COMNAVMEDCOM

FACILITIES EVALUATION AND ASSISTANCE

TEAM (FEAT) VISIT

NAVAL HOSPITAL

CAMP LEJEUNE, NORTH CAROLINA

2 - 6 February 1987

COMNAVMEDCOM FEAT MEMBERS

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PREFACE

A COMNAVMEDCOM FEAT visit was conducted at the Naval Hospital, CAMP LEJEUNE during the period 2 - 6 February 1987 for the following purposes:

(1) Assess facility condition and evaluate resource requirements.

(2) Review the status of the Facilities Management Program.

(3) Identify current and potential problems.

(4) Furnish on-site assistance and problem solutions when feasible, and if not, provide recommendations for obtaining necessary help.

This report summarizes the findings and recommendations.

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CO NAVHOSP CAMP LEJEUNE
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I. KEY PERSONNEL CONTACTED

CAPT R. A. Margulies, Commanding Officer

CDR L. O. Simmons, Executive Officer

LCDR L. W. Tomkins, Director of Administrative Services

LCDR S. L. Fish, Comptroller

LTJG R. N. Graham, Head, Facilities Management Department

Mr. Elwood B. Morris, Hospital Engineering Technician

Mr. Woodrow Willis, Maintenance Foreman

Mrs. Ruth Foley, Financial Manager

Mrs. D. Sterlen, Clerk Typist/Work Reception Clerk

II. SYNOPSIS

Facilities Management Department personnel provided outstanding cooperation and exhibited a keen interest and enthusiasm in continuing the improvement in overall department management and support to the NAVHOSP.

A. Facility Condition Assessment, Facility Inspection and AIS.

The formal media that reports condition indicates that overall facility condition is better than the average COMNAVMEDCOM activity. Total reported AIS deficiencies almost doubled from 30 September 1984 to 30 September 1985, but only increased slightly (6 percent) from 30 September 1985 to 30 September 1986. The AIS appears to be understated in the electrical discipline. NAVHOSP has an excellent preventive maintenance inspection program; however, the work should be estimated using Engineered Performance Standards (EPS) to increase productivity.

B. Resources and Budgeting.

A realignment of funds among the various RPMA subfunctional categories should be done by NAVMEDCOMMIDLANTREG, including a decrease in Minor Construction funding. Upon completion of this, NAVMEDCOMMIDLANTREG, together with NAVHOSP, should review RPMA funding compared to unconstrained requirements and make necessary adjustments.

C. Organization and Staffing.

Creation of an Electrical Planner and Estimator (P&E) position and disestablishment of the Grounds Shop are recommended. Also, transfer of two Quality Assurance Evaluators (QAE) to OIC Camp Lejeune is recommended. NAVHOSP FMD management personnel have adopted many of the key productivity

improvements required to make NAVHOSP competitive in the Commercial Activities (CA) study; however, recommendations made in this section should enhance their position against a private contractor.

D. Special Projects.

An on-site review of five Repair Projects was conducted. Although the number of Repair Projects currently submitted is low, the facility repair needs appear to be adequately covered. Specific comments have been provided for certain revisions to some of the project cost estimates and project classifications.

E. Facilities Support Contracts.

Facilities Support Contract (FSC) documentation and procedures were reviewed during the LANTNAVFACENGCOM Acquisition Management Review (AMR) of OIC Marine Corps Base, Camp Lejeune during 3-7 March 1986.

F. Work Control.

All categories of work authorizations were reviewed. Analysis revealed that performance of E/S work was within NAVFACENGCOM standards. Recommendations were made to minimize service calls to the FMD work receptionist and also minimize duplicate calls. A review of Standing Job Orders (SJO) indicated that most were well written; however, more emphasis should be placed on using EPS for the purpose of better controlling productive labor hours performed under SJOs. Specific job orders were generally well prepared and the work was properly charged. Again, use of EPS must be emphasized and variance analysis, which is not currently being performed, must be instituted if productivity improvements are to be realized.

G. Utilities Management.

NAVHOSP Camp Lejeune has an effective Utilities Management Program. Timely submittal of the Utilities Cost Analysis Report from the authorized accounting activity, NSC Charleston, South Carolina, would enhance utilities management.

H. Energy Management.

Energy conservation systems were included in the design of the main hospital, built in 1982, thereby limiting ways to reduce energy consumption. Management continues to stress energy conservation, as demonstrated through more efficient steam production using reduced boiler capacity.

I. Environmental.

Management is addressing environmental issues through the establishment of a comprehensive Hazardous Waste Management Program.

III. FINDINGS AND COMMENTS

A. FACILITY CONDITION ASSESSMENT, FACILITY INSPECTION AND AIS

1. Guidance initiated by the Chief of Naval Operations (CNO) OP-44 has centered on an annual assessment of the Navy's shore establishment and the potential impact of facility condition on mission accomplishment. This is accomplished by a detailed analysis at the Investment Category (IC) level. This assessment is firmly established as the basis for the Maintenance of Real Property (MRP) portion of the Navy's Program Objective Memorandum (POM) and Five-Year Defense Plan (FYDP) and subsequent resource requests to Office of Secretary of Defense (OSD).

2. The CNO has published guidance through OPNAVINSTS 11010.23D and 11000.16 relative to the Management of Real Property Maintenance which includes long-range objectives. These objectives are oriented by Investment Category (IC) and specific IC's are designated by the CNO for emphasis Navy-wide. These objectives are included as Attachment A-1. Major claimants are encouraged to revise these CNO objectives to place emphasis on IC's required for the accomplishment of their specific missions. These instructions recognize the tendency on the part of those responsible for facilities maintenance to defer required maintenance and repair because, in some instances, the consequences of the decision are not immediately apparent. It is for this reason that the CNO facility management effort focuses upon maintenance and repair. Allocation of activity M1 resources should consider the condition of Navy Real Property within these emphasis IC's and the potential for impact on Navy readiness.

3. The established formal media for reporting facility condition are through the Annual Inspection Summary (AIS), Special Projects, and the annual NAVCOMPT Budget Submission. Data from each should be used by the major claimant in the evaluation of activity facility condition, development of resource distributions, execution planning, and preparation of various budget exhibits submitted to CNO. Each of these is addressed in other sections of this report and the importance of each is stressed. It is essential that the data from the activity be complete and valid. If conditions are not accurately documented and presented, the activity's actual situation cannot be fairly portrayed as these reports are processed through the chain of command.

4. The Facilities Inspection Program and AIS continue to receive emphasis from OPNAV, DOD, congressional staff representatives and very recently, Presidential Study groups. The AIS is the primary document used in the development, programming, planning and execution of maintenance and repair (M&R) resources. Equally important is the Control Inspection Program from which the day-to-day M&R execution and AIS deficiency data are generated.

5. A review of the AIS was made. AIS deficiencies are compiled from inspection reports obtained from the Control Inspection Program (see paragraph 9). The following problems were discussed with the Engineering Technician responsible for preparing the report. NAVHOSP, following NAVMEDCOMMIDLANTREG guidance, includes deficiencies for clinics on their AIS for which the Marine Corps has maintenance funding responsibility. This situation could lead to double reporting of deficiencies (by Navy and Marine

Corps) and an overstated NAVHOSP AIS. To minimize duplication, the activity should coordinate with Marine Corps Public Works/Base Maintenance personnel and exclude those deficiencies which the Marine Corps plan to fund. The AIS appears to be weak in the electrical discipline (see paragraph 9) due to the absence of an Electrical Technician or Planner and Estimator (P&E). With the exception of these two problem areas, the AIS is well prepared and is considered an accurate report of facility condition.

6. To obtain an indication of NAVHOSP Camp Lejeune facility condition, a quantitative index has been developed from which comparisons and trends can be analyzed. These indices have been developed from AIS and real property inventory data. This quantitative index is known as the Facility Condition Index (FCI).

7. The Facility Condition Index (FCI) is a ratio of backlog to CPV. Total backlog is the total of Deficiency Codes 1 and 2 maintenance and repair deficiencies reported on the AIS; CPV is the total activity O&M,N maintained Current Plant Value as reported in the Naval Facility Inventory, NAVFAC P-164. The overall COMNAVMEDCOM FCI was not available for 30 September 1986 but was .0385 for 30 September 1985. The FCI for NAVHOSP Camp Lejeune is currently .0121 compared to a prior year index of .0120 and .0050 two years ago. The higher the index, the worse the condition. This indicates that current reported facility condition at NAVHOSP Camp Lejeune is significantly better than the average COMNAVMEDCOM Activity (expected due to recent construction of NAVHOSP facilities). Attachment A-2 shows the Facility

Condition Index for NAVHOSP Camp Lejeune since 30 September 1984. Observation reveals a worsening trend from 1984 to 1985 but a level trend through 30 September 1986. Attachment A-3 shows FCI by IC for COMNAVMEDCOM as a claimant for 30 September 1985 and may be used for comparison purposes. It must be recognized that comparisons of this nature and the effectiveness of related decisions are directly dependent upon the validity and completeness of AIS and plant account data. It is considered that the AIS may be understated in the electrical discipline, but it has been assumed that plant account data for the activity is reasonably accurate.

8. Analysis of the 30 September 1986 Annual Inspection Summary revealed that the worst facility condition exists in Personnel Support Facilities (IC-16), Other Supply/Storage Facilities (IC-12), and Medical Facilities (IC-13) in the order shown. In-depth analysis by individual facility can be performed utilizing Attachment A-4. This attachment is an interface of the inventory with the AIS yielding a Facility Condition Index (FCI) by facility. FCI is discussed in paragraph 7 of this section. For example: Facility NH 116 is in the worst shape (highest FCI), followed by Facility NH 115, etc. Attachment A-4 could not be completed due to the inability to associate AIS facility data with Plant Account (P-164) data. Once the activity can accomplish this, a clearer picture of facility condition by facility can be obtained. The purpose of this management tool is two-fold:

a. Facilities with high FCI are readily identifiable. In this case, all facilities with an FCI greater than average (.05) are highlighted. These facilities should be examined closely to ensure that the CPV is correct and

that the cost estimates for the deficiencies are correct. These facilities should receive immediate attention, particularly those considered to be mission essential.

b. This report may also be used to highlight high value, old facilities with no deficiencies. Facilities with a CPV greater than $500K, greater than 20 years old and no AIS deficiencies should be selected as facilities which may require another inspection. Uncorrected facility deficiencies would be expected to exist at aging, high value facilities unless the inspection program has failed to identify or report them. Are these facilities really in near perfect condition? Since NAVHOSP has no facilities in this category, the report cannot be used for this purpose.

9. Facility Condition Inspections (FCI) are performed by the Hospital Engineering Technician (GS-11) and a Mechanical Engineering Technician (GS-7) who are qualified to perform inspections in the structural and mechanical disciplines. Electrical inspections are performed by the Maintenance Foreman who is a licensed electrician. The Maintenance Foreman should not have to perform these duties in addition to his supervisory duties; the addition of an electrical Planner and Estimator in the Facilities Management Department (see section III-C) should be able to perform thorough control inspections as well as planning and estimating. The Continuous Inspection System (Control, Operator and Preventive Maintenance Inspections) is the backbone of the Facilities Management System. It is imperative that sufficient resources be dedicated to this program so that comprehensive inspections can be performed in <u>all</u> disciplines. The activity is commended for using Control Inspection

reports for programming work to shop forces and contract accomplishment. A review of randomly selected Control Inspection Reports was made. The Control Inspection Reports included labor and material estimates by craft, the urgency of each deficiency, and a description of the deficiency. A report format recommended by LANTNAVFACENGCOM is included as Attachment A-5 and the activity is encouraged to use this form as a means of better displaying facility deficiencies.

10. A review of Annual Inspection Summaries for 30 September 1984 and 30 September 1985 shows 100% inspection coverage. A coverage percentage was not provided on the 30 September 1986 AIS. This is an important reporting requirement and the activity should insure that this information is provided on all future submissions.

11. A Preventive Maintenance Inspection (PMI) Program was set up by Raycomm Industries Inc. in 1983. The consultant inventoried all equipment and established PM guides and checkpoints. After working with this system, the activity, using contractor data, revised the program to make it more efficient and to eliminate unnecessary checkpoints. The PM requirement is 2,736 labor hours based on actual performance by the workers. The activity should verify these hours periodically using Engineered Performance Standards (EPS) to insure proper control over the workforce. The activity is commended for placing a high degree of emphasis on this program. Some PMI is performed by five boiler operators while performing their watchstanding duties. Again, the activity is commended for this initiative to achieve maximum utilization from their workforce.

III. FINDINGS AND COMMENTS

B. RESOURCES AND BUDGETING

1. The Real Property Maintenance Activities (RPMA) Budget is prepared by the Facilities Management Department and submitted to the NAVHOSP Comptroller. Budget totals are based on preassigned control amounts. A synopsis of RPMA resources is shown below:

BUDGET FUNDING LEVELS ($ 000):

	SAG	FY85 (EXECUTION)	FY86 (EXECUTION)	FY87 (PLAN)
Recurring M & R	FA1	633	566	578
	FA2	18	327	104
Minor Const.	FB1	113	113	105
	FB2	124	205	21
MRP	(NON ADD)	888	1,211	808
UTILITIES	FC	1,694	1,699	1,703
OTHER ENGRG. SUPP	FD	134	134	135
RPMA TOTAL		2,716	3,044	2,646

2. In FY-85, approximately $113,000 was spent for minor construction (R-1). With a total Maintenance of Real Property (MRP) expenditure of approximately $746,000 for FY-85, the Minor Construction percentage was 15.1%. Minor construction as a percent of MRP for FY-86 and FY-87 is 16.6% and 15.4%, respectively. (Note: Expenditures for equipment installation are included in

the calculations.) Change 1 to OPNAVINST 11000.16 limits minor construction spending (less equipment installation) to 10% of MRP; however, this limitation has been increased to 20% for NAVMEDCOM (CNO letter 11000 Series 444/5U392937 of 1 Mar 85) through FY-87. Minor construction spending at NAVHOSP Camp Lejeune appears heavy compared to MRP funding and a more realistic level (closer to 10%) should be set by NAVMEDCOMMIDLANTREG for this activity. Based on a job order analysis discussed in Section III-F, NAVHOSP Camp Lejeune does not appear to be improperly classifying and charging Minor Construction (R-1) work as maintenance (M-1). NAVHOSP Camp Lejeune is commended for establishing a Facilities and Space Utilization Review Board; this is an excellent means of prioritizing and controlling this type of work.

3. A review of the Interservice Support Agreement (ISSA) between NAVHOSP and Marine Corps Base, Camp Lejeune reveals that NAVHOSP is currently responsible for funding all maintenance and repairs (M&R) to three BEQs, a BOQ and the Alcohol Rehabilitation Service. These facilities are on Marine Corps plant account and the Marine Corps should be responsible for all exterior M&R; the NAVHOSP should fund only those M&R deficiencies resulting from NAVHOSP occupancy. The ISSA should be renegotiated to effect this change. This work is currently being performed by Marine Corps Base personnel on a reimbursable basis; therefore, the transfer of responsibility will not affect NAVHOSP FMD shop forces.

4. DODINST 4165.2 requires accounting and financial reporting systems for RPMA that are designed "to meet the needs for full visibility of costs

incurred." A review of NAVHOSP RPMA charging practices revealed the following discrepancies:

a. PMI is currently being charged to subfunctional category (SFC) M-1, CAN 7810 which is a CAN designated (by NAVCOMPT) for Marine Corps use only. Navy PMI should be charged to SFC P-1, CAN 9280. This involves a transfer of approximately $42,880.

b. The Facilities Support Contract for operation and maintenance of the Energy Monitoring and Control System is being charged entirely to SFC N-1. Maintenance performed as part of this contract should be charged to SFC M-1. A recommended split is 66% N-1, 34% M-1 or $212,460 N-1 and $110,540 M-1.

5. The budget transfers discussed in paragraphs 3 and 4 could have an effect on the MRP floor and must be effected by NAVMEDCOMMIDLANTREG if an accurate picture of RPMA funding by SFC is to be portrayed in budget submissions. After these transfers are made, NAVMEDCOMMIDLANTREG should compare spending in the various SFCs with NAVHOSP total unconstrained requirements in the corresponding SFCs and make necessary adjustments. Currently, NAVMEDCOM does not have a formal means of identifying unconstrained RPMA requirements for its activities. Such a system for SFC M-1 is discussed in the NAVHOSP Portsmouth, Virginia FEAT report (7-18 April 1986). Similar budget exhibits for the other SFCs can be developed if deemed necessary.

III. FINDINGS AND COMMENTS

C. ORGANIZATION AND STAFFING

1. The current organization and staffing of the NAVHOSP Camp Lejeune Facilities Management Department is provided as Attachment C-1. The organization generally conforms to the organization recommended in NAVFAC P-318 for a small Public Works Department. The major exceptions include the absence of degreed engineers (except for the Head, FMD), an Assistant Department Head, and Planner-Estimators. Adequate engineering assistance is available from Marine Corps Base, Camp Lejeune on a reimbursable basis and a full engineering staff at NAVHOSP cannot be justified. The Hospital Engineering Technician currently functions as the Assistant Head and provides continuity during the absence of the Department Head. Prompt establishment of a P&E position is recommended and will be discussed later in this section.

2. The activity is currently undergoing a Commercial Activities (CA) study and, although the FMD organization appears efficient and competitive, several realignment actions can be taken to strengthen the chances of continued government performance of the maintenance function. Due to time constraints and the complexity of such an effort, a detailed staffing evaluation of FMD organizational components was not performed during this FEAT visit. However, in the course of evaluating current operations, FEAT personnel attempted to develop a general assessment of current staffing levels in relation to work load. A recommended staffing and organization chart is included as Attachment C-2 and a brief discussion of the changes follows:

a. Transfer the two Quality Assurance Evaluators (QAE) to OIC Camp Lejeune. The OIC is responsible for administration and QA of Facilities Support Contracts and the QAEs should come under direct supervision of the OIC.

b. Currently, the span of control is too small in the Service Shop and Pipe Shop. The Service Shop Foreman currently supervises four workers; the Pipe Shop Foreman supervises seven workers but five are shift workers. To better utilize these people and better control personnel assigned to the Grounds Shop, the following recommendations are made:

1. Transfer the one full-time Laborer, one seasonal Laborer and Motor Vehicle Operator Leader from the Grounds Shop to the Service Shop. Also, it will no longer be necessary for the Vehicle Operator to be a Leader. This realignment will also give the Maintenance Foreman the flexibility to use the Laborers to assist other shops personnel when they are not performing grounds maintenance duties.

