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EVALUATION OF A CASH COLLECTION SYSTEM FOR NAVY ASHORE FOOD SERVICE OPERATIONS

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Army Natick Development Center
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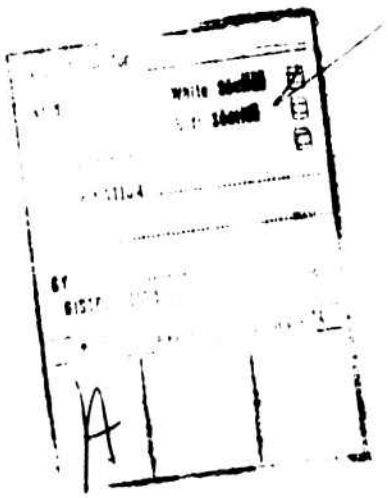

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This report presents the results of a feasibility study of a proposed cash collection system for Navy ashore food service establishments. The data was collected at Naval Air Station, Alameda and compared to similar data obtained at Loring AFB. The analysis covers consumer attitudes and worker attitudes toward BAS/a La Carte, attendance patterns, manpower analysis, nutritional intake survey and the costs associated with the new system. A series of findings and the rational for further testing the BAS/a La Carte concept at a Navy installation is also presented.

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SECTION I

INTRODUCTION

During FY75, the Operations Research & Systems Analysis Office conducted an investigation aimed at determining the feasibility of an all cash-item pricing concept (commonly called BAS/A La Carte) for Navy ashore appropriated fund food service facilities. This study was conducted as part of the Department of Defense Food RDT&ENG Program under Task AB of Project No. 1T762724AH99, Methods, Techniques and Measures of Effectiveness in Evaluating Feeding Systems.

The objective of this feasibility study was to assess the impact of the BAS/A La Carte System on the military consumer, the food service system (especially food service workers), and on the total costs of operation. Extensive data collection and surveys were conducted at Naval Air Station Alameda and compared with similar data obtained from Loring Air Force Base, where the USAF is conducting a BAS Test. This report develops the similarities of the two activities and then projects the effects of implementing BAS/A La Carte at NAS Alameda.

The Service Requirement is USN 5-2, Cash Collection for Navy Ashore Food Service Facilities.

SECTION II

FINDINGS AND RECOMMENDATIONS

Findings

The findings presented here are based on information drawn from surveys and data collected at NAS Alameda, as well as information obtained from the USAF BAS/A La Carte test at Loring AFB and Shaw AFB. The major emphasis in this study phase of this project was to quantify and project what would happen to the food service system at NAS Alameda if a BAS/A La Carte system was tested there. Of particular interest and importance were customer and worker morale, customer nutrition, customer attendance, manpower requirements, and system costs. With these considerations in mind, an analysis of the food service system at Naval Air Station, Alameda was conducted over the period August 1974–March 1975. Specific surveys that were given during this time were: (a) a consumer attitude survey, (b) a food service worker survey, and (c) a nutritional intake survey. Food service worker staffing level information, attendance data, and total system costs were also collected over this eight-month period.

1. The consumer attitude survey clearly shows an overwhelming preference of the all cash concept. The results at NAS Alameda confirm the findings at Loring AFB and Shaw AFB. The immediate effect of getting a "pay-raise" and having the flexibility to subsist other than in the dining facility are definite morale boosters. The item pricing concept is attractive to a majority of both ration status groups: Rations in Kind (RIK) and Commuted Rations (COMRATS).

2. There is a definite shift in worker attitudes toward the BAS/A La Carte concept. At Loring AFB the preference for BAS/A La Carte over the conventional mixed ration system is virtually unanimous, and a similar level of food service worker acceptance is possible at NAS Alameda.

3. The dining hall attendance rates at NAS Alameda were 34% and 4.7% for the RIK and COMRAT populations respectively. The average attendance for all enlisted personnel was 8.5%. For a comparable period at Loring AFB before converting to BAS/A La Carte, the respective rates were 33.5%, 3.6% and 10.9%. The level of overall attendance (10.9%) at Loring did not change appreciably in the first three months of the BAS/A La Carte test. The projected attendance at NAS Alameda during a BAS/A La Carte test is estimated at 8.8% for the entire enlisted population.

4. The number and type of food service workers required by the BAS/A La Carte system is not appreciably different from the requirements of the existing conventional system. One functional area that may need a higher level of control is the storeroom operation, a key area in the all cash-item pricing concept. The BAS/A La Carte test at Loring AFB is currently functioning quite well with no major changes in food service personnel.

5. The total amount of food consumed in the dining facility varied greatly between the RIK group and those receiving COMRATS, but the food items consumed outside the dining hall provided substantial intake for those who utilized the facility less frequently than the RIK population. It is important to emphasize that even RIK personnel, who as a group have the highest attendance rates, only receive approximately 29% (across ten nutrients) of their daily requirements in the dining hall. For the group surveyed their physical well being was more related to what they consumed outside the dining hall rather than inside.

6. The additional ration cost of placing everyone on COMRATS at NAS Alameda would be approximately $200,000 per year over the current subsistence cost of approximately $2,214,000. Other equipment and implementation costs are negligible when compared to the extra subsistence cost required to test BAS/A La Carte.

7. Increased efficiency and tighter management control is brought about by the BAS/A La Carte system. The system "forces" kitchen and serving personnel to be more conscious of food wastage, and food service concepts such as progressive cooking and merchandising food items. Better control over raw food expenditures cuts down on the quantities of food utilized per meal served.

Summary

The data collected and summarized in this report outline two potential benefits derived from the BAS/A La Carte concept: A significant increase in customer morale and increased job satisfaction for food service workers. Other system performance measures (nutrition, manpower, and attendance) should remain at the current levels during a BAS test. The one negative factor associated with the concept is the increase in overall system costs.

Recommendations

1. Initiate testing of the all cash – item pricing system in FY76. The start-up date should be 1 March 75, allowing a 1-2 month shakedown period before data collection activities begin.

2. The location of the test should be at Naval Air Station, Alameda. The data previously collected at this station provides a baseline in the evaluation of the BAS/A La Carte concept. Additionally, the size, type, and operating characteristics of NAS Alameda are comparable to many other Navy ashore establishments.

3. Appoint a member of the Navy Food Service Systems Office to be the principle point of contact for the administration of the test. He would serve as program monitor and would provide the level of support required for the successful completion of a system test.

