The services provided by the EFD's and PWC's for the Naval Reserve Force are generally a small part of their work. EFD work for the Naval Reserve Force involves mostly projects costing less than $25,000. This compares to million dollar projects done by NAVFAC subordinate commands for other Navy owners. Additionally, many Reserve Centers are geographically remote from any EFD, PWC, or other active duty military installations. The services provided by NAVFAC commands are available as a customer-client relationship. Most of them must be requested by the Naval Reserve Force commands.

Many Reserve Centers have Seabee units that drill in or near the facility. Seabees are the Navy's construction force. Before July 1992, these Seabees were organizationally under the Naval Reserve Force command. While under the Naval Reserve Force, they were tasked with supporting "facilities inspections of the Reserve activities to identify deficiencies, and doing planning and estimating to develop a scope of work for a project to repair each deficiency." Also, when they were available, they were a source for normal accomplishment of facilities projects (1). However, in July 1992 *operational control* of the reserve Seabees was changed from the Naval Reserve Force to the Commander-In-Chief's of the Atlantic and Pacific Fleets (CINCLANTFLT or CINCPACFLT). Now, as Figure 3.1 indicates, all Seabees, both active duty and reserve, are under the operational control of either CINCLANTFLT or CINCPACFLT. The Naval Reserve Force, by way of the Reserve Naval Construction Force (RNCF), maintains some *administrative and financial control* over the reserve portion of the Seabees. The full impact of the July 1992 organizational change on Reserve Center facility maintenance and repair is still uncertain.

3.3 Naval Reserve Organization for Reserve Center Maintenance and Repair Management

The Naval Reserve Force (in essence the "owner"), through the Naval Surface Reserve Force, is responsible for Reserve Center repair and maintenance. Figure 3.2 illustrates their chain of command to the Reserve Center, which is through the Readiness Command. As an owner, the Naval Reserve Force is assisted with Reserve Center maintenance and repair by the Reserve Naval Construction Force and the Reserve Division NAVFAC. In Figure 3.2 the active duty positions (full time) are shown as circles. The reserve positions are shown as dashed blocks. The organizations, whether reserve or active duty, are all shown as solid boxes. Some key facility management positions are also shown on Figure 3.2 and will be discussed later in this chapter.

The Reserve Naval Construction Force supports Reserve Center maintenance and repair through two sub organizations, Reserve Division NAVFAC and Naval Mobil Construction Battalions. From the Reserve Division NAVFAC (through the Naval Reserve EFD's), the Reserve Naval Construction Force provides limited maintenance planning and engineering support through the appointment of Facilities Support Officers (Facility Support Officers). Through Naval Mobil Construction Battalions, where local reserve Seabee detachments are available, the Reserve Naval Construction Force provides inspectors and crafts trades for inspection, maintenance and repair work as has been previously discussed.

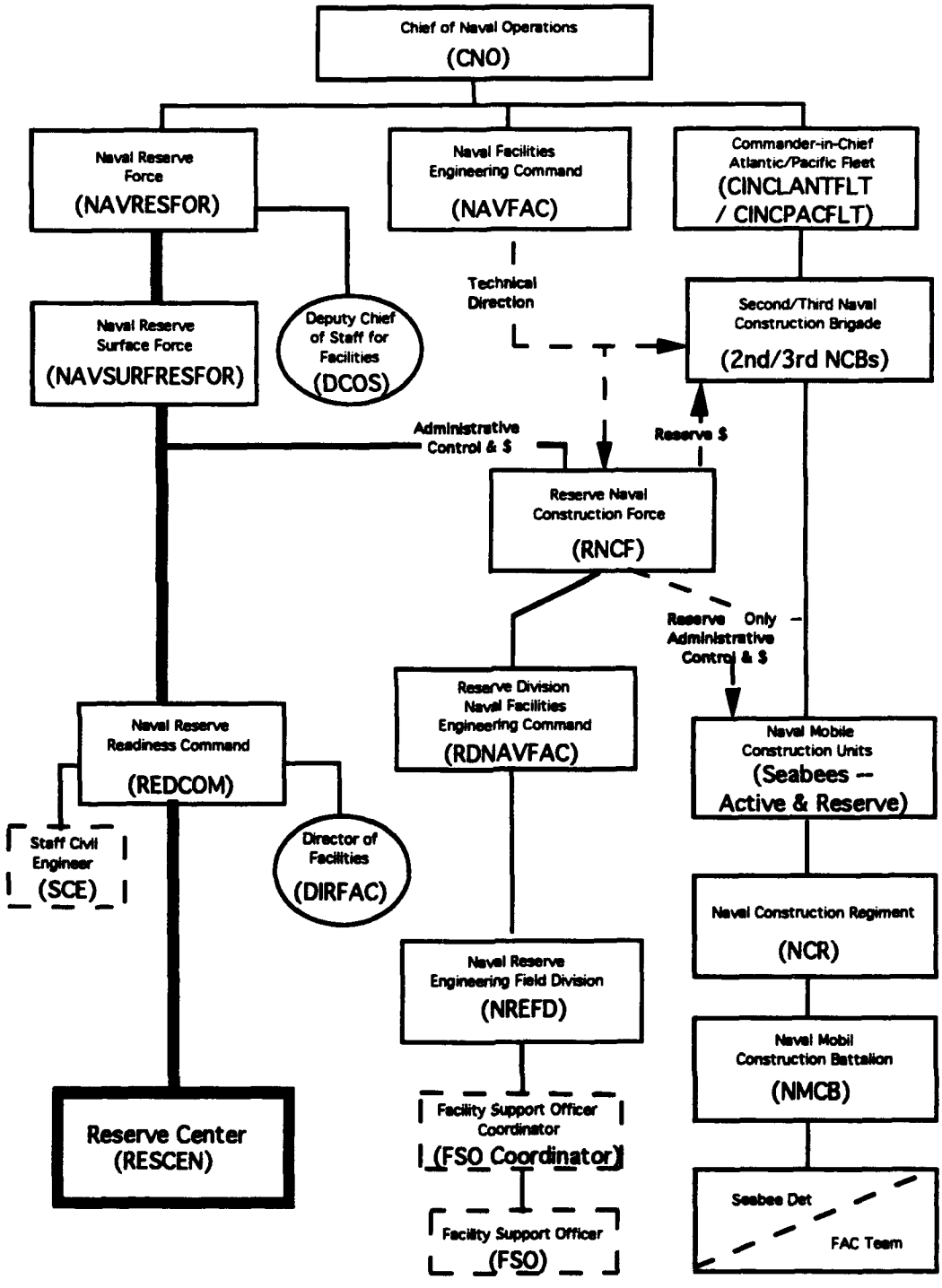

Figure 3.2 Naval Reserve Center Facility Management Organization and Key Positions

Regarding *control and management* of the Reserve Center facility maintenance and repair "system", the Naval Reserve Force and Reserve Division NAVFAC are the key organizations. The Naval Reserve Force is the owner and Reserve Division NAVFAC is the technical facility management advisor. In the execution of the maintenance and repair program, there are many more organizations, both Navy and non-Navy, that get involved.

From the interviews, the preliminary questionnaire, and the questionnaire, clearly there are some facility management individuals who are uncertain about who owns and has primary responsibility for resolving Reserve Center facility matters. For example, one Facility Support Officer implied that the NAVFAC Engineering Field Divisions were responsible for solving Reserve Center facility management matters. The Facility Support Officer stated,

> "Many recurring problems could be avoided and corrected if the EFD [would] send someone to inspect it [Reserve Center]. Also, by making field visits, they would see what problems the Reserve Center faces on a daily basis (with respect to facilities management) and let higher authority know of the urgency of these problems." (Facility Support Officer, Appendix F)

However, since it is less productive for improvements to focus on peripheral organizations, Figure 3.3 emphasizes that the direct management and control of Reserve Center facilities (Reserve Center facility management), are focused in the Naval Reserve Force and Reserve Division NAVFAC. In Figure 3.3 the Navy organizations outside the Naval Reserve Force chain of command are shown in boxes; non-Navy organizations are shown in circles.

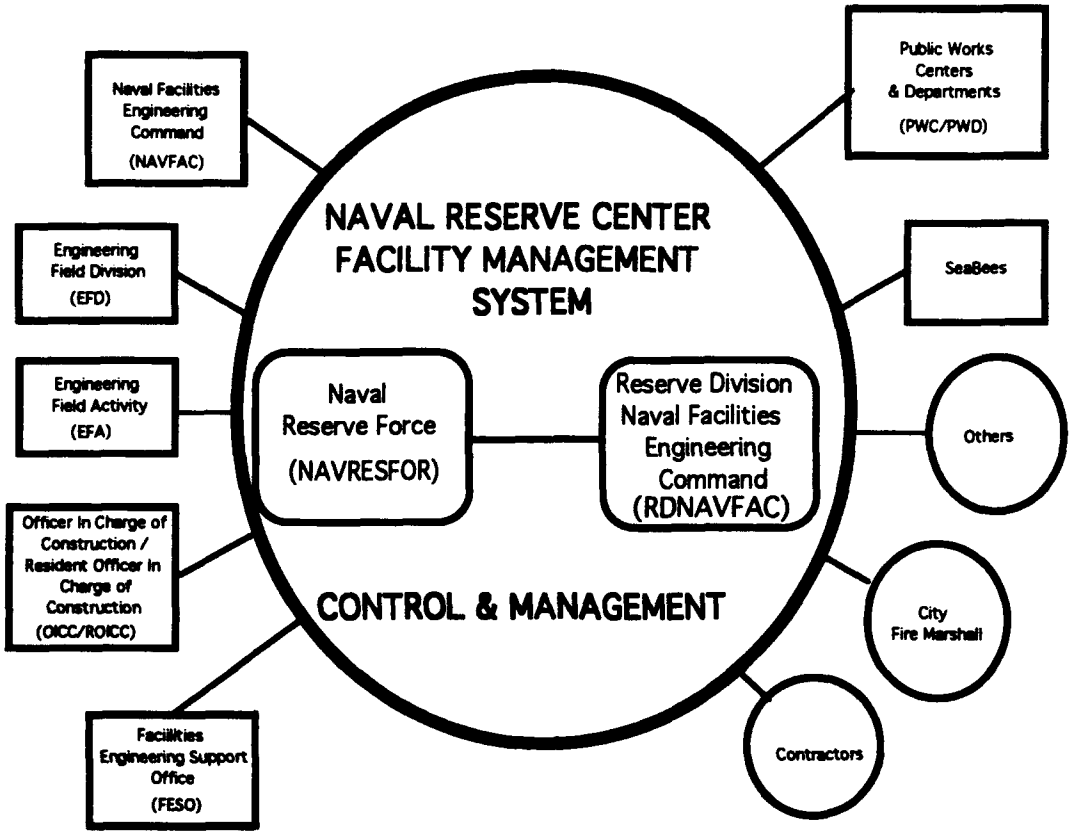

Figure 3.3 Management and Control Focus

Problems, whether systematic or one-time occurrences, outside the Naval Reserve Force and Reserve Division NAVFAC direct management and control, may be dealt with in the same manner that any customer deals with a supplier. When a customer is dissatisfied with a product or service, first comments are given to the supplier about the problem. In the extreme case, customers choose to seek new supplies when services do not satisfy them That is easy to say, but much more difficult to carry out in the Reserve Center facility management system because regulations restrict how things are done. However, as will be noted in more detail later, there is at least one initiative at the Naval Reserve Force to use the General Services Administration (GSA) or the Army Corps of Engineers (COE) for contracting services in cases where NAVFAC's EFD's may not meet the Naval Reserve Force's needs.

3.4 Facility Management Positions

In this section key positions involved with Reserve Center facility management, the Director of Facilities, the Staff Civil Engineer, the Facilities Officer (commonly referred to as the FSO Coordinator), the Reserve Center CO, the Facility Support Officer, the Seabee Detachment Officer In Charge (Det OIC), and the Facility Petty Officer, are discussed. After descriptions of the positions are presented, examples of the day-to-day working organization are discussed.

3.4.1 Director of Facilities (DIRFAC)

The Director of Facilities position, in Figure 3.2, is shown as a circle linked to the Readiness Command. There are sixteen Readiness Commands and only five Director of Facilities. As is noted in Table 3.1, each Director of Facilities serves at least two Readiness Commands. The Readiness Command in which the Director of Facilities works out of is referred to as the Lead Readiness Command. Column (1) of Table 3.1 identifies the location of each Director of Facilities and Lead Readiness Command. The Readiness Commands served by each Director of Facilities are shown in column (2). Note that each Readiness Command number is shown in parenthesis next to the Readiness Command location.

The Director of Facilities are active duty (full time) line officers. They may or may not have had prior experience with facility management when they were assigned the Director of Facilities billet. (Note that a recent change has been approved by the Chief of Naval Operations (CNO) to put active duty Civil Engineer Corps officers in the Director of Facilities billets.)

The Director of Facilities works on the Readiness Command level organizationally, but as Table 3.1 shows, they serve multiple Readiness Commands and thus they work for multiple Readiness Commanders. Even though all the

Readiness Command Commanders provide input to their respective Director of Facilities' annual fitness report, only one of the affected Readiness Command Commanders will sign the Director of Facilities' fitness report.

Table 3.1 Readiness Command Locations

LEAD Readiness Command (Director of Facilities Locations) (1)	Readiness Command (2)
Four: Philadelphia, PA	Newport, RI (One) Scotia, NY (Two) Philadelphia, PA (Four) Ravenna, OH (Five)
Seven: Charleston, SC	Washington, DC (Six) Charleston, SC (Seven) Jacksonville, FL (Eight) Millington, TN (Nine)
Ten: New Orleans, LA	New Orleans, LA (Ten) Dallas, TX (Eleven)
Thirteen: Great Lakes, IL	Great Lakes, IL (Thirteen) Minneapolis, MN (Sixteen) Industrial Airport, KS (Eighteen)
Twenty: San Francisco, CA	San Diego, CA (Nineteen) San Francisco, CA (Twenty) Seattle, WA (Twenty-two)

3.4.2 Staff Civil Engineer (SCE)

The Staff Civil Engineer officers are reserve officers and thus are shown in Figure 3.2 in a dashed box. They are assigned to the Readiness Command Commanders and are under the direction of the Readiness Command Chief of Staff. The Staff Civil Engineer initiates, effects, and coordinates facility planning and facility management services for the Readiness Command and assigned activities in coordination with the Director of Facilities. He/she also provides a liaison between assigned Facility Support Officers and the Readiness Command Director of Facilities for Reserve Center support (2).

3.4.3 Facilities Officer/Facilities Support Officer Coordinator (FSO Coordinator)

The Facility Officer is often referred to as the Facility Support Officer Coordinator. They are reserve officers assigned to a Naval Reserve EFD. They are responsible for interface between the Readiness Command Staff Civil Engineer and the Facility Support Officer. The Facility Officer supervises Facility Support Officer training and duties (1).

3.4.4 Reserve Center Commanding Officer (Reserve Center CO)

Reserve Center CO's are full time active duty line officers. They fall under the direct control and authority of their respective Readiness Command Commander. The Reserve Center CO is responsible for maintaining the physical condition of the facilities in coordination with the Director of Facilities and they usually have a small administrative staff.

The Reserve Center CO has three major time consuming areas of responsibility at the Reserve Center (3):

1. Training of Reserve Units
2. Administrative work associated with training
3. Upkeep of the Reserve Center facilities and equipment

3.4.5 Facility Support Officer (FSO)

The Facility Support Officers belong to the Naval Reserve EFD organization and are reserve officers. Even though they belong to the Naval Reserve EFD organization, they are assigned to and drill at (attend) one or more

Reserve Centers. (It is very rare for a Facility Support Officer to be assigned to only one Reserve Center.) At each assigned Reserve Center the Facility Support Officer is responsible for identifying and resolving maintenance problems.

The Facility Support Officer provides guidance and technical expertise to the Reserve Center CO, but the Facility Support Officer does not work for the Reserve Center CO. Even though the Reserve Center CO, Director of Facilities, and Staff Civil Engineer can provide input for the Facility Support Officers annual fitness report, the Naval Reserve EFD CO signs the Facility Support Officers annual fitness report and has direct control and authority over the Facility Support Officer. The Naval Reserve EFD CO formally assigns, by letter, the Facility Support Officer to one or more Reserve Centers.

3.4.6 Seabee Detachment Officer-In-Charge (Det OIC)

Although not specifically identified in Figure 3.2, Det OIC's are under the direct control and authority of a Naval Construction Regiment. Det OIC's are reserve officers. Like the Facility Support Officers, the Det OIC is encouraged to cooperate and serve the Reserve Center CO's. However, unlike Facility Support Officers, Det OICs are also tasked with many other responsibilities that have little to do with the Reserve Center facility.

3.4.7 The Facility Petty Officer

The Facility Petty Officer is an individual with an *occupational* rating such as a Hospital Corpsman, Boatswains Mate, or Torpedoman. The work that the Facility Petty Officer does is a job *duty* similar to duties such as office clerk, training instructor, etc. There is no active duty (full time) or reserve position for the work of a Facility Petty Officer. However, at each Reserve Center, the day-to-day facility matters are frequently delegated, as a collateral duty, to one of the

Reserve Center staff. Even though the Facility Petty Officer does not make facility management decisions, he/she is often the focal point for communications between the various other players and can be the continuity link between Facility Support Officer visits. For example, if the Director of Facilities staff has a problem with project documentation, they may try to get the message to the Facility Support Officer through the Reserve Center Facility Petty Officer. At many Reserve Centers this collateral duty is assigned to the supply petty officer due to his/her familiarity with contracting procedures. However, Torpedoman, Boatswains Mate, Hospital Corpman are also common rates assigned these duties.

3.4.8 Day-to-Day Working Organization

The three facility management individuals discussed above who are involved at the Reserve Center level - the Reserve Center CO, the Facility Support Officer, and the Det OIC - work for three separate organizations, the Readiness Command, the Naval Reserve EFD, and the Naval Mobil Construction Regiment respectively.

The organizational structures for facility management that are shown in Figure 3.1 and Figure 3.2 have some ambiguities because of split responsibilities for the Seabees between the Naval Reserve Force, CINCLANTFLT/CINCPACFLT, and the Reserve Naval Construction Force. The 'working organization' is even more complex due to the number of individuals that interact across organization and command levels.

These extensive inter-organizational relationships, that go on day-to-day, are not well defined and vary from Readiness Command-to-Readiness Command, Naval Reserve EFD-to-Naval Reserve EFD, and Reserve Center-to-Reserve Center. As an example, Figure 3.4 illustrates some of the interrelationships of key facility individuals from a Reserve Center CO perspective. The positions identified with a solid line box around them are full time billets; those with a dashed line box around

them are reserve billets. Reserves normally work one weekend a month and one two-week period each year. The dashed interconnecting lines represent the informal links that exist between positions; the solid lines represent direct control and authority between the positions.

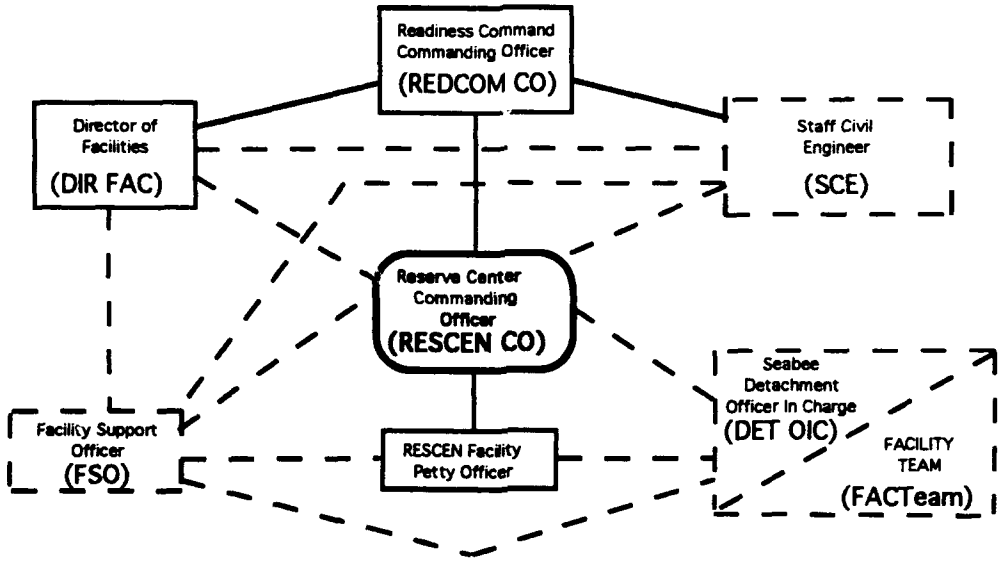

Figure 3.4 Reserve Center Facility Management 'Working Organization' From the Reserve Center CO's Perspective

As another example of the 'working' organization complexity, Figure 3.5 illustrates the interface relationships compiled from descriptions in the Reserve Division NAVFAC's "Career Planning and Development Guide" (2). The descriptions place the Director of Facilities, Staff Civil Engineer, Facilities Officer, and the Facility Support Officer in a series relationship. However, in the real world they often must work directly with individuals in a way that is not reflected in the formal organizational description. To understand the broader working interfaces of the key individuals, other individuals must be added to these interfaces.

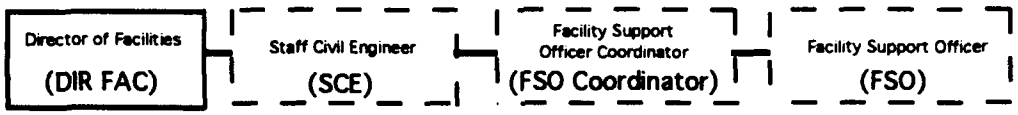

Figure 3.5 Director of Facilities - Staff Civil Engineer - Facility Support Officer Coordinator - Facility Support Officer Interfaces

Figure 3.6 profiles the broader working interfaces between key individuals. The heaviest lines represent the official organizational interface. The lighter lines represent interfaces that occur regularly between individuals that are closely associated with the "official organizational interfaces". The dashed lines represent a less official interface, however, one that occurs regularly. For example, the Staff Civil Engineer has an official organizational link with both the Readiness Command Chief of Staff, the Director of Facilities and the Facility Support Officer Coordinator. However, the Readiness Command Commander may directly interface from time to time with the Staff Civil Engineer. Similarly, the Staff Civil Engineer may also directly interface with the Reserve Center CO, although those links are not as direct or clearly defined as is the one with the Readiness Command Chief of Staff, Director of Facilities, and Facility Support Officer Coordinator. Further, the Staff Civil Engineer will intermittently interface from time to time with the Facility Support Officer and, for purposes of getting information or passing information or messages on to others, with the Facility Petty Officer. These links are represented by dashed lines. As a final note, the significance of each interface varies from organization to organization and on an individual basis.

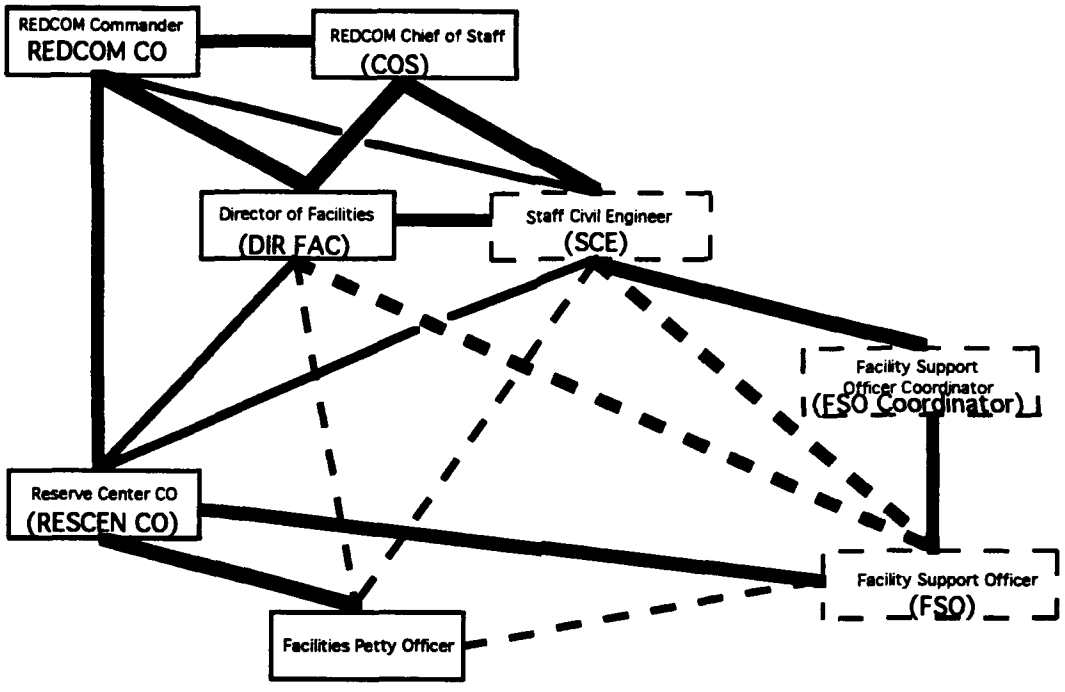

Figure 3.6 Day-To-Day Working Interfaces

3.5 Process Overview

The system for accomplishing maintenance and repair is represented in the six process steps shown in Figure 3.7. Depending on the particular project, the process steps may be very detailed or simple. The following example illustrates this point. Consider the case of a simple broken window:

(1) **Inspection:** A small broken window is noted by the Reserve Center CO during a walk through of the building.

(2) **Programming:** The Reserve Center CO already knows the scope of the repair and the justification is implicit. A ball park idea of repair cost and how it could be fixed is simple. The Reserve Center CO, from general knowledge, knows that the cost will be less than $500 and that

he/she has operating target (OPTAR) funds for the repair. Also, Seabees or self-help can do the fix. (Note: Self-help is defined as any Reserve Center staff or reservist, other than Seabees.)

(3) **Design:** The Seabee has in mind how to fix the window (i.e., a very simple design).

(4) **Contract Award:** The Reserve Center CO or Facility Support Officer work through the Det OIC (i.e., verbal contract) or with themselves, if it is to be done by self-help, to accomplish the work.