2. Transfer the Incinerator Operator from Grounds to the Pipe Shop and abolish the Grounds Shop.

c. NAVHOSP management personnel should reevaluate the need for the chief position in the Transportation Shop. If the management reports and supervisory duties currently performed by this person can be done by a lower paid worker (E-5 or civilian Leader mechanic), overhead calculated as part of the CA study can be reduced.

d. NAVHOSP management personnel should place a high priority on establishing a P&E position (preferrably electrical) in FMD. In addition to planning an estimating jobs, the P&E can perform electrical facility inspections, order, track and expedite material for jobs, and perform variance

analyses to identify discrepancies between actual labor hours and estimated "standard" hours. This will relieve the Foremen and Hospital Engineering Technician of these duties, which they are only able to perform on a limited basis, if at all. It will allow the Foremen and Leaders to do more productive maintenance work and allow the Maintenance Foreman and Hospital Engineering Technician more time to perform their management and customer liaison duties. EPS workload is expected to increase, particularly if the NAVHOSP CA study results in contract performance since each specific job given to the contractor and change order will have to be negotiated. Even if the study results in government performance of the function, estimates should be made for the purpose of increasing shop productivity to insure competitiveness with the private sector.

III. FINDINGS AND COMMENTS

D. SPECIAL PROJECTS

1. Review of the Special Projects Program was based on the Special Projects Financial Report dated 7 January 1987 from NAVMEDCOMMIDLANTREG. Attachment D-1 provides a summary of the review with details shown on the review worksheets, Attachment D-2.

2. Five repair Special Projects were reviewed and evaluated. One Project is now under construction; one Project is currently being designed; two Projects are scheduled for design during FY-87 and the remaining Project is unprogrammed.

3. The Hospital Engineering Technician is responsible for the development and preparation of Special Projects. Project identification is normally generated by scheduled facility inspections; however, some evolve as a result of hospital design or construction deficiencies. Recently, there has not been a large number of Repair Projects submitted, which is apparently attributable to the fact that the primary hospital facilities are new.

4. Review of Special Project submissions indicates that the Projects are being prepared in accordance with OPNAVINST 11010.20E for the most part. However, the following items were observed which should be taken into consideration in future Project preparation:

a. The Project cost estimates appear to be low and should be increased approximately 25 to 35% overall. The estimated cost of asbestos removal, in particular, has been very low and should be given more attention to insure adequate costing is provided.

b. Overhead, profit and contingency costs should not be added at the end of the cost estimate, but should be incorporated into each line item of the cost estimate individually.

c. Cost estimates can be improved by providing more detailed descriptive data in regards to the following: is the item deteriorated, broken, etc; where is the item located in the facility; and what specific material is being used to replace the item, i.e., replace rusted out rear entrance door with new 3'x7' hollow metal steel door. It should be remembered that the Project, particularly the cost estimate, ultimately becomes the Architect/Engineering firm's scope of work. The better the information that is provided, the better and more effective the contract plans and specifications will be.

d. Projects involving replacement of window air conditioning units (installed in windows) with a central air conditioning system is considered Minor Construction ("C") rather than Repair. This is because window air conditioning units are classified as Class 3 personal property rather than Class 2 real property.

III. FINDINGS AND COMMENTS

E. FACILITIES SUPPORT CONTRACTS

1. Facilities Support Contracts (FSC) through which NAVHOSP receives support are administered by OIC, Marine Corps Base, Camp Lejeune. Support funded with RPMA funds include (annual costs):

Operations and Maintenance of the Energy Monitoring and Control System	$323,000
Elevator Maintenance	$ 25,000
Maintenance and Repair of Nurse Call System	$ 6,090

2. Support appears to be adequate. Contract documents were not reviewed as part of this visit. A thorough review of contracting procedures was made during the LANTNAVFACENGCOM Acquisition Management Review of OIC Marine Corps Base, Camp Lejeune on 3-7 March 1986.

III. FINDINGS AND COMMENTS

F. WORK CONTROL

1. Work Reception and Control

The work reception functions are performed by a GS-4 Clerk-Typist who is the FMD clerk-typist as well as a work receptionist. NAVHOSPCLNCINST 4700.1I outlines procedures for requesting maintenance, repairs, alterations and improvements from NAVHOSP FMD. The instruction basically is an excellent instruction and contains all the elements required to enable customers to request work. However, the instruction allows anyone to call in service work (LCC 01) to the work reception clerk. To minimize incoming calls and duplicate calls, the instruction should be rewritten to designate specific maintenance service representatives in the NAVHOSP facilities who are authorized to call in work. These people should be trained in FMD procedures and have an understanding of the nature of service work. When properly trained, they can then be invaluable in assisting FMD perform their customer liaison function. To be effective, this system must also receive the support of all Directorate and Department managers. A sample instruction that may be used as a guide is included as Attachment F-1. Guidelines for E/S work that will be useful for training purposes is included as Attachment F-2.

2. Emergency/Service (E/S) Work Authorizations

The use of labor class codes (LCC) for E/S work is not in conformance with NAVFAC MO-321. LCC 01 is currently used to denote both emergency and service work whereas LCC 01 should be used for service and LCC 02 for emergency. The

correct usage of LCC's should be instituted if meaningful management reports are to be obtained from the microcomputer version of the Base Engineering Support Technical (BEST) system. It is recommended that NAVHOSP purchase this system and the system is further discussed at the end of this section.

Of 936 E/S authorizations completed from 1 October 1986 to 30 January 1987, a review of 60 was carried out. The results of the analysis are shown in Attachment F-3. Attachment F-3, page 4 indicates that the greatest proportion (58%) of the E/S sample was for repair of facilities and unclogging of plumbing systems as would be expected. Attachment F-3 page 5, item 1 shows that 93% of the sampled E/S chits had only one craftsman assigned with the remaining calls completed by two craftsmen. FMD is to be commended for its attention to assigning only one craftsman per call. The E/S distribution by Work Center is shown on Attachment F-3, page 6, item 1. Attachment F-3, page 6, item 2 shows that the average labor hours to complete a call is 2.4, which is at the high end of the recommended range of 1.5 - 2.5 hours per call. The labor hours per call would be lowered further if all shop personnel were encouraged to record time in tenths of an hour, rather than whole hours. The sample results also showed that the response time on E/S calls is good. Attachment F-3, page 6, item 3 shows that 96% of the calls were completed within 5 days. The recommended range is 3-5 days. Response times by Work Center are shown in Attachment F-3, page 5.

3. Standing Job Orders (SJO)

SJOs for maintenance (LCC 05) and Preventive Maintenance Inspection (LCC 03) issued for FY87 were examined. NAVHOSP Camp Lejeune has adequate

coverage in this area. Attachment F-4 is a list of the SJO's with comments where appropriate. Approximately 20,330 hours and $254K are expended on SJO's representing 50% of the total labor hours available. It is recommended that EPS be utilized in arriving at estimates for SJOs for PMI and Grounds Maintenance. Also, PMI is currently being incorrectly charged to a Marine Corps cost account (M1/7810) rather than the Navy PMI cost account (P1/9280). Guidelines for writing and classifying SJOs are included as Attachment F-5.

4. Engineered Performance Standards (EPS)

EPS is not currently being used by FMD personnel; however, large specific work is estimated using Unit Price Standards (UPS) which are accurate to ± 25%. Also, shop labor hours are reviewed periodically by the Foremen and Engineering Technician using personal experience as a standard. Approximately 75% of the FMD workforce is working from SJOs and E/S calls. This type of work must be closely controlled or the work authorizations can become "blank checks." It is recommended that the P&E proposed for FMD use EPS for standings and specifics. The work receptionist can be trained to use EPS for service work. The FEJE module of the microcomputer BEST system will aid in EPS application. A discussion of the importance of estimating as a management tool to help uncover problem areas is included as Attachment F-6.

5. Shop Load Plan

Shop loading is scheduled informally among the Head, Facilities Management Department (HFMD), Hospital Engineering Technician (HET) and Maintenance Foreman (MF). As specific work is written by the HET, a copy is provided to

the shop foreman so material, if needed, may be ordered. Once the job has been written and any required material received, the HFMD and HET decide where on the prioritized list a job will be placed. A scheduling meeting is held between the HFMD, HET and MF every week or two depending on how fast jobs are being completed. Based on the MF's knowledge of available labor hours for the next couple of weeks, he will indicate what jobs on the prioritized list can be handled.

6. Minor and Specific Work Analysis

A review of 44 specific job orders completed from 1983 thru 1986 was conducted and Attachment F-7 provides a list of the job orders sampled. All reviewed job orders appeared to be correctly charged to SFC M-1. None of the sampled job orders had job phase calculation sheets attached indicating they had not been EPS estimated. NAVHOSP Camp Lejeune is encouraged to apply EPS standards to all specific work. A large percentage of the sample appeared to be work generated from the Control Inspection program. However, the goal is 65% and NAVHOSP should place less emphasis on customer work requests.

7. Appraisal

Appraisal is a key element of maintenance management. Two of the most important management reports are the Tab A (Maintenance/ Utilities Labor Control Report) and Tab B (Completed Job Orders). These reports are essential if maintenance management is to be effective. Only with these reports can performance and planning be appraised and corrective action taken. Detailed information for their use is contained in NAVFAC MO-321, Chapter 10. During

the last four years, neither of these reports have been available to NAVHOSP Camp Lejeune and consequently, effectiveness cannot be evaluated. An alternative is a manual comparison of actual labor hours to estimated hours and this can be performed, to a degree, by the Planner-Estimator recommended for FMD.

8. Automation of Public Works Maintenance

To date, the Base Engineering Support Technical (BEST) system has been installed at most medium to large PWD's utilizing mini computers. By the third quarter of FY-87, BEST software will be available to small PWD's for use on micro computers. This software will include modules for Emergency/Service (E/S), Facilities Engineering Job Estimating (FEJE) and Work Input Control (WIC). Once the PWD has procured an IBM compatible computer, the software, installation and on-site training will be available from LANTNAVFACENGCOM. NAVHOSP FMD currently has a Zenith 248 on order which can be used with the BEST software. It is recommended that FMD be given one of the first computers to arrive at NAVHOSP Camp Lejeune so they can take full advantage of available training and software. Additional information on the system is included as Attachments F-8 and F-9.

III. FINDINGS AND COMMENTS

G. UTILITIES MANAGEMENT

1. The objective of utilities management is to generate/purchase and distribute utilities in the most economical manner. The review of the Naval Hospital, Camp Lejeune utilities management was performed to assist the activity in improving its procedures and overall program. Areas considered in this review included cost reporting and facility condition assessment.

2. The Utilities Cost Analysis System is composed of a quarterly Utilities Feeder Data Report (NC 2126) and the Utilities Cost Analysis Report (NC 2127 UCAR). The quarterly Utilities Feeder Data Report is prepared by the Facilities Management Department (FMD) and submitted to the Comptroller. The report provides quantitative data for consumption and fuel cost for the activity. This data is applicable to a microcomputer spreadsheet, such as SuperCalc. With computerization of this report, there would be a reduction of processing time. A microcomputer for FMD is presently on order. Depending on the delivery schedule of the microcomputer, application of the microcomputer version of the Base Engineering Support, Technical (BEST) Utilities Module to the Feeder Report would be advantageous to FMD. This version for small Public Works Departments will be available in FY-88. Presently, the Mechanical Engineering Technician of FMD, who is responsible for the Feeder Report, is receiving training in a LANTNAVFACENGCOM-sponsored course that covers preparation aspects of the Feeder Data Report, UCAR, and Defense Energy Information System Report (DEIS II). The data from the Feeder Report is used in the monthly DEIS II and the UCAR. The upper portion of the Feeder Data

Report corresponds to the upper portion of the UCAR. Because of the Integrated Disbursing and Accounting System, the Comptroller Department transferred (as of 1 October 1984) its accounting functions, including preparation of the UCAR to NSC Charleston, South Carolina, the Authorized Accounting Activity for NAVHOSP Camp Lejeune. Through computer terminals, Comptroller Department personnel submit the necessary cost information directly to NSC Charleston. From this cost information and the Feeder Data Report information, NSC Charleston prepares the UCAR. Review of the available FY-86 UCARs, first and third quarters, revealed documents with apparent discrepancies, thus limiting the usefulness of the UCAR as a management tool for checks and balances. The fourth quarter and annual FY-86 UCARs were not available. From the UCAR, the managers of NAVHOSP Camp Lejeune can assess the activity's complete utility systems from many aspects, including actual operation and maintenance costs. This report can also provide management with accurate and timely information necessary to permit efficient handling of problems arising during normal operations, such as:

a. The determination that operations are proceeding according to plan within budget parameters.

b. The early indication of problem areas and the suggestion of opportunities for improvements.

c. Preparation of engineering studies and economic analysis to evaluate current operations and develop future plans.

d. The evaluation of operating performances and monitoring of energy conservation.

The Facilities Management Department needs the UCAR on a timely basis for management purposes. NAVHOSP Camp Lejeune needs to contact NSC Charleston, South Carolina, to determine and resolve any problem areas hindering a timely and accurate submittal of the UCARs to the activity.

3. Because the NAVHOSP Camp Lejeune is a separate Command, the utilities systems on site belong to the activity and not to the Marine Corps Base (MARCORB), Camp Lejeune. Attachment G-1 lists the utilities systems external to the hospital on NAVHOSP plant accounts. Under the Host-Tenant Agreement, the NAVHOSP Camp Lejeune purchases electricity, water, sewage and gas from the MARCORB Camp Lejeune at reimbursable rates. Maintenance of the utilities system is on an informal reimbursable basis with the MARCORB Camp Lejeune. The Host-Tenant Agreement needs to specify the payment procedure for maintenance work to the utilities systems. As of 30 September 1986, the NAVHOSP Camp Lejeune complex consisted of 581,000 square feet of building area. The main building of the complex is the hospital with an area of 424,000 square feet. Two 1981 model Cleaver Brooks Boilers, each with a 14,645,000 BTU/hour capacity, supply steam to the main hospital. Each boiler has individual meters that measure the residual fuel consumption and the make-up

water added to the boiler to compensate for any condensate loss. The boilers are annually inspected by the Base Maintenance Office, MARCORB Camp Lejeune. There are approximately 62 steam traps in the steam distribution system. The MARCORB Camp Lejuene delivers 12.47 KV power to NAVHOSP Camp Lejeune. In case of a power outage, there are three 1125 KVA/900 KW emergency diesel generators available to meet the demands. These generators are checked monthly under load conditions. The potable water distribution system feeds the NAVHOSP Camp Lejeune through two 10-inch and one 8-inch mains. The usage for the hospital is metered. The NAVHOSP Camp Lejeune owns the sewer pump station into which the gravity feed lines terminate. There is a grinder and various pump equipment in the pump station that MARCORB Camp Lejeune Public Works personnel maintain. A 10-inch force main from the sewer pump station feeds the main MARCORB Camp Lejeune collection lines. Sewage charges are based on 70 percent of water charges according to the Host-Tenant Agreement.

III. FINDINGS AND COMMENTS

H. ENERGY MANAGEMENT

1. Guidance for the Command Energy Conservation Program is provided by Attachment H-1, NAVHOSPCLNCINST 4100.1 of 15 July 1986, as follows:

a. The Head, Facilities Management Department, is the designated Energy Conservation/Resource Manager.

b. Minimum annual energy reduction goals are established.

c. The Energy Conservation and Resource Management Committee (ECRMC) will meet at least quarterly to develop and recommend ways of reducing energy conservation.

The new energy reduction goal for FY-95 is a 12 percent reduction in MBTU/KSF using FY-85 as the baseline. Attachment H-2 shows the energy reduction progress of +3.87 percent compared with a -1.2 reduction goal as of 30 September 1986. OPNAVINST 4100.5C Energy Management states energy conservation goals for the activities.

2. A Facility Energy Plan (FEP), Attachment H-3, was conducted in February 1986 by Atlantic Division, Naval Facilities Engineering Command. Because the NAVHOSP Camp Lejeune was built in 1982 many energy conservation

systems were included in its design to reduce energy consumption. This factor has limited potential energy conservation recommendations. The FMD is presently considering the recommendation of installing a photocell to control loading dock lighting. Activities are allowed to submit up to eight variables, other than weather, which affect energy consumption to justify the present energy level for the EAR report. Variables, such as hospital administrative and patient loading, need to be submitted to NAVFACENGCOM for approval.

3. A Johnson Controls Energy Monitoring and Control System (EMCS) controls energy usage in the Hospital by monitoring and regulating two 450-ton chillers, one 200-ton chiller, the boilers and various other equipment. It has load shedding capabilities for lighting and various equipment, such as pumps. Presently, the sensors for fuel consumption on the boilers for the EMCS are inoperative. Therefore the reported BTU output of the boilers is derived from the conversion calculations of the fuel consumption meter readings. Some equipment is not on the EMCS system. All equipment needs to be evaluated for placement on the EMCS system to conserve and monitor energy usage.

4. The EMCS is under contract to Planned Systems International, Incorporated. Charges for the entire contract are presently allocated under N1 cost accounts. Closer inspection of the contract areas reveals that M1 cost accounts are also appropriate, as shown in Attachment H-4. The cost accounts should reflect the appropriate charges for this contract.

5. NAVHOSP Camp Lejeune submitted an Engineering Service Request (ESR) to LANTNAVFACENGCOM to determine the feasibility of installing a smaller boiler to provide steam during the summer months to decrease energy consumption. Because the summer load is very low, the present operation of one of the Cleaver Brooks boilers is very inefficient and subsequently wastes energy. The Facilities Management Department is pursuing LANTNAVFACENGCOM's recommendation, per the ESR, to install a 100 horsepower boiler for summer use. A Special Project, C1-87, was submitted and approved. It is now in the design stages.

6. A Steam Trap Management Program is an important area of energy conservation. The activities surveyed by LANTNAVFACENGCOM revealed on the average, 25 percent of all steam traps inoperative. Therefore, energy could be conserved if all steam traps were replaced on a five-year cycle, 20 percent per year. NAVHOSP Camp Lejeune has established a Steam Trap Management Program. Each of the 62 steam traps is inspected annually and replaced as necessary, thereby conserving energy.