4. Planning and coordination between the Navy Food Service Systems Office, the Operations Research/Systems Analysis Office, and the Naval Air Station, Alameda personnel should commence as soon as possible. The lead times required for the acquisition of equipment, minor building modification (i.e, utilities), and dining facility decor improvements are critical planning constraints that must be initiated early in FY76.

SECTION III

COMPARISON OF CONVENTIONAL AND BAS/A LA CARTE SYSTEMS

For the feasibility study portion of the Navy Ashore Cash Collection study, comparisons and projections had to be made to measure the effects of the BAS/A La Carte concept in a Navy ashore environment. The parameters that were measured in the performance of this evaluation were: (1) consumer attitudes, (2) worker attitudes, (3) attendance patterns, (4) manpower analysis, and (5) customer nutritional intake. Additionally, a cost analysis of the BAS/A La Carte system and the existing operation at NAS Alameda is found in Section IV.

Data from Loring AFB, Maine, were used to develop the comparison between the standard RIK-COMRAT mixed system and the new BAS/A La Carte concept. Information from the pre-test period and the first three months of the BAS Test at Loring AFB (Jan-March 1975) is presented along with the NAS Alameda data in the discussion of the five performance measures listed above.

Consumer Attitude Survey

As part of the feasibility study, personnel of the Behavioral Sciences Division of the US Army Natick Development Center conducted individual face-to-face interviews with a large number of the NAS Alameda enlisted personnel to determine their projected attitude toward the BAS/A La Carte system. In addition, the 1974 edition of the Consumer's Opinions of Food Service Systems (COFSS) survey was administered to a large group of enlisted personnel to assess their opinions about the current system as it was implemented at their installation. (A more complete and detailed presentation of these data is currently being prepared under a separate cover).

Method – For survey and interview purposes, the 2,333 enlisted man population of NAS Alameda was conceptualized as comprising three groups: married persons on COMRATS, single persons on COMRATS, and persons on RIK (rations-in-kind). A number of persons were randomly drawn from each of these groups, with the constraints that the persons were representative of the major work units at NAS Alameda, that they were male, and that they were not expecting to leave the Station in the near future. From the original sample of 300 men, a group of 150 enlisted men (50 of each group) were eventually interviewed and 169 enlisted men (54 RIK, 61 COMRATS-Married, and 54 COMRATS-Single) took the survey. Of these men, 136 were both interviewed and surveyed.

Interviews were conducted on a one-to-one basis at the interviewee's work site by three senior staff members of the Behavioral Sciences Division. The interview, which required 15-20 minutes to complete, contained 30 objective questions and 12 of an

open-ended variety. Four topics were covered in the interview: (a) demographic characteristics of the interviewee; (b) current eating patterns; (c) satisfaction with the current food system; and (d) projected attitudes about the BAS/A La Carte system. A copy of the interview protocol is contained in Appendix A.

The COFSS survey is a recent edition of the survey used by the Behavioral Sciences Division at numerous installations for all four services (e.g., Branch, Meiselman, and Symington, 1974). It contains 57 questions covering a broad range of areas related to food service. Respondents were allowed to complete the survey at their own pace, which required approximately 50 minutes.

Inclosed with the COFSS survey was a single-page Alternative Ration Systems survey which asked respondents about their general attitudes toward various ration systems. Specifically, it allowed respondents to design their "best" and "worst" systems and then rate those systems on a variety of scales. This survey required approximately 10 minutes to complete. A copy of both it and the COFSS survey are contained in Appendix A.

Results of Consumer Interview and Survey – In this section, attention will focus on the results of the consumer interviews, the survey findings being discussed to the extent that they supplement these data. Where appropriate, comparisons will be drawn between the data obtained at NAS Alameda and those gathered from similar interview/survey work at Loring AFB prior to the conversion of its dining system to BAS/A La Carte. (The Loring post-test results are available but have not been analyzed to the extent that conclusions can be made on the basis of those results).

Demographic Charcteristics – Some average demographic characteristics of the interviewees are:

	RIK	COMRAT(S)	COMRAT(M)
Age	22.3	27.1	29.8
Years in Service	3.6	7.8	10.5

Differences were also found with regard to rank, the medium rank of the RIK's being E-4 and that of both COMRATS groups being E-5. As would be anticipated, differences among the groups were also found with regard to living arrangements, most RIK's (82%) living in on-post bachelor quarters, most COMRATS-married, (70%) living in off-post family quarters, and COMRATS-Single split evenly between on- and off-post bachelor quarters (42% and 43%, respectively). The groups did not differ significantly with respect to racial composition (the majority were Caucasion, with some Negroes and Orientals) or education level (most had either completed high school or were working on a college degree).

Attitudes Toward the Current System

Interview Data: Reasons for Not Attending More Often – All interviewees were asked to specify the one main reason they did not eat in the dining hall more frequently. Responses were found to fall into six categories: inconvenience of the dining hall (hours, location of dining hall, location of home, etc.), undesirable food features (quality and variety), undesirable eating environment in the dining hall (decor, lighting, crowded, etc.) food habits which conflicted with and took precedence to eating in the dining hall (eating at home with family, going out with friends, etc.), poor service in the dining hall (attitude of worker, speed of service, etc.), and miscellaneous (expense, rules, etc.).

As shown in Table 1, the groups differed significantly in terms of the type of response given most frequently. Conflicting meal patterns and inconvenience features appear to play a significant role in the nonattendance of each of the groups. Collectively, 64% of the persons interviewed cited one of these two reasons which are not directly related to the food service system, as the main reasons for their relative nonattendance. Nonetheless, a number of persons in the COMRATS-Single group and, particularly, in the RIK group did mention undesirable features about the food served in the dining hall.

Interview Data: General Opinions of the Navy Food Service System – A number of questions in the interview were oriented toward the men's general opinion of the Navy's food service. The first asked the interviewees to rate their level of satisfaction with, "The effort the Navy has made to provide you with good food ashore". Persons on COMRATS were told that this included their COMRATS allowance. In response, less than a quarter of either COMRATS group (24% single, 18% married) expressed dissatisfaction, in comparison to over 40% of the RIK group.