(5) **Contract Administration:** The Reserve Center CO or Facility Support Officer witnesses (implicitly accept) the completed work.

(6) **Rework/Warranty:** The Seabee/self-help follow up on any needed rework.

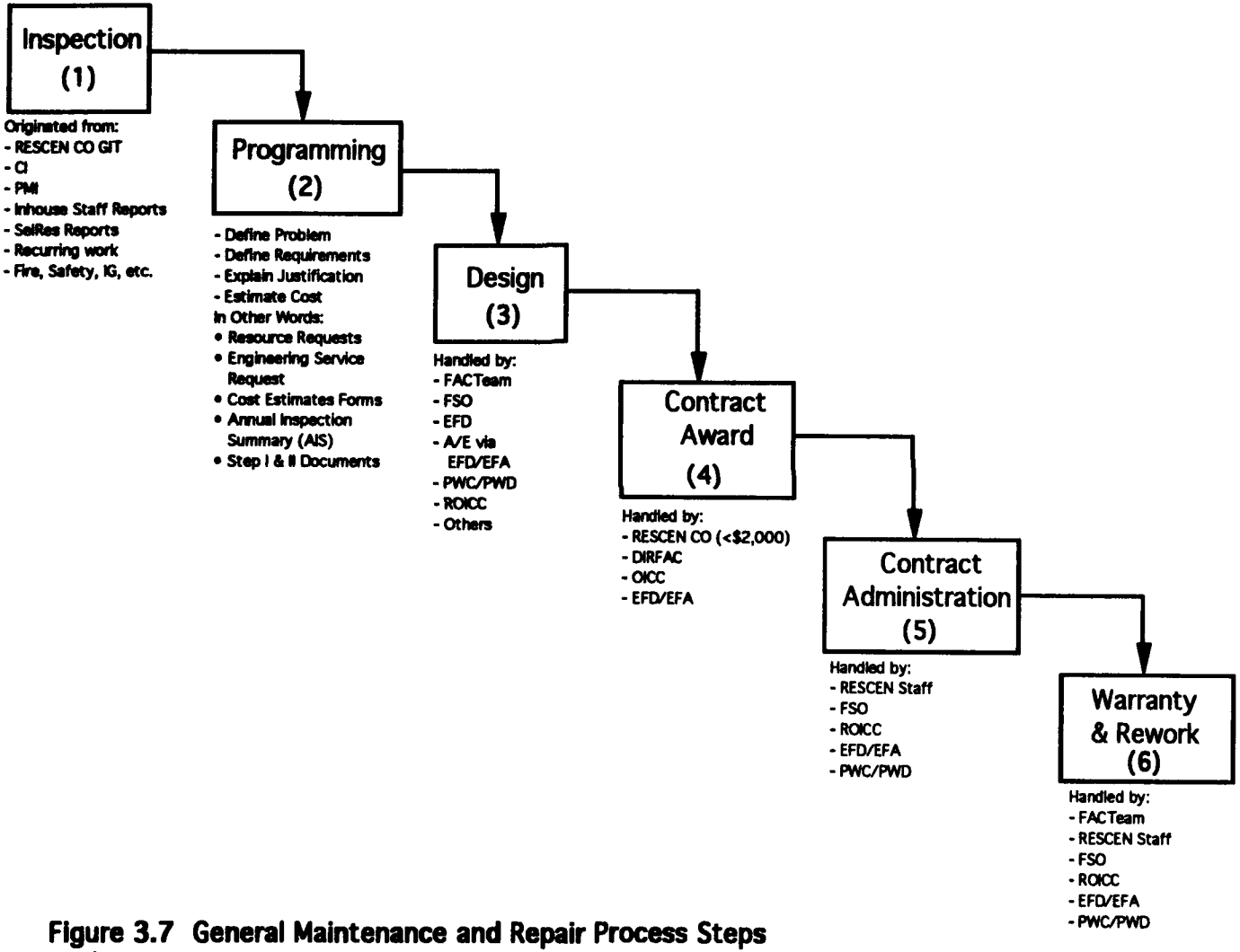

Figure 3.7 General Maintenance and Repair Process Steps

This process is much more involved for larger projects, such as the following example of the repair of a Reserve Center heating, ventilation, and air conditioning system (HVAC):

(1) **Inspection:** Indications of major problems with the HVAC equipment are noted during a Continuous Inspection (CI) or Preventive Maintenance Inspection (PMI). (As a separate iteration within the system, a *resource request*, requesting additional in-depth engineering evaluation, may be sent to the Director of Facilities.)

(2) **Programming:** The HVAC deficiency is noted on the Annual Inspection Summary (AIS). A rough cost estimate for repair and a resource request are prepared and submitted along with the AIS to the Director of Facilities. (Note: if the deficiency is noted during the year, e.g., say soon after the AIS is submitted, the deficiency is still listed on the AIS that is maintained at the Reserve Center, and the resource request and cost estimate documents are forwarded right away to the Director of Facilities. In this way, deficiencies are continuously put into the system throughout the year.)

(3) **Design:** At some point design funds will become available and the design will be done by the EFD/EFA or by an Architectural-Engineering (A/E) firm.

(4) **Contract Award:** When the design is completed and funds for repairing the HVAC system are available, the geographic EFD (or the local Officer In Charge of Construction (OICC)) will award the contract.

(5) **Contract Administration:** The local Resident Officer In Charge of Construction (ROICC) will officially administer the contract to repair the HVAC system. (Note: The remoteness of Reserve Centers, many of which are 50 and 100 miles or more from any military support, may affect the ability of the ROICC to regularly perform the inspection of contract work.)

(6) **Warranty and Rework:** Normal warranty and rework is handled between the user (Reserve Center CO) and the contractor. The OICC/ROICC may be involved to help handle difficult situations, such as an uncooperative contractor.

Emergency work also follows the same process, although, it is usually expedited and some work may proceed on verbal information. For example, if an HVAC compressor suddenly fails, that information along with estimated cost can be phoned to the Director of Facilities and followed up with the resource request and written cost estimate.

3.6 Project Costs Controls and Guidelines

Before any maintenance or repair can be performed, funds must be available. Maintenance and repair projects fall under one of two general categories, *activity* projects or *special* projects.

Projects that are within the Director of Facilities approval authority, less than or equal to $25,000, are activity projects. Annually, the activity projects are prioritized by the Readiness Command commander, base on recommendations by the Director of Facilities and Reserve Center CO. The execution plan containing the work to be accomplished during the year is developed based on the Readiness Command Commander's priority plan and the available funds. In general, the REDCOM's use Table 3.2 to prioritize the project requests (3).

Table 3.2 Repair Projects - Priority Guidelines

Repair Projects	
Priority	**Description**
1	Roofs and Fire Protection Systems
2	Heating and Electrical Systems
3	Structural Systems
4	Exterior Walls and Windows
5	Plumbing
6	Site Work and Utilities
7	Interior Finishes

Maintenance and repair projects with cost estimates over $25,000 are defined as special projects. Special projects are prioritized on the *special project summary list* by each Readiness Command and submitted by the Director of Facilities for approval to the Naval Reserve Force. Special projects may contain equipment installation and minor construction, along with the maintenance and repair work. As has been mentioned earlier, this study is concerned only with the *maintenance and repair* of Reserve Centers.

The Naval Reserve Force has spent an average of $22.6 million for fiscal years 1990, 1991, and 1992 on maintenance and repair (including minor construction & alterations) (4). The average annual expenditures are shown in Table 3.3. These funds are a result of an annual submission to the CNO of a list of maintenance and repair requirements, referred to as the Annual Inspection Summary (AIS). Each Reserve Center submits, through their respective Readiness Command, its own AIS annually to the Naval Reserve Force. At the Naval Reserve Force they are reviewed and consolidated, then forwarded to the Chief of Naval Operations (CNO). The AIS is used by CNO as a basis for portioning funds to the Naval Reserve Force for facility maintenance and repair.

Table 3.3 The Naval Reserve Force Average Annual Reserve Center Maintenance and Repair Expenditure

Project Size (1)	FY 1990 ($000) (2)	FY 1991 ($000) (3)	FY 1992 ($000) (4)	3 year ave. ($000) (5)
Below $25,000	7,447	9,394	8,210	8,350
$25,000 - $3 million	14,465	15,726	12,618	14,270
Total =	21,912	25,120	20,828	22,600

The funds cited in Table 3.3 are associated only with maintenance and repair. Travel costs for facility inspections, other engineering services like termite inspection, and engineering studies, are not included in the costs shown in Table 3.3. Those other costs must be budgeted for separately by each Director of Facilities through their respective Readiness Command comptroller.

The Naval Reserve Force has authority to complete maintenance and repair projects up to $3 million. It approves special projects, for maintenance and repair contracts over $25,000, that are then executed by the respective Readiness Commands/Director of Facilities. If engineering or contracting is required, the Director of Facilities must go to the NAVFAC EFD's/EFA's for accomplishment, i.e., the Director of Facilities has no facility contracting authority or contracting staff and little engineering staff available.

Some funds are provided to the Readiness Commands from the Naval Reserve Force for activity projects, projects with cost estimates less than $25,000. These funds are provided without regard to specific projects. The Readiness Command Commanders, with the assistance of the Director of Facilities, control and manage those funds. It is obvious from Table 3.3 that there are many small (less than $25,000 each) activity projects. If all the projects were at the maximum amount allowed for an activity project, $25,000, there would be 334 projects. If all the projects were at an average cost of $2,000 there would be 4,175 separate projects each year.

Activity projects that cost up to $2,000 can be contracted for under the Reserve Center CO's authority. Projects costing over $2,000, that cannot be done with self-help or Seabee resources, must be accomplished through a contracting officer. The primary contracting officers for maintenance and repair projects are located at the NAVFAC Engineering Field Divisions, NAVFAC Engineering Field Activities, or the local Officer in Charge of Construction Office. At the time of this study the Naval Reserve Force was looking at expanding its contracting resource through accomplishing maintenance and repair projects through other contracting agencies, such as the Army's Corps of Engineers and the General Services Administration.

3.7 Summary

In summary, unofficial organizational structures supplement the official organizational structure for the day-to-day Reserve Center maintenance and repair management. The variation of the day-to-day organizational structure differs from command to command and individuals to individuals. The research methodology used to identify problem areas in the Reserve Center maintenance and repair management system described above is presented in the next chapter.

Chapter 4. Research Methodology

4.1 Introduction

This section explains how information was obtained to identify problem areas in Reserve Center facility management. A facility management problem is defined as anything that inhibits quality facility maintenance and repair environment, including ineffective or inefficient use of resources (people, time, money).

Based on the objectives stated in Chapter 2, the study looked at two general areas:

1. Problems with the system. What are the overriding facility management process problems?

2. Problems with the physical plant. What are the major physical facility problems? For example, is it heating, ventilation, and air conditioning (HVAC), roofs, environmental concerns, etc.?

In general, the information was gathered from structured and unstructured interviews, site visits to the Naval Reserve Force and Reserve Division NAVFAC headquarters, a preliminary questionnaire, and a questionnaire. Statistical methods were used to analyze the gathered information. The methodology is outlined in detail in subsequent sections.

4.2 Interviews

Structured and unstructured interviews were held with various military and civilian personnel involved with Reserve Center facility management at each

command and organizational level. The initial interviews provided a basis for the preliminary questionnaire.

Each person interviewed was asked what he/she considered were the biggest problems with Reserve Center facility management. Each interview covered the same general areas, and an outline of general questions is contained in Appendix A. During the interview process a consensus of the general types of problems became apparent. Early in the study common problem areas were identified, such as communications, priorities and goals confusion, training, money, etc. Those areas formed a basis for the preliminary questionnaire and ultimately the (final) questionnaire. The interviews were conducted with senior officers in both the Naval Reserve Force and Reserve Division NAVFAC organization and included the Commander, Reserve Division NAVFAC and the Chief of Staff for Facilities at the Naval Reserve Force, as well as civilian and military personnel from both of their staffs.

4.3 Preliminary Questionnaire

A preliminary questionnaire was developed from information received from the interviews and is included in Appendix B. The purpose of the preliminary questionnaire was to develop a survey instrument to be sent to all Naval Reserve Facility Management personnel. The survey was sent to 65 selected individuals including: Naval Reserve EFD CO's; Director of Facilities; Staff Civil Engineers; Facility Support Officer Coordinators; Facility Support Officers; and Reserve Center CO's.

4.4 Questionnaire

The questionnaire was developed from information received from both the interviews and the preliminary questionnaire. It was comprehensive in coverage in

that it was sent to personnel at every command and organizational level directly involved with Reserve Center facility management.

The questionnaire sought to identify the most significant systematic/process and physical plant problems as they are perceived by the respondents. A copy of the questionnaire is given in Appendix C. Section 1 of the questionnaire sought background information for each respondent. Section 2 sought information about barriers to effective facility management. Section 3 sought information to identify the facility process problem areas. Section 4 of the questionnaire asked the respondents to identify three of the most significant physical plant problems. Finally, the last section, Section 5, asked the respondents for additional comments or concerns about any facility management area.

The mailing list for this survey was obtained from the NAVSURFRESFOR directory and Reserve Division NAVFAC recall lists. The questionnaire was mailed to every Naval Reserve EFD CO, every Director of Facilities, every Staff Civil Engineer, every Facility Support Officer coordinator, every Facility Support Officer, and every Reserve Center CO. (This population happens to coincide with the universe for this particular study.) The questionnaire was mailed out on July 2, 1992. A follow-up letter, requesting the respondents complete and return the survey, was mailed August 5, 1992, to 106 individuals surveyed and is included in Appendix D.

4.5 Site Visits

Site visits were made twice to the Naval Reserve Force in New Orleans, Louisiana, and several times to Reserve Division NAVFAC in Austin, Texas to coordinate interviews, collect data, present and discuss the preliminary data, and to explore preliminary findings and recommendations. Further, the rough data were presented and additional feedback received at the annual National Facility Support Officer conference in September 1992 at Arlington, Texas.

4.6 Statistical Analysis

Tabulated information from the questionnaire was collected and put into an EXCEL spreadsheet/data base. It was then analyzed based on frequency of response, weighted responses, and stratification. Written comments were reviewed and categorized based on the most frequently mentioned comment areas. The comments were then analyzed according to response categories. Interview comments and site visit observations were considered along with the tabulated data and content analysis to strengthen the statistical reliability through using multiple sources of information.

Chapter 5. Presentation of Data

5.1 Introduction

The methodology given in Chapter 3 was designed to collect and quantify subjective data expressed by those involved with the Reserve Center facility management system. This chapter will present data received from the interviews, the preliminary questionnaire, the questionnaire, and site visits.

5.2 Interviews

Structured and unstructured interviews were held with 33 individuals from each organization type and command level indicated in Table 5.1. A list of the typical questions used for the interviews is included in Appendix A.

Table 5.1 Interview Population by Organization

Organization (1)	Number Interviewed (2)
The Naval Reserve Force	7
Reserve Division NAVFAC	4
Readiness Command	9
Naval Reserve EFD	9
Reserve Center	4
Total Interviews (n) =	33

The interview data were used initially to develop the preliminary questionnaire. Eventually, in concert with the preliminary questionnaire results, these interviews also contributed to the development of the final survey instrument (questionnaire).

5.3 Preliminary Questionnaire

The number of preliminary questionnaires mailed out and the number of responses received are shown in Table 5.2. Column (1) indicates the position of the individual that the preliminary questionnaire was mailed to.

Table 5.2 Preliminary Questionnaire Population & Responses

Position (1)	Number Mailed (2)	Number Returned (3)
Naval Reserve EFD CO	6	5
Director of Facilities	5	3
Staff Civil Engineer	5	4
Reserve Center CO	25	14
Facility Support Officer Coordinator	6	6
Facility Support Officer	18	12
Total (n) =	65	44

The respondent's answers to questions on the preliminary questionnaire provided excellent input into development of the questionnaire. Further, the respondent's additional written comments helped to create a clearer picture of the problems faced with Reserve Center facility management. These comments are reproduced in Appendix E and include only the comments that are relevant to the issues addressed in this study.

The purpose of the preliminary questionnaire was to help develop a reliable questionnaire and as such, was merely a working tool to get to the questionnaire. To that extent the data were helpful. However, the data were not sufficient for a thorough and reliable analysis that would satisfy the objectives of this study.

5.4 Questionnaire

Information from interviews and the preliminary questionnaire was used to prepare the questionnaire that was mailed to the entire universe of key individuals involved with Reserve Center facility management decisions. A copy of the questionnaire is in Appendix C. Table 5.4 shows the population surveyed by position and the corresponding responses. Besides the number of respondents listed in column (3), there were three respondents that could not be identified by position/respondent group. The data from these respondents were not used. Also, there were five respondents that are counted in column (3) that were not used because they returned the questionnaire with little or no information. For example, one respondent noted that he/she had just arrived and had no basis to respond. Finally, column (4) identifies those questionnaires that were not deliverable due to incorrect addresses.

Besides the responses that were entirely unused, some individual answers were not used. For example, if a respondent marked four items where three were requested or indicated the same priority for multiple listed items, responses for those individual questions were not used. If a priority listing was asked for and the respondent only listed, say 5 instead of 10, those 5 were used. Consequently, the total responses for each question may vary and will be less than the total number of questionnaire responses. In all cases the number of good responses were sufficient to provide a clear indication of the population's perceptions.

Data in the following sections are presented in the same order as the questionnaire. Section 1 corresponds to the background/experience section of the questionnaire, section 2 corresponds to the barriers section of the questionnaire, section 3 corresponds to the system process section of the questionnaire, section 4 corresponds to the physical plant section of the questionnaire, and section 5 corresponds to the written comments section of the questionnaire.

Table 5.3 Questionnaire Population

Position (1)	Mailed (2)	Response (3)	Not Deliverable (4)
Naval Reserve EFD CO	6	6	0
Director of Facilities	5	4	0
Staff Civil Engineer	16	15	1
Facility Support Officer Coordinator	7	5	0
Facility Support Officer	121	98	4
Reserve Center CO	213	182	5
Total (n) =	368	310	10

5.4.1 Section 1. Background/Experience

The background/experience section of the questionnaire was included to collect data necessary to perform a detailed correlation later. Due to time constraints, these data will not be analyzed in depth in this study.

5.4.2 Section 2. Barrier Evaluation

The questionnaire had three questions in the barrier evaluation section. The questions pertained to (1) barriers, (2) regulations/instructions; and (3) engineering and inspection personnel. Raw data pertaining to each question are presented below.

5.4.2.1 Question 2.1: Barriers

In this question, the respondents were asked to prioritize the major barriers to effective Reserve Center facility management. The question is reproduced below:

1. Prioritize the major barriers to effective naval reserve center facility management.

RANK	*BARRIERS TO EFFECTIVE RESERVE CENTER FACILITY MANAGEMENT*
	Problems with control/handling of available funds
	Not enough money for maintenance or repair
	Problems with regulations/instructions
	Availability or expertise of engineering or inspection personnel
	Confusion about the Navy's facility management system
	Unfamiliarity with all available resources (people, programs, etc.)
	Poor communication within the facility management system
	Uncertainty about maintenance and repair project priorities or goals
	Too many non-facility priorities
	Difficulty scheduling/coordinating resources (Facility Support Officer, FAC Team, etc.)

Table 5.4 shows the frequency that respondents ranked the particular barrier/problem as number 1, number 2, number 3, etc.

Table 5.4 Frequency of Response for Each Barrier Priority

Barrier/Problem	Priority									
	1	2	3	4	5	6	7	8	9	10
Control/handling of available funds	11	29	22	22	30	25	22	29	37	55
Not enough money for maintenance or repair	102	30	26	16	14	16	14	21	26	21
Regulations / instructions	14	31	26	31	35	32	21	31	36	24
Eng/insp availability or expertise	26	47	33	34	23	26	30	27	20	17
Confusion - facility management system	27	25	31	37	33	33	40	27	13	16
Unfamiliarity with all available resources	23	24	23	34	44	34	36	26	30	8
Poor communication	28	25	32	21	27	35	34	35	26	18
Uncertainty - project priorities or goals	5	19	27	31	33	29	30	37	41	30
Too many non-facility priorities	27	31	32	30	20	26	21	19	26	50
Scheduling / coordinating resources	26	25	34	28	23	23	31	27	24	38
Total =	289	286	286	284	282	279	279	279	279	277

5.4.2.2 Question 2.2: Regulations/Instructions

Question 2 of section 2 was developed to determine the most prevalent problem with regulations/instructions. Respondents were asked to prioritize what they perceived were the most significant regulation / instruction problems. The question is reproduced below:

2. Prioritize the most significant regulation/instruction problems.

If this is not a problem, check here _____ and skip to number 3.

	Regulations/Instructions are vague or confusing
	Regulations/Instruction are to voluminous; they can be simplified
	Regulations/Instructions are restrictive

Even though the respondents were asked to prioritize the list, there were so few prioritized responses that only the first priority response was used. This was true for all the remaining questions. Table 5.6 shows the response frequency for each item by group.

Table 5.5 Regulation/Instruction Problem - Data

Group (1)	No Problem (2)	Vague / Confusing (3)	Too Volumnious (4)	Too Restrictive (5)
Naval Reserve EFD CO	1	2	1	2
Director of Facilities	1	0	3	0
Staff Civil Engineer	5	0	10	0
Facility Support Officer Coordinator	3	0	2	0
Facility Support Officer	27	7	51	10
Reserve Center CO	61	17	72	22
Total	98	26	139	34

5.4.2.3 Question 2.3: Engineering and Inspection Personnel

Question 3 of section 2 was developed to determine which type of engineering and inspection personnel problems were most prevalent. Respondents were asked to prioritize the most significant engineering and inspection manning problems. The question is reproduced below:

3. Prioritize the most significant engineering and inspection manning problems.

If this is not a problem, check here _____ and skip to the next section.

	Engineering EXPERTISE is unavailable (e.g., need a mech. vs. civil, etc.)
	Not enough engineering PERSONNEL or not around when needed
	Inspection EXPERTISE is unavailable (wrong mix of skills)
	Not enough inspection PERSONNEL or not around when needed

The responses, listed by groups, are shown in Table 5.6.

Table 5.6 Engineering/Inspection Problem - Data

Group (1)	No Problem (2)	Eng. EXPERTISE (3)	Eng. PERSONNEL (4)	Insp. EXPERTISE (5)	Insp. PERSONNEL (6)
Naval Reserve EFD CO	2	1	1	1	1
Director of Facilities	0	1	0	1	2
Staff Civil Engineer	2	2	5	3	3
Facility Support Officer Coord	1	2	2	0	0
Facility Support Officer	35	17	11	15	18
Reserve Center CO	69	22	52	10	18
Total	109	45	71	30	42

Legend:
(1) Respondent Groups
(2) This is not a problem
(3) Engineering EXPERTISE is unavailable (e.g., need a mechanical vice a civil engineer, etc.)
(4) Not enough engineering PERSONNEL or not around when needed
(5) Inspection EXPERTISE is unavailable (wrong mix of skills)
(6) Not enough inspection PERSONNEL or not around when needed

5.4.3 Section 3. Process Evaluation

The questionnaire had three questions in the process evaluation section. The questions pertained to (1) the most difficult system process step; (2) the most difficult project size; and (3) the two most helpful organizations. Data pertaining to each of these questions are presented below.

5.4.3.1 Question 3.1: System Process Problem

Question 3.1 presented the system's basic process steps and asked the respondents to mark which step they perceived was most difficult. The question is reproduced below:

1. The basic naval reserve center repair and maintenance management system consists of the following process steps. Please mark which one of these process steps that gives you the most trouble. ***Please mark only one.***

	SYSTEMATIC & RANDOM INSPECTIONS: Finding & identifying the problem
	PROGRAMMING: defining requirements, justification, & estimated costs
	DESIGN: preparing drawings & specifications, sketches, contracts, etc.
	CONTRACT AWARD: advertising, collecting & evaluating bids, awarding the contract
	CONTRACT ADMINISTRATION: payments, inspecting the work, handling contractor problems, disputes, non conforming work, etc.
	WARRANTY/REWORK

The responses are tabulated in Table 5.7.

Table 5.7 System Process Step - Data

Group (1)	Insp. (2)	Prog. (3)	Design (4)	Contract Award (5)	Contract Admin (6)	Warranty / Rework (7)
Naval Reserve EFD CO	0	2	3	1	0	0
Director of Facilities	0	1	2	0	0	1
Staff Civil Engineer	3	6	4	1	1	0
Facility Support Officer Coord	1	2	1	0	0	1
Facility Support Officer	10	26	27	17	7	7
Reserve Center CO	12	52	29	41	19	13
Total	26	89	66	60	27	22

5.4.3.2 Question 3.2: Project Size Problem

This question was developed to determine which size projects were the most trouble. Respondents were asked to indicate the size project they perceived as the most troublesome. The question is reproduced below:

*2. Please mark the facility management project size that gives you the most trouble. Note that this question addresses project size only, not who funded or contracted for the project. The question is intended to apply to everyone; Director of Facilities, Reserve Center CO, Facility Support Officer, etc.. **Please mark only one.***

	< $500
	$501 - $2,000
	$2,001 - $25,000
	>$25,000

Table 5.8 indicates the number of respondents for each cost range.

Table 5.8 Project Size Problem - Data

Group (1)	<$500 (2)	$500 - $2,000 (3)	$2,001 - $25,000 (4)	>$25,000 (5)
Naval Reserve EFD CO	0	1	2	2
Director of Facilities	0	0	2	3
Staff Civil Engineer	0	3	7	5
Facility Support Officer Coord	0	0	4	0
Facility Support Officer	4	9	54	28
Reserve Center CO	6	32	83	42
Total	**10**	**45**	**152**	**80**

5.4.3.3 Question 3.3: Helpful Organizations

Question 3.3 was included in the questionnaire to determine which organizations are perceived as most helpful. Respondents were asked to mark the two organizations that they felt were the most helpful with Reserve Center facility management. The question is reproduced below:

3. Please mark which 2 organizations that help the most with reserve center facility management. A glossary of the acronyms used here is included at the back of this survey for your reference. ***Please mark exactly 2 organizations.***

	NAVSURFRESFOR
	READINESS COMMAND
	RESERVE DIVISION NAVFAC
	NAVAL RESERVE EFD
	NAVFAC
	EFD/EFA
	OICC/ROICC
	PWC/PWD/etc.
	Seabee's
	Self-help

Table 5.9 shows the frequency that each respondent group checked for each organization.