III. FINDINGS AND COMMENTS

I. ENVIRONMENTAL

The Facilities Management Department received the responsibilities for Hazardous Waste Management in July 1986. Establishment of a Hazardous Waste Management Plan is in the initial stages. Since the NAVHOSP Camp Lejeune is a small producer of hazardous waste, less than 1000 kilograms per month, the activity guidelines will follow the NEESA 20.2 - 029A, Volume 3, Sample Hazardous Waste Management Plans, as provided by LANTNAVFACENGCOM. When there is hazardous waste, the NAVHOSP Camp Lejeune, Supply Officer, requests disposal through FMD. After receipt of the hazardous waste by FMD, the MARCORB Camp Lejeune is appropriately notified for pickup and disposal. Disposal of biological hazardous wastes is accomplished by incineration. The Infectious Waste Officer has the biological wastes packaged and delivered to the NAVHOSP Camp Lejeune incinerator. From that point, FMD is responsible for incinerating the waste. In April 1986, the North Carolina Environmental Protection Agency recertified the incinerator for disposal of biological hazardous waste.

III. FINDINGS AND COMMENTS

L. TRANSPORTAITON

1. A review of the Transportation Operations and Maintenance function at NAVHOSP was not performed as part of this FEAT visit. CHESNAVFACENGCOM (Transportation Equipment Management Center for NAVHOSP) has been contacted and a TEMC visit has been tentatively scheduled for the May/June 1987 timeframe. Further coordination efforts should be done by CHESNAVFACENGCOM.

IV. SUMMARY OF SUGGESTED ACTIONS

A-1 Coordinate AIS reporting with Marine Corps Base, Camp Lejeune to minimize duplicate reporting of facility deficiencies.

A-2 Utilize Attachment A-4 to determine which facilities have a high FCI for the purpose of concentrating funding for correction of deficiencies.

A-3 Increase emphasis on Electrical Control Inspections by establishing a new electrical P&E position.

A-4 Utilize Attachment A-5 for documenting deficiencies found during Control Inspections.

A-5 Provide facility inspection coverage data on all AIS submissions.

A-6 Verify PMI labor hour estimates using EPS and review estimates on a periodic basis.

B-1 NAVMEDCOMMIDLANTREG should review NAVHOSP Minor Construction funding and reduce it to a level that is more appropriate for NAVHOSP size and "newness."

B-2 Renegotiate ISSA with Marine Corps Base to redefine maintenance funding responsibility for BEQs, BOQ and ARS.

B-3 NAVMEDCOMMIDLANTREG should transfer RPMA funds among the various subfunctional categories as discussed in Section III-B in order to properly reflect RPMA spending.

B-4 After transferring funds as appropriate, NAVMEDCOMMIDLANTREG should reevaluate maintenance and repair funding compared with unconstrained requirements and increase subfunctional category FA1 funds if deemed necessary.

C-1 NAVHOSP should take action required to implement the recommended organization and staffing shown in Attachment C-2, placing high priority on establishing a new P&E position.

C-2 Reevaluate the need for the Chief position in the Transportation Shop and consider replacement with a lower paid position.

D-1 Adopt recommendations discussed in Section III-D, paragraph 4 prior to submission of future Special Projects.

E No action.

F-1 Revise NAVHOSP instruction for requesting work to designate specific maintenance representatives responsible for calling in service work.

F-2 Utilize corrent Labor Class Codes to designate emergency calls and service calls.

F-3 FMD shop personnel should record time spent on E/S calls in tenths of an hour.

F-4 Use EPS to estimate SJOs, particularly Grounds Maintenance and PMI.

F-5 Utilize EPS and perform variance analysis to the maximum extent practical until the P&E is on-board. Primary functions of this position include full-time estimating, variance analysis and material control.

F-6 NAVHOSP FMD should increase percentage of specific jobs originating from Control Inspections.

F-7 NAVHOSP management personnel should place a high priority on timely placement of a Zenith 248 microcomputer, currently on order, in FMD. Software for an automated Work Control system has been developed and tested and is available for the Zenith.

G-1 Request timely submittal of finalized quarterly and annual Utilities Cost Analysis Reports from the Authorized Accounting Activity, NSC Charleston, South Carolina, to the Facilities Management Department for use in the Utilities Management Program of NAVHOSP Camp Lejeune.

G-2 Revise Host-Tenant Agreement to reflect maintenance of NAVHOSP Camp Lejeune utility distribution systems by MARCORB Camp Lejeune Public Works personnel on a reimbursable basis.

H-1 Correct any deficiencies in the Energy Monitoring and Control System (EMCS) for existing equipment, i.e., fuel oil sensor to the boilers. Review existing and future equipment for integration into the EMCS.

H-2 Determine and submit factors, such as administrative and patient loading, to justify present energy usage for the activity.

H-3 Reevaluate the charges of the EMCS contract and distribute the cost to the proper accounts proportioned at 66 percent N1 and 34 percent M1.

I No action.

J No action.

K No action.

L No action.

PROGRAM OBJECTIVES FOR THE MAINTENANCE AND REPAIR OF REAL PROPERTY

This enclosure presents program objectives for the period FY 79-83 as approved by the CNO. They were derived in OPNAV from assessments of the condition of Navy facilities and the potential of that condition for impact on readiness. Major claimants are invited to comment on these objectives at any time. Claimants will be asked to discuss the objectives and propose revisions as appropriate during the meeting of the Shore Facilities Programming Board.

IC 01 Aviation Operational Facilities

O&MN - Increased emphasis should be placed on airfield pavement repairs to assure full availability under mobilization, maximum feasible flight safety conditions and substantial freedom from foreign object damage. Marginal conditions existing today would cause structural failure or unacceptable hazard to equipment and missions under wartime tempo.

NIF - Airfield pavement deficiencies at RDT&E facilities are outstripping the capacity of the individual activities to accrue NIF funds to initiate repairs. Major emphasis should be placed in this category to prevent mission impact on major aircraft and systems tests program.

IC 02 Communications Operational Facilities

No special emphasis required.

IC 03 Waterfront Operational Facilities

O&MN - A major increase in emphasis on repair of waterfront facilities is necessary. The potential for increased deterioration when small repairs are not accomplished on a timely basis must be recognized. Although many repairs are very costly the long term importance to readiness indicates that Navy waterfront facilities be upgraded. Properly maintained fleet moorings have a significant impact on fleet readiness and flexibility. Dredging requirements are especially critical, and advanced planning is now mandatory in order to accommodate the delays that may occur in the environment review process.

NIF - Serious deficiencies in this category will have impact on available berthing for industrial use and ammunition loading at shipyards and weapons stations. The problems are particularly sensitive at weapons stations with underutilized capacity. Special emphasis should be placed in this category to prevent deficiencies from deteriorating to a level which will make repairs from accrual impossible.

IC 04 Other Operational Facilities

No special emphasis required.

PROGRAM OBJECTIVES
FOR THE MAINTENANCE AND REPAIR OF REAL PROPERTY
(CONT'D)

IC 05 Training Facilities

O&MN - Place sufficient emphasis on repair to training facilities to ensure that accelerated economic deterioration does not occur.

NIF - No special emphasis required.

IC 06 Aviation Maintenance and Production Facilities

No special emphasis required.

IC 07 Shipyard Maintenance and Production Facilities

No special emphasis required.

IC 08 Other Maintenance and Production Facilities

O&MN - No special emphasis required.

NIF - Significant backlog exists due to age of facilities and previous deferral of maintenance. Problem is most prevalent at PWC's and some ordnance facilities. Level of backlog has impact on the ability of actitivies to perform assigned mission. Sufficient emphasis should be placed to reduce backlog to a manageable level.

IC 09 RDT&E Facilities

No special emphasis required.

IC 10 POL Supply and Storage Facilities

O&MN - Increased emphasis is necessary to assure full availability during contingencies or mobilizaiton.

NIF - No special emphasis required.

IC 11 Ammunition Supply and Storage Facilities

No special emphasis required.

IC 12 Other Supply and Storage

O&MN - Increased emphasis desirable with special emphasis on roof conditions.

NIF - No special emphasis required.

IC 13 Medical Facilities

O&MN - Place increased emphasis on routine maintenance funding levels in order to prevent accelerated deterioration of facilities.

NIF - No special emphasis required.

IC 14 Administrative Facilities

No special emphasis required.

IC 15 Troop Housing and Messing Facilities

O&MN - Increased emphasis is required to provide clear evidence of Navy's commitment to improving the livability of bachelor housing and messing facilities. These conditions directly affect morale and performance. Effective use of O&MN funds for maintenance and repair can significantly enhance living conditions, even in those cases where new construction through MILCON may ultimately be required.

NIF - No special emphasis required.

IC 16 Other Personnel Support Facilities

O&MN - Special emphasis required in locations where such facilities are of particular importance to the maintenance of a wholesome environment and to morale. The importance of the condition of chapels and religious education facilities on the effectiveness of Navy religious programs must be recognized.

NIF - No special emphasis required.

IC 17 Utilities

O&MN - Major emphasis is required throughout the shore establishment with particular concern for support of fleet units, production facilities and naval communications and for strengthening Navy's energy conservaion initiatives.

NIF - Severe problems exist in all areas of utilities at all NIF locations which have potential for serious mission impact. The problem is so severe that the backlog total for NIF activities in this IC is the highest of all ICs for all fund sources. Problems are due to age, climatic deterioation, over usage, and past failure to accure sufficient resources. Many systems are so deteriorated that complete replacements through the MCON funding route are the only possible solution. Major emphasis should be placed in this category to prevent serious mission degradation throughout the NIF establishment.

IC 18 Real Estate and Ground Structures

O&MN - Place increased emphasis in order to eliminate accelerated deterioation of roads and railroad tracks.

NIF - No special emphasis required.

FACILITY CONDITION INDEX — NAVHOSP CAMP LEJEUNE

INVESTMENT CATEGORY	($000) CPV** (9/30/86)	NMAR (9/30/86) ($000) DC-1	DC-2	TOTAL	FC INDEX	($000) TOTAL BACKLOG (9/30/86) DC-1	DC-2	TOTAL	FC INDEX	CNO EMPHASIS AREAS*
	1	2	3	4	5	6	7	8	9	10
01 AVIATION OPER.	108	0	0	0	0	0	0	0	0	IE
02 COMM OPER.										
03 WATERFRONT OPER.										MIE
04 OTHER OPER.	20	0	0	0	0	0	0	0	0	
05 TRAINING										IE
06 AVIATION M/P										
07 SHIPYARD M/P										
08 OTHER M/P	510	0	0	0	0	0	0	0	0	
09 RDT&E										
10 POL SUPPLY/STOR.										IE
11 AMMO SUPPLY/STOR.										
12 OTHER SUPPLY/STOR.	102	0	0	0	0	3.4	0	3.4	.0333	IE
13 MEDICAL	60623	91.3	304	395.3	.0065	201.7	410	611.7	.0101	IE
14 ADMINISTRATIVE										
15 TROOP HOUSING	***	13.7	0	13.7	***	67.3	0	67.3	***	IE
16 PERS SUPPORT	47	0	85	85	1.809	6.3	85	91.3	1.943	SE
17 UTILITIES	584	0	0	0	0	0	1.0	1.0	.0017	MIE
18 REAL ESTATE	2830	0	0	0	0	10.4	0	10.4	.0037	IE
TOTAL	64824	105	389	494	.0076	289.1	496	785.1	.0121	

*OPNAVINST. 11010.23D CH-2, 2 JUL 78
IE - INCREASED EMPHASIS
MIE - MAJOR INCREASED EMPHASIS
SE - SPECIAL EMPHASIS

**O&M,N MAINTAINED PROPERTY
EXCLUDES:
*** FACILITIES ON MARCORP PLANT ACCOUNT

ATTACHMENT A-2

FACILITY CONDITION INDEX

NAVHOSP CAMP LEJEUNE

INVESTMENT CATEGORY	($000) CPV** (9/30/85)	NMAR (9/30/85) ($000) DC-1	DC-2	TOTAL	FC INDEX	($000) TOTAL BACKLOG (9/30/85) DC-1	DC-2	TOTAL	FC INDEX	CNO EMPHASIS AREAS*
	1	2	3	4	5	6	7	8	9	10
01 AVIATION OPER.										IE
02 COMM OPER.										
03 WATERFRONT OPER.										MIE
04 OTHER OPER.										
05 TRAINING										IE
06 AVIATION M/P										
07 SHIPYARD M/P										
08 OTHER M/P										
09 RDT&E										
10 POL SUPPLY/STOR.										IE
11 AMMO SUPPLY/STOR.										
12 OTHER SUPPLY/STOR.	75	0	0	0	0	1	0	1	.0133	IE
13 MEDICAL	585-40	89	228	317	.0054	186	228	414	.0071	IE
14 ADMINISTRATIVE										
15 TROOP HOUSING	***	9	278	287	***	39	278	317	***	IE
16 PERS SUPPORT	46	0	0	0	0	1	0	1	.0217	SE
17 UTILITIES	974	0	0	0	0	0	0	0	0	MIE
18 REAL ESTATE	2240	0	0	0	0	8	0	8	.0036	IE
TOTAL	61875	98	506	604	.0098	235	506	741	.0120	

*OPNAVINST. 11010.23D CH-2, 2 JUL 78
IE - INCREASED EMPHASIS
MIE - MAJOR INCREASED EMPHASIS
SE - SPECIAL EMPHASIS

**O&M,N MAINTAINED PROPERTY
EXCLUDES:

*** FACILITIES ON MARCORPS PLANT ACCOUNT

ATTACHMENT A-2

FACILITY CONDITION INDEX

NAVHOSP CAMP LEJEUNE

INVESTMENT CATEGORY	($000) CPV ** (9/30/84)	NMAR (9/30/84) ($000) DC-1	DC-2	TOTAL	FC INDEX	($000) TOTAL BACKLOG (9/30/84) DC-1	DC-2	TOTAL	FC INDEX	CNO EMPHASIS AREAS*
	1	2	3	4	5	6	7	8	9	10
01 AVIATION OPER.										IE
02 COMM OPER.										
03 WATERFRONT OPER.										MIE
04 OTHER OPER.										
05 TRAINING	488	0	0	0	0	0	0	0	0	IE
06 AVIATION M/P										
07 SHIPYARD M/P										
08 OTHER M/P										
09 RDT&E										
10 POL SUPPLY/STOR.										IE
11 AMMO SUPPLY/STOR.										
12 OTHER SUPPLY/STOR.	1051	0	0	0	0	0	0	0	0	IE
13 MEDICAL	76835	103	0	103	.0013	268	0	268	.0035	IE
14 ADMINISTRATIVE	196	0	0	0	0	0	0	0	0	
15 TROOP HOUSING	***	74	0	74	***	137	0	137	***	IE
16 PERS SUPPORT	45	1	0	1	.0222	1	0	1	.0222	SE
17 UTILITIES	953	0	0	0	0	0	0	0	0	MIE
18 REAL ESTATE	2355	0	0	0	0	1	0	1	.0004	IE
TOTAL	81923	178	0	178	.0022	406	0	406	.0050	

*OPNAVINST. 11010.23D CH-2, 2 JUL 78
IE - INCREASED EMPHASIS
MIE - MAJOR INCREASED EMPHASIS
SE - SPECIAL EMPHASIS

**O&M,N MAINTAINED PROPERTY
EXCLUDES:

*** FACILITIES ON MARCORPS PLANT ACCOUNT

ATTACHMENT A-2

FACILITY CONDITION INDEX COMNAVMEDCOM (CLAIMANT)

INVESTMENT CATEGORY	CPV** ($1000) (9/30/85)	NMAR (9/30/85) ($000) DC-1	DC-2	TOTAL	FC INDEX	($000) TOTAL BACKLOG (9/30/85) DC-1	DC-2	TOTAL	FC INDEX	CNO EMPHASIS AREA*
	1	2	3	4	5	6	7	8	9	10
01 AVIATION OPER.	1020	6	0	6	.0059	15	0	15	.0147	IE
02 COMM OPER.	2032	—	—	—	0	—	—	—	0	
03 WATERFRONT OPER.	2554	3	147	150	.0587	101	297	398	.1558	MI
04 OTHER OPER.	2437	5	0	5	.0021	50	0	50	.0205	
05 TRAINING	78556	574	0	574	.0073	883	0	883	.0112	IE
06 AVIATION M/P	0	—	—	—	—	—	—	—	—	
07 SHIPYARD M/P	1428	—	—	—	0	—	—	—	0	
08 OTHER M/P	15845	347	0	347	.0219	979	311	1290	.0814	
09 RDT&E	72309	1070	431	1501	.0205	1839	770	2609	.0356	
10 POL SUPPLY/STOR.	487	13	0	13	.0267	15	0	15	.0308	IE
11 AMMO SUPPLY/STOR.	6	—	—	—	0	—	—	—	0	
12 OTHER SUPPLY/STOR.	16542	154	0	154	.0093	444	0	444	.0268	IE
13 MEDICAL	1404483	6636	22166	28802	.0205	15642	38126	53768	.0383	IE
14 ADMINISTRATIVE	157972	545	101	646	.0041	1295	251	1546	.0098	
15 TROOP HOUSING	117725	1582	277	1859	.0158	3749	1561	4310	.0365	IE
16 PERS SUPPORT	116812	1351	443	1794	.0154	2521	1024	3545	.0303	SE
17 UTILITIES	119463	3201	5014	8215	.0688	4036	6710	10746	.0899	MI
18 REAL ESTATE	109248	1830	447	2277	.0208	3578	2629	6207	.0568	IE
TOTAL	2270177	16717	29026	45743	.0204	34147	51361	85508	.0385	

*OPNAVINST. 11010.23D CH-2, 2 JUL 78

IE - INCREASED EMPHASIS

MIE - MAJOR INCREASED EMPHASIS

SE - SPECIAL EMPHASIS

**O&M,N MAINTAINED PROPERTY

ATTACHMENT A-3

REPORT DATE 01/13/87 PLANT ACCOUNT RPT 7 PAGE 1
SORT: FAC-NO/PRO-REC
CTL:PA84CTL.PLTCTL RPT=PLTRPT07.PLTRPT

UIC	FAC NO	PROP REC NO	FACILITY NAME	YEAR BUILT	AREA		CPV (K$)	AIS (K$)	FCI
68093		200172	PLAYING COURT	1982			47		
						REC#	47	.....	.....
68093		200173	ELECTRICAL DISTRIBUTION LINE	1982			263		
						REC#	263	.....	.....
68093		200177	SANITARY SEWER	1982			196		
						REC#	196	.....	.....
68093		200178	HOSPITAL ACCESS ROAD 1.55 MI	1982	28,060.0	SY	555		
					28,060.0	REC#	555	.....	.....
68093		200179	SIDEWALKS	1982	5,222.0	SY	89		
					5,222.0	REC#	89	.....	.....
68093		200180	STORM SEWER	1982			1,187		
						REC#	1,187	.....	.....
68093		200181	POTABLE WATER DISTRIBUTION	1982			364		
						REC#	364	.....	.....
68093		200182	PARKING AREA	1982	50,660.0	SY	629		
					50,660.0	REC#	629	.....	.....
68093		200191	PERIMETER/LIGHTING	1985			40		
						REC#	40	.....	.....
68093		200194	FIRE ALARM SYSTEM	1985			11		
						REC#	11	.....	.....
68093		200197	SECURITY/PERIMETER FENCING	1985			6		
						REC#	6	.....	.....
68093	NH-110	200174	SEWAGE TREATMENT PLANT (PUMP	1982			74		
						REC#	74	.....	.....
68093	NH-115 *	200175	WAREHOUSE	1982	5,000.0	SF	60		
					5,000.0	REC#	60	..19...	.0317
68093	NH-118	200185	PUBLIC WORKS TRANSPORTATION	1985	11,785.0	SF	510		
					11,785.0	REC#	510	.....	.....
68093	NH100 *	200171	HOSPITAL	1982	422,135.0	SF	60,623		
					422,135.0	REC#	60,623	..355...	.0059
68093	NH111	200187	HELO.LANDING PAD	1985	11,110.0	SY	83		
					11,110.0	REC#	83	.....	.....
68093	NH112	200188	FILLING STATION	1985			20		

* FCI could be calculated for these facilities only due to inability to associate AIS with Plant Account data for other facilities listed.