As a follow-up, interviewees were asked to specify the one thing they would most like changed in regard to the Navy food system. The categories into which the responses fell are shown in Table 2. These data suggest that the one main change desired by all groups was with regard to the ration system in general. The RIK group was most interested in an all-COMRATS policy or in at least having a choice between COMRATS and RIK. On the other hand, the one main desire of the COMRATS groups was an increase in the COMRATS allowance, with a number of COMRATS-Single persons also expressing a wish for item pricing. The degree to which these responses were influenced by the interviewees' knowledge of the impending system changes is unknown, although it is interesting that relatively few persons (7% overall) spontaneously named item pricing as a change they would most like to see. Besides these responses the RIK group made frequent mention of changes in the food served in the dining hall, primarily with respect to variety and quality of preparation.

On the positive side, respondents were asked to state the one main thing they most liked about the Navy food system. The general categories into which these responses fell are given in Table 3. The main likes of the RIK group centered on hours/location

TABLE 1

Main Reasons for Not Attending More Often

	RIK		COMRAT-M		COMRAT-S	
	Freq.	%	Freq.	%	Freq.	%
Inconvenience	5	10	13	26	20	40
Undesirable Food Features	19	38	3	6	10	20
Undesirable Environment	2	4	1	2	6	12
Poor Service	0	0	0	0	0	0
Conflicting Food Habits	19	38	29	58	10	20
Miscellaneous	5	10	4	8	4	8
Total	50	100	50	100	50	100

TABLE 2

Changes Desired by NAS Alameda Personnel

	RIK		COMRAT-M		COMRAT-S	
	Freq.	%	Freq.	%	Freq.	%
Hours/Location	0	0	1	2	1	2
Food	20	42	8	18	12	27
Environment	2	4	4	9	1	2
Service	1	2	2	5	5	11
Ration System	24	50	20	47	18	42
Miscellaneous	1	2	8	19	7	16
Total	48	100	43	100	44	100

TABLE 3

Main Likes of NAS Alameda Personnel

	RIK		COMRAT-M		COMRAT-S	
	Freq.	%	Freq.	%	Freq.	%
Hours/Location	14	32	4	10	3	7
Food	13	20	11	27	14	35
Environment	4	9	0	0	0	0
Service	4	9	4	10	2	4
Expense/COMRATS	7	15	20	49	21	52
Miscellaneous	2	5	2	4	1	2
Total	44	100	41	100	41	100

features and food features. In the former case, the following type of statement was most frequently voiced: "The best thing about the Navy food system is that dining facilities are there whenever I need them." The most frequently mentioned food features were specific foods (e.g., good breakfast foods), quality, and quantity. Both COMRATS groups emphasized the receiving of COMRATS and the low cost of dining hall meals as their most liked feature of the Navy food service system.

When asked whether there was anything the Navy could do to increase attendance in its dining halls, 20% of all respondents said "no", approximately 32% said "yes", but their own attendance would not increase; and the remainder, approximately 48%, said that both their and others attendance would increase if certain changes were made. The changes most frequently mentioned were related to the food (variety and quality of preparation) and the dining environment (general decor and crowded conditions).

Interview Data: Relative Rating of NAS Alameda Food Facility – When asked to rate the NAS Alameda dining hall in comparison to others they had seen, the majority of each group was critical of the facility. A similar situation was found at Loring AFB prior to the conversion of its dining hall to BAS/A La Carte. A significant improvement in the relative rating of that dining hall was found, however, after the conversion to the new system. This occurred for both those on RIK (Figure 1) and those on BAS (Figure 2).

Attitudes Toward BAS/A La Carte System

Interview Data: COMRATS Policy – Not surprisingly, 98% of both COMRATS groups indicated a preference for COMRATS over RIK. A similar sentiment was also expressed by most of the RIKs (92%), although a portion (8%) did say that they wanted to stay on RIK. When asked to explain their preference, the respondents preferring COMRATS mentioned three factors: (1) COMRATS conformed better than RIK to their current eating habits; (2) COMRATS provided a desired flexibility in choosing where to eat which was not afforded by RIK; and (3) money could be saved under COMRATS. The COMRATS-Married group stressed the first of these factors, while the other two groups were similar in dividing their responses relatively evenly among all three factors as shown by the following percentages:

Reason for Preferring COMRATS	RIK	COMRATS (M)	COMRATS (S)
Conform to Eating Habits	22%	59%	30%
Flexibility	27%	18%	30%
Save Money	36%	12%	[illegible]

It is interesting in light of the clear preference for COMRATS that a significant minority (over 20%) of each group opposed a policy which would place everyone on

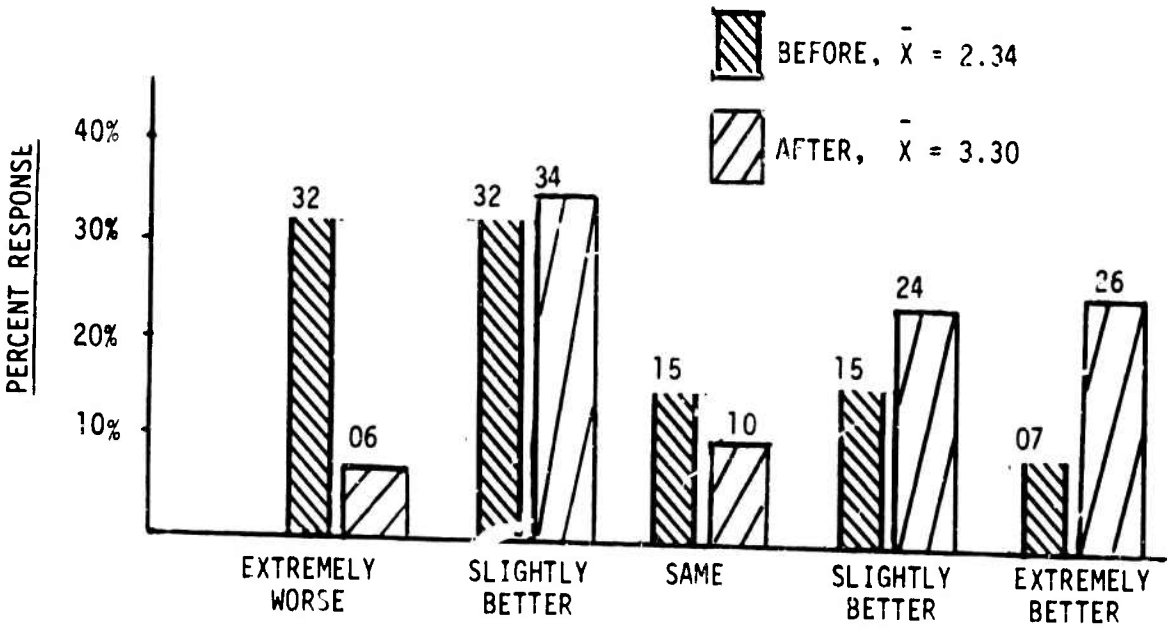

FIGURE 1: RATING OF LORING DINING FACILITY RELATIVE TO OTHER FACILITIES (RIK GROUP BEFORE AND AFTER CONVERSION TO BAS/A LA CARTE)