Table 5.9 Response for the Two Most Helpful Organizations

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Naval Reserve EFD CO	0	3	1	4	0	0	2	0	2	0
Director of Facilities	0	4	0	0	0	0	1	1	1	1
Staff Civil Engineer	0	11	0	7	0	0	0	0	10	2
Facility Support Officer Coord	0	2	1	2	0	1	0	0	4	0
Facility Support Officer	2	34	7	20	5	18	1	6	70	25
Reserve Center CO	2	89	11	16	25	2	15	8	101	70
Total	**4**	**143**	**20**	**49**	**30**	**21**	**19**	**15**	**188**	**98**

Legend:

(1) Respondent Group
(2) NAVSURFRESFOR
(3) Readiness Command
(4) Reserve Division NAVFAC
(5) Naval Reserve EFD
(6) NAVFAC
(7) EFD/EFA
(8) OICC/ROICC
(9) PWC/PWD/etc.
(10) Seabees
(11) Self-help

5.4.4 Section 4. Physical Plant Problem

This section of the questionnaire was included to determine the most troublesome perceived physical plant problems. Each respondent was asked to mark which three physical plant problems they perceived caused the most trouble. The question is reproduced below:

Instructions: DO NOT prioritize this list. Instead, please just check the 3 items that give you the most trouble.

1. What are the most troublesome facility problems?

	Floor tile/carpeting/etc.
	Doors & door hardware/windows & window hardware
	Heating, Ventilation, & Air conditioning (HVAC)
	Boilers
	Interior & exterior surfaces (painting, cleaning stucco, ceilings, etc.)
	Walls and foundation - structural
	Electrical distribution /wiring
	Environmental (asbestos, lead, pcb transformers, underground tanks, etc.)
	Services (janitorial, grounds, trash, etc.)
	Termites & other infestations
	Roof
	Plumbing/Sewer
	Storm drainage
	Lighting
	Security lighting & alarms/fire alarms
	Fencing
	Parking lot/roads/sidewalks & curbs

The response for each listed physical plant problem is shown in Table 5.10.

Table 5.10 Physical Plant Problems - Data

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
NR EFD CO	0	1	5	0	1	0	1	2	3
DIRFAC	0	0	4	2	0	0	1	2	0
SCE	0	2	10	4	1	0	3	8	4
FSO Coord	1	0	3	0	1	0	0	2	1
FSO	6	17	57	15	23	6	25	26	20
RESCEN CO	20	30	106	40	19	17	36	39	46
Total	**27**	**50**	**185**	**61**	**45**	**23**	**66**	**79**	**74**
(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
NR EFD CO	1	2	2	0	0	0	0	0	
DIRFAC	0	2	0	0	0	0	0	1	
SCE	0	8	1	0	0	1	0	3	
FSO Coord	0	3	1	0	0	0	0	2	
FSO	0	41	8	6	4	6	3	20	
RESCEN CO	8	42	20	6	7	20	10	28	
Total	**9**	**98**	**32**	**12**	**11**	**27**	**13**	**54**	

Legend:

(1) **Respondent Group**
(2) **Floor tile/carpeting/etc.**
(3) **Doors & door hardware/windows & window hardware**
(4) **Heating, Ventilation, & Air conditioning (HVAC)**
(5) **Boilers**
(6) **Interior & exterior surfaces (painting, cleaning stucco, ceilings, etc.)**
(7) **Walls and foundation - structural**
(8) **Electrical distribution / wiring**
(9) **Environmental (asbestos, lead, PCB transformers, underground tanks, etc.)**
(10) **Services (janitorial, grounds, trash, etc.)**
(11) **Respondent Group**
(12) **Termites & other infestations**
(13) **Roof**
(14) **Plumbing/Sewer**
(15) **Storm drainage**
(16) **Lighting**
(17) **Security lighting & alarms/fire alarms**
(18) **Fencing**
(19) **Parking lot/roads/sidewalks & curbs**

5.4.5 Section 5. Respondent's Comments

Section 5 of the Questionnaire was provided to allow Respondents a place to make additional comments pertaining to the Reserve Center facilities. Comments that were applicable to the scope of the study have been included in their entirety in Appendix F. The frequency of comments made by the respondents are indicated in Table 5.11.

Table 5.11 Questionnaire Respondent's Comments Data

Group (1)	# of Responses with Comments (2)
Naval Reserve EFD	3
Director of Facilities	3
Staff Civil Engineer	13
Facility Support Officer Coordinator	3
Facility Support Officer	54
Reserve Center CO	110
Total =	**186**

5.4.5.1 Questionnaire Comments - Additional Data

The respondent's comments were compiled in Appendix F and reviewed to quantify the subjective data they contained. The categories, shown in column (1) of Table 5.12, were the most frequently mentioned problems or needs. Once the categories were identified, then the number of times they were mentioned were counted. Those frequencies are shown in columns (2) through (5) of Table 5.12.

Most of the categories, from "Personnel Rotations" to "Money" were easy to identify and categorize. The last three categories, "System & Policy", "Organizational Structure", and "Coordination & Communication", were clearly mentioned, but are more ambiguous and vague.

There are four guidelines that were used when performing the content analysis:

(1) Position and organization comments were counted separately. If a position comment such as pertaining to a Facility Support Officer, Facility Petty Officer, Director of Facilities, etc., was counted under one of those categories, it was not counted under organizational structure.

(2) If a comment was counted under coordination and communication, it was not counted under system and policy.

(3) Comments relating to a position and the need for more training were counted under both the need for that position and the need for training.

(4) A respondent's comments were counted only once for any particular category. If, for example, a respondent mentioned three completely different system and policy category problems, only one was counted.

To emphasize the care taken in the content analysis, it should be noted that the content analysis was performed twice. The second analysis took place over a month after the first analysis and without referral to the first analysis. When the results of the second analysis, column (2) of Table 5.12, were compared with the results obtained from the first analysis, it was found that the variations were minor.

Table 5.12 Questionnaire Written Comments - Data

Problem or Need (1)	Total (n=186) (2)	Reserve Center CO (n=110) (3)	Facility Support Officer (n=54) (4)	Others (n=22) (5)
Personnel Rotations	12	6	2	4
Facility Support Officer	35	22	8	5
Facility Petty Officer	16	10	4	2
Director of Facilities & Staff	15	10	0	5
NAVFAC/EFD/PWC	20	13	4	3
NCF Support	20	12	7	1
Training	33	16	12	5
Money	12	6	4	2
System & Policy	71	38	27	6
Organizational Structure	13	5	5	3
Coordination & Communication	11	2	8	1

5.5 Site Visits and Observations

During the first visit to the Naval Reserve Force (November 1991), the 1991 Annual Inspection Summary for each Reserve Center was reviewed. The cover letter from each Reserve Center identified the number of inspections required for that Reserve Center. From these cover letters, the highest number of inspections required for a Reserve Center and the lowest number of inspections required for a Reserve Center were compiled for each Readiness Command. Those data are summarized in Table 5.13. It should be noted that AIS cover letters were not available for five of the sixteen REDCOM's; 10, 11, 13, 16, and 18.

Table 5.13 Required Facility Inspections per Reserve Center's 1991 AIS Cover Letters

Readiness Command (1)	Number of Reserve Centers with Data Available (2)	Maximum Number of Inspections Required (3)	Minimum Number of Inspections Required (4)
1	10	28	2
2	11	80	11
4	9	24	14
5	16	46	2
6	8	25	5
7	8	18	1
8	11	34	1
9	12	25	12
19	11	49	1
20	12	24	13
22	14	79	2

The second site visit to the Naval Reserve Force, New Orleans, was made after the preliminary questionnaire responses were collected and evaluated. During that visit an impromptu survey was performed of NAVFAC EFD's to determine their policy regarding Reserve Centers taking work directly to a local Contracting Officer (OICC/ROICC) for accomplishment. For example, it would be reasonable for a Facility Support Officer to prepare sketches and technical specifications adequate for repaving a parking lot. The project cost would exceed the Reserve Center CO's contracting authority, $2,000, and still be within the resources of a Facility Support Officers time and capabilities to prepare the necessary sketch and technical specifications for the OICC/ROICC.

The EFD's policy was compared to the EFD policy as perceived by the Naval Reserve Force facility staff. It was the unanimous opinion of the Naval Reserve Force staff that Reserve Centers were not allowed to go directly to the local OICC/ROICC to accomplish any work. The policies for the EFD's that responded are presented in Table 5.14 .

Table 5.14 EFD Policy on Reserve Center Work Going Directly to a Local OICC/ROICC Office for Accomplishment

EFD (1)	POLICY (2)
Southdiv	No specific policy
Northdiv	Work generally goes through the EFD regardless of size, however, no policy excludes work going directly to the OICC/ROICC
Westdiv	Yes, work can go directly to OICC/ROICC
Southwestdiv	It's OK for work to go directly to the OICC/ROICC

Also, during the second site visit to the Naval Reserve Force, information pertaining to Naval Reserve Force initiatives to alleviate some Reserve Center facility management problems, was discussed. Those initiatives include:

- Readiness Command area wide open-ended architectural/engineer contracts that would be administered by the Director of Facilities staff
- Readiness Command area wide Job Order Contracts (JOC's)
- Contracting through other than NAVFAC organizations, such as contracting with the General Services Administration (GSE) or the Army Corps of Engineers (COE)
- Reserve Center closures and realignments
- Replacement of the Training and Administration of the Reserve (TAR) Director of Facilities billets with active duty CEC billets (the request had gone to CNO in November 1991)

Chapter 6. Analysis of Data

6.1 Introduction

As previously discussed, the main study objective of this thesis was to identify Reserve Center maintenance and repair management problems. The data presented in Chapter 5 and the additional written comments from the respondents, reproduced in Appendix E and F, were collectively analyzed to provide insight into the perceived problems within the Reserve Center maintenance and repair system. The analysis is presented in the following sections. First, specific system problems are presented: lack of money; the Facility Support Officer and lack of engineering expertise/availability; the Director of Facilities; the Facility Petty Officer; training; regulations/instructions; process steps; project size; and organizations. Then, the general system problem is discussed. Finally, the perceived physical plant problems are presented.

Sixty-eight percent (44/65) of the preliminary questionnaire population and a 87 percent (313/358) of the questionnaire population returned their questionnaires. Additionally, 93 percent of the preliminary respondents and 60 (186/310) percent of the questionnaire respondents provided additional comments pertaining to the system. The written comments, although not in neat tabular form, added significantly to the picture of Reserve Center facility management problems. These response rates and the number of additional written comments are consistent with two common underlying attitudes that have been encountered while conducting this research project. Those two attitudes are: (1) an interest in improving the system for maintaining and repairing Reserve Centers; and (2) a belief that improvement can and should be made.

It should be noted that both questionnaires were mailed out without written endorsement from either the Naval Reserve Force or the Reserve Division NAVFAC. In fact, one Readiness Command Chief of Staff called this researcher to question the extent of the Naval Reserve Force and Reserve Division NAVFAC

endorsement before he would clear the way for his Readiness Command's Reserve Center CO's to respond. This underscores the remarkable response and the interest generated by this research project.

As was mentioned previously, one objective of this study was to identify, if possible, the costs of the system problems. The summary of findings reached after all the interviews were held and all the site visits made, is that the Navy presently has no means to quantify costs associated with Reserve Center repair and maintenance *management*. Cost data are supposedly available within each Readiness Command comptroller's office to quantify the money spent at each Reserve Center for special projects and activity projects. However, there are no data to indicate the amount of time or money spent on facilities management: for example, how much time (labor hours) was spent for a particular project to get it to the contract phase - i.e., how much time did the Reserve Center CO's waste because he/she did not understanding the system and the Facility Support Officer was not available; how much time did the Director of Facilities and his/her staff spend in getting the information correct for the documentation; how much time did the NAVFAC Engineering Field Division or NAVFAC Engineering Field Activity waste because the documentation was vague; and how much did it cost the Navy because the completed project did not really meet the need of the Reserve Center?

6.2 Specific System Problems

To get a clearer picture of perceived barriers, the response frequencies for each priority, as shown previously in Table 5.4, were weighted to determine their relative importance. The weighting was done by multiplying the number 1 priority by 10, the number 2 priority by 9, the number 3 priority by 8, and so forth until the number 10 priority was multiplied by 1; then, they were added to obtain the cumulative weighting. The results are presented in Figure 6.1.

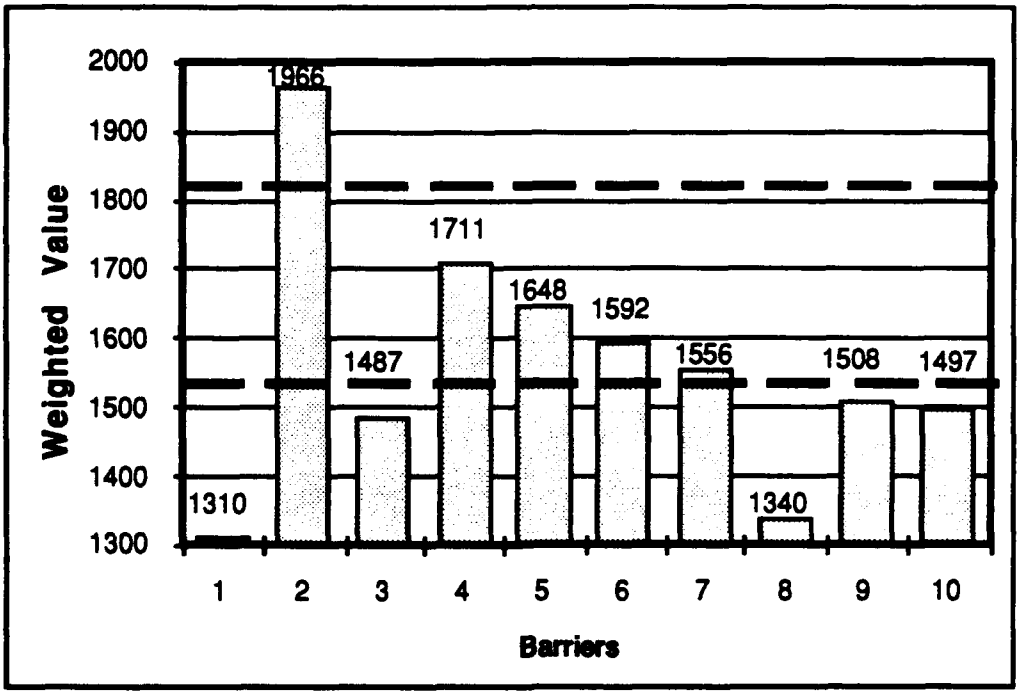

Figure 6.1 Weighted Reserve Center Facility Management Barriers

Legend:
1 **Problems with control/handling of available funds**
2 **Not enough money for maintenance or repair**
3 **Problems with regulations/instructions**
4 **Availability or expertise of engineering or inspection personnel**
5 **Confusion about the Navy's facility management system**
6 **Unfamiliarity with all available resources (people, programs, etc.)**
7 **Poor communication within the facility management system**
8 **Uncertainty about maintenance and repair project priorities or goals**
9 **Too many non-facility priorities**
10 **Difficulty scheduling/coordinating resources (Facility Support Officer, FAC Team, etc.)**

Note that the barriers in Figure 6.1 can be categorized into three groups. The highest priority group contains only one item, item (2) "Not enough money for maintenance or repair." In the middle group there are four items ranging from the lowest priority, item (7) "Poor communication within the facility management system", to the highest priority, item (4) "Availability or expertise of engineering or inspection personnel". The lowest priority group contains five items from item (9) "Too many non-facility priorities", to item (1) "Problems with control/handling of available funds."

6.2.1 Lack of Money

It is clear from Figure 6.1 that lack of money is perceived the most dominate hindrance to Reserve Center facility management. One Facility Support Officer stated that,

> All the inspection & project write ups done just right would not overcome the lack of funds to accomplish the backlog. The backlog of MRRP is well over the guideline of 1.8% times current plant value and growing.

A Reserve Center CO commented that, "You won't want to hear this but, money prudently used, is all that I need here to make this 45 year old Center a very respectable facility."

Although the lack of funds was clearly the biggest perceived barrier according to the questionnaire barrier response, it was not well represented by the written comments. Lack of funding accounted for only 6 percent of the written comments, while almost every other category had more written comments.

6.2.2 The Facility Support Officer and Lack of Engineering Expertise/Availability

Even though "Availability or expertise of engineering or inspection personnel," was clearly a far distant second as a perceived barrier behind the lack of funds, it was well supported by other questionnaire responses. Of the more easily identified categories from the written comments, the need for Facility Support Officer support was mentioned most often. Twenty percent of respondents that provided written comments indicated there was a need for more Facility Support

Officer resources. The following statements are typical responses concerning the Facility Support Officer role.

> Center CO's are left to hang re[garding] facilities. I'm lucky I have a contracting background. Facility Support Officers should be assigned to one Center as their permanent drill site, and should be warranted contracting officers. (Reserve Center CO)
>
> Without a Facility Support Officer the system doesn't work. The Facility Support Officer ties all the loose strings together from Readiness Command to NAVFAC, from Reserve Center to CB units. The Facility Support Officer is the key member in the system. (Reserve Center CO)
>
> Lack of an Facility Support Officer is very detrimental to facility management - I just lost mine (who was very good!) and have my AIS input due in one month. Help!" (Reserve Center CO)
>
> I have an Facility Support Officer who is assigned only part time. He cannot keep up with the AIS, EPA regulations, HAZMAT disposal, etc., etc., working onboard only 64 hours a year. And he's good and dedicated! (Reserve Center CO)

The need for more Facility Support Officer resources is also supported by the response to question 2.3 of the questionnaire concerning engineering/inspection. Figure 6.2 shows that 25 percent of the respondents felt that there were not enough engineering personnel or they were not available. Another 16 percent felt that the available engineering expertise was not the appropriate type. Engineering related concerns amounted to 40 percent (25% and 16% = 41%) of the respondent's concerns compared to those concerned with the inspection personnel (10% and 13% = 23%) and those who felt there was no problem (35%).

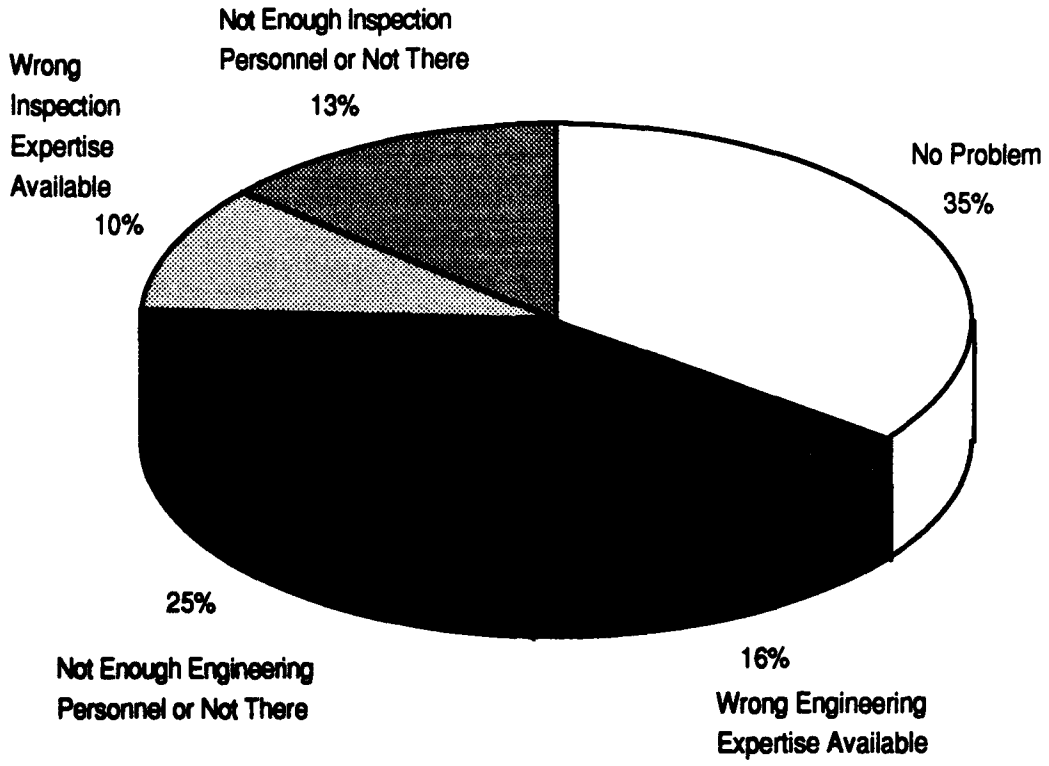

Figure 6.2 Type and Availability of Engineering and Inspection Personnel - Problem

From Figure 6.3, it can be seen that the Staff Civil Engineers, Facility Support Officer Coordinators, and Reserve Center CO's were the prominent groups that said there were not enough engineering personnel or they were not around when needed. About 36 percent of the Facility Support Officers indicated that there was no problem in this area, with the remaining 64 percent of Facility Support Officer perceptions being about evenly divided among the remaining problem categories. Additionally, other relationships, that are not discussed here, can be derived from the data.

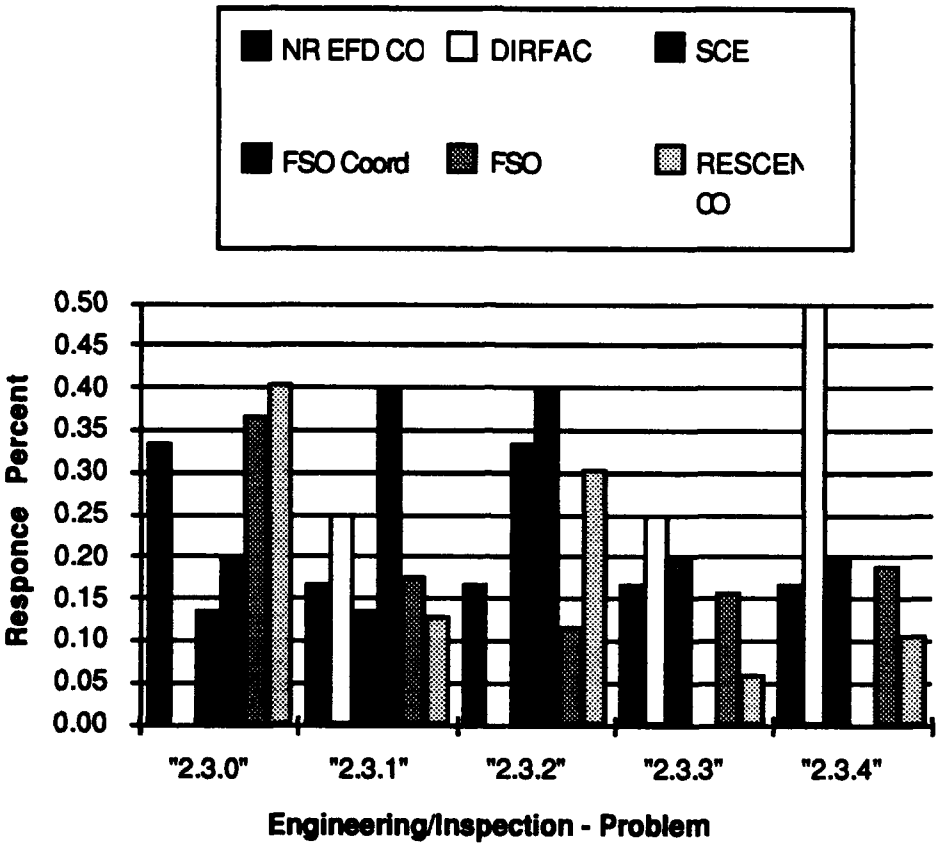

Figure 6.3 Engineering/Inspection Problem by Groups

Legend:
(2.3.0) This is not a problem
(2.3.1) Engineering EXPERTISE is unavailable (e.g., need a mechanical vice a civil engineer, etc.)
(2.3.2) Not enough engineering PERSONNEL or not around when needed
(2.3.3) Inspection EXPERTISE is unavailable (wrong mix of skills)
(2.3.4) Not enough inspection PERSONNEL or not around when needed

6.2.3 The Director of Facilities

Although the Director of Facilities/staff was not identified in either the preliminary questionnaire or the questionnaire as a distinct part of the Reserve Center facility management problem or solution, they were specifically mentioned by 8 percent of the respondents that provided written comments to the questionnaire. The following statements are typical responses concerning the Director of Facilities/staff role.

> Why treat this as a reservist problem - put a full time staff at Director of Facilities. (Naval Reserve EFD CO)
>
> Director of Facilities is far and away the biggest contributor - they are understaffed and under funded for their management challenge. (Staff Civil Engineer)
>
> One of the biggest problems is support to Readiness Centers who don't have an on-site Director of Facilities and staff. It's expensive, but each echelon IV needs an on-site Director of Facilities to be part of his management team. I speak from experience in both [a] Readiness Command with Director of Facilities ([...]) and without [a Director of Facilities] ([...]). (Reserve Center CO)
>
> Director of Facilities is a potential big help, but overextended. (Reserve Center CO)
>
> Director of Facilities have too great a span of control having to serve 3 to 4 REDCOM's each. Director of Facilities should have no more than 2 REDCOM's or 20 Reserve Centers. (Reserve Center CO)

6.2.4 The Facility Petty Officer

Like the Director of Facilities, the Facility Petty Officer was not a distinct part of either the preliminary questionnaire or questionnaire. However, the Facility Petty Officer was frequently mentioned by respondents (8 percent of those who made written comments on the questionnaire) as a key player in successful Reserve

Center facility management programs. During the first visit to the Naval Reserve Force, this researcher was told that a significant problem was that there were, "no facility types on the active duty Reserve Center staff. (5)" The following statements are typical of comments made regarding the need associated with the Facility Petty Officer role.