ATTACHMENT A-4

CTL:PA84CTL.PLTCTL RPT=PLTRPT07.PLTRPT

UIC	FAC NO	PROP REC NO	FACILITY NAME	YEAR BUILT	AREA		CPV		AIS	FCI
						REC#		20	.....	.....
68093	NH113	200186	OIL/WATER SEPERATOR/WASH	1985			01	25		
						REC#		25	.....	.....
68093	NH116	200176	WAREHOUSE	1982	5,000.0	SF		25		
					5,000.0	REC#	12	25	..15...	.0500 ←
68093	NH117	200195	HAZARDOUS/FLAMABLE STG.	1985	216.0	SF		17		
					216.0	REC#	11	17	.....	.....
					539,188.0	TOT		64,824		
					539,188.0			64,824		

FACILITY CONDITION REPORT

ACTIVITY: _____

* ☐ SUMMARY SHEET *

1. FACILITY NO.	2. CAT. CODE	3. COST ACCOUNT	4. I.C.	5. MGR. INSPECTION BR. INITIAL	DATE

6. DESCRIPTION & LOCATION

7. INSPECTOR	8. INSPECTION TIME USED	9. SHEET NO. OF

CRAFT AREA	PRELIMINARY ESTIMATE				
	LABOR		MAT'L OR CONTR COST	TOTAL COST	NON-DEFERRABLE PORTION OF COST
	HRS.	COST			
PLASTERER					
CARPENTRY					
ROOF					
PAINT					
MASONRY					
WHARF BUILDERS					
LABORERS/OTHER					
■ SUBTOTAL - STRUCTURAL					
PLUMBING, PIPE FITTING					
SHEET METAL					
WELDING					
LABORERS/OTHER					
■ SUBTOTAL - METAL					
ELECTRICIAN					
REFRIG./A.C.					
LABORERS/OTHER					
■ SUBTOTAL - ELECTRICAL					
■					
TOTAL					

SIGNED BY _____ DATE _____

ATTACHMENT A-5

FACILITY CONDITION REPORT

FACILITY CONDITION REPORT
DETAILED DEFICIENCY LISTING

Facility No. ______________ Type Inspection ☐ Struc ☐ Elec ☐ Mech ☐ Other

Inspector ______________ Inspection Time __________ Hrs. Date ______________

Correction Required Within:				DESCRIPTION OF DEFICIENCY REQUIRING CORRECTION	CRAFT	ESTIMATED COST			
IMMED	YEARS					LABOR		Mat'l. Or Contr. Cost	Total Cost
	1	2	3			Hrs.	Cost		

✓ DEFERRABLE
✓ NONDEFERRABLE

ATTACHMENT A-5

CURRENT ORGANIZATION AND STAFFING

QAE
GS-7(2)

HEAD
FACILITIES MANAGEMENT DEPARTMENT

clerk-Typist
GS-4

ENGRG TECH GS-11
ENGRG TECH GS-7

MAINTENANCE FOREMAN
WS-10 (1)

SERVICE SHOP (32) WC
MAINT FOREMAN
WS-6 (1)

* MAINT WORKER
WG-8 (3)

MAINT HELPER
WG-5 (1)

PIPE SHOP (34) WC
PIPEFITTER FOREMAN
WS-7 (1)

MAINT WORKER (BOILER OPERATORS)
WG-8 (5)

PIPEFITTER
WG-10 (1)

PLUMBER
WG-9 (1)

ELECTRICAL SHOP (35) WC
MAINT FOREMAN
WS-7 (1)

ELECTRICIAN
WG-10 (2)

A/C REFRIG MECHANIC (33) WC
WG-10 (2)

MAINT MECH HELPER
WG-5 (1)

CHIEF

GROUNDS (36) WC
MOTOR VEHICLE OPERATOR LEADER
WG-6 (1)

LABORER
WG-3 (1)

TEMP LABORER
WG-3 (1)
(APR - SEP)

INCINERATOR OPERATOR
WG-5 (1)

TRANSPORTATION
AUTO MECHANIC
WG-10 (1)

AUTO MECHANIC WORKER
WG-8 (1)

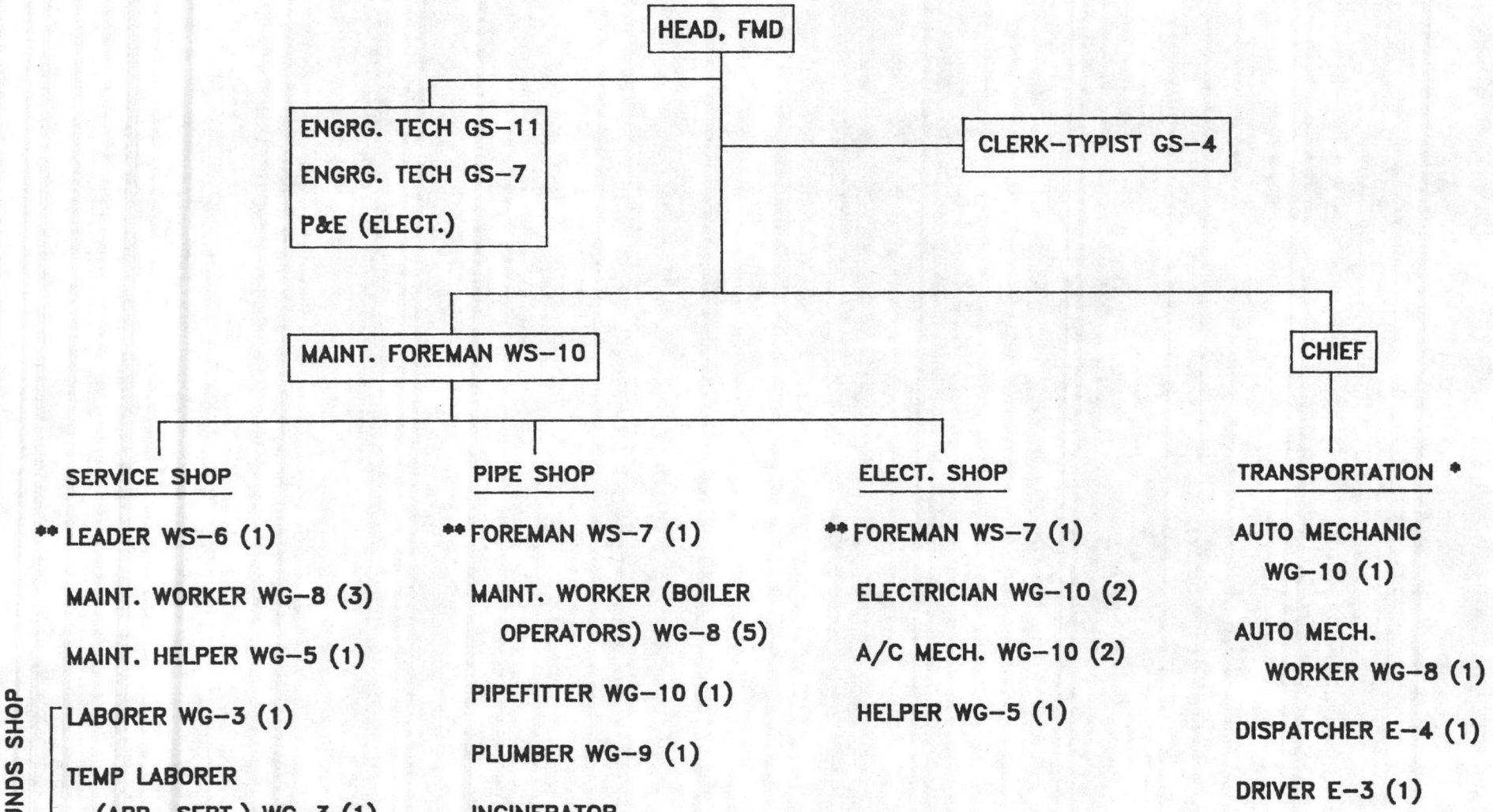
E-4 DISPATCHER

E-3 DRIVER

* INCLUDES PEST CONTROL AND LOCKSMITH FUNCTIONS AS COLLATERAL DUTY

ATTACHMENT C-1

PROPOSED ORGANIZATION



** WORKING SUPERVISOR

* NOT INCLUDED IN SCOPE OF THIS REPORT; ADDITIONAL PERSONNEL MAY BE REQUIRED.

Attachment C-2

SUMMARY OF FIELD PROJECT REVIEWS

PROJECT NO.	PROJECT TITLE	CURRENT COST		DESIGN FUNDED		SCOPE		SOLUTION		GENERAL APPRAISAL FUNDING CONSIDERED:				
		ORIGINAL AMOUNT	REVISED AMOUNT	YES	NO	OK	REV	OK	ALTERN RECOM	URGENT	ROUTINE	DEFER	CANCEL	RESUBMIT
RA1-84	RPL. HVAC SYSTEM IN BOQ H-14		376,315	UNDER CONST.						SEE COMMENTS ATTACH. D 2				
RA1-85	RPL. HVAC SYSTEMS IN H-30 & H-31		119,800	✓		✓		✓			✓			
R1-86	RPL. INSULATION ON CHILLED WT. LINE	142,780			✓	✓		✓			✓			
RC1-86	REPAIR/ALT. TO MEDICAL SPACES (15)		214,550	✓		✓		✓			✓			
RC2-86	REPAIR/ALT. TO MEDICAL SPC (JOHNSON)		147,000	✓		✓		✓			✓			

SPECIAL PROJECTS FIELD REVIEW WORKSHEET

ACTIVITY/LOCATION	NAME OF REVIEWER	DATE OF ON-SITE INSPECTION
NAVAL HOSPITAL CAMP LEJEUNE, N.C.	C. T. WELSH	2/4/87

PROJECT NO. RA/-84 PROJECT TITLE REPLACE HVAC SYSTEM IN BOQ

FACILITY NO. H-14 ESTIMATED COST: REPAIR $313,400 MAINT. _____

CONST. _____ EQUIP. _____

STEP 1 SUBMITTED ☒ NO ☐ YES (DATE: _____) TOTAL FUNDS REQUESTED $313,400

STEP 2 SUBMITTED ☐ NO ☒ YES (DATE: FEB 1984) EST. FACILITY REPL. COST $3,210,000

SCOPE OF WORK (DESCRIBE) THE EXISTING HEATING SYSTEM HAS DETERIORATED. THE BUILDING IS CURRENTLY COOLED BY WINDOW A/C UNITS INSTALLED IN WINDOWS. THIS PROJECT WILL INSTALL A NEW CENTAL COMBINED HEATING AND COOLING SYSTEM

METHOD OR SOLUTION: ✓ OK ___ REQUIRES REVISION (WHY)

COST ESTIMATE ___ OK ✓ REQUIRES REVISION (WHY)
THIS PROJECT IS CURRENTLY UNDER CONSTRUCTION. HOWEVER, IT WAS NOTED THAT THE FINAL AWARD PRICE OF $376,315 EXCEEDED CONSIDERABLY THE ORIGINAL PROJECT ESTIMATE PRICE OF $159,000.

GENERAL COMMENTS INSTALLATION OF A CENTRAL AIR CONDITIONING SYSTEM IN PLACE OF WINDOW A/C UNITS IS CONSIDERED MINOR NEW CONSTRUCTION ("C") RATHER THAN REPAIR. THEREFORE, APPROX. $150,000 OF THE $376,315 CONTRACT COST SHOULD BE CONSIDERED IMPROVEMENTS.

PROJECT FUNDING PLAN:
PROJECT IS CURRENTLY UNDER CONSTRUCTION

___ PLANNED FOR FUNDING IN FY___ IS OK.

___ FUNDING SHOULD BE ACCELERATED TO FY___.

___ PROJECT SHOULD BE DEFERRED FOR ___ YEARS.

___ PROJECT SHOULD BE CANCELLED AND RESUBMITTED.

___ PROJECT SHOULD BE CANCELLED.

ATTACHMENT D2

SPECIAL PROJECTS FIELD REVIEW WORKSHEET

ACTIVITY/LOCATION	NAME OF REVIEWER	DATE OF ON-SITE INSPECTION
NAVAL HOSPITAL CAMP LEJEUNE, N.C.	C.T. WELSH	2/4/87

PROJECT NO. RA1-85 PROJECT TITLE REPLACEMENT OF HVAC H-30 & H-31

FACILITY NO. H-30 & H-31 ESTIMATED COST: REPAIR 84,500 MAINT. _____

CONST. _____ EQUIP. _____

STEP 1 SUBMITTED ☒ NO ☐ YES (DATE: _____)

TOTAL FUNDS REQUESTED # 92,950 (INCLS. DESIGN COST)

STEP 2 SUBMITTED ☐ NO ☒ YES (DATE: MAY 1985

EST. FACILITY REPL. COST _____

SCOPE OF WORK (DESCRIBE) REPLACE DETERIORATED HOT WATER HEATING SYSTEM INCLUDING OIL FIRED BOILERS WITH A NEW HEATING SYSTEM TO ALSO INCLUDE A/C CONDITIONING.

METHOD OR SOLUTION: ✓ OK ___ REQUIRES REVISION (WHY)

COST ESTIMATE ___ OK ✓ REQUIRES REVISION (WHY)

COST ESTIMATE IS TOO LOW, PARTICULARLY COST FOR REMOVAL OF ASBESTOS INSULATION. A REVISED TOTAL COST IS ESTIMATED TO BE APPROX. # 119,800.

GENERAL COMMENTS INSTALLATION OF A CENTRAL AIR CONDITIONING SYSTEM IN PLACE OF WINDOW A/C UNITS IS CONSIDERED MINOR NEW CONSTRUCTION ("C") RATHER THAN REPAIR. THEREFORE APPROX. $50,000 OF THE ABOVE REVISED TOTAL PROJECT COST OF #119,800 SHOULD BE CONSIDERED IMPROVEMENTS.

SINCE TWO SEPARATE FACILITIES ARE INVOLVED, TWO SEPARATE PROJECTS SHOULD HAVE BEEN SUBMITTED RATHER THAN ONE.

PROJECT FUNDING PLAN:

PROJECT NOW BEING DESIGNED

✓ PLANNED FOR FUNDING IN FY 87 IS OK.

___ FUNDING SHOULD BE ACCELERATED TO FY ___.

___ PROJECT SHOULD BE DEFERRED FOR ___ YEARS.

___ PROJECT SHOULD BE CANCELLED AND RESUBMITTED.

___ PROJECT SHOULD BE CANCELLED.

ATTACHMENT D2

SPECIAL PROJECTS FIELD REVIEW WORKSHEET

ACTIVITY/LOCATION	NAME OF REVIEWER	DATE OF ON-SITE INSPECTION
NAVAL HOSPITAL CAMP LEJEUNE, N.C.	C.T. WELSH	2/4/87

PROJECT NO. R1-86 PROJECT TITLE REPLACE INSULATION ON CHILLED WATER LINES

FACILITY NO. NH-100 ESTIMATED COST: REPAIR 129,800 MAINT. _____

CONST. _____ EQUIP. _____

STEP 1 SUBMITTED ☒ NO ☐ YES (DATE: _____)

TOTAL FUNDS REQUESTED $142,780 (INCLS. DESIGN COST)

STEP 2 SUBMITTED ☐ NO ☒ YES (DATE: DEC 1985)

EST. FACILITY REPL. COST _____

SCOPE OF WORK (DESCRIBE) THE EXISTING FIBERGLASS PIPE INSULATION ON A/C PIPES INSTALLED ABOVE THE CEILING THROUGHOUT THE HOSPITAL HAS BECOME DEFECTIVE, PARTICULARLY AT THE JOINTS, PERMITTING CONDENSATION OF MOISTURE TO COLLECT & ULTIMATELY LEAK DOWN ON THE CEILING & FLOORS BELOW. THIS PROJECT WILL REPLACE ALL OF THE FIBERGLASS PIPE INSULATION WITH URETHANE INSULATION & REPLACE DAMAGED CEILING TILES.

METHOD OR SOLUTION: ✓ OK ___ REQUIRES REVISION (WHY)

COST ESTIMATE ✓ OK ___ REQUIRES REVISION (WHY)

GENERAL COMMENTS RECOMMEND PROJECT BE ACCOMPLISHED AS SOON POSSIBLE TO PRECLUDE FURTHER DAMAGE TO CEILINGS.

PROJECT FUNDING PLAN:

___ PLANNED FOR FUNDING IN FY___ IS OK.

✓ FUNDING SHOULD BE ACCELERATED TO FY 88.