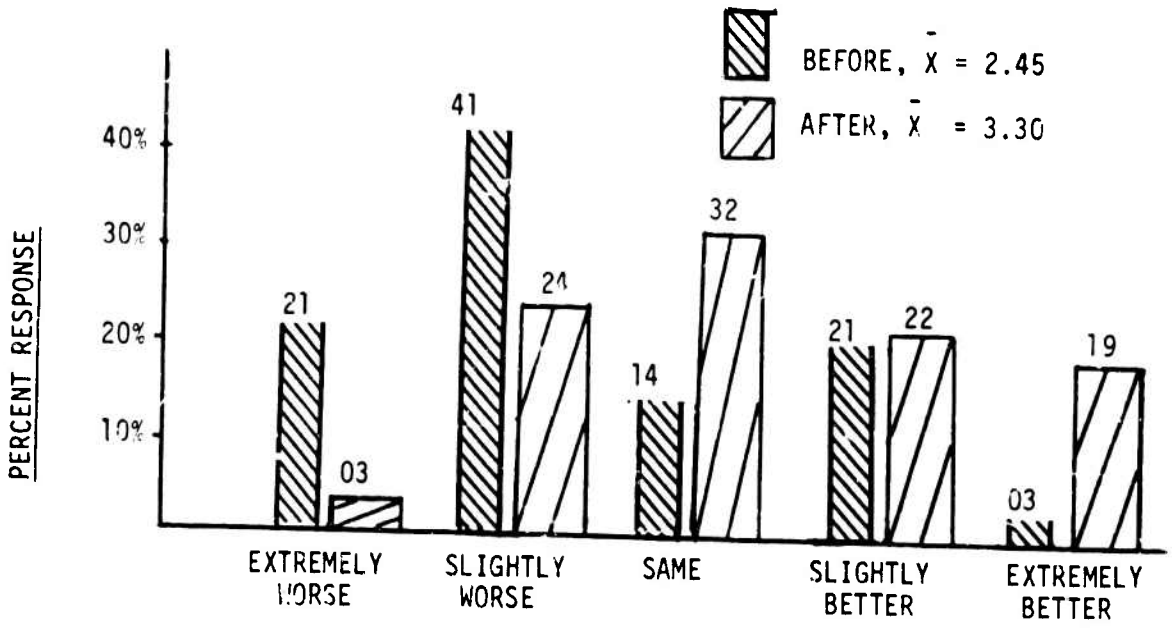

FIGURE 2: RATING OF LORING DINING FACILITY RELATIVE TO OTHER FACILITIES (BAS GROUP BEFORE AND AFTER CONVERSION TO BAS/A LA CARTE)

COMRATS (Figure 3). Many felt the younger personnel would not budget their money. It is also noteworthy that 44% of RIKs said their attendance in the dining hall would decrease if put on COMRATS.

The two reasons given most frequently by those preferring item pricing were to the effect that: "I could eat for less" and "I want to choose the food I eat rather than have somebody else do it". Another common response, especially among the COMRATS-married group, was that item pricing would reduce food waste.

A similar degree of agreement was found among groups when persons preferring meal pricing were asked to explain that preference. The most popular reasons within each group was the same as that given with regard to item pricing; it would be cheaper. Apparently these persons were larger eaters than those who chose item pricing for economic reasons. A similar response was given by a number of others; namely, that more food would be available under meal pricing.

The last area covered in relation to item pricing was whether it would lead to any changes in eating behavior within the dining hall. A majority of each group said it would (51% of RIK, 64% of COMRATS-Married, and 60% of COMRATS-Single). The one type of change most often cited by each group pertained to food quantity, and over 60% of these giving this response said that their quantity of intake would decrease with item pricing. Another change mentioned relatively often by each group, unsurprisingly, was that persons would reportedly become more choosey about what they took. With regard to attendance, most reported no change, although 34% of RIK's, 24% of COMRATS-Married, and 46% of COMRATS-Single said they would come more often.

Survey Data: Opinions Toward Alternative Ration Systems – In this survey, respondents designed what for them would be the best ration system by making three decisions: (a) whether all persons or only some would receive COMRATS: (b) whether dining halls should be run by the government or by civilian contractors; and (c) whether payment should be for the entire meal, for only the items taken, or for a "special", "regular", or "short order" meal. Subsequently, respondents rated their "best" system on four scales, pertaining to attendance, waste, economic value, and overall favorability.

The three decisions mentioned above generate 12 possible systems. An all-COMRATS, item pricing system run by civilians was most frequently chosen by all three groups, over 20% specifying it in each case. Otherwise, however, there was relatively little agreement among the groups as to what constituted the best system. By ignoring individual systems, however, agreement was found in that: (a) 68%, 61% and 63% of the RIK, COMRATS-Married, and COMRATS-Single groups, respectively, chose systems with everybody on COMRATS; (b) 49%, 46%, and 49%, respectively, chose as best systems offering item pricing; and (c) 72%, 64%, and 72%, respectively, had their best systems run by civilian contractors.