> The major problem I see with the facilities area is lack of continuity and time. A full time (E-4, E-5, or E-6) member must be assigned to handle day-to-day issues and track work (from initial inspection, which designated the work, through programming, to completion). It is difficult to come in every two months ([I] have two Centers) and "start over" again - i.e., catch-up, figure out where things stand, what's been done, etc. (Facility Support Officer)
>
> Reserve Centers need at least one qualified active duty person who's primary duty is facility management. He[/she] should be the full time coordinator for the Facility Support Officer & FACTM. Facilities management on drill weekends only is inefficient. (Facility Support Officer)
>
> I'm assigned to 3 Centers. The full-time personnel are understaffed. Facilities is a low priority collateral duty. Those assigned facilities typically have no facilities knowledge or background at all - such as a Boiler Technician! We Facility Support Officers must rely on the full time personnel to get things done between our visits. (Facility Support Officer)
>
> My biggest problem is that I do not have a full time person to be the facility manager. This job usually goes to the poorest producer or non-admin type DC, BM, etc. (Reserve Center CO)

At the National Facility Support Officer Conference (September 1992) several conference attendees related Reserve Center facility management success and failure experiences to the Facility Petty Officer. This researcher's experience during the interviewing portion of this study with a Facility Petty Officer signaled a need for some concern about them. A Facility Petty Officer who was also the supply petty officer and had been at the Reserve Center for over a year, *did not know nor had the inclination to get the phone number for either the Facility Support Officer or Staff Civil Engineer.*

6.2.5 Training

The need for training is represented in the barriers question by line items 5 and 6: "Confusion about the Navy's facility management system" and "Unfamiliarity with all available resources (people, programs, etc.)." Combined, those two items were 50 respondent's perceived highest barrier, which represents 16.1 percent of all the respondents.

Training is strongly supported by the questionnaire written comments as well. In the written comments, the need for additional training was specifically identified by 33 respondents (20 percent of respondents that made written comments). Some of the following comments are typical:

> I'm doing okay as an Facility Support Officer because of my 11-1/2 years of active duty experience. Otherwise, this independent duty would be overwhelming trying to figure out what to do and how to do it. More training (not just a 2 day conference) is needed. (Facility Support Officer)
>
> Reserve Center COs are expected to manage a system that they generally know little about and have no personnel assigned who are trained and knowledgeable, either. (Reserve Center CO)
>
> Many Reserve Center CO's are like myself, they come to these commands from ships with little or no training in facilities. My entire experience is as a civilian with a different branch of the Federal Government and has nothing to do with building operation. This program needs to be extensively addressed at the Reserve Center PCO school in New Orleans. (Reserve Center CO)
>
> I came to my command rather confused concerning how to get repairs done at a Reserve Center. CO, NRC school discussed the program but it can be rather confusing because of all the different yet similar commands and programs involved (i.e., ROICC, EFD, NAVFAC, EFA, PWC/PWD, NCR, etc.). (Reserve Center CO)

6.2.6 Regulations/Instructions

According to the response to the barriers question, question 2.1, only 4.5 percent of the respondents felt that problems with regulations/instructions were significant enough to rank it as a number one problem. When the responses were weighted, it was the third lowest problem. However, in question 2.2, nearly half the respondents said that the regulations / instructions were too voluminous. Figure 6.4 shows how the respondents perceived regulations/instructions.

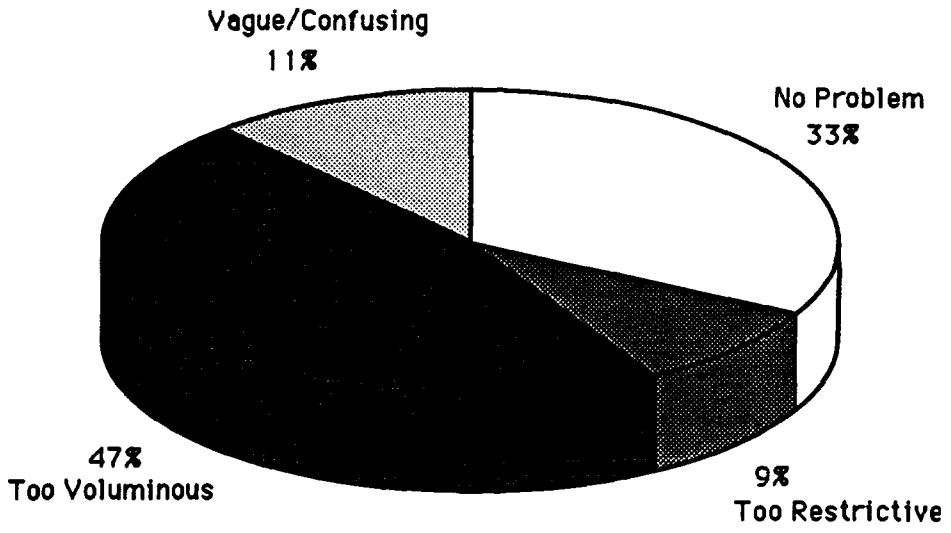

Figure 6.4 Regulation/Instruction - Problem

Interestingly, when response to the regulation/instruction question is looked at by groups, other facts appear. Figure 6.5 identifies how each group responded to the regulation / instruction question. From Figure 6.4 it was seen that only 11 and 9 percent of the total response indicated that the instructions/regulations were too vague/confusing or too restrictive. However, 66 percent (33 percent in each category) of the Naval Reserve EFD CO's marked one of these categories as a

problem. Further, even though 47 percent of the total response indicated that regulations/instructions were too voluminous, but only 17 percent of the Naval Reserve CO's indicated regulations/instructions were too voluminous.

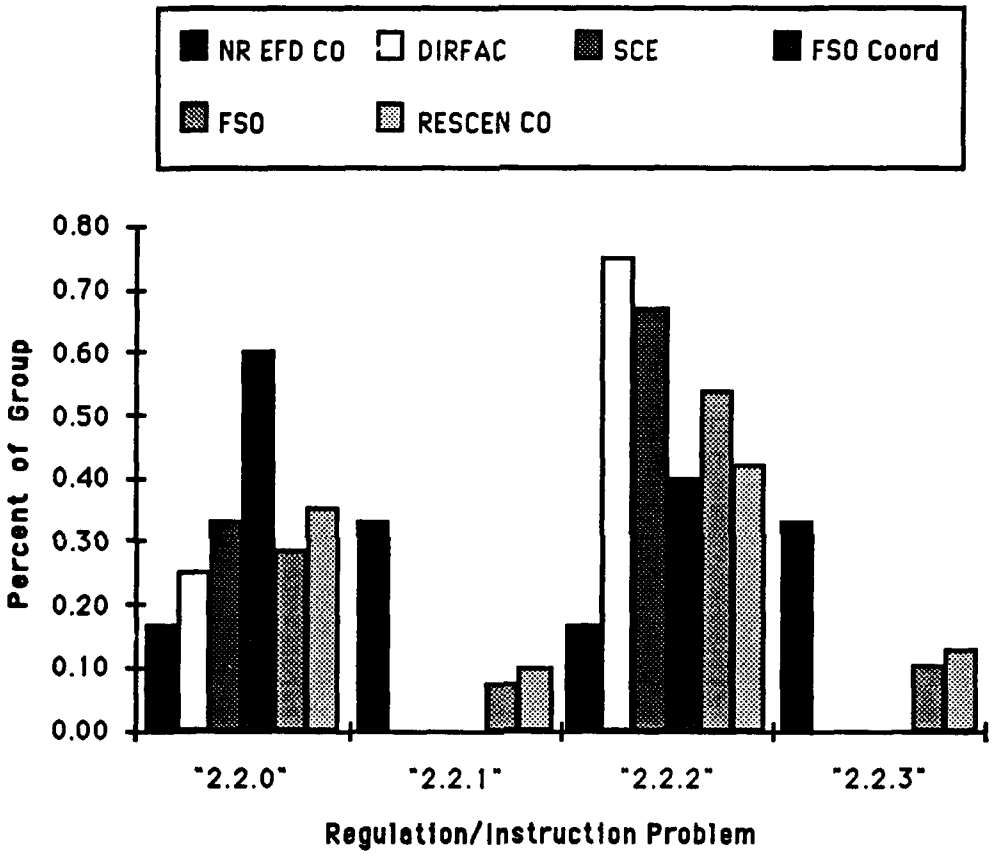

Figure 6.5 Regulation/Instruction Problem by Groups

Legend:
"2.2.0" No problem with regulations/instructions
"2.2.1" Regulations/instructions are vague or confusing
"2.2.2" Regulations/instructions are too voluminous; they can be simplified
"2.2.3" Regulations/instructions are restrictive

6.2.7 Process Steps

Figure 6.6 shows that the respondent's perceived programming and design as the most troublesome process steps. Over half (56%) of the respondents felt that the most troubled step was either programming (32 percent) or design (24 percent).

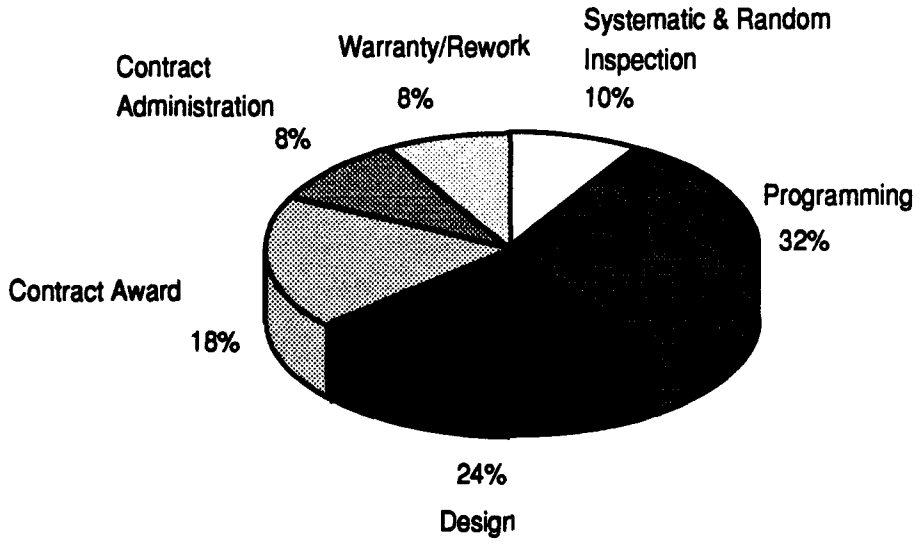

Figure 6.6 Quantified Process Problems

Other facts become evident when the process step evaluation is looked at by groups. Figure 6.7 shows the response by groups. Eleven percent of the total responses indicated that the inspection step was the most trouble, however, 20 percent of the Staff Civil Engineers and 20 percent of the Facility Support Officer Coordinators indicated it was the most trouble. On the other hand, none of the Naval Reserve EFD CO's or Director of Facilities indicated the inspection phase was the most trouble. With regard to "design", the population average was 24 percent, but 50 percent of the Naval Reserve EFD CO's and 50 percent of the Director of Facilities indicated that design was the most troublesome process step.

Regarding "contract award", the Reserve Center CO's indicated it was more trouble (25 percent) than the population average (18 percent) while the Facility Support Officer (17 percent) was about the same as the population average. Regarding the warranty and rework step, 25 percent of the Director of Facilities indicated it was the most troublesome process step compared to a population average of only 8 percent. The size of the different groups accounts for some, but not all, of the variations in responses. There are other observations that can be made from the data that are not discussed here.

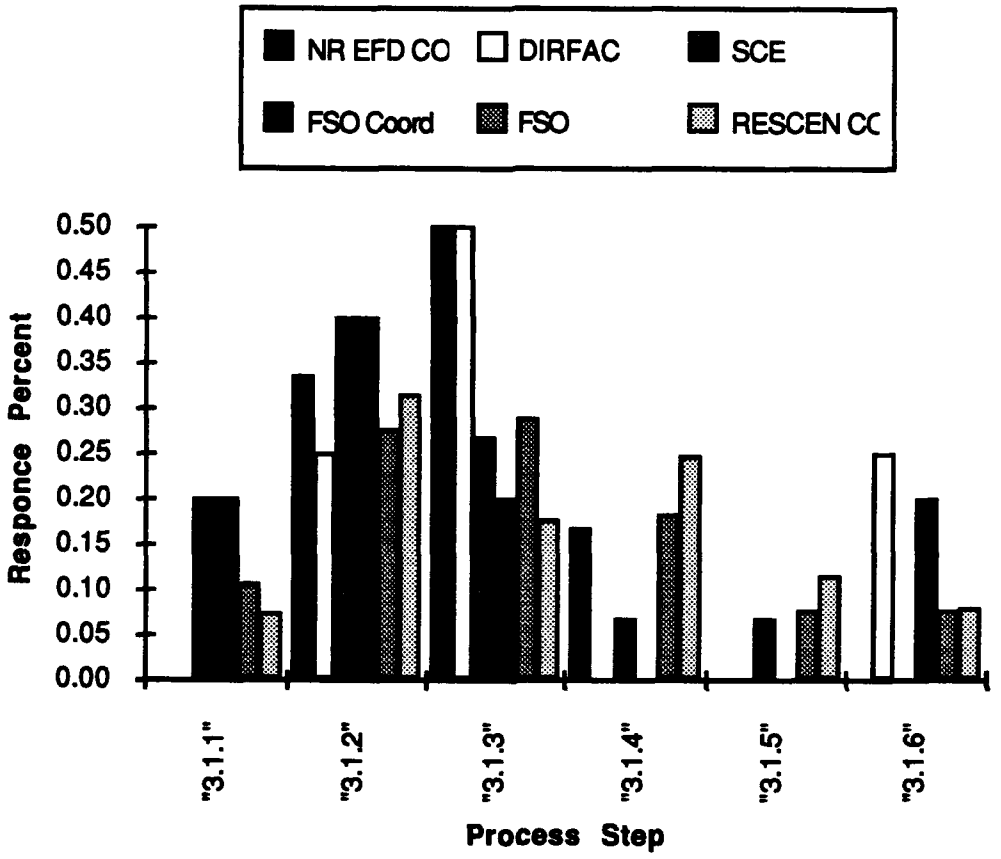

Figure 6.7 Process Step - Problem by Groups

Legend:
"3.1.1" SYSTEMATIC & RANDOM INSPECTIONS
"3.1.2" PROGRAMMING
"3.1.3" DESIGN
"3.1.4" CONTRACT AWARD
"3.1.5" CONTRACT ADMINISTRATION
"3.1.6" WARRANTY/REWORK

6.2.8 Project Size

Figure 6.8 shows that over half of the respondents concluded that the most troublesome size projects were those between $2,001 and $25,000. This is probably not surprising since most Reserve Center repair and maintenance work falls in this category. A significant number of respondents (26 percent) indicated that projects greater than $25,000 were the most trouble.

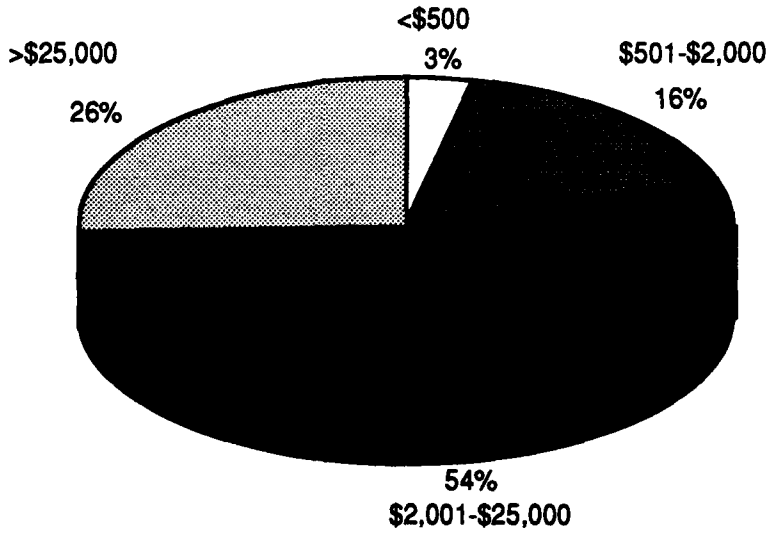

Figure 6.8 Problems Prioritized by Project Size

Figure 6.9 shows that the respondent groups are divided similarly to the total averages for each size category.

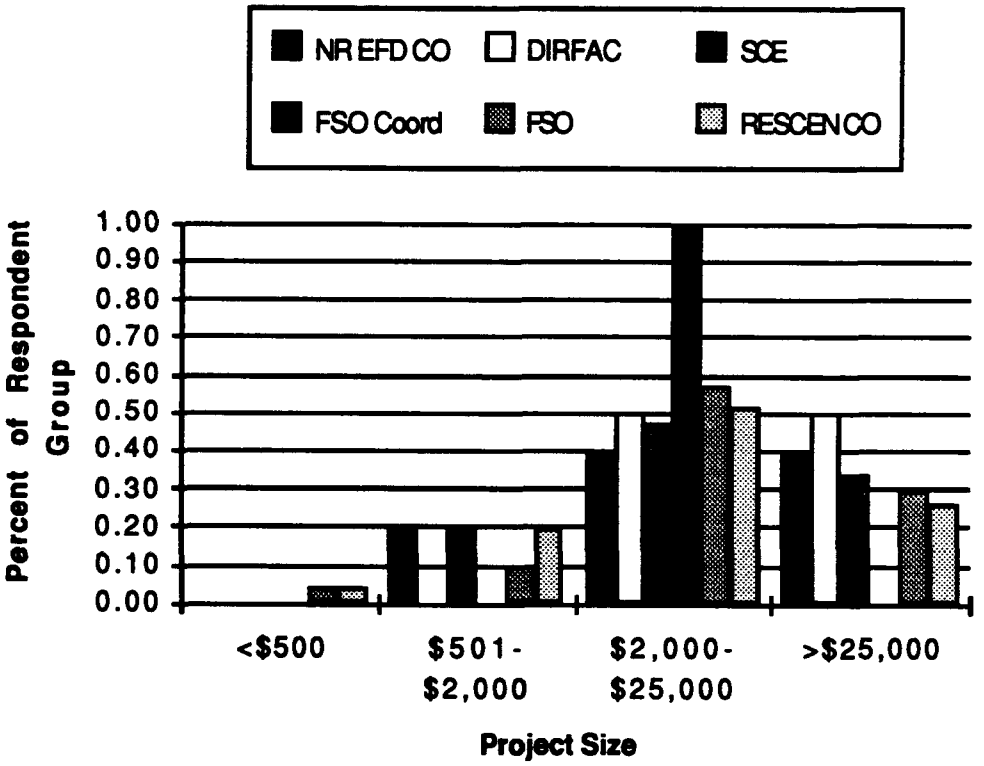

Figure 6.9 Project Size Trouble by Groups

6.2.9 Organizations

When respondents were asked to indicate the two organizations that were most helpful with facility maintenance and repair management they indicated that the Seabees (33 percent) and the Readiness Commands (25 percent) were clearly perceived as the most helpful. Self-help (17 percent) was seen as a significant help also. The helpfulness perception rating for the remaining organizations was about

the same with the Naval Reserve EFD leading at 7 percent and the Naval Reserve Force tailing at 1 percent. Figure 6.10 shows, by percent of the total response, the extent to which each organization is perceived as being helpful to Reserve Center facility management.

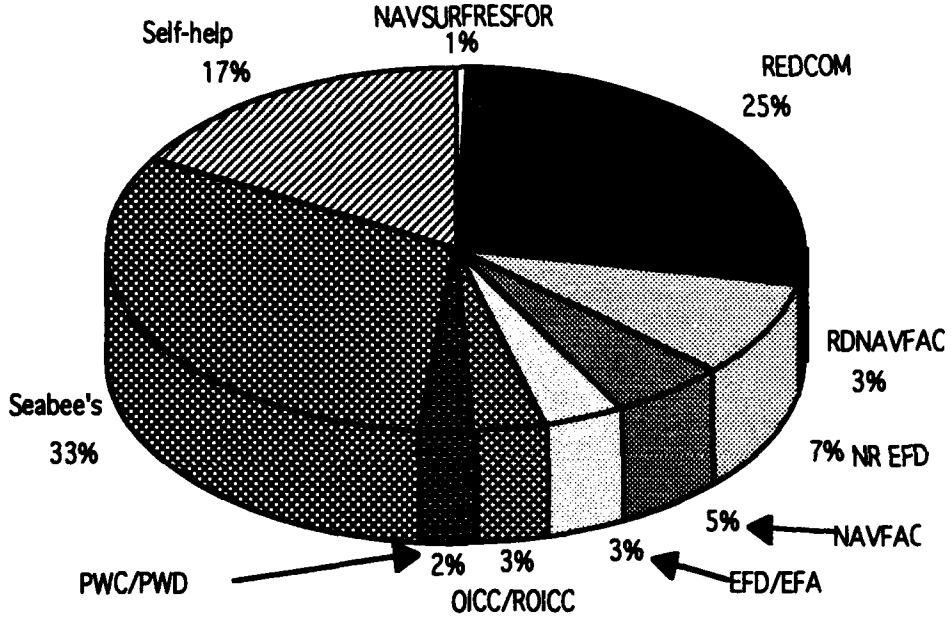

Figure 6.10 Most Helpful Organizations by Percent of Response

Figure 6.11 shows, by respondent groups, which organizations were perceived as most helpful. Several observations can be made from Figure 6.11. For example, it seems noteworthy that most of the respondent groups said the Seabees were one of the two most helpful organizations. The responses from these groups are around the population's 33 percent average. The exception is that only 17 percent of the Naval Reserve EFD CO's and only 13 percent of the Director of Facilities groups indicated that Seabees were one of the two most helpful organizations. Another observation is that the Naval Reserve EFD CO's (17 percent) and the Director of Facilities (13 percent) groups perceived the OICC/ROICC helpfulness was significantly higher than was perceived by the population average(3 percent). Interestingly, essentially only the Facility Support Officer Coordinator and Facility Support Officer groups saw the NAVFAC Engineering Field Divisions and NAVFAC Engineering Field Activities as one of the two most helpful organizations. Many more observations can be made that are not discussed here.

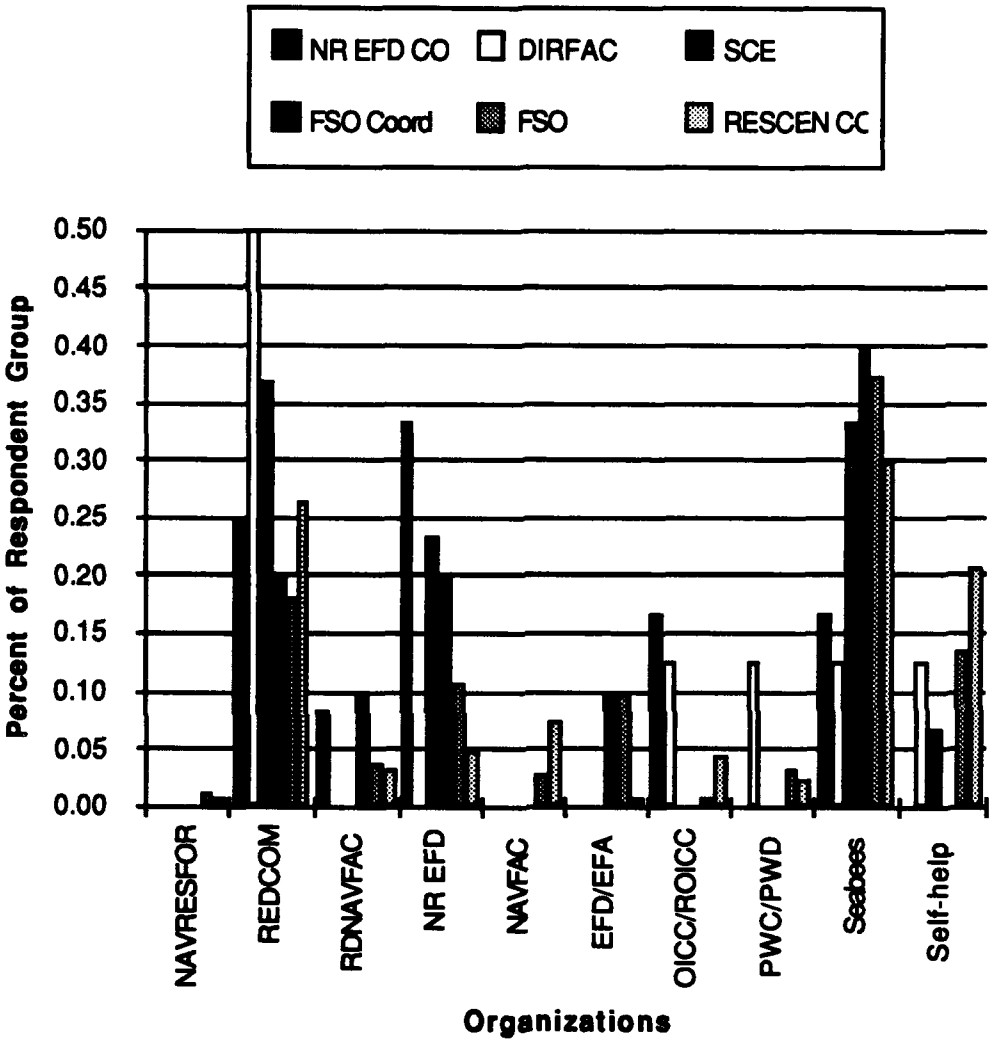

Figure 6.11 Most Helpful Organizations Response by Groups

6.3 General System Problems

Besides the specific system problems that were identified in the questionnaire, there were a significant number of respondents that provided written complaints about the "system." This section addresses those comments.

Eighty-four percent of the respondents made some comments that fall under the broader category called "system" problems. In general, these comments refer to system, policy, process, and organizational structure. For example, the following comments refer to the apparent "convoluted and fragmented" nature of the system.