___ PROJECT SHOULD BE DEFERRED FOR ___ YEARS.

___ PROJECT SHOULD BE CANCELLED AND RESUBMITTED.

___ PROJECT SHOULD BE CANCELLED.

ATTACHMENT D-1

SPECIAL PROJECTS FIELD REVIEW WORKSHEET

ACTIVITY/LOCATION	NAME OF REVIEWER	DATE OF ON-SITE INSPECTION
NAVAL HOSPITAL CAMP LEJEUNE, N.C.	C. T. WELSH	2/4/87

PROJECT NO. RC1-86 PROJECT TITLE REPAIR & ALTERATIONS TO MEDICAL SPACES

FACILITY NO. 15 ESTIMATED COST: REPAIR 106,000 MAINT. _____

CONST. 53,000 EQUIP. _____

STEP 1 SUBMITTED ☒ NO ☐ YES (DATE: _____)

TOTAL FUNDS REQUESTED $174,9000 (INCLUDES DESIGN C

STEP 2 SUBMITTED ☐ NO ☒ YES (DATE: FEB 1986)

EST. FACILITY REPL. COST 8,650,000

SCOPE OF WORK (DESCRIBE) PROJECT INCLUDES REPAIR BY REPLACEMENT OF VARIOUS INTERIOR STRUCTURAL ITEMS SUCH AS DOORS, FLOOR TILE, CERAMIC TILE WAINSCOT AND TOILET PLUMBING FIXTURES. IMPROVEMENTS INCLUDE VINYL WALL COVERING, CARPETING AND SUSPENDED CEILING TILE.

METHOD OR SOLUTION: ✓ OK ___ REQUIRES REVISION (WHY)

COST ESTIMATE ___ OK ✓ REQUIRES REVISION (WHY)

RECOMMEND THE PROJECT BE INCREASED BY 35% FOR A REVISED REPAIR COST OF $143,000 AND IMPROVEMENT COST OF $71,550. ESTIMATE FOR T... QUANTITY & TYPE OF REHAB. WORK IS TOO LOW.

TOTAL REVISED COST - $214,550

GENERAL COMMENTS

PROJECT FUNDING PLAN:

✓ PLANNED FOR FUNDING IN FY 87 IS OK.

___ FUNDING SHOULD BE ACCELERATED TO FY ___.

___ PROJECT SHOULD BE DEFERRED FOR ___ YEARS.

___ PROJECT SHOULD BE CANCELLED AND RESUBMITTED.

___ PROJECT SHOULD BE CANCELLED.

ATTACHMENT D2

SPECIAL PROJECTS FIELD REVIEW WORKSHEET

ACTIVITY/LOCATION	NAME OF REVIEWER	DATE OF ON-SITE INSPECTION
NAVAL HOSPITAL CAMP LEJEUNE, N.C.	C. T. WELSH	2/4/87

PROJECT NO. RC2-86 PROJECT TITLE REPRS. /ALTS. TO MEDICAL SPACES - JOHNSON DISPENSARY

FACILITY NO. M-128 ESTIMATED COST: REPAIR 83,050 MAINT. ____

CONST. 31,405 EQUIP. ____

STEP 1 SUBMITTED ☒ NO ☐ YES (DATE: ____) TOTAL FUNDS REQUESTED 114,455

STEP 2 SUBMITTED ☐ NO ☒ YES (DATE: APRIL 1986 EST. FACILITY REPL. COST ____

SCOPE OF WORK (DESCRIBE) INTERIOR & EXTERIOR REPAIRS INCLUDE: REPL. SUSPENDED CEILING, REPL. INT. DOORS, VINYL FLOOR TILE, TOILET FIXTURES, LAB. CABINETS, WATER PIPING, HEATING SYSTEM, INT. PAINTING, WATERPROOFING OF EXT. STUCCO WALLS, AND REPL. WINDOWS. ALTERATIONS INCLUDE: CARPETING, BLINDS, PARTITION WORK, CERAMIC TILE WAINSCOT AND VINYL WALL COVERING.

METHOD OR SOLUTION: ✓ OK ___ REQUIRES REVISION (WHY)

COST ESTIMATE ___ OK ✓ REQUIRES REVISION (WHY)
OVERALL COST ESTIMATE APPEARS LOW - PARTICULARLY THE COST FOR WINDOW REPLACEMENT (TRIM NOT INCLUDED), ASBESTOS INSUL. REMOVAL AND SUSPENDED CEILING. (SEE BELOW)

GENERAL COMMENTS THE COSTS FOR ASBESTOS REMOVAL SHOULD BE INCREASED TO $10,000, THE WINDOWS TO $12,000 AND CEILING TILE TO $12,560. THE REMAINING ITEMS OF THE COST ESTIMATE SHOULD BE INCREASED APPROX. 30%. THE REVISED REPAIR COST SHOULD TOTAL $115,400.
TOTAL PROJECT WOULD BE $147,00.

PROJECT FUNDING PLAN:

✓ PLANNED FOR FUNDING IN FY 88 IS OK.

___ FUNDING SHOULD BE ACCELERATED TO FY ___.

___ PROJECT SHOULD BE DEFERRED FOR ___ YEARS.

___ PROJECT SHOULD BE CANCELLED AND RESUBMITTED.

___ PROJECT SHOULD BE CANCELLED.

ATTACHMENT A-2

4100.1E
:PW:gm
15 March 19

INSTRUCTION 4100.1E

From: Commanding Officer
To: Distribution List

Subj: Requests for Work to be accomplished by the Public Works Department, submission and processing of

Ref: (a) NAVFAC P-321

1. Purpose. To establish procedures for submitting and processing requests for work or services to be accomplished by the Public Works Department, in order to insure the most effective use of available manpower and funds.

2. Cancellation. Instruction 4100.1D

3. Background and Discussion. Reference (a) establishes basic policies and objectives for management of the maintenance and operations of Navy public works and public utilities. These include insuring maximum return for manpower and funds invested. Expansion of the physical plant at , increasing labor and material costs, increasing average age of facilities and a relatively level budget, require the majority of available manpower and financial resources be directed toward required maintenance and repair work as opposed to minor construction/alterations. In order to enhance capability for accomplishing essential work, the submission, processing and priority rating procedures outlined below are established.

4. Work Submission Procedures.

a. Emergency Work is defined as work requiring immediate action to accomplish any or all of the following purposes involving public works and/or public utilities;

(1) Prevent loss or damage to Government property.

(2) Restore essential services that have been disrupted by a breakdown of utilities.

(3) Eliminate hazards to personnel or equipment.

Emergency trouble calls may be made by telephone to the Public Works Trouble Desk during working hours or the Public Works Duty Section during non-working hours or holidays.
Any person cognizant of an emergency situation may submit work of this category.

ATTACHMENT F-1

b. Service Work is defined as relatively minor in scope, not of emergency nature, normally estimated to require two man-days or less to accomplish, and does not exceed a $200.00 material cost limitation. Service Work will be submitted to the Public Works Trouble Desk by telephone or in person. Personnel authorized by Department Heads, CO/OIC Tenant Activities shall submit work of this category.

c. Work Requests, NAVFAC 9-11014/20.

(1) Maintenance and Repair Work is of a larger scope than Service Work (i.e. more than $200.00 and 2 man-days) and is normally generated by controlled inspection of facilities by Public Works Department Maintenance Control personnel. This category of work may be submitted by NAVFAC 9-11014/20. Requesting activities shall provide complete justification and details in "Block 8" of work desired, and shall include available prints, drawings, sketches, and any other information including the name and telephone extensions of a knowledgeable contact.

(2) New Construction/Alteration should be requested by NAVFAC 9-11014/20, as described above. These requests will be submitted to the Public Works Officer and the Shore Station Development Board for review and subsequent approval by the Commanding Officer. Approved work which can be performed with activity funds will be scheduled along with Maintenance and Repair Work. Approved requests which cannot be funded within the Commanding Officer's authority or fund availability will be processed for special funding or as part of activity Special Projects or Military Construction Programs, as appropriate. Departments or Activities desiring to fund construction/alteration work from their OPTAR funds should provide a funds citation upon receipt of a cost estimate. Inasmuch as this effort diminishes the Public Works Department's capability to perform required maintenance and repairs, the cost estimate will include not only labor and material costs but contractor's overhead and profit to enable the work to be accomplished by contract.

(3) Submission of NAVFAC 9-11014/20. Department Heads, CO/OIC Tenant Activities shall initiate Work Requests, NAVFAC 9-11014/20. The requests shall be sent to the Public Works Officer.

5. Priority of Work Requests. Work Requests received by the Public Works Department will be assigned priority designators. Priority designators are as follows:

"Critical" - Work if not accomplished would restrict the Activity's immediate operational capabilities.

"A" - Work if not accomplished would restrict Departments'/Tenants' current operational capabilities.

"B" - Maintenance or repair work if not accomplished would effect health, welfare and/or safety of personnel or property.

"C" - All other types of work including minor construction/alteration

Work Requests within each designator will be processed in sequence of receipt by the Public Works Department.

6. Public Works Department Processing of Work Requests.

a. Work Reception. Work Requests received by the Public Works Department shall be screened by the Maintenance Control Director/Assistant Public Works Officer. Work not qualifying for submission of NAVFAC 9-11014/20 shall be transferred to Service Work or returned to the initiator. Valid requests shall be assigned a priority designator for subsequent accomplishment.

b. Maintenance Control Division. Work Requests received by the Maintenance Control Division shall be integrated with the work generated by the controlled maintenance inspection program. The following is the order of accomplishment of planning and estimating of Work Requests:

Designator	When Accomplished	Estimated Time to Complete P&E Work
"Critical"	When received	1 - 3 days
"A"	Following job presently being accomplished	1 - 5 days
"B"	Following completion of all "A" designated work	1 - 15 days
"C"	Following completion of all "B" designated work.	10 - 60 days

Work Requests for maintenance and repair work, designated Category "C", normally generated by controlled inspection, will be returned to the initiator, with the notation that a copy of the request has been placed in the facilities folder and that it will be reviewed prior to the next controlled inspection.
For planning purposes initiators of Work Requests should allow from three to six months for CONUS purchase of materials for Category "B" and "C" type work.

7. Action

a. All Work Requests shall be submitted in accordance with this instruction.

b. Department Heads, CO/OIC of Tenant Activities shall provide to the Public Works Officer on a quarterly basis, by the 5th working day of the quarter, a listing of one Maintenance Service Representative and one alternate, authorized to submit Work Requests and Service Calls for Maintenance and Repair to the Public Works Department. Maintenance Service Representatives shall perform the following work:

1. Act as the single coordinator and contract point with the Public Works Department.

2. Receive, screen, consolidate, record and forward to the Public Works Department all requests from the Department Activity.

3. Obtain and log Service Call numbers from the Public Works Department Emergency/Service Desk.

4. Review outstanding Work Requests monthly for possible cancellation due to changing requirements or circumstances which may have eliminated the need for the requested work.

c. The Maintenance Control Director/Assistant Public Works Officer shall review all outstanding Work Requests, assign priority designators and process them and all new Work Requests in accordance with this Instruction.

Distribution:
5216.3E, List 1, Case "A"

EMERGENCY/SERVICE WORK AUTHORIZATION CONTROL

GUIDELINES

The following guidelines are suggested for the control of Emergency and Service Work Authorizations.

DEFINITIONS

Service Work (LCC 01) - That work, relatively minor in scope, which can be accomplished in less than 16 manhours, is not emergency work by nature, and does not exceed the dollar limitation which the Work Reception and Control position is authorized to approve.

Emergency Work (LCC 02) - Work that requires immediate action to accomplish any or all of the following purposes involving public works and/or public utilities:

(1) Prevent loss or damage to Government property.

(2) Restore essential services that have been disrupted by a breakdown of utilities.

(3) Eliminate hazards to personnel or equipment.

CONTROL OF INPUT

- An up-to-date station instruction setting forth policy for submitting requests for services will be developed and adhered to by all personnel. Included in the instruction will be statements that only liaison officers are authorized to request service work, that all such requests be made to the trouble desk, and that calls will not be accepted from anyone other than liaison officers. Emergency work will be accepted from anyone.

- Continual emphasis will be made to persons authorized to request work to minimize the number of calls per day by accumulating service-type requirements by the day or preferably by the week and then submitting them in total.

- Established written procedures will be maintained for accepting service-type calls, which will include:

(1) A current listing of personnel authorized to request service work along with instructions to accept requests only from these personnel and to deny requests from anyone else.

(2) A current listing of inspection schedules to be used as a basis for deferring any service requests for a facility pending an imminent visit from an inspector.

(3) Inquiring, in-depth, as to the nature of the trouble as to determine its relative scope and severity.

- No E/S Authorization will be typed.

- The PWO, APWO, FMED (Facilities Management Engineering Director), Shops Branch Manager are the only other Public Works personnel authorized to approve service-type work. All other public works personnel will report discrepancies to their immediate supervisor or the MCD.

- Maximum effort will be made to group service work to create a single, larger job.

- Ensure that all personnel authorizing service work are familiar with:

(1) Maintenance and/or service type work which is the funding responsibility of the tenant as spelled out in the Host/Tenant Agreement.

(2) Items that are currently covered under the specifications of a Maintenance Service Agreement.

ACCOMPLISHMENT

- Shop supervisors will review and control the backlog of service and maintain a three to five day backlog to enable additional pre-planning of workload assignment for effective use of manpower. The FMED and Shop Branch Manager will be notified when the backlog becomes excessive.

- Two men will not be assigned to accomplish a single service call unless absolutely necessary.

- Shop supervisors and Shop Planners will ensure that sufficient "routine" materials are available and readily accessible to shop personnel for use on service work.

- All completed E/S chits will be returned within one day of completion. Return all incomplete service chits within ten days of approval date, and all emergency chits within two days of approval, unless there are acceptable reasons for retention of the chit.

APPRAISAL

- The Work Receptionist will perform a daily review of all uncompleted emergency chits (LCC 02) in excess of 48 hours from issue and report the reasons why they are incomplete.

- The Work Receptionist will periodically (at least quarterly) perform an analysis to identify and resolve the reasons for a high frequency of calls or requests from the same buildings, commands or facilities and report to the FMED and PWO so that appropriate actions can be taken to reduce same.

- A monthly report will be prepared by the Work Receptionist and submitted to the PWO via the FMED, that will include:

(1) The number of Emergency (LCC 02) and Service (LCC 01) chits issued, by shop.

(2) The number completed, by shop.

(3) The manhours per completed chit, by shop.

(4) The current backlog, by shop.

- The FMED will review all reports and analysis of service work authorizations and take action to resolve problems of excessive manhours per chit, excessive chits per facility, excessive backlog and other problems noted or observed by the trends.

- Periodically, the FMED will review completed work chits and assure all information required is shown correctly.

(1) Date received

(2) Job Order Number

(3) Control or Work Order Number

(4) Labor Class Code

(5) EPS Standard hours

(6) Facility number

(7) Job description

(8) Actual work performed

(9) Number of persons performed work

(10) Total actual crafthours used to 10th of an hour

(11) Shop or Work Center Code

(12) Date started

(13) Date completed

EMERGENCY/SERVICE WORK AUTHORIZATION
RECEPTION DESK STANDARD QUESTIONS

PLUMBING

What is wrong?	How many require repair? What type facility is this (barracks, admin., etc.)?
Toilets:	Stoppage or leaks? Is flushometer working? What type tank?
Urinals:	Leaking or broken? Is flushometer working?
Drains:	Plugged or broken?
Traps:	Leaking or broken?
Spigots:	Leaking or broken? Will it shut off? Is it sink, basin, tub?
Showers:	Does handle need replacing? Are the pipes leaking? Are the shower heads OK?
Valves:	Leaking or broken?
Radiators:	Leaking or broken? No heat? Does it make excessive noise? Is it steam or gas?
Steam Heaters:	Will fan run? Is it loose or leaking? Is it wall or overhead?
Gas Heaters:	Is pilot light burning? Is it leaking gas? Will burner light?
Piping:	Where leaking? At valve or joint? Is there a hole in the pipe?

ELECTRICAL

What is wrong:	How many require repair? What type facility is this (barracks, admin., etc.)?
Lights:	Flourescent or incandescent? How long have they been out? Are some burning?
Switches:	Are they working?
Panels:	Are they smoking or hot? Do they trip?
Receptacles:	Broken? No current?
Electrical Power:	Is there a power failure?
Door:	Metal or wood? Large or small?

MISCELLANEOUS

What is wrong? Where located?	How many require repair? What type facility is this (barracks, admin., etc.)?
Floor Buffers:	Will it run: Is the handle broken? Are brushes missing? Does the electric cord need replacing?
Ventilators:	If electrical, will fan run? Is it loose? Will it ventilate? If mechanical, will ventilator turn? If natural vent, do screens need cleaning?
Doors:	Is it locked? What kind of lock? Is lock broken? Will it open and close? Are the hinges loose? Is the glass broken? Will the door closer work? Is it wood or metal? Large or small?
Windows:	Will they open or close? Are the sash balancers working? Are they broken? How many lights are broken? Size? Wood frame or metal?
Venetian Blinds:	Will they open and close? Do the pull cords need replacing? Is the take OK? Are the slats OK?
Hand Carts:	Are the castors OK? Do the rails need repair?
Auto Claves:	Will it operate? Is the track loose? Describe any part of functioning. Is it electric or steam?
Elevators:	Do you have power? Will the doors open and close? Other description if known.

GALLEY EQUIPMENT

Ovens:	Is it burned out? Will it operate? Why won't it operate? What make oven? Large or small?
Dishwasher:	Will it operate? Is there hot water? Is the water below temperature? Is it broken or leaking? What make dishwasher?
Sterilizer:	Will it operate? Will the motor run? Is there hot water? Is the thermostate working? Is it below temperature? Is it broken or leaking? What make sterilizer?

SERVICE WORK

1. Ensure that all personnel authorizing service work are familiar with:

   a. Maintenance and/or service type work which is the funding responsibility of the tenant as spelled out in the Host/Tenant Agreement.

   b. Items that are currently covered under the specifications of a Maintenance Service Agreement.

2. Review and enforce the station directive which specifies who can request service work.

3. Initiate a station directive holding occupants liable for damage and deterioration which are beyond normal wear; investigate vandalism and discipline vandals.

4. Do not automatically approve service calls. Each call should be:

   a. Reviewed by the Planner and Estimator/Inspector for necessity.

   b. Checked against inspection reports, grouped and combined into specific job orders where possible.

   c. Appraised regarding "type" of work. Fabrication, alteration and improvements should be submitted via work requests, accomplished by specific job orders and charged to customer funds where possible.

5. Do not provide "instant response". Response time of five to eight days should be considered acceptable for routine service calls.

6. Begin reviewing and analyzing Emergency/Service work with the intention of:

   a. Purging nonessential work.

   b. Ensuring that identical work is not already in the system as an issued job order or included on an inspection report as deferred or planned workload.

   c. Consolidating compatible work into specific job order scope for estimating and planning accomplishment.

7. Routinely analyze service work in an attempt to identify:

   a. Facilities and/or equipment requiring excessive service, i.e. breakdown maintenance.

   b. Excessive manhours per service call.

   c. Distribution of Emergency/Service effort by type of work.