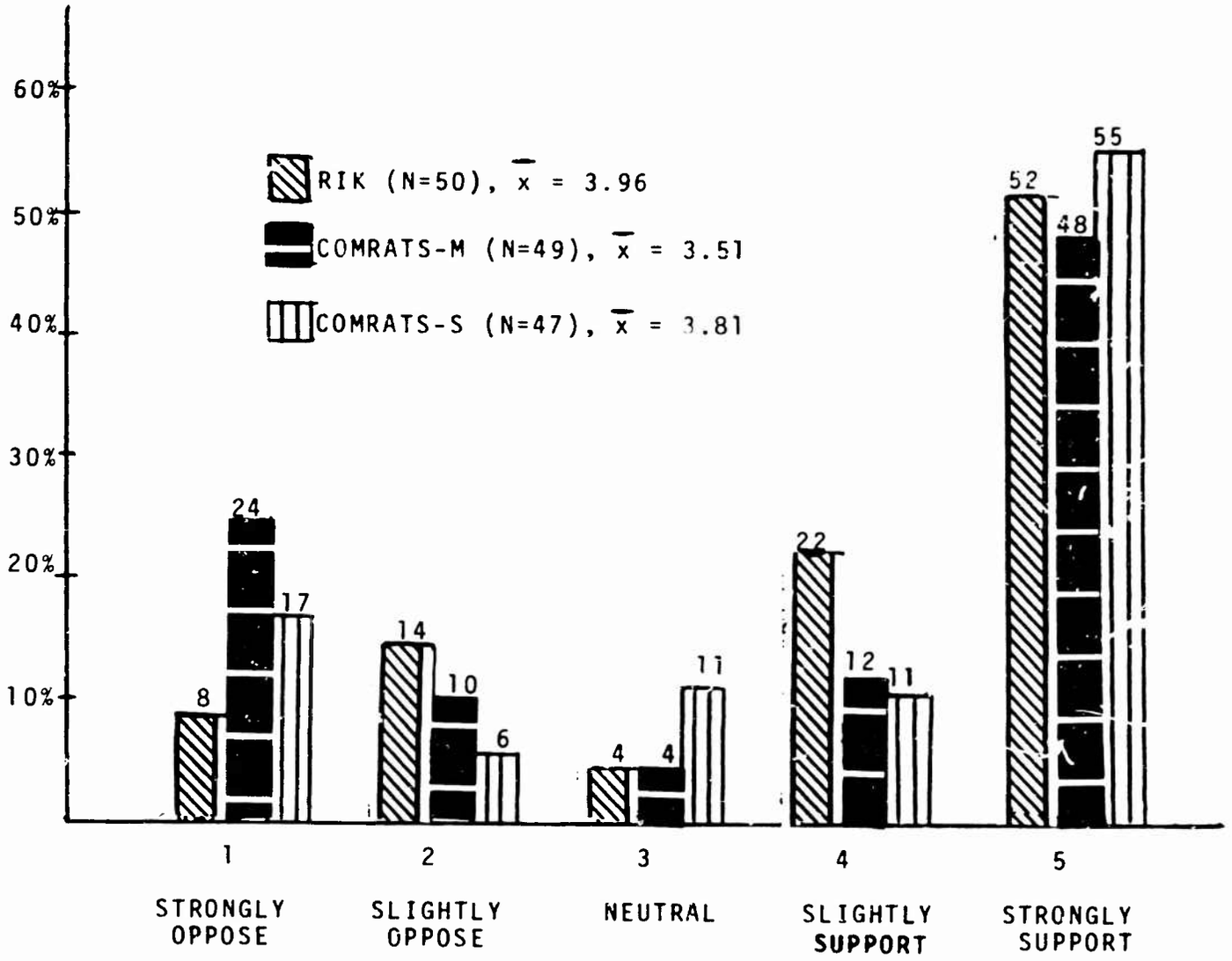

FIGURE 3: OPINION OF AN ALL-COMRATS POLICY

Worker Attitude Survey

In addition to the work carried out with the customers at NAS Alameda, surveys and interviews were administered to both military and civilian contract food service workers in the main dining facility in order to assess job satisfaction and attitudes toward the projected food service system change. The survey consisted of questions concerning characteristics of the individual which might be expected to affect job satisfaction, human factors oriented questions dealing with the kitchen environment, and a standard paper and pencil method, the Job Description Index, which measures satisfaction with five areas of a job: the work itself, the supervision, the co-workers on the job, the opportunities for promotion, and the pay.[1] The interview dealt with the workers' positive and negative feelings about the proposed BAS/A La Carte system as well as with their perceptions of what their jobs might be like in the new system. Twenty civilian mess attendants and twenty-four military food service workers completed the survey/interview package at NAS Alameda.

Table 4 presents overall mean responses of the military food service workers at NAS Alameda to the Job Description Index. Very briefly, respondents can score between 0 and 54 on each of the five scales with higher scores meaning a higher level of satisfaction. The Table also provides the mean scores from military food service workers at three Air Force bases[2] and norms for a large non-food service, civilian sample.[3]

All workers were asked in the interview whether they thought their jobs in the new system would be better, worse, or about the same. Table 5 shows the responses of the NAS Alameda workers to this question and provides, for comparison, the responses of workers at Loring AFB, Maine to the same question asked shortly before Loring implemented the BAS/A La Carte system.

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[1] The Job Description Index was taken from Smith, R.C., et al., **The Measurement of Satisfaction in Work and Retirement**; Rand McNally & Company: Chicago, 1969.

[2] Symington, L.E., and Meiselman, H.M., Job Satisfaction and Opinions of the Air Force Food Service Worker, US Army Natick Development Center, Technical Report, July, 1975.

[3] Data for civilian normative sample was taken from Smith, P.C. et al., **The Measurement of Satisfaction in Work and Retirement**; Rand McNally & Company: Chicago, 1969.

TABLE 4

Mean Responses to the Job Description Index
(NAS Alameda, Three Air Force Bases, and Civilian Normative Sample)

Scale	NAS Alameda	Three AFB's[1]	Norms
Supervision	40.95	38.89	41.10
Co-Workers	33.36	34.98	43.49
Promotion	32.73	25.69	22.06
Work	30.95	23.72	36.57
Pay	20.36	21.26	29.90

[1] Travis, Minot and Homestead AFB's.

TABLE 5

Rating of BAS/A La Carte System by Food Service Workers
(NAS Alameda and Loring AFB Food Service Workers Percentage Response)

	NAS Alameda		Loring AFB (Before)	
	Military (N=24)	Civilian (N=20)	Military (N=25)	Civilian (N=24)
Better	14%	5%	32%	25%
Same	36%	45%	16%	54%
Worse	50%	0%	40%	13%
Don't Know	0%	50%	12%	8%

TABLE 6

Rating of Conventional (Old) System Vs. BAS/A La Carte (New) System
(Percentage Response of Loring AFB Food Service Workers During Test)

	Military (N=30)	Civilian (N=29)	Total (N=59)
Extremely Prefer New System	63%	92%	76%
Slightly Prefer New System	20%	8%	15%
No Preference	10%	0%	6%
Slightly Prefer Old System	7%	0%	3%
Extremely Prefer Old System	0%	0%	0%

NOTE: This question was modified slightly in the improved version of the worker attitude survey. The responses on the newer 5 point scale (Table 6) can be compared to Table 5 by combining the categories: Extremely and Slightly Prefer New System = Better; No Preference = Same; and Slightly and Extremely Prefer Old System = Worse.