> Simple things are very convoluted" (Director of Facilities)
>
> The system is much too fragmented between different chains of command. (Staff Civil Engineer)
>
> There is no common starting point in the processing of maintenance request.
>
> ROICC --> local contracts
> Director of Facilities --> small repairs
> [...]Div --> Real estate (lessor), major repairs. (Reserve Center CO)
>
> Never in my 27 years of total Naval Service have I experienced such a fragmented, convoluted, inefficient approach to maintenance. There are so many fingers in the pie, with so many divided responsibilities, so many approval routes and 'chops' for projects, and such obscure routes for paperwork - it is a wonder that anything gets accomplished! (Reserve Center CO)
>
> The biggest problem is that I have no one single source to turn to assist with my facility management, for example: some support I get from working directly with the ROICC in [...], some goes from to PWD[...], some from Readiness Command[....] to ROICC, some from Readiness Command to EFD. (Reserve Center CO)

As another example, Figure 6.12 illustrates the variation in the number of required inspections, by Readiness Command, noted on Reserve Center cover letters for the 1991 AIS submission. The average number of inspections for all Reserve Centers was 19. Some variation is expected because of the numerous different type of Reserve Center structures, age, and type of equipment. However, it is obvious from looking at Figure 6.12 that there is a wide Readiness Command-to-Readiness Command variation in the number of inspections. Some Reserve Centers are defining too few inspections, and perhaps some are defining too many

inspections. This is illustrative of there not being a clear definition of what constitutes an inspection.

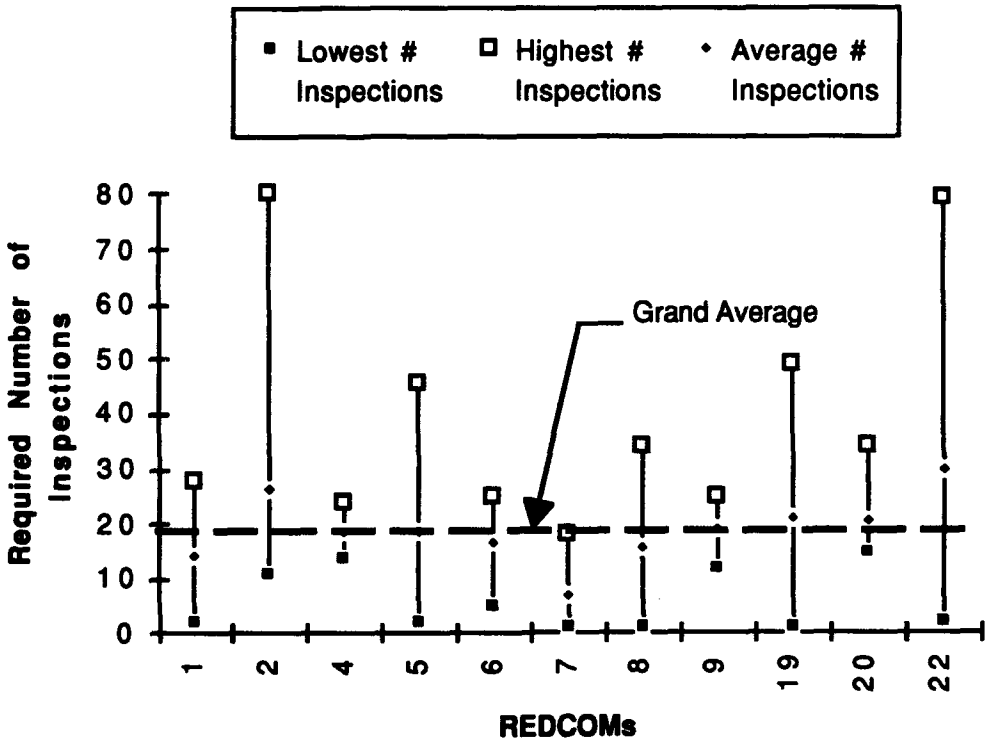

Figure 6.12 Required Number of Facility Inspections

6.4 Physical Plant Problems

The questionnaire responses provided the information needed to satisfy the study objective to identify the most troublesome perceived physical plant problems. They are presented below.

Figure 6.13 shows what the respondents perceived were the most significant physical plant problems. There are a few significant physical plant problems that stand out. The perceived major physical plant problems have to do with six categories; HVAC (64 percent), roofs (34 percent), environmental issues (27

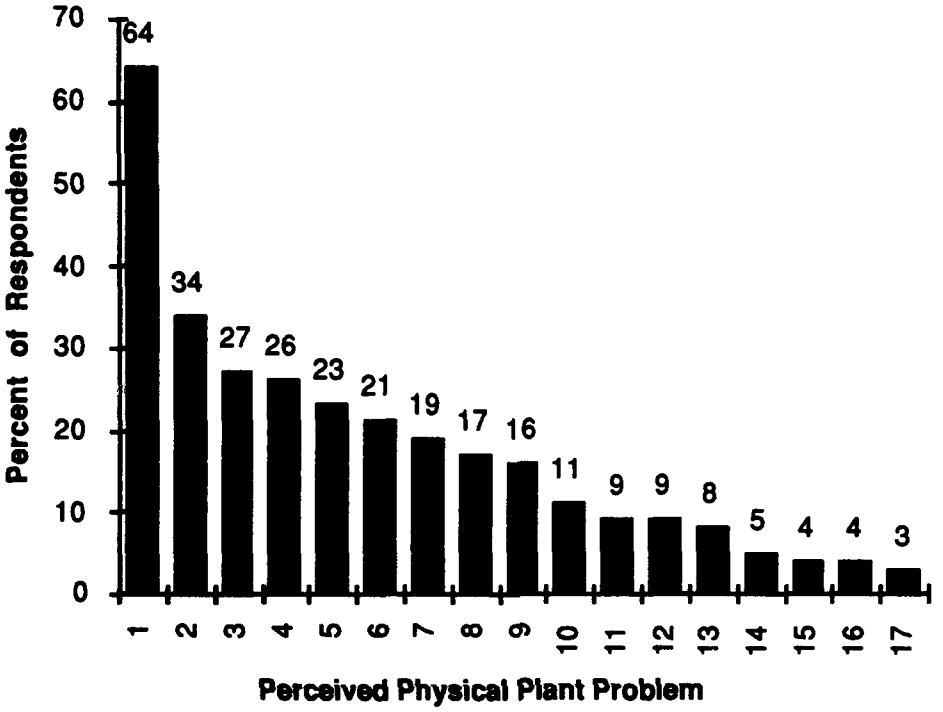

Figure 6.13 Perceived Physical Plant Problems

Legend:

1 Heating, Ventilation, & Air conditioning (HVAC)
2 Roof
3 Environmental (asbestos, lead, PCB transformers, underground tanks, etc.)
4 Services (janitorial, grounds, trash, etc.)
5 Electrical distribution / wiring
6 Boilers
7 Parking lot/roads/sidewalks & curbs
8 Doors & door hardware/windows & window hardware
9 Interior & exterior surfaces (painting, cleaning stucco, ceilings, etc.)
10 Plumbing/Sewer
11 Floor tile/carpeting/etc.
12 Security lighting & alarms/fire alarms
13 Walls and foundation - structural
14 Fencing
15 Storm drainage
16 Lighting
17 Termites & other infestations

percent), services (janitorial, grounds, trash, etc.) (26 percent), electrical distribution/wiring (23 percent) and boilers (21 percent). Reserve Center physical plant system configurations for heating and cooling were not taken into account in the survey. It is likely that even though boilers were listed as significant by only 21 percent of the respondents, because only a portion of the Reserve Centers have boilers, that may be a much more significant problem than the 21 percent indicates. It may be that boilers need to be considered with the number one listed problem, HVAC.

As previously discussed, the intent of the survey with regard to the physical plant problems was to determine the perceived physical plant problems. Consequently, data associated with the cost for each category problem were not collected. It follows then, that this analysis does not consider the costs associated with the physical plant problems. For example, if during a freezing night, a boiler failed and frozen and broken water pipes resulted, then it is possible that subsequent damage to carpets, walls, etc., could far exceed the cost of the boiler. Also, as another example, structural repairs to walls and foundations were mentioned by only 8 percent of the respondents, however, the cost associated with the repair or failure to repair that problem may exceed a complete replacement of the HVAC system. Those kinds of considerations are not within the scope of this study.

Chapter 7. Conclusions and Recommendations

7.1 Conclusions

Except for the analysis performed in this study, the Navy has no documentation that describes the whole Reserve Center facility management system. Many individuals are in positions that require a working knowledge of the system, not just a general understanding, but they have had little or no experience and only superficial training. To a few individuals, the Reserve Center facility management system may seem simple and straight forward. To many individuals, it seems complex and unwieldy. The variations in the day-to-day organization and how the system is used indicate problems in the process that must be overcome in order for the Reserve Center facility management system to perform properly.

Individuals from all commands and organizational levels perceive many specific system problems that hamper Reserve Center Facility Management. Respondents to the survey feel there simply is not enough maintenance and repair money to adequately maintain the Reserve Centers. They also feel there are not enough resources provided in key positions: the Facility Support Officer, the Director of Facilities, and the Facility Petty Officer. They perceive that training is often inadequate or misguided and that there are too many regulations and instructions for most key individuals to keep up with. Problems associated with the programming and design of projects is significant to most individuals. Projects estimated to cost between $2,001 and $25,000 are the most numerous and most troublesome. Many organizations with the facility expertise needed to manage Reserve Center maintenance and repairs are not thought of as being very helpful. In general, the system is perceived as being fragmented and not user friendly with too much variation from command to command and organization to organization.

HVAC is by far the most significant perceived physical plant problem and there is no Naval Reserve Force-wide policy or guidance to standardize either the HVAC systems or maintenance. The Naval Reserve Force has no system in use to track or measure the cost associated with HVAC or any other physical plant category item such as roofing.

7.2 Recommendations

If the Navy wants to improve the Reserve Center facility management system and make the most of their resources, then it should consider the following recommendations:

- The Navy should standardize and streamline the system and organizational structures, including the organization necessary for day-to-day work. Emphasis should be placed on improving how projects that cost between $2,001 and $25,000 are programmed and designed.

- The Navy should either (1) provide more money for Reserve Center maintenance and repair, (2) reduce the physical plant inventory, or (3) improve the physical plant inventory's maintainability.

- The Navy should provide, to all individuals involved with Reserve Center Facility management, including individuals in organizations outside the Naval Reserve Force, such as the NAVFAC Engineering Field Divisions, a published document that contains a clear description of the whole Reserve Center Facility management system.

- The Naval Reserve Force and Reserve Division NAVFAC need to reevaluate how they are using and supporting the Director of Facilities, the Facility Support Officer, and the Facility Petty Officer. Once these issues are clearly understood at the Naval Reserve Force and Reserve Division NAVFAC level, then they need to be projected to everyone involved.

- The Naval Reserve Force and Reserve Division NAVFAC should study ways to standardize HVAC and roofing systems, including repair and maintenance of those systems. The policy should then be clearly projected to all organizations and commands, including those outside the Naval Reserve Force.

Appendix A. Typical Interview Questions

- What are the biggest problems you see with Reserve Center facility management?

  - Engineering/Inspection Availability
  - Training
  - Communication
  - Organizational Structure
  - Geographic Location

- What are the key ingredient when the system seems to work well?

- What are the key ingredients when the system seems to work poorly?

- Do Reserve Center CO's and Facility Support Officer know what the project priorities are? Are the Reserve Center CO, Facility Support Officer, Director of Facilities, and Staff Civil Engineer all working to the same game plan?

- How would you characterize the quality and quantity of inspections existing vice required?

- How well do FACTMs work; what are problems with them, etc.?

Appendix B. Preliminary Questionnaire

3103 Bee Caves Rd, Suite 135
Austin, TX 78746-5523
December 20, 1991

<<Rank>><<FirstName>><<LastName>>
<<Address 1>>
<<Address 2>>
<<City>>, <<ST>> <<Zipcode>>

Dear <<Rank>><<LastName>>:

The Naval Surface Reserve Force (NAVSURFRESFOR) and Reserve Division, Naval Facilities Engineering Command (Reserve Division NAVFAC) have sanctioned a study to identify and quantify the difficulties encountered in Naval Reserve Center facility management.

Please take the time to complete the enclosed preliminary questionnaire and return it to me in the enclosed stamped, self-addressed envelope by January 10, 1992. Your input will be used to develop a final questionnaire that will be sent to all the key people associated with Reserve Center facility management.

Individually, it is extremely difficult to effect changes outside our direct control. In this case, your thoughts and ideas will be collectively presented to the NAVSURFRESFOR and the Reserve Division NAVFAC staffs. Additionally, I am planning to present the findings and recommendations at the Reserve Division NAVFAC Facility Support Officer conference in September 1992.

I will keep your responses confidential. I would like to emphasize that neither individuals nor specific commands will be identified without prior approval.

Please feel free to call me at [home] 512-326-1399 or [school] 512-471-4648 if you have any questions. Thank you again for your help. I am looking forward to your response.

Yours truly,

enclosures
(1) preliminary questionnaire
(2) G. Edward Gibson, Jr., Ph.D. ltr

NAVAL RESERVE CENTER
FACILITY MANAGEMENT OBJECTIVES

Section 1: Please list 5 to 10 facility management objectives for a naval reserve center (i.e., **what are we trying to do?**).

NAVAL RESERVE CENTER FACILITY MANAGEMENT EVALUATION CRITERIA

Section 2: Please list 3 to 6 facility management evaluation criteria for naval reserve centers. The criteria should include only those elements which directly impact attainment of facility management objectives.

Quantitative Criteria: (e.g., Percent OPTAR obligation) (This data should be easily obtainable)

Qualitative Criteria: (e.g., How well the facility presents the 'Navy Image')

BARRIERS TO EFFECTIVE NAVAL RESERVE CENTER FACILITY MANAGEMENT

Section 3: In your opinion, what are the major barriers to effective naval reserve center facility management? Please rank the following barriers in order of most important from 1 to 10 (1 being the most important barrier; Note: there are more than 10 barriers listed.)

RANK	BARRIERS TO EFFECTIVE RESERVE CENTER FACILITY MANAGEMENT
	Not enough help/training/assistance from Readiness Command, Director of Facilities, etc.
	Confusion about the Navy's facility management "system"
	Regulations/Instructions are vague or confusing
	Regulations/Instructions are restrictive
	Unfamiliar with all available resources (people, programs, etc.)
	Poor facility network communication (verbal communications, etc.)
	Uncertainty about maintenance and repair project priorities/goals
	Difficulty scheduling/coordinating resources (Facility Support Officer, FAC Team, etc.)
	Engineering expertise is unavailable (e.g. need a mech. vs. civil, etc.)
	Not enough **engineering** expertise or not around when needed
	Inspection expertise is unavailable (wrong mix of skills)
	Not enough **inspection** personnel or not around when needed
	Poor attitudes by personnel involved
	Reserve Center - Facility Support Officer relationship
	Too many non-facility priorities
	Not enough OPTAR money (Reserve Center CO control)
	Not enough maintenance money (custodial, HVAC, boiler, etc.)
	Not enough repair money (one-time repairs $2K-$25K)
	Poorly written specifications
	Poorly administered contracts
	Others (please list at section 5)
	Others (please list at section 5)

MAINTENANCE AND REPAIR PROBLEMS AT NAVAL RESERVE CENTERS

Section 4: Aside from the "system" and people problems associated with reserve center facility management, what are the maintenance and repair problems you encounter? (e.g., roof leaks, air conditioning problems, etc.)

OTHER ISSUES ASSOCIATED WITH NAVAL RESERVE CENTER FACILITY MANAGEMENT PROBLEMS

Section 5: Do you have any additional comments? Is there an area that is not being addressed completely enough?

COLLEGE OF ENGINEERING
THE UNIVERSITY OF TEXAS AT AUSTIN

Department of Civil Engineering · Austin, Texas 78712-1076
Construction Engineering & Project Management · (512) 471-3541

December 18, 1991

Dear Respondent:

Enclosed within this correspondence is a pre-questionnaire prepared by Lt. Michael Durant for use in performing a research project involving analysis of the Naval Reserve facility management program. This effort has been sanctioned by NAVSURFRESFOR AND RDNAVFAC. The results of this research will be widely distributed and, hopefully, will result in improvements to the existing facility management program.

Lt. Durant is a student in the Navy Graduate School Program pursuing a Masters Degree in Construction Engineering and Project Management here at The University of Texas at Austin. He will conduct the research and I will serve as his supervising professor. Your timely, thoughtful attention to this pre-questionnaire will be greatly appreciated and will assist immensely with the overall research project.

Again, thank you for your assistance.

Yours truly,

G. Edward Gibson, Jr., Ph.D.

Appendix C. Questionnaire

6308 Clubway Ln
Austin, TX 78745-3725
2 July 1992

«RANK» «FIRSTNAME» «LASTNAME»
«ADDRESS»
«CITY», «ST» «ZIPCODE»

Dear «RANK» «LASTNAME»:

The Naval Surface Reserve Force (NAVSURFRESFOR) and Reserve Division, Naval Facilities Engineering Command (Reserve Division NAVFAC) have sanctioned a study to identify and quantify the difficulties encountered in naval reserve center (Reserve Center) facility management.

«RANK» «LASTNAME»,please take a few minutes to personally complete the enclosed survey and return it to me in the enclosed stamped, self-addressed envelope by 20 July 1992.

Individually, it is extremely difficult to effect changes outside our direct control. In this case, your thoughts and ideas will be collectively presented to the NAVSURFRESFOR and the Reserve Division NAVFAC staffs. I have also been invited by Reserve Division NAVFAC to present the findings and recommendations at the Reserve Division NAVFAC Facility Support Officer conference in September 1992.

Your response will be kept confidential. I would like to emphasize that neither individuals nor specific commands will be identified without prior approval.

Please feel free to call me at [home] (512) 444-4290 or [school] (512) 471-4648 if you have any questions. Thank you again for your help. I am looking forward to your response.

Yours truly,

enclosures
(1) Survey (w/ self-addressed stamped envelop)
(2) G. Edward Gibson, Jr., Ph.D. ltr

SECTION 1
BACKGROUND/EXPERIENCE

Please provide the following information. This information will be used only for statistical evaluation. **The survey responses will remain confidential.**

1. Rank: _____
2. Designator: _____
3. Year/months of active naval service; Officer: _____
   Enlisted: _____

4. Time in present job (years/months): _____

5. Facility management experience (e.g., OIC, Facility Support Officer, City planning, etc.) Please indicate years/months.
   Total (both military & civilian experience): _____
   Military only related experience: _____

6. Formal education:

   a. Highest degree received (**please circle only one**)

      1. High school
      2. Associate degree
      3. Bachelors degree
      4. Masters degree
      5. Doctorate degree

   b. Degree area of study (i.e., mechanical engineering, political science, etc.) (please indicate all received)

      1. Associate degree: _____
      2. Bachelors degree: _____
      3. Masters degree: _____
      4. Doctorate degree: _____

7. **For Reserve Center Commanding Officers ONLY:** Please circle the owner relationship for your facility.

a. The Navy owns the facility
b. The Navy leases the facility
c. The Navy is a tenant in the facility

8. **For Facility Support Officers ONLY:** For each of the reserve centers that you serve, please circle the owner relationship.

a. Reserve Center #1: Navy owned / Navy leased / Tenant
b. Reserve Center #2: Navy owned / Navy leased / Tenant
c. Reserve Center #3: Navy owned / Navy leased / Tenant

SECTION 2
BARRIER EVALUATION

Instructions: Please prioritize each of the following lists, using 1 through the total number of listed items. For example, mark 1 for the item that is most significant, 2 for the item that is second most important, etc., through the total number of listed items. **Please only use one listed item per priority number; i.e., only list one number 1 priority, only one number 2 priority, etc., through the total number of items on each list.**

1. Prioritize the major barriers to effective naval reserve center facility management.

RANK	BARRIERS TO EFFECTIVE RESERVE CENTER FACILITY MANAGEMENT
	Problems with control/handling of available funds
	Not enough money for maintenance or repair
	Problems with regulations/instructions
	Availability or expertise of engineering or inspection personnel
	Confusion about the Navy's facility management system
	Unfamiliarity with all available resources (people, programs, etc.)
	Poor communication within the facility management system
	Uncertainty about maintenance and repair project priorities or goals
	Too many non-facility priorities
	Difficulty scheduling/coordinating resources (Facility Support Officer, FAC Team, etc.)

2. Prioritize the most significant regulation/instruction problems.

If this is not a problem, check here _____ and skip to number 3.

	Regulations/Instructions are vague or confusing
	Regulations/Instruction are to voluminous; they can be simplified
	Regulations/Instructions are restrictive

3. Prioritize the most significant engineering and inspection manning problems.

If this is not a problem, check here _____ and skip to the next section.

	Engineering EXPERTISE is unavailable (e.g. need a mech. vs. civil, etc.)
	Not enough engineering PERSONNEL or not around when needed
	Inspection EXPERTISE is unavailable (wrong mix of skills)
	Not enough inspection PERSONNEL or not around when needed

SECTION 3

PROCESS EVALUATION

1. The basic naval reserve center repair and maintenance management system consists of the following process steps. Please mark which one of these process steps that gives you the most trouble. **Please mark only one.**

	SYSTEMATIC & RANDOM INSPECTIONS: Finding & identifying the problem
	PROGRAMMING: defining requirements, justification, & estimated costs
	DESIGN: preparing drawings & specifications, sketches, contracts, etc.
	CONTRACT AWARD: advertising, collecting & evaluating bids, awarding the contract
	CONTRACT ADMINISTRATION: payments, inspecting the work, handling contractor problems, disputes, non conforming work, etc.
	WARRANTY/REWORK

2. Please mark the facility management project **size** that gives you the most trouble. Note that this question addresses project size only, not who funded or contracted for the project. The question is intended to apply to everyone; Director of Facilities, Reserve Center CO, Facility Support Officer, etc.. **Please mark only one.**

	< $500
	$501 - $2,000
	$2,001 - $25,000
	>$25,000

3. Please mark which 2 organizations that help the most with reserve center facility management. A glossary of the acronyms used here is included at the back of this survey for your reference. **Please mark exactly 2 organizations.**

	NAVSURFRESFOR
	READINESS COMMAND
	RESERVE DIVISION NAVFAC
	NAVAL RESERVE EFD
	NAVFAC
	EFD/EFA
	OICC/ROICC
	PWC/PWD/etc.
	Seabee's
	Self-help

SECTION 4
PHYSICAL PLANT PROBLEMS

Instructions: DO NOT prioritize this list. Instead, please just check the 3 items that give you the most trouble.

1. What are the most troublesome facility problems?

	Floor tile/carpeting/etc.
	Doors & door hardware/windows & window hardware
	Heating, Ventilation, & Air conditioning (HVAC)
	Boilers
	Interior & exterior surfaces (painting, cleaning stucco, ceilings, etc.)
	Walls and foundation - structural
	Electrical distribution /wiring
	Environmental (asbestos, lead, pcb transformers, underground tanks, etc.)
	Services (janitorial, grounds, trash, etc.)
	Termites & other infestations
	Roof
	Plumbing/Sewer
	Storm drainage
	Lighting
	Security lighting & alarms/fire alarms
	Fencing
	Parking lot/roads/sidewalks & curbs

SECTION 5
ADDITIONAL INFORMATION

1. Please include any additional comments you may have regarding this survey or the naval reserve center facility management system in general:

_____

_____

_____

_____

_____

_____

GLOSSARY OF TERMS AND ACRONYMS

EFA - Engineering Field Activity

EFD - Engineering Field Division; i.e., with full-time military and civilian staff.

Readiness Command - Readiness Command: Includes Readiness Commander (for your facility), Director of Facilities (Director of Facilities), Director of Facilities Staff, Staff Civil Engineer, etc..

NAVFAC - Naval Facilities Engineering Command

NAVSURFRESFOR - Naval Surface Reserve Force

NREFD - Naval Reserve Engineering Field Division; i.e., the naval reserve organization composed of selective reservists with mobilization billets in the active duty EFD organization.

PWC/PWD - Public Works Center/Public Works Department

Reserve Division NAVFAC - Reserve Division, Naval Facilities Engineering Command: The naval reserve counterpart of NAVFAC which oversees the NREFD's.

COLLEGE OF ENGINEERING
THE UNIVERSITY OF TEXAS AT AUSTIN

Department of Civil Engineering · Austin, Texas 78712-1076
Construction Engineering & Project Management · (512) 471-3541

July 7, 1992

Dear Respondent:

Enclosed within this correspondence is a questionnaire prepared by Lt. Michael Durant for use in performing a research project involving analysis of the Naval Reserve facility management program. This effort has been sanctioned by NAVSURFRESFOR and RDNAVFAC. The results of this research will be widely distributed and, hopefully, will result in improvements to the existing facility management program.

Lt. Durant is a student in the Navy Graduate School Program pursuing a Masters Degree in Construction Engineering and Project Management here at The University of Texas at Austin. He will conduct the research and I will serve as his supervising professor. Your timely, thoughtful attention to this questionnaire will be greatly appreciated and will assist immensely with the overall research project.

Again, thank you for your assistance.

Yours truly,

G. Edward Gibson, Jr., Ph.D.

Appendix D. Questionnaire Follow up letter

6308 Clubway Ln
Austin, TX 78745-3725
5 Aug 1992

«RANK» «FIRSTNAME» «LASTNAME»«(+)»
«ADDRESS»
«CITY», «ST» «ZIPCODE»

Dear «RANK» «LASTNAME»:

A survey regarding a study of **Naval Reserve Center Facility Management** was sent to you early in July. I would still like to include your response, which I have not received yet, in the final results. If you did not receive the survey or do not have it please call the Reserve Division NAVFAC office at 512/328-1398 for another one. If you have already sent your survey in, thank you(!), and please disregard this letter.

Should you have any questions or comments about the study you can call me at [UT] 512/471-4648 or [home] 512/444-4290. Briefly, I have discussed the issues with CAPT St. Peter at the Naval Reserve Force and Admiral Heine at Reserve Division NAVFAC and have worked closely with their staffs to identify systematic problems and possible solutions. I am presently completing data collection, which is why I would like your survey response.

The data analysis will be done with the assistance of the Naval Reserve Force staff and Reserve Division NAVFAC staff. However, the survey responses will remain confidential. That is, no one beside myself will be able to attach a name to specific survey responses. I have a survey index so I can track who has responded and to determine if there are any demographic trends in the responses.

I am looking forward to receiving your survey response. Thank you!