Attachment F-2

REVIEW OF EMERGENCY OR SERVICE WORK ACCOMPLISHMENT

ACTIVITY NAVHOSP CAMP LEJEUNE DATE OF REVIEW 2/3/87 EPS USED? No PAGE 1 OF 6

JOB ORDER/ SHOP CONTROL NUMBER	DESCRIPTION								FACILITY NUMBER (CIRCLE IF WORK IS EMERG)	NUMBER OF CRAFTS-MEN ASSIGNED TO E/S	RESPONSE TIME (NUMBER OF DAYS)	WORKCENTER PERFORMING WORK (ENTER MANHOURS)												
	CONSTRUCT	INSTALL	FABRICATE	UNCLOG	RELAMP	REPAIR	KEYS/LOCK	OTHER				WC # 33	WC # 34	WC # 35	WC # 32	WC #	WC #	WC #	WC #	WC #	WC #	WC #	WC #	WC #
0771						X			W130A	1	4		1											
0743						X			C-5-S	1	3		3											
0343				X					S225A	1	1		1											
0253						X			Physical Therapy	1	1		1											
0177						X			FSD	1	1		25											
0122						X			NH100	1	5		2											
0091						X			MAT Mgmt	1	2		4											
0035						X			W258A	1	1		4											
0812						X			AHU-4	1	0		4											
0726						X			S222	1	2		2											
0573				X					FSD	1	5		1											
0561						X			Lab	1	0		4											
0491						X			S237A	1	1		2											
0903								X	Cat Scan	1	1			1										
0831								X	Near Fed Service	2	2			4										
0761						X			Maint Bldg	1	3			1										
0381						X			Rm 328	1	5	1												
0344						X			Locker Rm	2	8			3										
0317						X			2E Intensive Care	2	3	7												
0278		X							FSD	2	1	16												

NAVHOSP REVIEW OF EMERGENCY OR SERVICE WORK ACCOMPLISHMENT

ACTIVITY Camp Lejeune DATE OF REVIEW 2/3/87 EPS USED? No PAGE 2 OF 6

JOB ORDER/ SHOP CONTROL NUMBER	DESCRIPTION								FACILITY NUMBER (CIRCLE IF WORK IS EMERG)	NUMBER OF CRAFTS-MEN ASSIGNED TO E/S	RESPONSE TIME (NUMBER OF DAYS)	WORKCENTER PERFORMING WORK (ENTER MANHOURS)											
	CONSTRUCT	INSTALL	FABRICATE	UNCLOG	RELAMP	REPAIR	KEYS/LOCK	OTHER				WC # 33	WC # 34	WC # 35	WC # 32	WC #	WC #	WC #	WC #	WC #	WC #	WC #	WC #	WC #
0233						X			Psychiatric Clinic	1	0			1									
0211					X				ICU	1	4			1									
0171								X	H-118	1	1			1									
0105						X			2E	1	4			2.5									
0048						X			Boiler Room	1	1			2									
0002								X	Elevator #8	1	5			1									
0805					X				Pastoral Care Dept.	1	4			1									
0699						X				1	4			2									
0681					X				4A Ward	1	5			1									
0650						X			Staff Entrance	1	1			2									
0566					X				L + D	1	4			1									
0583						X			Labor + Delivery	1	4	1											
0530		X	X						Nursing Service	1	1			2									
0508						X			2E	1	0			3									
0467			X						NIT 100	1	1			1									
0429					X				Recovery Rm	1	2			1									
0838							X		Recovery Rm.	1	3				2								
0787		X							NH 100	1	0				1								
0313						X			C 200	1	?				2								
0265						X				1	?				1.5								

NAVHOSP REVIEW OF EMERGENCY OR SERVICE WORK ACCOMPLISHMENT

ACTIVITY Camp Lejeune DATE OF REVIEW 2/3/87 EPS USED? No PAGE 3 OF 6

JOB ORDER/ SHOP CONTROL NUMBER	DESCRIPTION								FACILITY NUMBER (CIRCLE IF WORK IS EMERG)	NUMBER OF CRAFTS-MEN ASSIGNED TO E/S	RESPONSE TIME (NUMBER OF DAYS)	WORKCENTER PERFORMING WORK (ENTER MANHOURS)												
	CONSTRUCT	INSTALL	FABRICATE	UNCLOG	RELAMP	REPAIR	KEYS/LOCK	OTHER				WC # 33	WC # 34	WC # 35	WC # 32	WC #	WC #	WC #	WC #	WC #	WC #	WC #	WC #	WC #
0188						X			FSD	1	4				3									
0146		X							Pedeactric Clinic	1	4				4									
0079		X							3E	1	2				2.5									
0016		X							N117	1	1				1									
0731						X			ALT 21	1	1				5									
0680								X	N239	1	5				2									
0644						X			Phy therapy	1	1				1									
0505						X			Oper Mgmt/ Info Desk	1	0				1									
0432								X	Fiscal Dept	1	1				1									
0840		X							Pediactric Clinic	1	3				1									
0396						X			NH-100	1	1				6									
0277							X		Collection Agent	1	1				5									
0337		X							Pastoral Care	1	0				1									
0887								X	LL	1	2			1										
0829		X							Generator Rm	1	0			4										
0756								X	Elevator #7	1	6			1										
0383						X			Rm 218	1	1	2												
0797						X			W288	1	0		3											
0368						X				1	4		1											
0218				X					CSS	1	1		1											

EMERGENCY SERVICE WORK ANALYSIS

TYPE WORK	NO. CALLS COMPLETED	PERCENT
REPAIR	32	53
UNCLOG SYSTEM	3	5
MFG. KEYS/Locks	2	3
RELAMP	5	8
FABRICATE	1	2
INSTALLATION	9	15
CONSTRUCTION	0	0
OTHER	8	14
	60*	100%

* (%) of calls sampled were not considered valid E/S calls. These calls should have been issued as minor or specific Jobs or were within the scope of currently authorized standing or PM work authorizations.

EMERGENCY/SERVICE WORK ANALYSIS

1. NO. CRAFTSMAN ASSIGNED	WC-33	WC-34	WC-35	WC-32	WC-	WC-	WC-	WC-	TOTAL	PERCENT
One person/call	3	16	20	17					56	93
Two persons/call	2	0	2	0					4	7
Two + persons/call	0	0	0	0					0	0
TOTAL	5	16	22	17					60	100%

2. RESPONSE TIMES	SAME DAY	ONE DAY	2-DAYS	3-5 DAYS	6 + DAYS	TOTAL CALLS
WC-33 No. Calls	0	2	0	3	0	5
%		40%		60%		100%
WC-34 No. Calls	3	6	2	5	0	16
%	19%	38%	13%	30%		100%
WC-35 No. Calls	3	6	3	8	2	22
%	14%	27%	14%	36%	9%	100%
WC-32 No. Calls	3	6	1	5	0	15
%	20%	40%	7%	33%		100%
WC- No. Calls						
%						100%
WC- No. Calls						
%						100%
WC- No. Calls						
%						100%
WC- No. Calls						
%						100%

ATTACHMENT F-3
Page 5 of 6

EMERGENCY/SERVICE WORK ANALYSIS

1. E/S DISTRIBUTION	WC-33	WC-34	WC-35	WC-32	WC-	WC-	WC-	WC-	WC-	TOTAL
No. calls completed	5	16	22	17						60
% Total Calls Worked	8	27	37	28						100%
2. E/S MANHOURS EXPENDED										
No. Manhours Used	27	36.5	37.5	40						141
No. Calls Worked	5	16	22	17						60
Ave. MHRS Per Call	5.4	2.3	1.7	2.4						2.4

3. RESPONSE TIME	SAME DAY	ONE DAY	TWO DAYS	3-5 DAYS	6+ DAYS	TOTAL CALLS
No. Calls worked	9	20	6	21	2	58
% calls completed	16	34	10	36	4	100
Cumulative percentage	16	50	60	96	100	

ATTACHMENT F-3
Page 6 of 6

NAVHOSP

ACTIVITY Camp Lejeune DATE OF REVIEW 2/3/87 PAGE 1 OF 1

STANDING JOB ORDER REVIEW

DESCRIPTION	JOB ORDER/ SHOP CONTROL NUMBER	SFC	CAN	LCC	ANNUAL MHR	ANNUAL COST	APPRAISAL: JOB OK	JOB SPEC. DEFICIENCY: SCOPE OF WORK	FREQ	UNITS	LOCATION	WORKER COULD NOT DO WORK BY READING SCOPE	SUGGESTIONS: REVIEW FOR NEED	REVIEW SPECS	RE-CLASSIFY	CANCEL	RECOMMENDATIONS
PMI *	05702	M1	7810	03	236	42,880	✓								✓		Should be P1, 9280
Pest Control	07022	P1	9220	05	992	15,256	✓										
Operate Incinerator	07650	P1	9230	05	1900	22,154	✓										
Operate Boiler	0716 B	N1	8110	05	8750	123,691	✓										
Maintenance* of Lawns & Shrubs	05422	M1	7410	05	5952	50,000 ↗ APPROX	✓										
	Total				20330	253981											

* ESTIMATE LABOR HOURS USING EPS FOR BETTER CONTROL OF WORKERS

ATTACHMENT F-4

Standing Job Orders

There are two types of Standing Job Orders: Estimated (LCC05, LCC03) and Unestimated (LCC04).

a. Estimated: Estimated SJOs include all work that is highly repetitive and can be planned, estimated and scheduled. All fixed requirements should be identified and specified in detail. Examples of work covered by LCC05 include: Janitorial services, utilities operational requirements, recurring pest control services, and refuse collection. SJOs should also be written for preventive maintenance requirements and designated as LCC03. Work should not be authorized on SJOs which are service in nature. For instance, estimated SJOs should not be written for replacing window glass, replacing light bulbs, emergency repairs or repairing plumbing leaks.

A common problem with SJOs is the tendency to issue estimated SJOs to cover work which "might" happen. An example is a job to "replace 50 panes of glass" with no definite time interval given, or known discrepancies existing. The work is generally issued to the shop by memorandum and the craftsman then replaces the pane. The job is worked like a service request but disguised as an estimated SJO. SJOs like this should be eliminated. The work should be done as a specific work authorization (LCC07) or a service request (LCC01) as the occasion warrants. This work does not qualify as an estimated SJO since it cannot be scheduled and therefore cannot be controlled.

Another area which requires close scrutiny is the concept of "area" maintenance mechanics. These mechanics perform work in high maintenance areas, primarily BEQ, BOQ and galleys and are covered by an estimated SJO (usually written for one productive labor year times the number of mechanics). Since the majority of work in these areas is E/S in nature, having mechanics available to respond to service calls "instantaneously" is expensive and also "robs" the other PW shops of needed personnel. Management should closely monitor the actual work accomplished on these SJO's during a 6-12 month trial period and cancel the SJO's if not economical. Some increase in E/S work will undoubtedly occur as a result of cancellation, however, it will receive visibility and limited management control on an item-by-item basis rather than lumped with a number of other undefined items of work. These types of SJO's are blank authorizations for charges and not subject to control by Public Works management. If management decides to retain the SJO's, the mechanics should be required to record all the jobs performed with labor hours for each and turn these in to their supervisor on a daily basis. The area maintenance mechanic concept is probably cost effective where one mechanic can serve several facilities in close proximity to each other and there is a great travel distance between the PW shops and the facilities.

Maintenance work in utilities functions should be documented in the same manner as the other station maintenance. Very often, one-time maintenance work in utilities is hidden in large estimated SJOs with little or no back-up data relative to actual maintenance work performed. Only the work specified on the SJO should be performed; requirements for more work should be issued as an amendment, a service request or specific job order. Utilities operational requirements should be estimated and specified in detail on estimated SJOs. Particular emphasis should be placed on segregating operator maintenance from maintenance work that should be accomplished by the Maintenance Division

Attachment F-5

personnel. Quite often job orders for operations are written haphazardly and the only basis for the job order is the number of persons on the Utility Division roster. Utilities functions generally have poorly documented work authorizations resulting in inadequate control of personnel by management. Improvements in the detailed analysis of these functions and subsequent identification and specification of work requirements including labor hours and cost estimates on SJOs will provide the basis to improve the overall effectiveness of this function.

b. Unestimated: unestimated SJOs include all repetitive work that cannot be planned, estimated and scheduled. SJOs are issued at the beginning of each period (usually on an annual basis) and are used by the Fiscal Department as a means of accumulating costs for this work. Unestimated SJOs should be held to a minimum. Work requirements should be analyzed carefully and unestimated SJOs should be issued only after a clear determination that specific job orders or estimated SJOs are not applicable. As work is identified to be accomplished under the unestimated job order the MCD issues the work using the cost accounting and job order number identified on the unestimated SJO. Thereby the purpose of the unestimated SJO is achieved, to gather costs for a certain type work over a period of time, without sacrificing control over the work or issuing a "blank check" to the shops. Examples of valid unestimated SJO's include relamping and snow/ice removal. In these instances, historical records will show that a certain amount of this work will be required and can be planned and estimated; however, it cannot be scheduled.

c. Example SJO's: examples of valid SJOs, with proper charging noted, are provided in the following table:

SJO DESCRIPTION	SFC	CAN	LCC
Maint. Underground Telephone Manholes & Vaults	M1	7710	05
Maint. Fire Pumps (PMI)	P1	9280	03
PM Boilers	P1	9280	03
Hydrost. Test & Insp. Unfired Press. Vess.	M1	End-use CAN	05
Pre-expended Bin (Material only)	M1	7910	05
Operation of Swimming Pool	P1	9290	05
PM Window Unit A/C	P1	9280	03
Read Elec. Meters	N1	8330	05
Repairs to Washers & Dryers	Non-RPMA	9962	04
Snow/Ice Removal	P1	9240	04
Relamping	M1	End-use CAN	04

CINCLANTFLT FACILITIES MANAGEMENT NEWSLETTER

5 OCT. 1984

IV. Engineered Performance Standards Issues.

OPNAVIST 11000.16 states that the Navy goal is to obtain 75% EPS utilization and 100% review of performance variance exceeding plus or minus 10% of estimates. CINCLANTFLT has urged the use of EPS through CINCLANTFLT letter 11000/FFI-2/N922 of 28 July 1982. CINCLANTFLT 071812Z Dec 1983, subject: Facilities Management, has established a goal of increased EPS utilization and review of 10% per year over the latest EPS utilization visit until the Navy's goal is achieved. To help achieve these goals, space is allocated in the newsletter to address your questions regarding EPS utilization and review.

The Key to Successful Application of EPS is Variance Analysis. Variance analysis is the evaluation of actual performance compared to the EPS estimates and is essential to an effective work management system. Even if the estimates are not based specifically or solely on EPS, estimated, planned and scheduled work should be evaluated in relation to actual time, equipment and material to evaluate overall productivity. This completed cycle of estimate, plan, schedule, execute and review will provide a basis to effectively manage and control resources. Through this process, recurring problems in supply, equipment, shop or craft experience, work methods and habits, training and management can be identified and corrected. Elimination of the problems is the primary factor in increasing productivity. All too often, there are no significant variances between the estimates and actual performance because the Planner and Estimators continue to estimate many jobs based on the "supposed to" time needed by the shops. Shop personnel often complain that EPS doesn't give them enough time to do the job, so the Planner and Estimators are frequently influenced to inflate the estimates beyond the standard time allowed. Pressure to inflate estimates may also come from management, supervisors, and/or the Planner and Estimator's own misunderstanding of the purpose of performance standards. Inflated estimates usually result in small to no variances between actuals and estimates, which in turn, masks the fact that productivity problems exist. The nonproductive situations perpetuate themselves or may even get worse. Management may take no action to correct problems because problems are not identified or investigated.

ATTACHMENT F-6

NAVHOSP

SPECIFIC WORK ANALYSIS (M-1 NON-REIMBURSABLE)

ACTIVITY Camp Lejeune DATE OF REVIEW 2/4/87 PAGE 1 OF 2

DESCRIPTION	FACILITY NUMBER	JOB ORDER/ SHOP CONTROL NUMBER	CAN	MHR	ESSENTIAL M&R (COST)	NON-ESSENTIAL M&R (COST)	NON-M&R (COST)	COMBINATION (COST)	REMARKS/RECOMMENDATIONS
Fertilize & Sow Grass, Hospital		15147	7410	276	6644				
Rpl carpet with tile	NH100	15077	7150	119	4122				Insp. Generated
Replace screen wire on AHU's	NH100	15047	7660	260	4293				
Repair Exhaust Grill	NH100	15080	7150	48	721				
Fabricate Screen for Ceiling Tower		15042	7660	32	481				
Install Vinyl Wall Protection	NH100	0503-9938	7150	240	4554				Insp. Generated
Install Door Windows	NH100	0533-9931	7150	16		267			
Repair Controls on HVAC syst.		0504-9898	7150	40	647				
Oil Spill Clean-Up	NH100	0571-9878	7820						Insp Generated, Not Est.
Repair Floor Tile		0504-9851	7190	52	925				
Replace Carpet	H-16	15117	7170		2018				Not Estimated
Replace Condensate Line	H-16	0564-9819	7720	128	1891				
Paint Rooms & Hallways	H-16	0527-9767	7170	32	420				
Paint Interior	H-16, H-30, H-31	15027	7170		13680				Insp Generated
Purchase & Install Carpet	HP-36	05241	7150		405				Done on Contract
Paint Interior	H-23 & H-24	15072	7170		32000				Contract
Replace Carpet	H 24	15116	7170		1822				Contract
Cyclic Maintenance Repairs	H 23	15063	7170	274	7608				
Repair Plumbing & Walls	H-24	15018	7170	290	4868				
Repair Bed Bumpers	NH100	15081	7150	30	465				
Elevator Maintenance	NH100	15120	7150		25512				Contract
Clean & Repair Boiler	NH 118	15114	7120	28	230				

ATTACHMENT F-7

NAVHOSP SPECIFIC WORK ANALYSIS (M-1 NON-REIMBURSABLE)

ACTIVITY Camp Lejeune DATE OF REVIEW 2/4/87 PAGE 2 OF 2

DESCRIPTION	FACILITY NUMBER	JOB ORDER/ SHOP CONTROL NUMBER	CAN	MIR	ESSENTIAL M&R (COST)	NON-ESSENTIAL M&R (COST)	NON-M&R (COST)	COMBINATION (COST)	REMARKS/RECOMMENDATIONS
Rpl Anchor Bolts: Trash Compactor	1	15112	7150	35	571				Insp Generated
Prepare Boiler for Annual Insp.	NH100	15130	7150	54	903				
Repair Post Lights	Street Lighting	15113	7150	23	372				Insp. Generated
Repair Valve in Chill Water Line	NH100	15123	7660						Not Estimated
Replace louver Screens	NH100	15124	7150	34	489				Insp. Generated
Repair Wall, Corners & Doors	NH100	15083	7150	177	8685				Insp. Generated
Rpr & Clean Boiler: Winter Prep	NH118	15082	7120	32	535				
Prepare & Seed Lawn	Lawns	15076	7410	118	2462				Insp. Generated
Paint Sign Post	Hospital Area	15059	7310	16	236				Insp. Generated
Design for Wall Protection, Galley	NH100	15017	7150		2500				Contract
Electrical Study	NH100	15015	7150		1000				Contract to Marine Base
Cleaning of chillers & cooling towers	NH100	15014	7660	188	2792				
Install Corner Guards	NH100	6809351501[illegible]	7150	52	3332				Insp. Generated
Repair Steam Coils: Quantity Unknown	NH100	15021	7150						Not Estimated
Relocate Sewer Drain Line	NH100	6809351501[illegible]	7150	42	792				Insp. Generated
Prepare Boilers for Insp.		0506-9935	7640	48	861				Insp. Generated
Rpr Painted Surfaces in Area C&Q2	NH118	6809351501[illegible]	7150	40	591				Insp. Generated
Rpr A/C System	H-24	0501-9946	7640		51000				Contract
Replace Floor Tile	H-14	0528-9944	7140		19800				Contract
Annual Cleaning of Chillers	NH108	0518-9957	7660	190	2985				
Rpr. Asphalt Pavement	Parking Lot	0533-1105	7310		6817				Contract
Replace AC supply to Room		0503-9947	7150	20	317				

ATTACHMENT F-7

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511-6287

TELEPHONE NO.
A/V 564-9800
(804) 444-9800
IN REPLY REFER TO:
5230
1012

From: Commander, Atlantic Division, Naval Facilities Engineering Command

Subj: AUTOMATION OF PUBLIC WORKS MAINTENANCE MANAGEMENT SYSTEMS USING MICROCOMPUTERS

Encl: (1) Public Works Department Microcomputer Maintenance Management Systems
(2) Microcomputer Application to PW Programs, Questionnaire

1. Public Works Departments (PWDs) have many functions which can be automated with the use of computers. While some PWDs have individually implemented various stages of automation, others have not. A mini-computer based Maintenance Management system referred to as the Base Engineering Support, Technical (BEST) System has yielded many benefits since its implementation. With over two years of field use in medium to large PWDs, its successful implementation has set a precedent for all PWDs to benefit from this standardized maintenance management system. To respond to the needs of PWDs that did not receive the mini-computer version of the BEST System, the software has been rewritten to run on microcomputers operating with the MicroSoft Disk Operating System (MS-DOS) Version 3.1 or later.