Four observations are appropriate. First, the military personnel were more negative than the civilians about the new system. Second, although the NAS Alameda personnel appeared to be a bit more negative than the Loring personnel, the difference is not significant. Third, the civilians at NAS Alameda appeared to be less well informed about the new system. Fourth, the most frequent response at NAS Alameda was that the job would be the same.

Table 6 summarizes data obtained from the Loring workers three months after the initiation of the BAS/A La Carte System. Compared to the relatively neutral response to the new system in the pre-test interview (Table 5), this response to the question of which system is preferred is extremely positive toward the new BAS/A La Carte system. It is certainly possible that the NAS Alameda workers might also respond in the same positive manner after experiencing the BAS/A La Carte system.

Finally, workers at NAS Alameda were also asked what they though was going to be good or bad about the new system. On the bad side, the two most frequent responses were that customers would run out of money (31% of the workers making this comment) and that there would be too much work (19%, all military making this comment). On the positive side, the two most frequent comments were that the new system would give the customer more choice (19%) and that there would be less food waste (10%).

Attendance Patterns

Overall attendance figures for the main dining facility at NAS Alameda and Loring AFB are presented in Table 7. Even though the overall attendance rate at Loring AFB (pre-test) is 2.4 percentage points higher, the population (approximated by the total authorized to eat) and the attendance mix (RIK & Cash Sales) at Loring AFB compare quite favorably to those at NAS Alameda.

The third column in Table 7 contains the attendance information from the first three months of the BAS Test at Loring AFB (Jan-March 1975). The overall attendance rate decreased by approximately 2 percentage points when compared to the pre-test data.

A more detailed breakdown of the eating pattern at NAS Alameda is available for a sample population over the period 7-23 March 1975. Figures 4 and 5 are histograms of the total number of meals attended over this period for three groups: RIK, single-COMRATS, and married-COMRATS.

Projected Attendance – The attendance of the personnel currently on RIK status would decrease dramatically when placed on COMRATS during a BAS/A La Carte test. Documented results from Travis AFB of a group of personnel who switched from RIK

TABLE 7

Attendance at NAS Alameda and Loring AFB

		NAS Alameda[1]	Loring AFB[2]	Loring AFB[3]
Authorized to Eat —				
	RIK	357 (13%)	725 (25%)	
	COMRATS (BAS)	2391 (87%)	2250 (75%	3417 (100%)
	TOTAL	2784	2975	3417
Meals Fed —				
RIK	B	78	144	
	L	147	305	
	S	140	279	
	TOTAL	365	728	
CASH	B	72	56	102
	L	143	124	390
	S	122	67	344
	TOTAL	337	247	836
RIK & CASH	B	150	200	102
	L	290	429	390
	S	262	346	344
	TOTAL	712	975	836
Rations (Unweighted) —				
	RIK	122	243	–
	CASH	112	82	301
	TOTAL	234	325	301
Attendance Rate —				
	RIK	34.2%	33.5%	
	CASH	4.7%	3.6%	8.8%
	TOTAL	8.5%	10.9%	8.8%

[1] Daily averages based on Jan 75 & Feb 75 period. Meals fed include Navy Regular and USMC personnel.

[2] Daily averages based on Jan 74 – Sept 74 period.

[3] Daily averages based on Jan – March 75 period.