Yours truly,

Michael E. Durant
LT, CEC, USNR

Appendix E. Preliminary Questionnaire Written Comments

Note: These comments have been reproduced from the comments made by respondents on the questionnaire. Comments pertaining only to the questionnaire subject were included.

- Concern/interest in facility management varies greatly among Center COs.

  Local and Reserve/Guard politics plays a big part; many poorly used (read: could be shut down) Centers are kept in operation past their useful life and without adequate resource support.

- When building new Centers, more emphasis should be placed on building quality and maintenance issues including standardization and life cycle costing.

- 1. We renew the barriers every time we rotate personnel. New people have to start over again (every year or two).

  2. Most of the "barriers" are people problems, not the system. We need time to train, to develop, and time in the job to perform. Facility mgmt is not a top priority. We need travel $.

- Environmental issues are increasing in importance and frequency. Many environmental problems may go unidentified due to lack of qualified observation and analysis. We are trying to emphasize this area.

- A. For the money we waste on Facility Support Officer training & travel Director of Facilities could assemble a staff of GS7-12 Engineers, Inspectors, & Contract Specs who could better maintain facilities than Facility Support Officer approach does.

  B. Director of Facilities system is reactive to individual resource requests. Why not proactive Director of Facilities selection of planned actions from his thorough review of AIS.

  C. The plethora of environmental, energy, top-down, "one-time" surveys and programs makes the Facility Support Officer effort dilute. Choose the basics, do the basics.

- Other issues associated with Naval Reserve Center facility management problems

1. There has been a lack of consistency over time in the way facility maintenance has been prioritized. This is due to the instability of the funding cycles and the inability to replace some of the obsolete buildings, therefore requiring excessive expenditure of maintenance and repair dollars.

2. There is no apparent connection between design capacity and manpower assignments to Reserve Centers. This is due to the fact that billets are moved to where people are available to fill them, but we cannot respond by making buildings larger or smaller in a reasonable time. One possible solution to this would be to expand the use of leased facilities, but the cost would probably be prohibitive.

3. Standardization of requirements for reserve centers. Original, post World War II buildings were pretty much alike. Newer buildings and whole center repair modifications to older buildings have made each building unique. This has increased costs in design and maintenance areas.

4. Computer systems at Director of Facilities level are inadequate.

- I think each Readiness Command would benefit by having their own Director of Facilities.

- Most Center CO's have no facility background or interest.

Most Facility Support Officers do not visit their assigned centers frequently enough

At present, there is a very poor geographic match of Facility Support Officers to Centers supported.

Related to above, IDTT is often needed but often unavailable.

I would suggest enlisted billets assigned to EFD units to get better coverage of Centers.

Poor rotation of EFD officers. At least go to another units. I know of two that spent entire reserve career in EFD units & never knew a Seabee. Many have never served in a Battalion & most not in a Regiment. As a result, FAC Team relationship is poor.

- Restricted travel funds limit availability of specialized expertise to evaluate engineering or technical problems.

- Better communication. The players include the Center, the Facility Support Officer, Seabee Det personnel, the EFD, Reserve Division NAVFAC, the Readiness Command Director of Facilities, the Staff Civil, and COMNAVRESFOR. All should be working in roughly the same way toward the same goal, and know what the others expect of them. At present, they are not and do not. Very little is ever heard out of COMNAVRESFOR.

Programs and methods of getting the job done should be standardized nationwide. One Readiness Command does something one way, another does it differently, and COMNAVRESFOR another way still.

Better training of Facility Support Officers. Most of the training a new Facility Support Officer receives now is on his own, on the job.

The perceived status of Reserve Division NAVFAC needs to be improved. Despite the marked improvement in the last few years, it is still looked on, especially by JOs fresh from the Green Machine, as "dead end," non-career enhancing, and the Facility Support Officer work as busy work.

The MO-323 should be looked at with the possibility of revision or update, the inputs being from all the players listed above.

While acknowledging that the Seabee mission is not primarily Center maintenance, there should be some pressure on the RNCF to support the Reserve Division NAVFAC mission with cooperative FAC Teams, etc.

- We are trying to do something without the proper billet structure. The Facility Support Officer/FACTM program is a noble gesture, but we are bastardizing our mobilization training in order to support it. The Seabee battalions can't afford to man the FACTM's - but they do. What does being a Facility Support Officer have to do with the mobilization billets of a Reserve Division NAVFAC officer? While there are slight applications, I doubt that, when mobilized, an officer would do anything remotely related to his/her duties as an Facility Support Officer while on active duty. Most Facility Support Officers are LCDR/CDR - ask yourself what their mobilization billets would be. The duties of an Facility Support Officer don't even begin to compare to the duties of an active duty ENS PWO at a NAVFAC or remote COMSTA (Adak). An 0-4/0-5 should be activated & used @ an EFD. Please excuse this diatribe, but who are we kidding? Desert Storm/Shield showed that the RNCF can respond effectively - let's keep our attention on our mobilization missions.

- Inability to schedule my FAC Team (C/B DET) for limited periods of ADT (Special Active Duty) to complete local self-help projects.

Took me a year to get a consistent FAC Team.

System is not flexible enough for me to effect changes. Major problems take years to resolve.

Lack of consistent Director of Facilities manning. (I've been CO for 14 months. I'll soon be working with my third Director of Facilities).

- Lack of local government facility representative (i.e. PWO) to provide insight on repairs.

- Whole Center Improvement Project incomplete, $ cut due to lack of funds.

- Additional: Reserve Center CO and Supply Supervisor initial education in facility matters/concerns/responsibilities.

- A 1 week training course should be set up to train facility petty officers. Most are placed in the position, given all publications and directed to go read and learn by "Fire."

- Yes - in the eight months I've been here, I (and I do mean I - there is nobody else to do facilities) have dealt with (corrected) the following problems: [respondent then listed physical plant problems].

Would be nice to have a one page bullet list of required inspections & reports. It seems as though a "new" requirement pops up every other day.

- Facility management is totally foreign to most center COs. There is not a great deal of emphasis on it and, therefore, facility management is very low on their priority list. Most COs operated with the attitude that when something breaks, they'll fix it.

Center COs need more training in facility management. Perhaps a better solution would be to leave facility management to the experts, such as the Director of Facilities, Facility Support Officers, and CBs so the Center CO can concentrate on his/her primary mission - the training and administration of the Naval Reserve.

- Money & the time it takes to get anything out of the Reserve Center CO span of control completed. Repairs are seldom a problem if they're of an emergency nature but if something is not an emergency, it is very difficult.

- - Reserve Center COs are, by and large, line officers with little experience or knowledge of facilities maintenance, contracts, etc. Our Facility Support Officers are usually junior officers who are conscientious and concerned, but also inexperienced and over-obligated (mine has at least 3 other Reserve Centers to take care of).

- The Center COs need either more training at the PCO school or an Facility Support Officer who is available more than 3-4 times a year.

- The Reserve Center is not allowed to have a maintenance (janitorial contract). We have a staff of 8 and a drilling reserve population of over 400, who are prohibited from performing all but the most basic (i.e., emptying trash) maintenance functions during drill time. Our interior physical plant exceeds 22,500 ft. The building is located on 4.85 acres of improved grounds (leased from the city) for which we are responsible for maintenance & appearance. Particularly during the summer, the staff may spend 1/3 of its time devoted to interior and exterior maintenance instead of training Reservists, resolving pay problems, arranging AT/IDTT, making service record entries, etc. The staff consist of pay grades E5-E8 who should not be required to scrub floors and toilets and cut grass and rake the clippings. At least give us 1 or 2 E1-E3 to do maintenance.

- I feel that assignment of Facilities/Maintenance Person as a Collateral Duty is very demanding. With the complex, in-depth requirements placed on them that it should be an assigned billet. The ever increasing emphasis on HAZMAT, Preventive Maintenance and Reports has made facilities a full time job.

- The biggest problem I see with facility management is lack of knowledge/understanding. I am a ship driver. I know about zone inspections, electrical safety, valve maintenance, painting, etc. The NAVFAC MO/323 is a good pub, but I'm still a little lost. For example, what programs do I need? - Electrical safety seems important to me, but I guess it's not because my Readiness Command says its not. Strange, to a ship driver.

- Due to lack of funding, preventative maintenance is not performed which results I the need for emergency repairs or more extensive work. For example, roof repairs or recoating was needed in 1983 but not funded until 1990. In the meantime, there were several roof leaks and temporary repairs and the cost of the overall roof repair escalated several fold.

- There is a need to get all the Facility Support Officers together more often. It is very difficult to run an effective and well coordinated facilities maintenance program by mail. This program is further complicated by the large number of Facility Support Officers who belong to other Reserve Units and are cross assigned to the Facility Support Officer duties.

- Consistency. CNAVRES needs a specific policy of quality of facility. Facility Support Officers from different REDCOM's and even within REDCOM's have different ideas about what is "good enough."

- Manpower is a problem. An Facility Support Officer needs to visit the reserve center almost every month to get in control of the Reserve Center maintenance problem and stay on top of it. Less causes frustration for the Facility Support Officer and Reserve Center staff.

- RNCF instructions indicate that the Battalions are to provide support to the Reserve Centers, however, the enlisted men provided vary greatly from each Reserve Center. Many reserve centers have excellent support others have very minimal support. The support varies within a Regiment or Battalion.

- 1. The Readiness Command Director of Facilities billet should be a CEC billet.

2. Annual Inspection Summary (AIS) -- The backlog of deficiencies is not being appropriately funded in a timely fashion by major claimant (COMNAVRESFOR). MRP OPTAR funding is for small predictable repairs or emergency repairs less than or equal to $2,000. Funding is issued per quarter. However, the bulk of repairs must come from contract funding.

For example, for the Naval Reserve EFD [ ] Reserve Centers, 32 Annual Inspection Summaries were completed in FY89 at a value of $12,073,000. Contracts let to correct the deficiencies totaled $1,347,047. For FY90 the AIS increased to $20,686,000 with contracts let totaling $416,389. FY91 figures are showing a larger gap. It is recognized that the AIS is not a funding document. However, the number of non-deferrable deficiencies are substantially increasing. The AIS backlog of maintenance and repair is increasing at an alarming rate with less funding being provided to correct the deficiencies.

- Navy needs to involve Reserve Center CO's, Readiness Command Staff Civil Engineer, Director of Facilities & Facility Support Officer in a Quality Action Team to resolve roles & responsibilities and to improve dissemination of correspondence.

- The biggest problems are people problems. Reserve Centers assign petty officers and chief petty officers as their "facilities personnel" when they have no facilities background whatsoever. Facility Support Officers are assigned with minimal training (a 2-day workshop that just scratches the surface, big deal!) How many Facility Support Officer or Reserve Center personnel understand OPNAVINST 11010.20E and can explain the difference between repair, maintenance, construction, and equipment installation? How many of these people understand facility category codes, facility planning documents or the P-164?

  What do we do with Reserve Center personnel assigned facilities management, but don't care because they're on their twilight tours of duty? What do we do about Reserve Center personnel who have no facilities background, are so overloaded with work, that facilities management becomes extremely low priority?

  The Reserve Center facilities maintenance and repairs are expected to be accomplished by FACTEAMS, but what do you do when there are no Seabees, nor any PWD or PWC nearby?

  How can an Facility Support Officer maintain continuity when he's assigned three Reserve Centers and can only get to them about one every three to four months, and even sometimes less than that because of required IDTTs away from the Reserve Centers.

  Facility Support Officers are expected to be experts in everything, from facility maintenance, contract writing, facility inspections, architects, engineers, experts in energy conservation and hazardous waste management, and cost estimating. It just isn't so. Facility Support Officers are not miracle workers. I was active duty for over 11 years as a CEC officer and have a pretty good understanding of the Navy's facility management programs, especially having served as a Staff Civil Engineer with more than $2-million MRRP OPTAR, a $40-million AIS, submitted literally hundreds of Special Projects (STEP IIs), and been involved in energy conservation (with the command winning Navy awards). I often feel frustrated as an Facility Support Officer, and truly feel sorry for CEC Reservists trying to serve as Facility Support Officers without prior active duty experience with MRRP and facility programs. There are too many roadblocks to be an effective Facility Support Officer. I'm sure most Facility Support Officers are just winging it.

  The MO-323 is a good guide, but probably not adequately used by Facility Support Officers or Reserve Centers.

  I suggest that Reserve Center MRRP and other related facilities programs be assigned to a PWD, lead PWD, or PWC for active duty support.

  Let's get real! And let's not rely on non-existent FACTEAMs.

- (1) You may want to define Facilities Management as it applies to this study. My experience with fellow Facility Support Officers is that unless an Facility Support Officer had significant PW experience on Active Duty, some of the specific concepts do not readily come to mind.

(2) Consider requiring each CO or Readiness Command to produce an annual fiscal year facilities plan. There would have to be a prescribed format and the Facility Support Officer would end up providing most of the input. It could contain the specific goals for each Reserve Center along with a statistics section for all the performance indicators identified by your survey. Such a document would be an excellent catalyst to improved facilities communication.

(3) Establish a Navy Reserve Center facilities computer bulletin board. Written communication and envelope stuffing takes an inordinate amount of time. Reserve Center YN staff are typically unable to be responsive enough with their administrative priorities.

(4) Availability of official mail stamps. Stupid simple things is all it takes to slow or stop communications.

(5) Use of the Gov't telephone credit card # is a real positive step.

- I have a problem, which is being resolved, but should not have occurred. When I am assigned to my current Reserve Center [ ] & I am assigned IDTT orders to visit my second Reserve Center in [ ] , why does the Readiness Command have my current location/Reserve Center as [ ] when I left there over a year ago? ....What is the problem? Why does it take so long to correct such a simple, yet important item as this?

Ultimately, this impacts receiving IDTT orders in a timely manner & definitely impacts travel claim returns (on average 2-1/2 months).

- Lack of discipline and control throughout the system is a major problem.

Lack of adequate drawings and poor drawing control systems are a major problem.

#1 The wrong people are doing facilities work.

The focus of the facility maintenance system seems to be the REDCOM's "inspecting" Reserve Centers and punishing them if they do not look good.

There is a major problem in that the wrong people are doing facilities work. Using fleet people to run the facilities side of the Reserve Centers guarantees failure.
The Reserve Center CO's need to have most facility problems taken off their backs.

REDCOM's must be responsible for maintaining Reserve Center drawings and assuring that no building changes take place without permission and without proper drawings being done in advance of changes. Fire departments, HVAC people and maintenance background engineers should sign off on drawings before changes are made.

Inspections should be based on knowledge. A Readiness Command inspector should not be telling a Reserve Center CO and Facility Support Officer that floors should be buffed when they are under instructions not to buff because of asbestos problems. Reserve Centers should not be made pretty and painted up for inspections. There should be dated records as to when any facility is painted.

When funding has not been provided over a five year period by the Readiness Command to repair windows a Readiness Command inspector should not harass the Reserve Center CO about windows especially when a contract to replace all of the windows is in effect and overdue.

One major problem is that the people from the REDCOM's who do facilities inspections are often reservists who are more concerned with how they look than whether or not they have any knowledge of the system and why things are the way they are.

When a water heater is replace by Readiness Command on emergency basis with improper controls and Readiness Command inspects and says controls are unsatisfactory that should be a hit on the Readiness Command not the Reserve Center. The Readiness Command inspectors often do not know what is going on within the system.

Basically communication between different parts of the system is too little, too late, or confused.

Contracts are so delayed in administration as to render them essentially useless at times.

Changes are made in contracts based on cost without necessarily understanding the functions. This is a relatively minor problem.

Often when one contact job is done, major damage is done to other facilities and the people available to inspect the work do not realize it in time. At [ ] when roof work was done major damage was done to security lighting. This was not obvious, but was important and an SK or CO should not be responsible for this. It is essential to have qualified inspectors inspect work. The level of inspection on work is way too low.

- It seems as if the Centers are not always genuinely concerned about their facility until an emergency occurs. Also, it is difficult to get anything really accomplished during a weekend, when the active duty personnel are all <u>too</u> busy with helping out in training & admin. duties for other Reservist.

- I. The Facility Support Officer needs to be included in the Whole Center Repair Project Process. There are several reasons:

    1. Facility Support Officer is typically the only member of the CO's staff who will be at the Center for more than 2 years. Facility Support Officer provides continuity between the past & present. Also, everyone else involved (except the Director of Facilities civilian) stays for 3 years max.

    2. Facility Support Officer may be a local design or construction professional.

    3. WCRPs typically involve many change orders and occasionally disputes. This presents an excellent training opportunity from design through bidding and construction to completion.

    4. Facility Support Officer needs to be informed. Reserve Center staff or CO may call on Facility Support Officer especially if he feels that NAVFAC or ROICC is not being responsive. It looks bad and we can't help if we don't know the background.

We need to develop a way to sell Facility Support Officer involvement to Director of Facilities, NAVFAC, ROICC. Call it required mobilization training outside experts or what ever seems appropriate.

II. Det OIC/Facility Support Officer is a good combination but only if the Det has a strong CPO.

- I only drill at Reserve Center every other month or 1/QTR. It's hard to get things done. Reserve Center staff wear many hats, hard to keep their attention for 4 hr's or greater.

It would be nice if Reserve Center facilities person & Facility Support Officer attended same training course. It would improve working relationship & they could plan future activities. Talk to Director of Facilities TEC i.e., [ ] or equal not Director of Facilities. He's to far removed from the work.

Reserve Center facilities person should be 1 or 2 yrs like Facility Support Officer assignment.

- The Reserve Center that I serve is located adjacent to and on property of NAS [ ]. This is both good and bad. We usually get a timely response from Public Works for repair projects. However, I have found that the quality of repair is marginal. Often times PW will "patch" the problem instead of fixing it. They claim that the right paperwork wasn't submitted or that this is how they work. Also they may "sit" on a job because we are not a priority. Requests submitted from Reserve Center to Director of Facilities are sent by Director of Facilities to PW for their review, evaluation or design. This tend to delay projects.

- I think this (All the above questionnaire!) begs the issue.

Reserve Center is a building which needs to be kept up, repaired, maintained, improved, etc. Each Reserve Center is unique and must be evaluated for its own set of problems. If the officer is not a trained professional, i.e., architect, engineer, contractor, construction manager, etc. and has the know how to do his job then he should not be assigned as an Facility Support Officer. It is not practical to train someone to do this job.

Coordination and liaison among the various elements of the Reserve/Active Duty NAVFAC family of organizational components is important. Especially important is being able (from the Facility Support Officers stand point) to tap into the RNMCB talent pool to get help on specific projects which require expertise not readily available at the Reserve Center i.e., a finish cabinet maker (BU) to do some finish carpentry work, a welder (SW) to fabricate a metal bracket, an engineer to design a footing, etc., etc.

A close working relationship with contracts i.e. the OICC is also necessary to insure contract execution.

- I believe the majority of facility funds should be allocated annually to the actual facility for the CO to use (and justify). In that way, he can realistically deal with ongoing facility problems. He can be sworn to the procurement obligations and held accountable as contracting officers are now.

The facilities program should retain an ongoing printout of resource requests & AISs & produce that for each Reserve Center, and alleviate the need for re submission of the same project or repair request at a later time. The data base should be: changeable like a planning document in case partial funding allows partial repair, but sufficiently precise to allocate budget amount to centers.

You certainly are aware of MO-323 "Inspection, Maintenance & Operation Manual for Naval Reserve Centers." I urge you to [???] 323 in your methodology and recommendations so that we Facility Support Officers have an improved "Bible" to work with.

Appendix F. Questionnaire Written Comments
(N = 186)

Note: These comments have been reproduced from the comments made by respondents on the questionnaire. Only Comments pertaining to the questionnaire were included.

Naval Reserve EFD COs, Director of Facilities, Staff Civil Engineer, Facility Support Officer Coordinators

- I believe one of the biggest problems w/ Reserve Center maintenance is the frequent rotation of Reserve Officers serving as Facility Support Officers (rotation <= 2 yr.)

- It appears to be getting there as we strive to improve our system.

- Why treat this as a reservists problem - put a full time staff @ Director of Facilities

- With more coordination, Facility Support Officers would be a tremendous asset. Biggest problem is getting E done to produce contract. Also the "way" we do business is grossly inefficient. Project management is a farce. EFD's delay work, caught up in civilian job justification. Simple things are very convoluted. Excess property disposal is a study in fraud, waste, and abuse.

- I am shocked at the waste of time & money spent on projects that sit in a "reviewers" in box. Having spent 11 years in the fleet, I feel that I have a good sense of priorities & urgency. I see no priority system or any sense of urgency what so ever in the reserve facilities' management outside the Readiness Command & Reserve Center CO. The system is bogged down at PWC & all levels beyond. The system must be streamlined!

- Your Barriers Question is off the mark Biggest Barriers really are at contracting phase!

- Consideration should be given to altering the method of writing and preparing contracts. I was on active duty to the point where I was selected and frocked to LCDR. In all that time, I never wrote a contract. I had others who did that. However, in the Reserves, we expect some very junior officers, who in many cases are direct appointments, to not only have the ability, but also the time, to write contracts. I would like to offer the following suggestion:

    1. Make the Director of Facilities the centralized office for writing contracts, of any size, within his funding authority.
    2. The Readiness Command, with the Staff Civil Engineer input, should decide which projects go to contract.
    3. The Facility Support Officer should submit the technical, engineering information needed to write the contract for submittal to Director of Facilities.
    4. The Director of Facilities should have a contract specialist assigned to aid in preparing technically correct contracts.

- Special project funding is inadequate.

EFD units should have enlisted billets to supplement officer shortages & assist Facility Support Officers.

- As Staff Civil Engineer, the main problem is getting Centers to think simple and innovative. They want the easy out, not what is best for the long term.

Also I find just plain not competent Reserve Center COs.

Need more Facility Support Officers as, we expect too much of Facility Support Officer for limited time available.

- Ratio of Reserve Centers to Facility Support Officers is too high. Lack of Facility Support Officer contract and estimating expertise/training.

- The system is much to fragmented between different chains of command. Facility Support Officers have no direct control of FACTMs. Seabee battalion management seem indifferent to the needs and tasking of FACTMs -- it does not seem "important" (i.e., they don't get inspected on it) to them. Funding Facility Support Officer travel through the REDCOM's just throws one more chain of command into the mix. Further, Reserve Center CO's really don't have facilities as a major priority -- they put their manpower into the training & Resfirst management areas. If facilities management is really a priority, and the intent is to accomplish this with Naval Reserve CEC officers and Seabees then the following organizational changes should be made:

1. Put enlisted Seabees in Reserve Division NAVFAC for direct assignment to Facility Support Officers.
2. Assign only one Reserve Center to each Facility Support Officer and limit drills away from center to 2 or 3 a year.

Additionally, to allow the Reserve Center staffs to provide better assistance, Reserve Division NAVFAC should offer training to Reserve Center SKs in maintenance service contact management, use and reporting of facilities planning information and hazardous waste/material handling and disposal requirements.

To put some bite in this system, Naval Reserve EFD units should get a portion of their inspection grade from input provided by the Readiness Command Staff Civil for the various Reserve Centers/REDCOM's which are served.

- System is terrible inefficient for the small self-help projects in the range of $300 - $2500. Many project require review by up to 15 different people. This is a great waste of resources on these small projects. Better to train the Director of Facilities personnel in more technical areas, give them some labor saving communications like data bases, electronic mail with the Reserve Centers and some more secretarial help. Could assign all of the EA at the REDCOM's to the Director of Facilities office. This would concentrate the manpower where it is needed and perhaps increase their efficiency (Director of Facilities). The system, by its nature is very political and extremely

bureaucratic for these small jobs. The Facility Support Officers that do not work in facilities related jobs in the civilian sector are not given enough initial training. Perhaps some type correspondence course could be added as a requirement for training of these Facility Support Officers.

- TQL Approach - Leadership & Process. Quality is process oriented. Service should have customer focus - I think we develop our own agendas in facilities and are far from a team approach!

Regs/Instructions only document process - the problem is systemic, not regulatory.

USA CERL has done years of research on facility condition assessment and has in place an initiative to develop an automated Engineering Management System (BUILDER) to document facility condition; plan & prioritize M&R; and predict optimum recurring maintenance schedules.

Contact Dr. DR.. Uzarski (CAPT (Sel), CEC, USNR) at 1-800-872-2375. [Dr. (CAPT(SEL)) Uzarski was not this respondent.]

This problem is not unique to USNR!

Once again [reference to question 3.1] - you can't separate one step from the PROCESS! Systems Thinking & Problem Solving REQUIRES a "Big Picture" approach.

Director of Facilities is far and away the biggest contributor - they are understaffed and under funded for their Management challenge.

I believe the real challenge is that Reserve Center facility management doesn't have priority attention with leadership. How can we manage facilities with an Facility Support Officer who visits the Center once a quarter? Seabees have been "committed" for years but the RNCF has overwhelming training and project obligations. We are always playing "catch-up" - roofing projects that take 3-4 years to get through the "Process" after being identified. WCRP Projects that are poorly scoped and poorly Administered - [...] to name 2.

At the Reserve Division NAVFAC Facilities Conference in Spring '90 in New Orleans a workshop recommended reorganizing to basically treat Facilities Mgmt in CNRF as a PW function. A PW Det at each Readiness Command with adequate CEC/Civilian Engr/Seabee assets to service the centers. The thought was that a cost effective return on investment could justify Reserve pay billets that may not even have a Mobilization tasking. Real Facilities Mgmt pay back on a daily basis for Reserve asset justification.

If we're going to do a remake of facilities mgmt - let's do it right with a full fledged TQL Process, Leadership and Feedback approach! We have the people, we have some money - let's use training, teamwork, feedback, and systems thinking to improve the program.

- MO-323 is ready for a rewrite.

- More training of Facility Support Officers are desirable. This could be done annually. Use the outstanding performing Facility Support Officers to teach and lead new Facility Support Officers through all the material to a small class vice a large auditorium.

- Reserve Centers need better qualified staff (active duty) personnel to handle day to day facilities matters.

- Unfortunately the least helpful people in facilities mgmt of Reserve Centers are EFD's and PWCs.

- The most significant problem is getting the work accomplished once the problem has been identified & funds have been obtained.