2. The microcomputer based Maintenance Management system is currently being developed and tested by the Civil Engineering Support Office (CESO). The applications programs are designed as software modules with their functions described in enclosure (1). The first release of the software is planned for sometime during the third quarter of FY87. Applications for Family Housing, Facility Support Contracts, and Utilities are also in various stages of development. Microcomputer system purchases are the responsibility of the PWD. Individual microcomputer systems capable of running the software are available at a cost within the local Operations and Maintenance, Navy (O&MN) authorization limit.

3. Enclosure (1) describes the basic parameters of the microcomputer Maintenance Management system. We ask that you review enclosure (1) for its applicability to your operations. To provide implementation assistance, we also ask that you complete and return enclosure (2) by 6 March 1987. My staff will follow-up with you on your responses and interest.

4. Points of contact for further information are Robert G. Eure at AUTOVON 564-9847 or commercial (804) 444-9847 and Barry G. Densten at AUTOVON 564-9810 or commercial (804) 444-9810.

for J. M. DOUGHERTY
By direction

Distribution:
(See page 2)

Quality Performance ... Quality Results

ATTACHMENT F8

PUBLIC WORKS DEPARTMENT

MICROCOMPUTER

MAINTENANCE MANAGEMENT SYSTEMS

Enclosure (1)

MICRO COMPUTER MAINTENANCE MANAGEMENT SYSTEM

I. GENERAL

II. SYSTEMS/MODULES

A. Emergency/Service (E/S)
B. Facilities Engineering Job Estimating (FEJE)
C. Work Input Control (WIC)

III. BASIC PREREQUISITES

A. PW Maintenance Management Program
B. Hardware/Software (Operating System)
C. Computer System Administration

Enclosure (1)

MICROCOMPUTER MAINTENANCE MANAGEMENT SYSTEMS

I. GENERAL

A set of MicroSoft Disk Operating System (MS-DOS) microcomputer based Maintenance Management Software modules is under development and will be available for your use in the near future. The information provided here-in will give you a general overview of the modules being developed and the prerequisites necessary to accept the software. We have also included a questionnaire (Enclosure (2))that addresses your current automation applications and your interest in the NAVFAC software. Your responses will assist us in formulating our plans for any assistance you may desire.

II. SYSTEMS/MODULES

A. Emergency/Service (E/S)

The E/S Module is a self-contained system designed to support the day-to-day operation of your E/S program. Service work is generally minor in scope and can be accomplished in 16 hours or less. Emergency work usually requires immediate attention in order to prevent loss or damage to government property or is needed to restore essential services and/or eliminate hazards. Based upon input from the E/S work reception desk, it prints out work orders. With this module, information relating to outstanding work orders, work performed by work center/craft or even by individual craftspersons, against certain activities or even an individual facility or type of service performed, is available at any time.

B. Facilities Engineering Job Estimating (FEJE)

The FEJE module is an automated method of applying Engineered Performance Standards (EPS) that enables Planners and Estimators to prepare scoping and detailed estimates with more consistency and better quality. The FEJE module includes Scope Estimating and Detailed Estimating. Use of FEJE will significantly improve EPS utilization. Various studies have shown that proper application of standards results in more productive use of resources.

C. Work Input Control (WIC)

The WIC Module provides your Facilities Manager a tool to effectively control the flow of work to the shops or contracts, based upon known availability of resources. WIC is designed to track work to see what has been accomplished, what is currently scheduled, and what has been deferred. When work is planned to be performed, a PW control number is assigned and the pertinent information is entered into the WIC module. Dates, organizational codes and remarks can be entered as the job progresses through cost estimating, materials ordering, shop scheduling and in-house accomplishment or contracting phases.

III. BASIC PREREQUSITES

A. PW Facilities Management Systems

These microcomputer applications have been written on the assumption that reasonably good, operational basic Maintenance Management procedures are

in place. Without some key elements, the programs will not effectively operate. To help you make a self appraisal of your current systems, we offer Attachment A. After your evaluation, you should be in a better position to determine what steps are necessary for an easier transition.

B. Hardware

Attachment B is a hardware listing based on the Zenith contract. Each module will require its own individual configuration. The items to select will depend upon the volume of work processed. For example, for FEJE, two 20 MB drives and a tape drive are required and one system can normally accommodate three P&Es. For E/S and WIC, only one 20MB drive may be required for each, but this is dependent on the workload processed and whether or not other non-facilities management programs are being used, e.g., word processing. The NAVFAC applications software operates on an IBM PC or compatible microcomputer with MS-DOS, Version 3.1 or later version. We suggest that only one module be installed in each microcomputer system.

C. Computer System Adminstration

To efficiently keep all of the equipment and programs in operation, at least one person, preferably two should be knowledgable in microcomputer operations or be provided sufficient time to learn. Additionally, the person(s) would have as a collateral duty the responsibility to oversee the total computer operations and assist the day-to-day users in operations. Most important is the need for regular periodic backups of data. Additionally, software updates will need to be installed by someone familiar with the computers to prevent loss of data. Previous experience has indicated that specific duties and responsibilities should be assigned to individuals to maintain the operational capabilities of the computer systems.

FACILITIES MAINTENANCE PROGRAM STATUS

MODULE	TARGET	CURRENT	REMARKS
A. Emergency/Service			
1. Is there a central "Trouble Desk" for reception of all E/S calls?	Yes*		
2. Is there a "Log" maintained on the status of all calls?	Yes*		
3. Is EPS being applied to service calls?	Yes		
4. Is there feedback of actual hours spent on E/S calls?	Yes		
5. Is there a listing of all customers?	Yes*		
6. Is there a numbering system for calls?	Yes		
7. Is there a current listing of all on-station facilities?	Yes*		
B. FEJE			
1. Are all job orders (PMI, Standing, Minor, and Specific being planned and estimated?)	Yes*		
2. Are all Work Centers designated by a Code?	Yes*		
3. Are current labor rates maintained for each Work Center?	Yes*		
4. Have all Planner/Estimators received EPS training?	Yes		
5. Is there a current travel zone map available?	Yes*		
6. Is EPS being applied to all job orders?	Yes		
C. WIC			
1. Is there a "Log" maintained on the status of all works requests, job orders and contracts?	Yes*		
2. Is there a numbering system for all job orders?	Yes		
3. Are monthly Manpower Availability/Work Plan Summaries prepared?	Yes		
4. Are monthly Shop Load Plans prepared?	Yes		
5. Is there feedback of actual hours spent on job orders?	Yes		
6. Question A.5	Yes*		
7. Question A.7	Yes*		

*Key elements for the transition to the NAVFAC application software.

Enclosure (1)
Attachment B

ZENITH PERSONAL COMPUTER REQUIREMENTS
FOR FACILITIES MANAGEMENT PROGRAMS

Contract F19630-86-D-0002: New Standard Air Force/Navy Desktop System

CLIN	Part Number	Description	Contract Price ($)
Hardware:			
0001	ZFX-248-50	Z-248 Basic Computer System	1103.00
0004AA	Z-405-3	Mem Expansion to 640KB	120.00
0006AA	Z-217-22	20MB Hard Disk	302.00*
007	AFP-45	ALPS P-2000 Dot Matrix Printer	528.00
0012	ZVM-1442	Monochrome Monitor	116.00
0014AB	HCA-80	Surge Supressor	30.00
0015	AFP-51	Dial-UP 2400 Baud Modem	158.00
0017	Z-416-2	8 MHZ 80287 Math CoProcessor	143.00
0016	Z-427-20	Tape Backup w/5 21 MB Blank Tapes	478.00**

*2nd Disk depends on volume of data to be processed.

** Tape drive required if FEJE Module is utilized. Recommended to backup hard drives, however only one is needed.

Enclosure (1)
Attachment B

MICROCOMPUTER APPLICATION TO PW PROGRAMS
QUESTIONNAIRE

ACTIVITY_____

POINT OF CONTACT_____(A/V)_____(COMM)_____

1. Are you currently using microcomputers on any of the areas discussed here-in? Yes_____, No_____.

   a. If so, which ones? (Check)
   E/S____, FEJE____, WIC____, Other (explain):

   b. Would you like to try any of the NAVFAC modules, assuming you have hardware capability? Yes____, No____.

   Which ones? E/S____ FEJE____, WIC____.

   c. Do you currently have microcomputer systems that meet the requirements as described in Enclosure (1) Section III, para B. Hardware? Yes____ No____, If so, How many systems?____ What Makes and Models?

   d. If you do not have the hardware, are you willing to procure it for installation of the NAVFAC modules? Yes____ No____.

2. Do you feel you have a reasonably good basic Maintenance Management program in operation to accept the NAVFAC modules? Yes____, NO____.

   Remarks:

3. Do you currently have someone on-board to act as a Systems Administrator? Yes____, No____.

   If not, are you willing to commit someone to this function? Yes____, No____.

4. Can we provide you with any other information on this subject?

BEST NEWS

1011 ~~1000~~ 410
1011 E CW
1011F
1012 — LAS

PACIFIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND

Volume No. 87 | Issue No. 13 | January 1987

PACNAVFACENGCOM BEST INFORMATION

PHONE: AUTOVON: 471-8260/8054/9151/8169
COMMERCIAL: (808) 471-8260/8054/9151/8169

STATUS OF BEST APPLICATION SOFTWARE

WIC, FEJE, SFI - Reprogramming is completed. EFDs will conduct a final review of the revised software in late January. Activities may be receiving the new software in late February.

UTILITIES - Testing of the Utilities program is near completion. User training is now scheduled for last week in February. Installation of the software at field activities will follow soon after the user training.

TRANSPORTATON - The entire Transportation software is scheduled to be completed by mid-May. "BETA" test of the software is scheduled for June and may take 6-8 weeks. TEMC training will follow in late summer with field installation scheduled for the August-September timeframe.

✳ BEST SOFTWARE FOR MICRO COMPUTERS

As you are becoming aware, the state-of-the-art of micro computers has now achieved a level where it can rival mini computers in certain applications. Realizing the benefits and cost effectiveness of micros, CESO is pioneering the "down sizing" of the BEST software applications to run on micro computers.

Currently, MS-DOS micro versions of FEJE, ES, and the Family Housing software are being tested by CESO and may be available for release this calendar year. These micro version of the software are being run and tested on a Zenith 248 with a hard disk drive.

The Tranportation functional area also have two micro versions of software. One down sized version is called "CAMEO". This however, is a very limited single user application designed on a Zenith 120.

The other version which shows more similarity to the BEST Transportation software is called the "GTE". This automated transportation management system was developed by General Telephone and Electronics (GTE) and has been modified to meet the needs of the Navy.

Attachment F-9

Current micro computer capabilities and application software show tremendous potential and may be more cost effective in the long run for many small to medium size activities. More details will be published as they become available. For additional information contact PACNAVFACENGCOM. More on micros in the following article.

ZENITH 248 MICRO COMPUTER

A very lucrative contract exists for all services of the DOD to purchase Zenith 248 micro computers. The contract, better known as the AFCAC CONTRACT NO. F-19630-86-D-0002, calls for 90,000 Z-248 micros over a 3 year period. This contract offers three levels of Z-248 systems - a basic, intermediate, and advanced system. Additionally, other peripheral devices and a limited amount of software are offered on this contract.

Astronautics Corporation of America (ACA) handles all maintenance services. On-site maintenance are available in the Far East, Europe, the Pacific and for all of CONUS. Currently, there is no Zenith service representative in Japan. All calls are now handled through a service office in Seoul, Korea. Zenith is however, working on establishing a service center in Japan.

Also offered on this contract are several emulators which will allow the Z-248 to function as a work station to a host computer. A simple example would be, using an emulator to have the Z-248 also function as your Honeywell VIP 7305 terminal. Here you would be able to use it as a micro computer and as a BEST terminal. This may be advantageous since the cost of a Honeywell VIP 7305 terminal costs more than the basic Z-248 system.

CAUTION - The Honeywell emulator on the Zenith contract is not compatible with our DPS 6 mini and VIP 7305 terminals. The correct emulator goes under the description as VIP III.

If you have already ordered your Z-248 here are some helpful phone numbers to get status on your order depending how far along your requisistion is.

If you have not received a delivery date, status on your order can be obtained by calling:

NARDAC, Norfolk (804) 445-1493 or AUTOVON 565-1419

If you have a delivery date which has passed and your computer has not arrived, you can call Zenith directly:

Zenith Data Systems (703) 821-0104 or 893-0549
(800) 582-0030 or 843-4130

If you are currently using your Z-248 and run into problems or questions, call your local Naval Data Automation Command first.

NEAREST CITY..JACKSONVILLE 4.3 MI NW TYPE/STATUS..ACTIVE NON-INDUSTRIAL ACTIVITIES
PRODUCT/FUNCTION..HOSPITAL OPERATOR..... INITIALLY OCCUPIED.1972 ACTIVITY CODE..3435200

LAND

CCN		OWNED COST TO GOVT	OWNED ACRES	INGRANTED ESTIMATED VALUE	INGRANTED ACRES
911	LAND-FEE	3197	166.00		
	TOTAL	3197	166.00		

	OWNED ACRES	INGRANTED ACRES
IMPROVED	68.71	
SEMI-IMPROVED	9.28	
UNIMPROVED	83.83	
OTHER	4.78	
OUTGRANTED		

BUILDINGS

CCN		COST TO GOVT	OWNED CPV (000)	SQ FT	OTHER/ NAVALT	# BLDG
143	SHIP&OTH OP BLD			1400		
441	COV STOR/DEPOT	70606	75	10000	200000TC	2
510	MED CEN/HOSPTAL	54366955	58540	422135	205BD	1
740	COMM FAC-MH&R I			500		
	TOTAL	54437561	58615	434035		3

		COST TO GOVT	OWNED CPV (000)	SQ FT	OTHER/ NAVALT	# BLDG
	PERMANENT	54437561	58615	434035		3
	SEMI-PERM					
	TEMPORARY					
	EXCESS					

STRUCTURES/UTILITIES

CCN		COST TO GOVT	OWNED CPV (000)	AREA	OTHER/ NAVALT
750	COMM FAC-MH&R-X	42000	46		1EA
812	ELEC TMSN/DISTR	350000	381		33335LF
832	SEWAGE/COLLECT	231000	251		7462LF
842	WATER DIST-POT	313500	341		15305LF

CCN		COST TO GOVT	OWNED CPV (000)	AREA	OTHER/ NAVALT
851	ROADS	462000	503	26710SY	1MI
852	WALKS PARKING	546000	594	49594SY	
871	GROUNDS DRAINAG	1050000	1142		11596LF

AREAS AND USERS

AREA	ACTIVE/ INACT	CITY	COUNTY	STATE/ COUNTRY	SIG	ACRES	SQ FT	CLASS 1 COST	CLASS 2 COST	OWNED CPV	# BLDG
MAIN SITE	A	CAMP LEJEUNE	ONSLOW	NC	S	166.00	434035	3197	57432061	61873312	3
USERS..		NAVHOSP CAMP LEJEUNE NC		N68093	H/T=0	166.00	434035	3197	57432061	61873312	
*** ACTIVITY TOTAL ***						166.00	434035	3197	57432061	61873312	3

ATTACHMENT G-1

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, NORTH CAROLINA 28542-5008

IN REPLY REFER TO
NHCLNCINST 4100.1
107
15 JUL 1986

NAVHOSPCLNC INSTRUCTION 4100.1

From: Commanding Officer

Subj: ENERGY CONSERVATION PROGRAM

Ref: (a) OPNAVINST 4100.5B
(b) NAVMEDCOMINST 4100.1

1. Purpose. To maintain our Energy Conservation Program and to provide policy and guidance in establishing specific energy reduction goals in compliance with references (a) and (b).