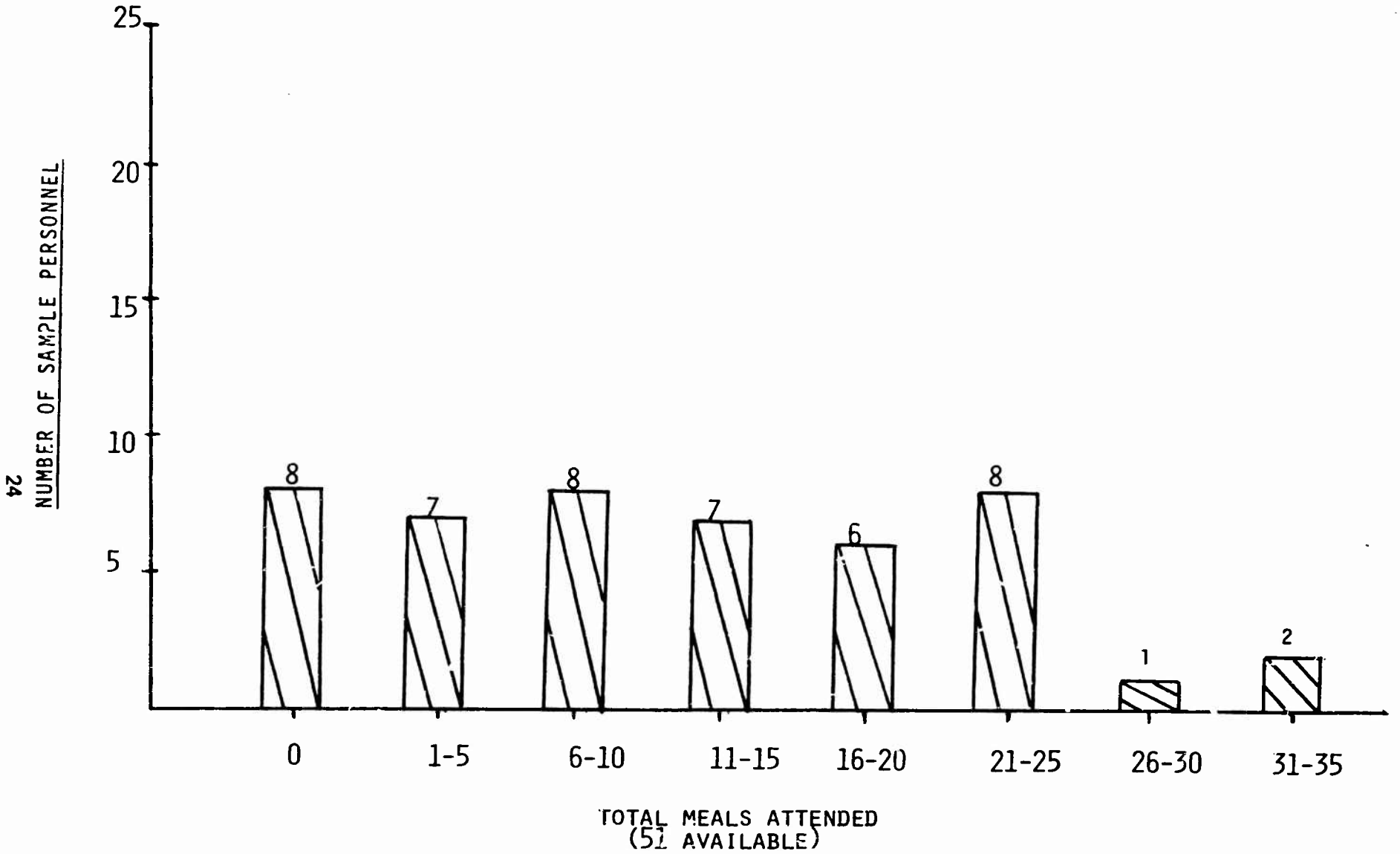

FIGURE 4: ATTENDANCE PATTERN OF RIK SAMPLE POPULATION (N=47; ATTENDANCE RATE=23%)

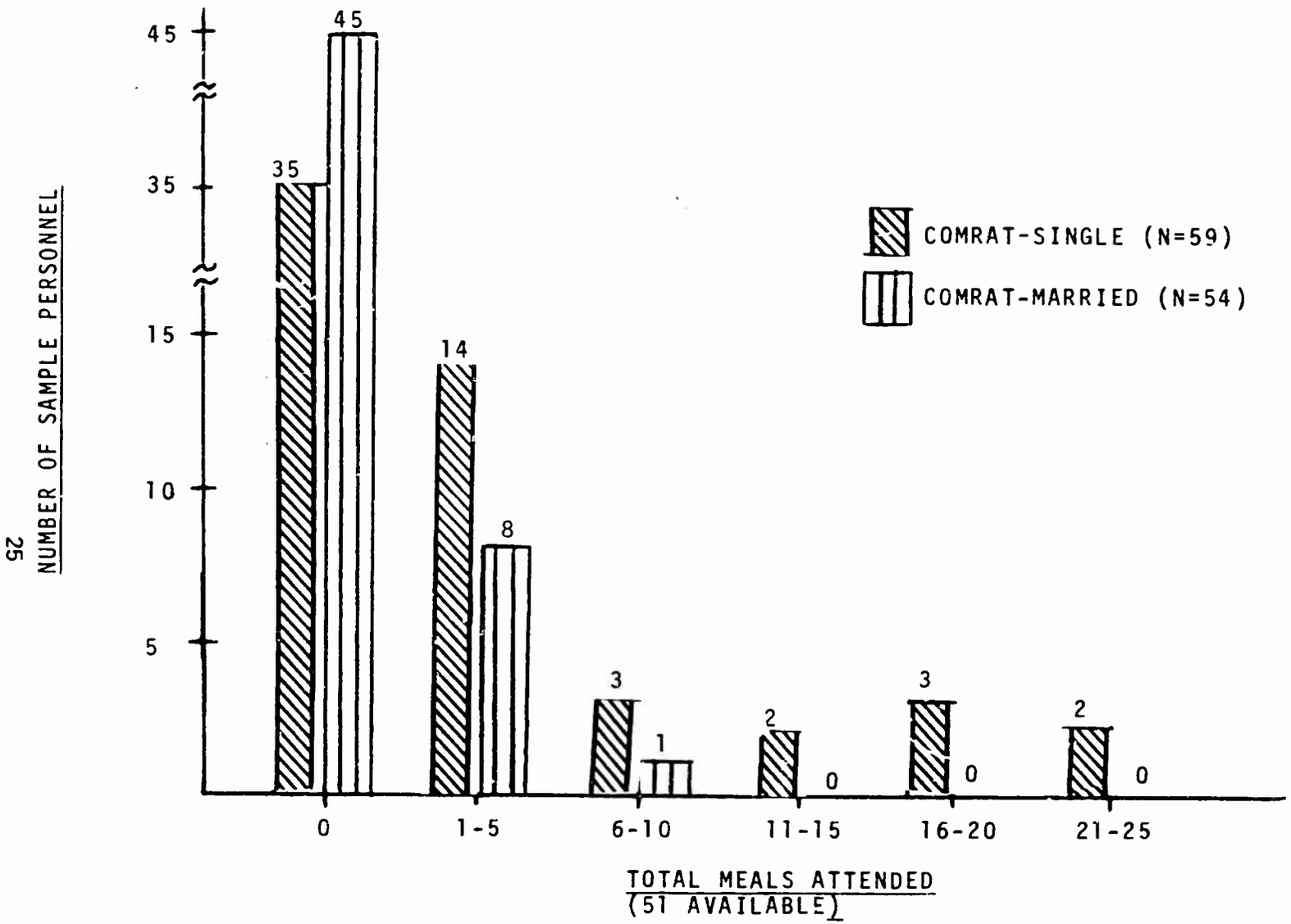

FIGURE 5: ATTENDANCE PATTERN OF COMRAT SAMPLE POPULATION

to BAS status show a decrease in attendance of 66%.[4] Decreases were also noted in both the Shaw and Loring AFB BAS Tests. The estimated decrease of those on RIK status at NAS Alameda during a BAS/A La Carte test is 50%; their attendance rate would drop from 34.2–17.1%. The "a La Carte" concept is attractive to those currently on COMRATS and the experience at Shaw and Loring AFB has shown this increased acceptance in higher attendance rates. For the COMRAT population at NAS Alameda a projected increase of 60% is estimated; their attendance rate would jump from 4.7–7.5%. The projected combined effect of a BAS/A La Carte system at NAS Alameda would yield an increase in overall attendance from 8.5–8.8%. Based on the information that is currently available there should be no significant decrease in the attendance rate and there may, in fact, be an increase during the test period.

Manpower Analysis

The primary work functions that would be affected by the BAS/A La Carte system are the food preparation and serving functions. This manpower analysis focused on personnel assigned to these specific areas and did not account for the number of management support and supply personnel or the number of mess attendants required. The latter functional areas would remain the same regardless of whether the existing or the new BAS system were in operation.

This analysis of manpower requirements at NAS Alameda and Loring AFB includes the following comparisons: (1) food service worker manning levels at Loring AFB before and during the BAS/A La Carte test and (2) food service worker productivity levels at NAS Alameda and Loring AFB. The productivity figures presented here are only for the food preparation and serving personnel and are higher than the meals per man-hour figures that would be obtained if all personnel (management support, supply, mess attendants) were included in the analysis.