- (1) Facility Support Officer should be 3 yr. billet.

  (2) Director of Facilities should be CEC officer

- I would like to see more commitment to the Facility Support Officer program. While most agree it is important work, it is discounted by selection boards, especially when the officer is a LCDR or CDR. Consequently it is hard to attract the best performers for Facility Support Officer and related billets.

- Proper facilities management can not be done when responsible personnel are rotated on a two year basis. They always have a short term perspective.

- Two major problems:

  1) Inadequate funding for MRP & Special Projects.
  2) Instabilities in Facility Support Officer allocations.

Facility Support Officers

- The biggest problem for effective facility management is that the Facility Support Officer has no construction authority. The Facility Support Officer functions only as an advisor to the Reserve Center CO. There is also a communications problem within the system of funding and approval with the Director of Facilities being a non-engineer and the Readiness Command being the customer with the engineering community (EFD, NAVFAC).

- More training is a must! As an X-S3, I found the process initially confusing. Junior officers w/o facilities or Navy experience are at a real disadvantage.

  More support from NCF units is essential. I had to develop FACTMs at both Reserve Centers.

- Reserve Centers need at least one qualified active duty person whose primary duty is facility management. He should be the full time coordinator for the Facility Support Officer & FACTM. Facilities management on drill weekends only is ineffective.

- System is over managed and too complex to efficiently handle small (<$2 - 3000) repairs.

Has too many "management" areas - safety, environment, energy, etc., which overlap, waste time.

- I have met with both the Base ROICC and the PWO. I try to make myself available twice a year during the week to meet with PWO & ROICC. Besides I only have one Reserve Center, which is located on the Naval Base.

- A) Inspection of complex systems usually requires special tools & equipment for testing, all of which are not readily available at Reserve Center for use by Facility Support Officer/FACTM

B) Navy regulations prevent use of non-Navy tools and equipment to accomplish task, thus preventing many small maintenance and repair projects at the Reserve Center level.

C) Engr & Inspection problem number one is the solution of defects by parties not in proximity to the sites, usually on the larger problems budget wise, i.e.., one job was completed with objectionable aspects prior to the submittals being reviewed & approved resulting in messy warranty and rework.

- Not enough interaction with NAVFAC & ROICC. Seems that their highest priority is protecting turf and not serving customer (Reserve Center CO) through all available resources including Facility Support Officer.

- I feel like the management system works fairly well. However, I would like for the Facility Support Officer to have more control/information over facilities prioritization and funding through the REDCOM's.

- [Re: Confusion about the Navy's facility management system] I know system very well on active duty side, and so have been able to make "translation", but am alarmed at how many of my peers don't understand the system!

[Re: Regulations/Instructions] Hard to get, hard to know which ones to get.

[Re: Engineering & Inspection avilability/expertise] Seabees are great resource, but often facilities work is not their priority. Have started FACTEAM and hope this will improve matters.

The major problem I see with the facilities area is lack of continuity and time. A full time (E-4, E-5, or E-6) member must be assigned to handle day to day issues and track work (from initial inspection which designated the work, through programming, to completion). It is difficult to come in every two months (have two Centers) and "start-over" again - i.e., catch-up, figure out where things stand, what's been done, etc.

- Need to perform more drills to get the job done right.

- Funds (Readiness Command) should be awarded on a project basis for self-help & Seabees rather than lumped together. Accounting should have separate line items for each project.

- Training of the Reserve Center CO and Facility Support Officer to provide leadership for facility maintenance is significantly lacking. I envision a one week course which reviews facility planning, (BFR), adding/deleting facilities, AIS, MO-323, getting funding, Seabee support, contracting, ESRs, resource request, step I, Step II, resources available and ways to access, key environmental issues, key safety issues, key OSHA issues, etc. This training should be given to both CO & Facility Support Officer prior to taking on assignment.

  Also, when request for new reports or report feedback goes to Reserve Center and directs the CO to contact Facility Support Officer for guidance the NAVFAC organization should have prepared the Facility Support Officer for the request with skills/capability.

- - Question No. 1 seems too difficult to give you a true, representative answer.
  - Director of Facilities -> Readiness Command ->Facility have an unusual Chain of Command.

- The EFD's should send the full time staff personnel to the Reserve Center to identify the full extent of the problem when we let them know of the problem. Many recurring problems could be avoided and corrected if the EFD send someone to inspect it. Also, by making field visits, they would see what problems the Reserve Center faces on a daily basis (with respect to facilities management) and let higher authority know of the urgency of these problems.

  The government wastes a lot of money on "quick fixes." They should look to spend more money initially, if deemed necessary, on correcting the problem long term instead of temporarily.

- Expect the NAVFAC realignment will adversely affect Reserve Center engineering service and design support.

- The Facility Support Officer program offers all officers with a desire to seek out answers - the opportunity to get the job done. If one doesn't know the answer to a question or how to solve a particular problem, there are a multitude of avenues to seek out resolution. The system is very robust. I have no complaints.

- Facility management instructions & requirements are a jungle. Reserve Centers do not even have all of the reference pubs. Facility Support Officers don't have access to instructions or pubs at home, so its difficult to do things in between drills. What would be helpful is a list of "experts" to call to answer questions and get info on how to do things. Such as:

  - updating FPDs
  - changing property record cards
  - environmental issues
  - BFRs
  - Real Estate issues (leases, etc.)
  - etc.

Also, the Facility Support Officer/Facteam relationship needs to be better defined. Who does the Fac Team work for - the Battalion CO? the Facility Support Officer? the Reserve Center CO? Right now the Facility Support Officer gives guidance but he can't direct when each man drills, or what he does.

In the "green machine" the CEC officers were trained in their billets (and we also had an active duty staff to assist between drills). In Reserve Division NAVFAC our WETs are geared around our mobilization billet and we are expected to understand the complex facility maintenance job by osmosis even though many of us haven't dealt with Public Works jobs in 15 years. The Reserve Center CO's depend on their Facility Support Officers to help & assume that we understand all of this stuff. We need to formalize a method for obtaining the info we need rather than groping for it.

- There is a high degree of apathy through out the system. Need to check into the control of funds at local Reserve Centers ,i.e., communication between supply ($) & facilities.

- Communication between levels and response to repair needs is way tool slow. Too many non knowledgeable people are involved in facilities work. There is a lot of paper, but no policy or plan. Wrong people are used to accept work.

- The task of the Facility Support Officer is at times an exercise in futility - the amount time to effectively do this job would lead you to get fired from your civilian job. Seeing a Center once a quarter is an ineffective way to use personnel - you lose so much time just in briefing & debriefing, you have no time to be much help. A successful year is measured by getting the AIS done.

Also, on drill weekends, there is no one to contact to work issues/problems/projects, e.g., no Director of Facilities, no Readiness Command, no EFD/EFA, no OICC/ROICC, no PW, etc.

- I think that there are probably some Reserve Centers that need a full time active duty Facility Support Officer. Sometimes one weekend per month doesn't get the job done.

- Reserve Centers can minimize many chronic problems by optimizing self-help & small purchase contracts.

- Seabee FACTM need appropriate rates & training, tools & equip. Need group for inspections. Need P&E person, draftsman. Need maintenance personnel w/tools & equip. This need to be a priority on the Seabee side of the house. CB priority should be Reserve Center upkeep. Battalion/Det inspection item.

- No one talks to me as Facility Support Officer. I was not on distribution list during WCRP, underground storage tank was removed before I knew anything about it. NAVFAC & ROICC have no respect for our program. Never have tools for my people to work with. Good system is to combine DET OIC & Facility Support Officer where possible.

- The FACTEAM concept does not receive the support expected from Battalion. The importance of this program is not realized at the DET level.

- I'm assigned to 3 centers. The full-time personnel are understaffed. Facilities is a low priority collateral duty. Those assigned facilities typically have no facilities knowledge or background at all - such as a Boiler Technician! We Facility Support Officers must rely on the full time personnel to get things done between our visits. Reserve Centers need to be staffed sufficiently to execute facility management programs such as Control Inspections and Preventive Maintenance Inspections as well as be responsive to facility needs.

  I'm doing okay as an Facility Support Officer because of my 11-1/2 years of active duty experience. Otherwise, this independent duty would be overwhelming trying to figure out what to do and <u>how</u> to do it. More training (not just a 2 day conference) is needed.

- Everyone outside the facility puts up impediments instead of rolling up sleeves and helping the most productive time I and other Reserve Center staff spend is searching for qualified small contractors. Small contractors are our best allies. They provide more help and more results than <u>any</u> government person.

- How long it takes to get a high $ item repaired or replaced without using "emergency" funding is a big problem. If HVAC deteriorates very rapidly, normal funding process takes 4-7 years or more to get replaced.

- Director of Facilities staff for Readiness Command [ ] does not coordinate and communicate with Reserve Center CO or Facility Support Officer effectively.

- The Seabees do a super job in helping the Reserve Centers. But they are hampered w/ not enough tools or maintenance money to do more

  Many reserve centers need janitorial contracts to help out in the esthetics of a bldg. There is not enough time for the staff to do their job & clean too.

- Without minimal contracting authority - $2 to 5K (example: in civilian work I can sign up to $250K) the work as an Facility Support Officer is a joke!

The Navy better check again, if TQL isn't going to be a joke too! Authority passed to the lowest responsible level is one of Deming's 14 points.

- I am new and have little experience in facilities management, but I feel that the lack of knowledge of the system or that does not always function properly is the largest problem

- A. The Reserve Center staff could certainly use an automated PC based facility maintenance management system. There are many on the market! This would help drive the needed inspection program which can be done by Reserve Center staff & Seabees.

B. All the inspection & project write ups done just right would not overcome the lack of funds to accomplish the backlog. The backlog of MRRP is well over the guideline of 1.8% x current plant value and growing. Without funding this will continue to grow. My Center is relatively new (1968, 1988, 1990) so it has not impacted occupation greatly. Other Centers are in worse shape.

C. The AIS, which should be automated to show backlog of MRRP is a key document not mentioned. I don't know how the Naval Reserve Force can properly manage the project backlog without using an automated data base of project info. If one exists I don't know of it.

- Both Reserve Centers I inspect are less than 20 yrs old and in excellent condition. In the last year I have identified no major problems, maintenance wise, that the Seabees/Reserve Center staff couldn't accomplish.

The biggest problem I can see is just to have someone (Facility Support Officer, etc.) visit often enough and be able to call the maintenance requirements out to the CO for execution.

- Availability of expertise is the greatest problem. Reserve Division NAVFAC could provide a pool of expertise that are IDTT'ed into various Reserve Centers for support. The Facility Support Officer is a jack of all trades. Have Reserve Division NAVFAC officers specialize to become a resource available to Facility Support Officers especially on week ends. Readiness Command Director of Facilities could work Tuesday-Saturday. It can be difficult to coordinate all communications through the Reserve Center.

I have no comunication channel open with the PWC. It must all go through the Director of Facilities. Direct communication with the ACE/ROICC would help significantly.

- LT DURANT, as is the case within the Reserve system, information flows 'at best' at a moderate pace. Often times, the in-the-field officer is left to his own demise in implementing a workable system from a barely evident 'turnover' file. It just seems that the "weekend warrior" status results in a weekend worth of devotion. It surely is the case that the better Facility Support Officer and CO programs have evolved from above and beyond the call of duty amounts of program devotion and attention to detail.

It would be a blessing to devise a marriage of timeliness to our in-field management system requirements. A "process" which is understood by all who have to utilize it, and which results in a timely and contributing exchange of information from all parties so that the "process" becomes a way of continually streamlining and weeding out the ineffctive or confusing, or simply needless waste of precious time and effort.

It goes without saying that we Reservists' time is already taxed to the maximum to provide our customers with the service they desire. And, it is also assumed that steps such as the one you have devised are an attempt to better serve that end. I applaud your effort. I also found your survey to be an accurate appraisal of the Facility Support Officer system as we know it today, and yesterday...

Aside from the endless battery of paperwork and required readings with which we are constantly faced, we must take the full process in totality and assimilate that which is meaningful to our own programs usually ON OUR OWN due to the limited amount of time we have to "act" or "react." For example, this is my second year as an Facility Support Officer and I am just now going to attend the Facility Support Officer conference. It also took me ten months into my first year as an Facility Support Officer to obtain my own copy of the Facility Support Officer GUIDE! (I finally obtained it from another Facility Support Officer who had another copy available at his Reserve Center).

I just want the system to work better so that I can work smarter and better also. The whole Navy-wide system and process is overwhelming just as the scope of our facilities and manpower is at a larger scale. But does the process of maintaining our facilities and getting the information out have to be so confusing, exhausting???

Can the TQL and TQM systems of approach have some merit? We are told that NAVFAC is an excellent example of how it can work.....

- At the present time the procedure is adequate and other than providing more contract flexibility on a local level, nothing should be changed. Use of local Seabees to perform AT Job some projects would be very useful.

- Lack of training of active duty personnel is a problem. Active duty Facilities person is typically SK with a great deal of other work and little training in facilities

- The instructions are overly broad and general in scope. The instructions lack specificity in basic description and performance related items: i.e. job description, source for answers, procedures that can be followed, contacts for all information, form listings and applicability.

- 1. Self-help (Seabees) very important not enough support available.
  2. Contract award bids delays too many middle man & not knowlegible.
  3. Not enough staff (maintenance) support available.

- 1. Lack of Funds: Can't get sufficient $
  2. "The system": What I need now may not get done for 3 fiscal years, if ever
  3. Lack of Tools: many Seabees don't bring tools & the Reserve Center for sure doesn't have 'em
  4. Lack of priority: What I designate as "Quality of life" or "safety" is ignored.

- Warranting is a must for the reserve Center - Every qualified Res. CEC Officer should be Warranted. Centralizing of authority is the cause, not the answer - authority needs to be at the Reserve Center.

- More funds need to be made available. Training/direction is a big problem more is needed.

- I am a direct commission officer with no active duty experience in the ROICC Community. It has been difficult to understand exactly what is expected of a primary duty Facility Support Officer, how the process is intended to work, and how to be effective in 1-day a month (per Reserve Center) The MO-323 is a great help, it is not complete.

- Drawing up of designs, then preparation of contracts is too hard. We need OICC/EFD support to assemble contracts that are properly written & include a good design. Plus, local Seabees vanish by being transferred or pulled back for battalion work. Month to month, there is a different or nonexistent work force.

- The most difficult part of the Reserve Center MRP is convincing it few CO's that Facility problems are Not cured overnight! You cannot CASREP A Bldg.! I have been accused of doing nothing by one CO even though I spent many hours training 3 consecutive facilities chiefs (in one-2 yr period), establishing and training a previously non existent FACTEAM, and establishing and funding a valid CI & PM program, he could not see beyond one month that these building blocks would serve him very well if I was not available. Each month, during debriefings, he could not understand why this training was important. This particular center, in the last 2 yrs, has had new A/C systems installed, new boilers, new water heaters, an HVAC Balancing, and an list removed. The BLDG was Built in 1978 and is in excellent condition. He has at his disposal a well trained facilities chief, an excited active FACTEAM, and a large group of Seabees to call upon for expertise. The frustrating problem is convincing him that things will happen and are happening.

- Dealing with Readiness Command is the biggest problem. Very uncooperative. Border on incompetent.

- The facility maintenance and repair approval process is too slow. The Facility Support Officers should be given more authority to approve projects. Facility Support Officers should also be given the training required to warrant them as Contracting officers.

- Facility Support Officer Paperwork is overwhelming. There are too many reports and they have duplicate information - i.e., weekend report, quarterly reports etc.

- The biggest hindrance to successful support of a Reserve Center is the NAVFAC 04/02 organization. They have no imagination when it comes to approving/identifying contract types. The use of an IFB or RFQ is not necessarily the best vehicle. The "design-build" contract type is extremely successful in the private sector & other Federal agencies & should be considered. The advantage of a D-B contract is a decrease of the entire process from concept -> design -> construction award. The cost is generally going to be less than a traditional fixed prize design (either IOC work orders or FP designs) with the follow-on IFB for construction.

With regard to the 04 controlled design phase, an effort must be made to ensure we get 1).more "performance" specs & 2).we stop putting in contract language that is overkill or unenforceable.

Example (1) "place concrete, screed by hand, hard float, & broom finish." Why not, "place concrete & screed or vibrate to ensure uniform density & provide a broom finish."

(2) "Protect concrete surface with visquene over lapped 12 inches." What if the Kr overlaps only 10 inches? What if the Kr got a deal on visquene wide enough to cover all the concrete? We need to ensure a clause is enforceable.

(3) Require a Kr to provide a complete asphalt mix design for asphalt to fill a 6" wide trench across a parking lot (conduct was installed in trench) Or, provide a concrete mix design for a pad at a refueling stand.

In these examples, the 04 administered design contract was for a UST Removed/Replacement at a gas/diesel fueling stand. The trench is for wiring the UST monitoring gear which is installed in a garage. A std 3000 psi concrete from your local batch plant is more than adequate with no mix design required. The contract warranty & inspection clauses cover the potential of a bad mix. An asphalt hot mix to top the trench w/ a std highway or DOT spec would do.
When the EFD/EFA starts looking towards performance specs, & stops putting so much risk on the KR, we'll start getting better bids & performance.

- Additional facilities management problems Frequent relocation of QE Facility Support Officers from one Readiness Command to another
Facility Support Officer has no control over the priority of Seabee detachment projects

- System is too complex for Facility Support Officer to run himself especially on one drill weekend a month. However, with Reserve Center staff, Readiness Command code 08, EFA//EFD ROICC and high[illegible] command support, the Facility Support Officer can be the key coordinator/initiator of facility work and the system will work. Also, because every Reserve Center situation is different, I can't personally see how there will be any pattern to the results of section 4 . I would be very interested in looking at the results

- Often a group of different projects are separately developed which ought to be combined or at least sequenced properly. e.g. replace lighting/replace suspended ceiling- insulate ceiling. If done as a single project would permit the replacement of ceiling lights and insulation simultaneously, whereas, otherwise the ceiling would have to be removed at least twice after the first project. But, if

one of the phases was over already "in the funding mill" , the Facility Support Officer would have a hard time combining 3 project scopes into one. We need to make more whole center calls rather than picking away at this or that

- Section - 2 item: ranking is not really linear-"Nuisance factor" between any two sets of adjacent items may not be the same I.E. 1&2 are inter-changeable, 7 & 8 are not

Sec 3 Item 3: can't say enough about the Seabees! Reserve Center staff provides a great deal of support and are an integral part of the process, if given the opportunity, all of the other organizations are over-worked machines, in a way (not intended to be a detrimental statement).

Sec2-item3: Although not a problem now, availability of Seabees sometimes limited by det OIC. only in the smallest of units is exper.... unavailable.

Reserve Center CO's

- There is no course being set by New Orleans as to the near term and long term goals for facility management. For example, conversion to more efficient HVAC, lighting and water systems.

- The director of facilities should be a CEC officer

- It appears to me that this system does not exist; for example, I am requested by my Readiness Command facilities and EFD to identify PCB's in transformers. I wouldn't know a transformer if I fell on it and neither would my staff. the way it should work is the Director of Facilities should send or contract for someone to check all centers. next example is boilers certification standardization, it doesn't exist. I contracted for any boiler to be certified. it is but certified to what, I don't know. This also should be done by the Director of Facilities or someone in the reserve ?.....
These two examples are off the top of my head I am sure there are others.

- Readiness center in good condition. I view my prime disadvantage to be the fact that the Seabee's drill at PDS not in Reserve Center. I only get them in the building to accomplish specific projects . Not avail for small scope maintenance work.

- I feel that the key to an effective facilities management program at the Reserve Center is a knowledgeable, committed facilities support officer. I strongly recommend that an Facility Support Officer training program be developed to provide those without experience with basic program procedural guidance, reference material, and as feasible, a handbook incorporating this information.

To the typical Reserve Center CO, the whole NAVFAC structure and who does what for whom can be confusing. A one page "desk guide to facilities management" would be very useful.

With the down sizing of Naval Reserves in the future and the disestablishment of the local RNMCB,. the continued support of this Reserve Center is in doubt. We have relied heavily on our Facility Support Officer for support, he has done an outstanding job, and we would hate to lose him, would like to see the Facility Support Officer more often. She (LT ...) is excellent and a terrific

help. She is new to the assignment & hope she can get up more often when she returns to the US after her summer studies in ....

- If on-site contracting authority could be raised to $5,000 from $2000, the naval Reserves would significantly obtain "more" return for each dollar. For example, I needed to replace an exterior door entrance prior to receiving the $2000 contracting authority, when it was referred to the ROICC because of contract authority, the cost jumped to $4300 from $1890 and none of the local contractors who have given me quotes would compete because it involved too much paper work, Also I now have a main power switch and cabinet(electrical) that needs repair. I have bids(three) that are less than $2000, However, these bids are dependent upon work being performed during workday. The tenants on-site manager is refusing to cooperate because it involves approximately five hours of no electrical support to site. Thus, to do the work on the weekend will involve time and a-half which takes the project cost over $2000. Then I will be forced to go to the ROICC and associated bidding environments. I anticipate cost to rise to $5000, Therefore, the Naval Reserves has spent more money for the same project, which means some other project or projects will not be supported.

- The biggest problem I have is the money limitations placed on me, for example last summer I could have replaced with assistance from CBs the entire parking lot, however do to regs I am not authorized to expend more then $2000 on any project, Instead the parking lot will be completed by '94 what a waste and I could have done it now at great savings.

- Center COs are left to hang re Facilities. I'm lucky I have a contracting background. Facility Support Officers should be assigned to one center as their permanent drill site, and should be warranted contracting officers. If they weren't ROICC or at a PWD/PWC that's on active duty, send them to the right schools to learn how to do this job.

- [@ 2.1] There is no one common starting point in the processing of maintenance requests.
  ROICC - local contracts
  Director of Facilities - small repairs
  [...]DIV - Real estate (leasor), major repairs

  STRESS: adopting local and state regulations those are the ones that will get centers CO's into trouble.

  To many times the material readiness of a Facility depends on the availability of a CB detachment which is a hit and miss proposition. A more organized approval in assignment of 2 wk ATs into maint. pools to complete requested Center Projects "AIS" could be a planning tool.

- Past history has shown that problems are identified quickly, however long term resolution has sometimes taken months. Additionally, because there is no assign Seabees FACTEAM, requirements that can be met by them are not always met due to scheduling conflicts.

- The past 3 Facility Support Officers assigned to my center were neither engineers nor were they experienced Facility Support Officers. Guidance does not clarify contract writing

responsibilities. Centers have neither the time nor the resources(Experience to design and contract for maintenance or repair. EFD's are virtually non supportive.

- As a new center CO with significant at sea experience as both an engineering division Officer and department head as well as a tour with the PACFLT propulsion examining board, I have come to appreciate the value of self sufficiency stressed in the fleet. I find it frustrating to not be able to tell one of my people to "fix it" having to rely on activities who do not have a vested interest in the maintenance of my building(i.e. they do not have to live here)is aggravating at best.

- The contract procurement/award system does not serve the customer (i.e. ME - the NCR CO). Constraints on procurement regulations make it exceptionally difficult for one to do anything - and thus is a problem for any center not near a major Naval installation.

- Having served as a Director of Facilities before assuming duties as a Reserve Center CO, I have A Unique advantage. However, Facility Management is critically dependent upon local CEC/Seabee expertise and a strong and involved Director of Facilities. I have been fortunate to have a strong local Eng. team but the Director of Facilities office assistance has been somewhat weak. Since our center is a tenant of the army this lack of support has been less of an impact than for other activities. As a tenant of the army we have been subject to their budget priorities and this has been a serious problem. It has taken an enormous amount of effort (letters and phone calls) to convince the army of the importance of properly prioritizing repair of a leaky roof, and non-functioning heating and A/C systems. Convincing them to repair/replace broken external doors has been next to impossible. It would be extremely helpful if there were something available to require the army to reconsider priority of tenant repair projects. Talking to a civilian facility manager (collateral duty) who has little at stake if something is ignored has been insufficient at best. I would be happy to discuss further this most important matter at any time if desired until my transfer in...

- Director of Facilities is a potential big help but overextended. They are brought in for major projects, and AIS review and funding, otherwise don't see them much, except for C.O. Conferences, where they yell at us for not filling out our paperwork right. With some notable exceptions, reserve facilities support officers have not been extremely pro-active or useful.

- The biggest problem is that I have no one single source to turn to assist with my facility management for example: some support I get from working directly with the ROICC in ...., some goes from ROICC to PWD ... , some from Readiness Command ... to ROICC, some from Readiness Command to EFD. I feel I should only have to deal with the Readiness Command facility manager and he should coordinate with outside activities.

  Also the attached letter addressing a new tasking procedure will further complicate center facilities management.

- Reserve centers must have excellent storekeepers to handle all of this as well as effective Facility Support Officers and avail..... and competent CB detachments.

- With scaling back staff at our servicing ROICC, now the Center has the burden, with Director of Facilities assist, to prepare contract-ready specs, yet other than assist by our Facility Support Officer we really don't have the expertise this greatly cha..... out the time required to get facilities projects initiated.

- Funding for facilities management seems to receive the lowest priority until the problem has gone beyond a simple repair. having additional staff at the readiness command level(full time support) may help prioritize and standardize work requests and identify repair needs before they become critical

- Major problem is estimating within a reasonable amount the work required and the cost prior to resource request. more often, scope of work increases once job is begun, and other times estimates are too conservative.

- Too much justification (i.e. paperwork) is required for getting money for needed repairs

- [...] Division is my biggest problem. They never respond to my requests and they put out Bad info. MO 323 is a superb publication.

- As an overall comment, the problems that most often surface are too many simple things to do. The individual items are no t difficult but the aggregate is overwhelming.

- All this facilities BS. could be consolidated into one small office at the REDCOM's and at RESFOR. Its all the bloated bureaucracy that inhibits action! Bureaucrats killed communism and the Soviet Union and they'll kill capitalism and the US. too if we let them. Off with their heads!!!
P.S. Thanks for this opportunity to vent my spleen.

- Without a facilities support officer the system doesn't work. The Facility Support Officer ties all the loose strings together from Readiness Command to NAVFAC, From Reserve Center to CB units. The Facility Support Officer is the key member in the system.