2. Cancellation. NAVREGMEDCENCLNCINST 4100.1E

3. Information. Our demand for energy is increasing. Most of this energy is derived from fossil fuels which are becoming more expensive and are expected to be in short supply. As energy demands in the United States increase, the United States becomes more dependent on foreign countries for our fuels. The combination of foreign dependence and rising costs could seriously impair the Navy's ability to fulfill its responsibilities.

4. Policy. All departments will make every effort in achieving stated goals without sacrificing proper patient care, military readiness, or safety and effectiveness.

5. Goal. We support the Federal Energy Program's goal of a ten percent reduction in energy per gross square foot area by FY95. This reduction is based on the adjusted FY 1985 baseline (1 October 85 - 30 September 95). Our target is a minimum annual reduction of one percent.

6. Action

a. The Head, Branch Medical Clinics will establish energy conservation guidelines in accordance with references (a) and (b), and this instruction.

b. The Head, Facilities Management Department is our Energy Conservation/ Resource Manager. His duties are:

(1) Promote energy efficiency in using our systems and equipment.

(2) Advise and assist all Departments in energy conservation measures.

(3) Maintain graphs and records in accordance with reference (b).

c. Each Department Head will establish and maintain procedures to prevent energy waste.

ATTACHMENT H-1

d. Energy Conservation and Resource Management Committee (ECRMC).

(1) The Energy Conservation and Resource Management Committee is established as follows:

(a) Director, Administration (Chairman)
(b) Director, Nursing Service
(c) Head, Branch Medical Clinics
(d) Head, Facilities Management Department
(e) Head, Psychiatry Department
(f) Head, Operating Management Department
(g) Command Master Chief
(h) Financial Manager, Fiscal Department
(i) Recorder, Facilities Management Department

(2) The ECRMC will meet as needed, but at least quarterly.

(3) The committee will focus attention on and develop active participation in reducing utilities consumption. They will make recommendations to the Commanding Officer on ways of reducing energy consumption. They will assist energy monitors as required.

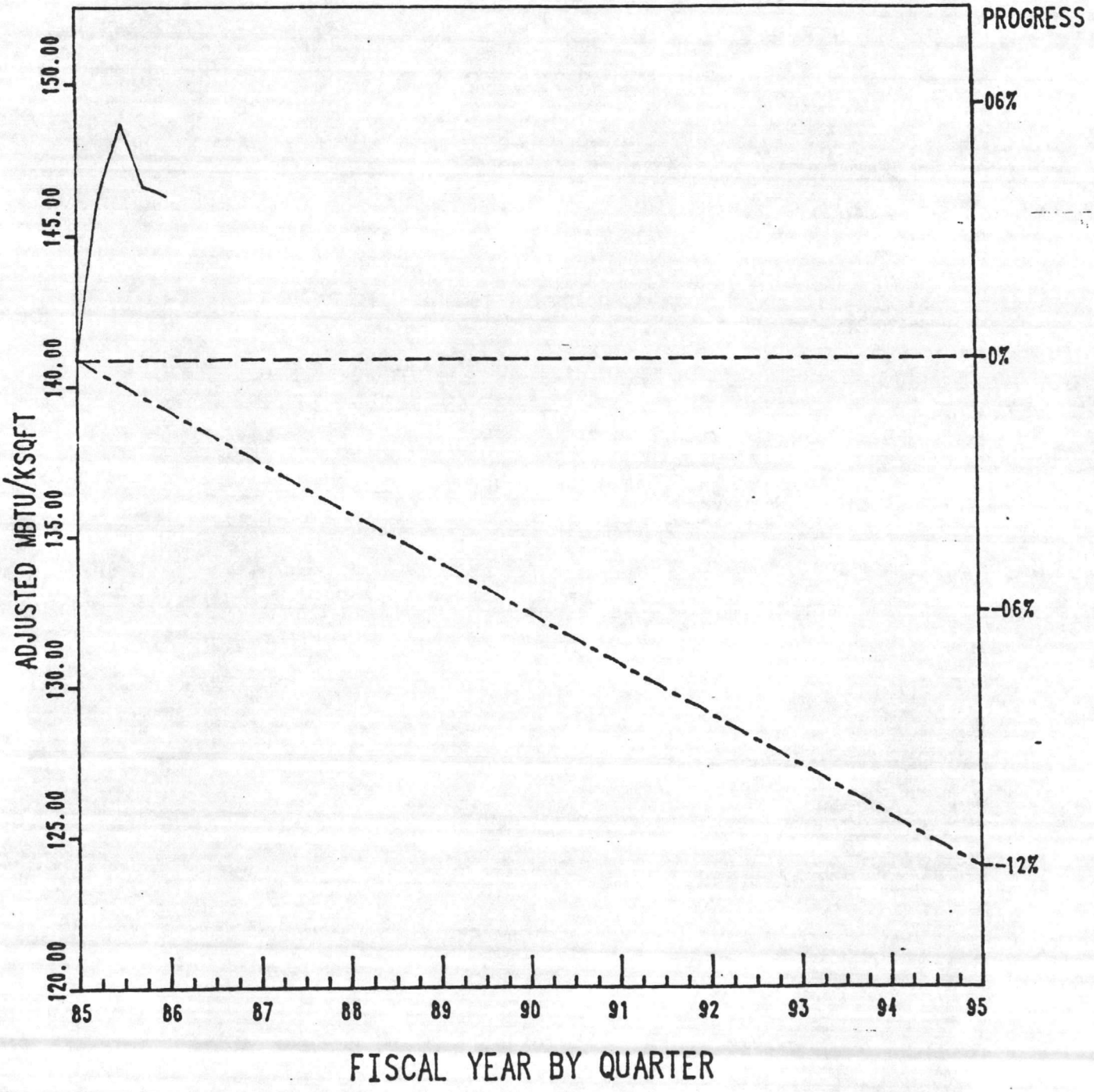
R. A. MARGULIES

Distribution:
List "A"

ADJUSTED ENERGY CONSERVATION PROGRESS

NAVHOSP CAMP LEJEUNE NC

AS OF 30 SEPTEMBER 1986



(UIC N68093)

BASELINE	
GOAL	(-01.20%)
PROGRESS	(3.87%)

ATTACHMENT 4-2

PREPARED BY NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY

FACSO RPT/SYM NO 9593/F75EARO6
EFD DETAIL FOR.....LANTDIV
MAJOR CLAIMANT....NAVMED
SUB CLAIMANT.....MEDMAR

DATE.....03 DEC 86

ENERGY AUDIT REPORT
PROGRESS SUMMARY

EFD.....LANTDIV

PREPARED BY...NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY

ACTIVITY UIC.....N68093 SHORE ACTIVITY
ACTIVITY NAME.....NAVHOSP CAMP LEJEUNE NC

	CURRENT QTR	PREVIOUS QTR	PERCENT DIF
ADJUSTED MBTU/KSF PROGRESS (LATEST 12 MONTHS PERFORMANCE AS COMPARED TO FY85)	3.87%	4.10%	-0.23%
INTERIM GOAL.....	-1.20%		
PERFORMANCE FROM FY75 TO FY85.....	12.57%		

IF YOUR ACTIVITY(S) MET THE INTERIM GOAL OF -1.20% YOUR ENERGY COST FOR THE LATEST 12 MONTHS WOULD HAVE BEEN $44,057 LESS

DEPARTMENT OF THE NAVY
NAVAL HOSPITAL
CAMP LEJEUNE, NORTH CAROLINA 28542-5008

IN REPLY REFER TO
4300
13/11572
10 Oct 1986

From: Commanding Officer, Naval Hospital, Camp Lejeune, NC 28542-5008
To: Commander, Atlantic Division, Naval Facilities Engineering Command, Norfolk, VA 23511-6287 (Attn: Mr. A. J. Hansen)

Subj: FACILITY ENERGY PLAN

Ref: (a) LANTDIV ltr 11300/1112JAK of 16 Sep 86

1. Thank you for the observations/recommendations of reference (a).

2. For the record, the hospital's Facilities Management Department is currently submitting a special project to install a small boiler to handle the summer heating loads as recommended in paragraph IV of reference (a). The photo cell operation of the loading dock lights is also being investigated.

3. Point of contact for any further comments is LTjg Graham at AUTOVON 484-4900.

R. NEAL GRAHAM
By direction

Copy to:
MIDLANT 21

Attachment H-3

FACILITY ENERGY PLAN
FOR THE NAVAL HOSPITAL
CAMP LEJEUNE, NORTH CAROLINA

SEPTEMBER 1986

ENERGY PROGRAMS SECTION
ENERGY AND UTILITIES ENGINEERING BRANCH
UTILITIES, ENERGY AND ENVIRONMENTAL DIVISION
ATLANTIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511-6287

PREPARED BY:

J. D. KNIGHT
MECHANICAL ENGINEER

I. Introduction

In accordance with NAVFACINST 4101.6 of 19 October 1984, A Facility Energy Plan (FEP) is to be developed at least once every six years at each naval activity for the purpose of assisting activities in achieving the established energy goals in existing buildings as stated in OPNAVINST 4100.5C. This FEP was initiated at NAVHOSP Camp Lejeune on 5 February 1986.

FEP's are to provide shore activities with a plan to identify and quantify all facility energy conservation opportunities to minimize energy use. The FEP emphasizes the cost effectiveness of energy conservation opportunities. The FEP is a cornerstone of the Energy Engineering Program (EEP) defined by NAVFACINST 4101.4 for the purpose of providing technical and management support to naval activities.

II. Brief Activity Description

The Naval Hospital, Camp Lejeune consists of over 580,000 square feet of building floor space which is distributed among one hospital building, four dispensaries, six barracks and warehouse space. Of the total square feet, 424,000 is contained in the hospital building, which was constructed in 1982. The hospital building was constructed with energy conservation as a basis of design. The hospital building is also equipped with an Energy Monitoring and Control System (EMCS). All major energy consuming equipment is monitored and controlled by the EMCS. The major energy consuming equipment of the hospital includes two 350-horsepower boilers, two 450-ton chillers, one 200-ton chiller and three 900-KW emergency diesel generators.

III. Energy Conservation Program

The current Energy Conservation Program is defined by NAVHOSPCLNCINST 4100.1 of 15 July 1986. The Facility Management Department Staff Civil Engineer is assigned as the Energy Conservation/Resource Manager as a collateral duty. The energy instruction sets goals, establishes policy and establishes the Energy Conservation and Resource Management Committee which meets at least quarterly to develop active participation in reducing utilities consumption.

IV. Observations/Recommendations

The hospital was constructed with modern energy conservation techniques and there is very little that can be done to the building systems to decrease its energy consumption. A recent study completed by this office recommended installing a 100 Horsepower boiler to be used in the summer. The existing boiler operates at a very low load during the summer which is inefficient. A project should be submitted through the chain of command to have the smaller boiler installed. Other recommendations are as follows:

a. Loading Dock Outside Lighting - Loading dock lighting should be put on a photo cell that would turn off lights during the daylight hours.

b. Incinerator Waste Heat Recovery - The incinerator that is used to burn hospital waste is fired by propane gas. It has been found that to retrofit the incinerator, install piping, pumps, and controls that would be required, is not cost effective.

c. Telephone Switch Gear Room - The telephone switch gear room is now cooled by two window air conditioning units. Alternatives were considered to replace the window units but none proved to be cost effective.

d. Energy Audit Report (EAR) - Currently the EAR report is adjusted for weather conditions for all activities. Activities are allowed to submit up to eight other variables which will affect energy consumption. A variable that should be considered is hospital inpatients. The variable requires historical data for the previous three years and the variable must be approved by NAVFACENGCOM.

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U UNCLASSIFIED U
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JWK
JDK JDK

ADMINISTRATIVE MESSAGE

ROUTINE

R 060030Z NOV 86 ZYB PSN 806015N20

FM COMNAVMEDCOM WASHINGTON DC

TO NAVMEDCOM MIDLANTREG NORFOLK VA

INFO NAVHOSP CAMP LEJEUNE NC LANTNAVFACENGCOM NORFOLK VA

UNCLAS//N11019//

SUBJ: NAVHOSP CAMP LEJEUNE FACILITIES SPECIAL PROJECTS PROGRAM

A. OPNAVINST 11010.20E
B. MY LTR 11019 SER 432A/51025008 OF 25 JAN 85 (NOTAL)

1. THE FALL SPECIAL PROJECTS PROGRAMMING BOARD MET ON 29 AND 30 OCTOBER 1986 TO FINALIZE YOUR FY-87 PROGRAM AND SELECT A PORTION OF YOUR FY-88 PROGRAM. VERY FEW PROJECTS WERE SELECTED FOR FY-88. THE NUMBER OF VALID UNPORGRAMMED PROJECTS AVAILABE FOR OUR REVIEW WAS MINIMAL, ESPECIALLY REPAIR PROJECTS. YOUR AIS SUBMISSIONS SHOULD REFLECT ALL MAINTENANCE AND REPAIR DEFICIENCIES. ENSURE ALL CLASS 2 DEFICIENCIES HAVE PROJECT DOCUMENTATION PREPARED AND SUBMITTED.

2. NO PROJECTS ARE PROGRAMMED FOR FY-87 CONSTRUCTION EXECUTION.

3. THE FOLLOWING PROJECTS ARE PROGRAMMED FOR FY-88 CONSTRUCTION EXECUTION. ADDITIONAL FY-88 PROJECTS WILL BE SELECTED DURING THE SPRING PROGRAMMING BOARD. PLS ENSURE DESIGNS ON THESE PROJECTS ARE STARTED IMMEDIATELY. INCLUDE US IN THE ENTIRE DESIGN REVIEW PROCESS, INCLUDING 35, 90, AND FINAL DESIGNS FOR ALL PROJECTS WITH AN "X" IN THE RVW COLUMN.

PROJ #	TITLE	CWE	RVW
C1-86	ALTS TO MEDICAL GAS OUTLETS	$ 50K	X
C1-87	PROVIDE ADDTNL BOILER/DEAERATOR TANK	$ 40K	← FEP
CA1-85	PROVIDE A/C IN MED DRUG STORAGE AREA	$ 35K	
RC1-86	RPRS/ALTS TO MED SPACES, B. 15 MCB	$159K	X

4. THE FOLLOWING PROJECT IS PROGRAMMED FOR FY-87 DESIGN ONLY. ONCE THIS PROJECT IS DESIGN COMPLETE AND APPROVED WE WILL

DLVR:LANTNAVFACENGCOM NORFOLK VA(15)...INFO

RTD:000-000/COPIES:0015

806015/310 1 OF 2 MATAU462 310/02:44Z 060030Z NOV 86
CSN:AUIAU2729 310/02:44Z COMNAVMEDCOM

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ATTACHMENT H-3

PLANNED SYSTEMS INTERNATIONAL, INC. CONTRACT # N6247[illegible]6-B-5514

SCHEDULE OF DEDUCTIONS

SCHEDULE ITEM NO.		DESCRIPTION	UNIT	NO. UNITS	UNIT PRICE	TOTAL	SFC
0001A		OPERATION of EMCS	HR	8760/yr	$ 5.05	$ 44,238.00	NI
0001B		OPERATION of Hospital Communication Control Center	HR	8760/yr	$ 16.75	$146,730.00	NI
0001C		PM EMCS	MO	12 3 688.50	$ 3687.50	$ 44,262.00	MI
0001D		PM Sound System	MO	12	$ 300.00	$ 3600.00	MI
0001E		PM PA System	MO	12	$ 300.00	$ 3600.00	MI
0001F		PM Security System	MO	12	$ 300.00	$ 3600.00	MI
0001G		PM Broadband System	MO	12	$ 300.00	$ 3600.00	MI
0001H		PM Intercom System	MO	12	$ 300.00	$ 3600.00	MI
0001I		PM Fire Alarm 14 items 3 months 11 2/years	MO	12	$ 300.00	$ 3600.00	MI
0001J		PM Code Blue	MO	12	$ 300.00	$ 3600.00	MI
0001K		Regular Service Calls	EA	600 1,000	$ 20.00	$ 12000.00	MI
0001L		Emergency Service Calls	EA	60 000	$ 40.00	$ 2400.00	MI
0001M		Reports and Logs	MO	12	$ 200.00	$ 2400.00	NI
0001N		Facility History File Maintanence	MO	12	$ 200.00	$ 2400.00	MI
0001O	*	Housekeeping	DA	365	$ 20.00	$ 7300.00	MI
0001P	**	Balancing of Sound System	LS	1	$ 278.00	$ 278.00	MI
0001Q		Foster Bldg. Prog. Rep	EA	4	$ 1000.00	$ 4000.00	MI
0001R		Technical Library	MO	12	$ 200.00	$ 2400.00	NI
0001S		Training of Government Personnel	S*	2	$ 2000.00	$ 4000.00	NI
0001T		Quality Control Program	MO	12	$ 200.00	$ 2400.00	NI

TOTAL PRICE FOR CONTRACT LINE ITEM 0001: $ 300,000.00

*Session

not true PMI accords to navy definition; Hereafter, MI vice PI

SUBMITTED BY: Frank E. Sloan, Site Manager

Frank E. Sloan

* should be PI; for simplicity, make MI.

** not RPMA; for simplicity, make MI

Rec 1 July 86

ATTACHMENT H-4

SCHEDULE

ITEM No.	Supplies/Services

01 FIRM FIXED PRICE LUMP SUM WORK:
Price for labor and material to perform all work specified in Section C for a period of one year except for work specifically identified as being included in the Indefinite Quantity protion of the contract.

SCHEDULE OF FIRM FIXED PRICE LUMP SUM WORK

TOTAL PRICE FOR CONTRACT LINE ITEM 01 $_____

02 INDEFINITE QUANTITY WORK:
Price for labor and materials to perform specific repair as specified in Section C for a period of one year. The quantities listed below are realistic estimates provided solely for the purpose of bid evaluation and for establishing the penal sums of bonds (if required). The price for this bid item is the total of the items listed in the Schedule of Indefinite Quantity Work. $_____

SCHEDULE OF INDEFINITE QUANTITY WORK

Item No.	Supplies/Services	Qty.	Unit	Price	Amount	
						SFC
0002AA	Price for labor to perform specific repair work as specified in para. C.6d.	500	MN-HRS	$ 25	$ 12,500	M-1
0002AB	Price for materials to accomplish specific repair work as specified in para. C.6d	xxxxx	LS	xxxxx	$ 7500.00	M-1
0002AB	Price for labor and materials to accomplish required programming.	120	HRS	25	$ 3000	N-1

TOTAL PRICE FOR CONTRACT LINE ITEM 002 $ 23,000

M-1 = 110,540 / 323,000 = 34%

N1 = 212,460 / 323,000 = 66%