- Long term identification of facilities to be closed should be done, to conserve resources for those facilities with a future. Also more environmental education is needed to keep us out of trouble with those issues.

- Center seated for closure 30 September 92. All plans for improvements to the facility on hold since 1982 (first talk of closure of this 45 yr. old Quonset hut structure).

- I have been exceedingly fortunate to have a solid Facility Support Officer, Readiness Command, and ROICC. Also, the CB's have been a great help.

- NAVFAC is useless to the standard reserve center they are far removed both physically and operationally with what goes on.

- Seabees should be utilized to do more of the work vice contracting out to civilian sector.

- Facility Support Officer is good - just not able to be here enough.
  Need more local funding.
  NAVFAC/EFD in an ivory tower.
  FACTM is not a good use of Seabee resources - better to use to P&E and fix problems - not as routine inspections only.

- In my two years as Readiness Center C.O. I have had two outstanding Facility Support Officers with a supply CT on my staff full time (TAR) the facilities management is one of my strong areas.

- The Facility Support Officer program has not been of use to me due to excessive turnover, i.e. 5 Facility Support Officers in 15 months.

The Navy's organization for managing construction for shore activities is very large and I sometimes feel "left in the dark".

I know that the "system" is working projects for my Center but I am not always "privy" to specific details. Example; This Center completed a major center repair project in July 1991. I am interested in planning for the next one, however, no one knows the scheduled date. A well defined schedule allows all elements to plan effectively.

- Facility Support Officer doing his/her job is a must for effective facility Management. Establishing a FACTEAM from SEABEES probably the best possible assist would be to have a full time Seabee EA1 or EAC assigned to each center for planning and estimating repairs (if not for each center, there to a Readiness Center, where travel would be involved. He/she could act as the on site liaison between LANTDIV/NAVFAC/Readiness Command and coordinate funding and self help to enhance repair/replacement efforts.

- Building is old but small i.e. manageable but always requiring work. To get good support, advise and funding, in spite of the fact that I don't completely understand processes/organization.

- Promised work gets postponed and often canceled. work which would ultimately save money if completed (e.g. door and window repairs to save heating and air conditioning costs-plus add to safety and security) gets a low priority and therefore not funded.

Civilian PWC/PWD personnel (some) seem to have 'little' professional pride in their performance.

- Long time to get warranty/rework done; more damage occurs while waiting.

- One of the biggest problems is support to Readiness Centers who don't have an on-site Director of Facilities and staff. - It's expensive but each echelon IV needs an on-site Director of Facilities to be part of his management team. I speak from experience in both Readiness Command with Director of Facilities (Readiness Command [ ]) and without (Readiness Command [ ]).

- My biggest frustration is the lengthy amount of time it takes to contract a problem I have one repair job that has existed for 5 months and I'm still waiting for funds to do the work. With a dollar's worth caulk I could fix my leak. However, I can not stand on my roofing structure.

- The time lag from project identification to project completion is way too long.

- Program is good. Our building is leased from the city for $1.00 per year. This should be noted.

- Real issue tend to be the capability of junior staff personnel's ability to coordinate with Facility Support Officer/Readiness Command/NAVFAC of real needs and then get project plan funded and completed

- As a tenant, my situation may be other data for some of your questions. It took flag officer involvement, but I finally got the facility manager's attention on one project-roof repair. My Facility Support Officer could be better, but my Seabees are wonderfully supportive - this is my 2nd tour with them!

- The numerous task of the assigned Facility Support Officer is extremely troublesome Facility Support Officers are responsible for several Reserve Centers not within reasonable commuting distances making it difficult for the Facility Support Officer to pay required attention to any one center. Alleviate this taking to only one center or 2 centers co-located(reasonable commuting distances).

- Most Director of Facilities, and NAVFAC EFD's are slow and unresponsive to Naval Reserve requirements. The Director of Facilities is usually a multi-Facility Support Officers LCDR line officer who is a proven non-performer. I'd like to see a CEC officer in Director of Facilities billets. Director of Facilities have too great a span of control having to serve 3 to 4 REDCOM's each Director of Facilities should have no more than 2 REDCOM's or 20 Reserve Centers.

- My background is primarily shipboard with 13 years of sea duty in Commanding Officer, Executive Officer, and all three line departments including Engineering. I have been through 2 regular overhauls, countless RAV's, SRA's, and repair periods. I have been involved in thousands of maintenance actions on a myriad of ship's systems ranging from C-4 CASREP's to routing maintenance. Never before in my 27 years of total Naval Service have I experienced such a fragmented, convoluted, inefficient approach to maintenance. There are so many fingers in the pie,

with so many divided responsibilities, so many approval routes and "chops" for projects, and such obscure routes for paperwork-it is a wonder that anything get accomplished!

- I believe that this center is superbly supported by Is.'s Facility Support Officer Readiness Command, and NAVFAC. Our primary concern/problem/difficulty lies in the acquisition of funding to complete projects. This causes undue delays. I don't anticipate a near-term solution to this problem.

- Disband the current system. Have it maintained through the individual REDCOM's

- All reserve centers drilling in excess of 1,000 drilling reservist should have a full time facilities officer. Especially buildings that are WWII vintage.

- The lack of qualified or trained Facility Support Officers. Facility Support Officers tend to rely on other people to accomplish their job. The Facility Support Officer is not fully aware of his duties and responsibilities. In the Facility Support Officers defense, the facilities instructions are old and out of date. The entire facilities program requires a major revision from initial contract awarding right through to the maintenance of the completed facilities. Ever time I have a question relating to facilities, I am consistently referred to outdate instructions.

  As you may have guessed, I'm not very happy with SELRES or active duty support in the facilities areas. My regional facilities officer attempted to hold me accountable for an outdated instruction which outlined Facility Support Officer duties. The Naval Reserve EFD also held the same instruction and was also using it as current doctrine. I suggest that you look into stream lining the organization.

- Proper FAC management cannot be effective when Reserve Centers are understaffed and over tasked. While our Seabees do an excellent job for our FAC requirements; timely funding, planing (simply our logistics system) makes the most simple repair a major endeavor.

- My Reserve Center is in an Army building constructed in 1942. The Army condemned the building in 1981, the Navy moved in 1982. My entire tour has been spent working with NAVFAC ....DIV. Real Estate Division in attempts to get a new facility. After having signed contract for a new lease/purchase facility, the contractor was unable to get financing for the project due to GAO lease restrictions in 1989. A whole center repair project was planned for $1.7 million. The lease/purchase building was $1.4 million. Little has been accomplished pending "moving into our new building".

- We have an outstanding Facility Support Officer. HVAC breaks a lot. I wish we had a maintenance contract. We have a fire alarm service with Sonitrol monitoring and Simplex equipment. Whenever it rains, Simplex generates a false alarm.

- We are in a 1948 structure that is wholly unsafe. Trying to get the attention of personnel who make changes is virtually impossible. Once they recognize safety hazards then funds are easier to acquire. However, all too often requests are received a simple complaints solely due to cosmetics of a facility. Unfortunately this is of little consolation to someone who may get hurt!

Once a facility is evaluated as unsafe, the politics involved in moving forward is mindless. I have 16K usable space and BFR of 39K. My DCT is 5 miles away. I have wiring chewed through by raccoons, deteriorated wiring, inadequate head facilities, asbestos, lead, plumbing problems and only 36 parking places. What's the best solution? - Ideas presented by seniors?

1. MILCON
2. Wait but not fund any project due to excessive cost and asbestos involvement
3. Possible lease/purchase

Two years after I started trying to improve on more from this facility, I finally have Readiness Command attention. But the jury's still out on what to do. Sure hope we don't burn down and God forbid someone gets hurt - or I lose all 650 Service, medical, and dental records.

- AIS guidance, etc. should be modified to address actions required at Navy facilities which are tenants of other services.

- For the most part the Reserve Center CO is left to deal with facility problems-supply helps with the bids and awards, Readiness Command is good for moral support but it (the dirty work) still is left to the CO. He needs help.

- Most problems are incurred due to poor quality assurance by facility inspectors when accepting final product.

- Energy conservation: Need to incorporate more energy efficient features into centers.
  -KW Demand Balance Building Programmers
  -More efficient A/C Zoning
  -Programmable thermostats
  -Low energy lighting
  -Automatic IR sensors to control classroom/Drill Hall/Store Rooms

- Part of the problem concerning not having personnel, present on drill weekends for facility, inspections/work is because Battalion 28 has and still doesn't inform Reserve Centers when personnel will be gone on 7077.

- I consider the entire system "eye-wash", something that sounds great on paper, but does very little for the facility. I personally can't see why this system is around. It should be eliminated and the more meaningful tasks absorbed by other systems.

- There's very little training provided to Reserve Center CO's.

- The system is so slow and the funding is even slower coming.

- Readiness Command [ ] FAC team has been "outstanding" in their assistance of Reserve Center projects.

- Most of my problems get taken care of by the army which owns the building. However, the Seabees are usually eager to help, although I have to be careful about what they do and if the Army is supposed to do it or not. I do not have any major problems.

- As CO for a building originally constructed as public school in 1921 (75,000 sq. ft over 4 acres), isolation from good government support is our biggest headache. When PWC .... sends in a team, (such as for our new boiler installation project) it is a blessing - we get lots done for lower costs. We could keep a PWC worker busy full-time assigned exclusively to us.

- [@ Q3.3] Facility Support Officer is the other biggest help - who does he belong to? Naval Reserve EFD? If so, that's my choice.

RESFOR was just out on a routine FAC site inspection and I told them that most CTR CO's don't understand the facilities system and need formal training. They said "Not our problem that's what your Facility Support Officer is for." I don't buy that answer! We get inspected on this stuff but no one person or entity wants to translate requirements and tasking into simple English!

- PWC support is tedious, sometimes extremely bureaucratic and quality control is not always good. PWC often slow to react to emergent requirements. Low contract authorization of dollars creates prob. to have repairs done in timely manner. Proposed new Reserve Center (presently under review). Precludes needed repairs on present facility.

We are a host/tennant arrangement with leased space. We have one of the nicest facilities around at a cheap price compared with other Centers. The State of Indiana (host) owns the building and does most of the necessary contracting. This usually means NAVFAC is not involved. This saves months of time and thousands of dollars. The State does not have all the same small business regulations to put up with. It is a quite simplified operation to work under a lease.

- 1. Facility Support Officers should be locally assigned. (mine lives in [ ] and although good, can't get here as often as possible). He's also retiring this fall and I'll be getting my 4th Facility Support Officer in 2 years. (Can't there be a little consistency/corporate memory built in to this position?)

2. With [ ] I gained additional FTS billets but no longer have an engineering rate(mm/bt/en/dc) on staff. This hurts in view of my heating and auxiliary systems now approaching 20 years and minor repairs/maintenance nickel and dime me to death. I use SELRES engineers and the Seabee FACTM when I can, but they're just not here on a daily basis.

3. With 700+ people from three services utilizing this Center on a monthly basis, wear and tear and cleanliness are always issues, the Marines work with us but the majority of the problems have been with the Army.

4. How about some HAZMAT training for Reserve Center personnel(CO, HM coord)? It's really needed !!! Environmental concerns are a big issue here in [ ].

- Don't go overboard trying to "fix" facility management. The Navy's system is functional to anyone who makes even the most rudimentary effort to understand it. What we all want is a comfortable safe work place that is attractive enough that we're not ashamed to show it to the public or relatives. You won't want to hear this but, money prudently used, is all that I need here to makes this 45 year old center a very respectable facility.

- The Navy leases buildings without thought to 5 yrs "down the road" and when the problem is brought to their attention you have to wait 3 years just to get one the 5 yr. POM. It seems that a building has to practically fall down around your ears before any real action is taken and then it won't happen for years. Frustration is high at many centers.

- Reserve Center COs are expected to manage a system that they generally know little about and have no personnel assigned who are trained and knowledgeable, either. I have a 3 yr. old building whose biggest problems are with facility systems installed during initial construction.

- Takes way too long to process work requests. NAVFAC/PWC organizations are manned with too many people that just don't care.

- As a tenant my facilities problems are greatly reduced in most aspects, especially if the host is responsive to our needs. When the host is not responsive - life become miserable.

- 1. Response time is slow on projects which are major. For example, NRC La is over 50 yrs old and needs a new roof. Job is identified and may be done in FY94. In the meantime, money will be spent or repairs and heating loss costs.

2. Regulation and policy tie your hands and inadvertently put Navy at a risk. NAVSUP absolutely forbids Navy personnel any type of herbicide (lawn weed killer) but Readiness Command refuses to request to have professionals apply weed killer to Center's grounds.

Result - weeds are slowly gaining upper hand and will certainly spread to adjacent private lawns creating negative attitude to Navy by residents.

- My Facilities Support Officer provides excellent service and is invaluable to one.

- Many Reserve Center CO's are like myself, they came to these commands from ships with little or no training in facilities. My entire experience is as a civilian with a different branch of the Federal Government and has nothing to do with building operation. This program needs to be extensively addressed at the Reserve Center PCO school in New Orleans.

- In Section 4 you asked for the three most troublesome areas - Please note at one time or another each area has been a major head. CO's are limited to the amount of moneys they can contract (2000.00) any additions or major projects can become major headaches - This is why it is understandable that CO's fail to maintain their buildings (in some cases) to the best of their abilities. In other words - There are too many boundaries, too many prerequisites to fill prior of any project being started, not to mention are the hurdles experienced along the way!

- Usually, Reserve Center is lucky if they have a Facility Support Officer available locally. Since this is a NAVFAC function most of the RNMCB organization officers don't get too involved with Facility Support Officer business. Should be a program to use any/all available CEC officers vice primarily using NAVFAC CECs.

- More timely action on Center requirements (i.e., lawn mowing contracts, HVAC repair contracts) at the Readiness Command facilities office responsible for this center.

- The facilities manager at remote Reserve Centers is usually on SK1 (if you're lucky) but sometimes an SK2 with no facilities experience. If the CO or other staff members don't have shipboard maintenance experience, the facilities can really suffer from neglect. Also, the whole approval process to facility repair is unbelievably slow. If it took the same time to get repairs approved onboard a ship, the fleet would be on the bottom!

- Our Facility Support Officer (Facility Support Officer) drills in ..., ..., and only comes to this center 2-3 times per year. This doesn't help us at all. We need to have an Facility Support Officer assigned here locally or an Facility Support Officer who can come here at least once per quarter.

- Historically, Facility Support Officers are of very little value. Readiness Command Director of Facilities (Readiness Command [ ]) has been extremely helpful, knowledgeable, effective. He has made this thing work for me.

- The instruction(s) needs to be simplifies along with number of inspections required, Keep it simple.- Lead time for project planning and funding can take up to (2) two years, far too long for project required for emergency. Re heating, cooling etc.) (RNCB) SEABEES provide excellent support and have been critical to the proper maintenance and upkeep of the facility. They often used their own tools to complete assigned self-help projects.

- 1. Reserve Division NAVFAC [ ] provides exceptional support regardless of the relative project cost.

  2. This center receives continuous facilities upgrades from the locally drilling Seabees that provides tremendous savings to the Navy.

- It is difficult to be a tenant - I feel I could probably get repairs completed in a more timely fashion if I used the Navy/chain of command.

- Would be nice if each center had its own Facility Support Officer.

- It is incredibly tough for a center physically removed from any support facility to get help. ROICC is slow and unreliable. PWC is expensive, unavailable and unreliable. Facility Support Officer is a non-pay billet (there's only so much time he can spend on the shared centers <he has 2>. Seabee won't help. Draw down in manning restricts bodies and rates available for self-help. There's little money available for contracts and not much help available for making up contracts that will fly past ROICC/contracting. It would be nice if the system and system components acted and as if they were a resource to be used instead of speed bumps to be got over or wickets to be passed through. Do I sound frustrated? Right first time.

- This is a tenant command. Although relations with the local Army people if excellent, the Army Reserve chain of command is incredibly vague. No one accepts responsibility. We are under both 63rd ARCOM and FT, AZ. It is always someone else who is at fault. I have not had an accurate utility bill for over two years. My allocation is based on an estimated cost prescribed 3 years ago. The Army Reserve's bureaucracy puts the Navy to shame.

- [@s3.1] Getting CEC officers to get off their dead asses, break off the proverbial "we/they" with the rest of the Naval Reserve, and do some work.
Many managers and few workers in the reserve CEC business.

- My biggest problem is that I do not have a full time person to be the facilities manager. This job usually goes to the poorest producer or non-admin.. type DC, BM etc.

- This readiness center looks like a lot of Public Schools that have experienced significant growth. There are numerous temporary buildings to deal with expansion in [ ]. Permanent structures need to be built.

- I came to my command rather confused concerning how to get repairs done at a reserve center. CO, NRC school discussed the program but it can be rather confusing because of all the different yet similar commands and programs involved (i.e. ROICC, EFD, NAVFAC, EFA, PWC/PWD, NCR, etc.). Fortunately for me, my readiness command, Region [ ], has provided me with outstanding support and guidance. Included are the Region's Code 06, 07, 08 and Naval Reserve EFD personnel. Through their assistance and help, I've been able to implement and maintain a good and successful repair and upkeep program.

- Environmental - very confusing - no one organization seems to have total cognizance. Example: Whole center Repair project for NAVRESERVE CENTER S. ... - nobody seems to know (ROICC - WESTDIV - Contractor - Readiness Command) who has responsibility or scope of authority to certify building as "asbestos free" or note exactly what asbestos was removed, same story for an underground storage tank removed project. Too many organizations have a little piece of the action but not the whole picture - obviously as CO I need to have "the whole picture" - but, I

certainly do not have the expertise to know exactly what and to whom I have to report, certify or request environmental expertise.

- My Facility Support Officer is very good. But I was without one for almost a year and there were several projects held in abeyance. My new Facility Support Officer has many other demands on his time during his drill weekends and therefore doesn't get to spend as much time on specific projects as is necessary.

- Having just completed a whole center repair project is in good shape facility wise but, if I didn't have my background as a Navy Nuc and years on submarines we would have been lost.
I think RESFOR would gain if we had some "floaters" who went from Project to Project making sure they went correctly, my impression is they don't unless the CO's pushes it or you have a good local Facility Support Officer. But even then the learning curve is steep.

- Lack of an Facility Support Officer is very detrimental to facility management - I just lost mine (who was very good!) and have my AIS input due in one month. Help!

- Facility Support Officer: Should be assigned up to 2-3 centers in same geographic location and have no mobilization unit assignment/responsibility. The Facility Support Officer should report directly to the Readiness Center Commanding Officer and assignment as Facility Support Officer should be for a period of 2-3 years. The Facility Support Officer could play a vital role in ensuring Seabee job assignments in support of facilities is mobilization/professional enhancing. Prompt assignment of replacement is vital in event of loss of Facility Support Officer.

- Definite lack of funding for repairs - Lack of personnel onboard for self help projects.

- I am in an unique situation where I am a tenant on a Naval Station. I receive full service from NAVSTA (Staff Civil), PWC and NAVFAC for may facility needs. My biggest problem is not enough money for the many facility maintenance projects I like to see. I also am collocated on the same NAVSTA with my Readiness Command Facilities Manager who greatly assists with coordinating Reserve-funded special projects and self-help projects. I appreciate that most center CO's don't have this luxury, although being a tenant on a NAVSTA doesn't assure success in the facility management area.
My biggest facility management frustration has been keeping an Facility Support Officer, having just lost my third one in less than a year.

- I have nothing but praise for my Facilities support structure. The Readiness Command has obtained over $85K in funding this FY to fix problems. This is in addition to a $815K whole center repair project for FY '93. If we can keep ... DIV. from spending all the money on things we don't need but are written in a book somewhere we can get the project completed on time within budget.
2. PWC is pricing themselves out of the market place. If they don't wake up and smell the coffee (compete) there won't be a job for them to do.

- Armed Forces Reserve Center .... is a new center, which was built in 1990. This command received outstanding support from the ROICC and NAVFAC; during the construction phase; however, information on new building projects i.e. collateral equipment allowances, modifications, information system design (Computer/PA/internal cable TV system/Telephone systems. Shop and Medical Dept. layout and equipment) should be presented to the prospective user (CO of command) in layman's terms.

- EFD has been particularly notable for their inability to provide meaningful support.

- Our major problem has been the inability of the EFA to obtain contracts in a timely mannerly, send R & D personnel, and take action against maintenance. contractors.
Self-help and organize CB elements has kept this installation going for 45 years not EFA! No PWC assigned to us.

- Facility management always gets the lower priority until the "roof falls in". In large part it is a result of poor training of the CO, i.e. nowhere in the pipeline is he taught the "system". Further, the Facility Manager as the Readiness Command or for the Readiness Command historically has been a multi-passover line officer ready to return.

- The hardest part for a new Reserve Center CO just coming off a ship is figuring out what's required - 3-m?, Electrical Safety? Zone Inspections? etc./ - all those things we're used to. There was no "facilities" in-brief at the Readiness Command when I reported, so I spent @ 5 months figuring out what was needed.

- A Commanding Officer cannot become a facility manger through a couple of hours of program overview taught at the Reserve Center CO course in New Orleans. Like so many other areas of reserve center management, we have to rely on our assigned personnel to be the experts and to do the work effectively. If we consider the Facility Management System to be such an important priority, why do we spread our Facility Support Officers across two or three Reserve Centers ? Being that he is a Selected Reservist, I would barely see my Facility Support Officer enough to cover all of the work if he drilled here every single month. But with other centers assigned to him, as well as all of his required IDTTs for conferences, I consider myself lucky to see him once per quarter. Seabee OICs need to have their role in facility support more clearly defined; they want to support us, but they just don't know how to prioritize the work or split their assets accordingly. The active duty staff (collateral-duty) Facilities Coordinator gets his training only by OJT, and that is just not enough for such a complex management system.

- We have a fundamental problem with prioritization by Director of Facilities/Readiness Command. Priorities seem to be based more on "time in the queue" or convenience of Director of Facilities staff than on need. For example, placing a project for sprinklers and landscaping ahead of a leaking roof which is causing interior damage!

Too many redundant requirements.

- Service personnel/contracts are major headaches. EFD/NAVFAC design seldom, if ever, gives us the product we requested. The general quality is poor, conformance to customer request very poor. They are involved in too many projects. i.e. Design is too noisy.

Your project doesn't address piers, pilings, or landfill. Seattle Reserve Center spends almost as much time and energy educating ROICC/EFD person as we do fending off citizen grabs our property. History files are in San ..... Historical interest/landmark status is a nightmare. Who uses the records? No one we know.

Your questionnaire omission is consistent with the NAVFAC "we know all situations" attitude. They don't. Your questionnaire will provide collectable data. I don't think you are delving into fundamental problems.

The major one: The customer is not in control of the project at any time after submission. I see a Design problem at the 30% review point - it's very hard to get a change. If I see contract non-conformance, I have no power to weigh in.

If you owned my building, would you do business like that?

- There are no active duty billets designated for facilities management yet it is the most important job we have for a 22 acre facility with four tenant commands and over 30,000 sq. ft of building space. I have eaten one E-7 and one E-5 out of an already undermanned hide and they've been supplemented by two man years of HUMS assignments. Maintenance and cleaning of this facility are well beyond the capabilities of two wage grade employees. With all that, we still can't keep up.

I have an Facility Support Officer who is assigned only part time. He cannot keep up with the AIS, EPA regulations, HAZMAT disposal, etc., etc. working onboard only 64 hours a year. And he's good and dedicated!

The Readiness Command staff facilities officer is a non-CEC officer split between two REDCOM's, supported by two absolutely incompetent civilians. And you wonder why we have facilities problems? I have asbestos, PCB's, a security lighting CASREP, a forty year old water main full of leaks, and a building that can't meet energy conservation standards so you're going to reduce my operating budget so I can't pay the energy bills!

Want more? Call me...

Appendix G. Glossary of Terms & Acronyms

ACDUTRA - Active Duty for Training

CO - Commanding Officer

CNO - Chief of Naval Operations

Director of Facilities - Director of Facilities

EFA - Engineering Field Activity

EFD - Engineering Field Division

Facility Support Officer - Facility Support Officer

LEAD Readiness Command - Physical location of Director of Facilities and Director of Facilities staff

NAVFAC - Naval Facilities Engineering Command

NAVRESFOR - the Naval Reserve Force

NAVSURFRESFOR - Naval Surface Reserve Force

Naval Reserve EFD - Naval Reserve Engineering Field Division

PWC/PWD - Public Works Center/Public Works Department

Reserve Division NAVFAC - Reserve Division, Naval Facilities Engineering Command

Readiness Command - Naval Reserve Readiness Command

RESERVE CENTER - Naval Reserve Center, Reserve Readiness Center, Armed Forces Reserve Center, etc.

RNCB - Reserve Naval Construction Battalion

RNCF - Reserve Naval Construction Force

RNCR - Reserve Naval Construction Regiment

STAFF CIVIL ENGINEER - Staff Civil Engineer

Seabee's - Term used for members of the Navy's military construction force

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VITA

Michael Edward Durant was born in Fresno, California, on December 11, 1952, the son of Arlene Veloyce Rowe and Wilbur Edward Durant. From the age of 8 years he was raised by his step-father, Rual Leo "Lee" Wade. After completing his work at Roosevelt High School, Fresno, California, in 1971, he enlisted in the United States Navy. His enlistment, from June 1971 to June 1979, included service on the ocean mine sweeper, USS Reaper, and on the attack submarine, USS Snook. From 1975 to 1979 he served as an instructor at the Naval Nuclear Power Training Unit in Ballston Spa, New York. In June 1979 he entered Brigham Young University in Provo, Utah. While an undergraduate student, he served in the navy and army reserves. He received the degree of Bachelor of Science from Brigham Young University in December 1982. That month he received a commissioned in the United States Navy. His commissioned service includes: Assistant Public Works Officer, Assistant Resident Officer In Charge Of Construction, and Deputy Resident Officer In Charge Of Construction/Assistant Officer In Charge Of Construction. In 1989, he was licensed as a registered mechanical engineer in the State of California. In August 1991, he entered The Graduate School of The University of Texas.

Permanent address: 5261 E. Webster St.
Fresno, California 93727

This thesis was typed by the author.