Operation of Dining Facility – NAS Alameda – During a normal working day the NAS galley runs one serving line during breakfast, two during lunch, and also two during supper. When the two lines are in operation, one is used for short order items only (i.e., speed line). Food is served by military cooks (entrees only) and civilian contract KP personnel (all other items); bussing and scullery duties are performed by the remainder of the contractor employees. A listing by meal of the food service workers directly involved in preparing and serving food is displayed in Table 8.

In addition to the workers listed in the Table there are two military storeroom employees and two military cashiers (for COMRAT cash collection). Only one cashier is required per meal.

[4]Wetmiller, J.R., An Analysis of Attendance Patterns in the Experimental Food Service System at Travis AFB, US Army Natick Development Center, TR 75-75-OR/SA, December 1974.

TABLE 8

Food Service Workers Per Meal at NAS Alameda*

	Breakfast			Lunch			Supper		
	Mil	Civ	Total	Mil	Civ	Total	Mil	Civ	Total
Dining Hall Supervisor	1		1	1		1	1		1
Cooks (Kitchen & Serving Line)	10		10	10		10	10		10
Baker	1		1	1		1	1		1
Contract Servers		1-2	1-2		2-3	2-3		2-3	2-3
Utility Men		2	2		2-3	2-3		2-3	2-3

*Based on March 1975 Data

Operation of Loring AFB – Presently, the main dining hall operates one serving line through breakfast, two through lunch, and one through supper. Short order items as well as A-ration meals are offered on both lines during lunch and on the single dinner line. Civilian wage grade cooks and military enlisted personnel prepare the food, while only the military cooks carry out the serving function. Both the bussing and scullery work are handled by civilian wage grade personnel. Table 9 contains a breakdown of the food service workers per meal.

Of the three military storeroom employees available, only one or two are on duty during any meal. Also, four part-time civilian cashiers (GS-2) cover all of the meal periods; only lunch requires two cashiers as both serving lines are open. Total manpower figures for Loring AFB before and during the BAS/A La Carte test are exhibited in Table 10.

Since the only significant manpower change has been the addition of four cashiers, a BAS/A La Carte system apparently does not meaningfully affect food service staffing levels.

TABLE 9

Food Service Workers Per Meal at Loring AFB*

	Breakfast			Lunch			Supper		
	Mil	Civ	Total	Mil	Civ	Total	Mil	Civ	Total
Dining Hall Supervisor	1		1	1		1	1		1
Cooks (Kitchen & Serving Line)	4	2	6	8	4	12	4	2	6
Baker	1		1	1		1	1		1
Dessert Bar Attendant		1	1		1	1		1	1

*Based on April 1975 Data

TABLE 10

Change in Manning Levels at Loring AFB

	Milt. Cooks	Store-room (Milt.)	Total Milt.	Civ. Cooks	Civ. KP's	Total Civ.	Sub-Total	Cash-iers (GS-2)	Total
Before Test[1]	20	2	22	4	23	27	49	0	49
During Test[2]	21	3	24	4	22	26	50	4	54
Change	+1	+1	+2	0	−1	−1	+1	+4	+5

[1] Based on October 74 Data

[2] Based on 3 months average (Feb. – Apr. 75)

Even though the number of workers does not appreciably increase, the importance of several functional areas is elevated in a BAS/A La Carte system. The workload and responsibility of storeroom workers increase immensely since (1) the amount of necessary recordkeeping doubles and (2) accurate food cost record maintenance is essential to the success of the system.

Likewise, portion control of food items is critical because revenue at the cash register must cover the actual cost of raw food served (+10%). For this reason, the performance of the serving line workers needs to be closely monitored.

NAS Alameda/Loring AFB Comparison – A comparison of NAS Alameda to Loring AFB (during test) based solely on the number of workers does not present a clear picture of the staffing in each food service operation. Worker productivity analyses provide better measures of system effectiveness and can be presented in two different ways. The first measure (meals per worker) crudely accounts for the number of personnel actually involved in supervisory, food preparation, and serving functions normalized by the number of meals actually fed. Table 11 presents this information for breakfast, lunch, and supper at NAS Alameda and Loring AFB during the BAS test.

A second approach to worker productivity accounts for actual hours expended for the supervisory, food preparation, and serving functions. The formula used to derive this measure is:

$$\text{Overall Daily Productivity} = \frac{\text{Total Meals Served (Daily Ave.)}}{\text{Total Hours for Supervisory, Cooking and Serving functions (Daily Ave.)}}$$

The calculated productivity is 5.4 meals/man-hr at NAS Alameda and 7.1 meals/man-hour at Loring AFB during the BAS Test. These worker productivity calculations for supervisory, food preparation, and serving personnel supply evidence that the food service operation at Loring AFB is more efficient than at NAS Alameda. Since we know that the number of food service workers at Loring AFB did not increase significantly during the BAS Test (see Table 10), the implication is that no additional food service workers should be required to conduct a BAS/A La Carte test at NAS Alameda.

Nutritional Intake Survey

Method – A survey of eating patterns over a 17 day period (6-23 March 75) was conducted at NAS Alameda. Within the dining facility, each man/woman was identified by his/her Social Security Number (SSN) and the individual meal trays were tagged. A group of dieticians noted the items selected for each tagged tray for all meals over the 17 day period. After the man finished his meal, the tray was returned to the kitchen

TABLE 11

Food Service Worker Productivity Analysis

	NAS Alameda			Loring AFB		
	Breakfast	Lunch	Supper	Breakfast	Lunch	Supper
Meals Fed[1]	185	340	322	102	390	340
Food Service Workers[2]	15-16	16-18	16-18	9	15	9
Servers	3-4	5-6	5-6	2	4-6	2-3
Worker Productivity (Meals fed per worker)	12	20	19	11	26	38
Server Productivity (Meals fed per server)	53	62	59	51	78	138

[1] NAS Alameda daily averages based on Jan. 75 & Feb. 75 data.
Loring AFB daily averages based on Jan. 75 — Mar. 75 data.

[2] Refer to Table 8 for NAS Alameda Staffing levels, Table 9 for Loring AFB.

area where plate waste measurement of individual food items was taken. From this data we knew: 1) who attended each meal, 2) what each individual selected during each meal, and 3) the individual plate waste for all items for each meal. By also measuring the total amount of food placed on the serving line we could then calculate the nutritional intake value of foods selected, subtract the nutritional value of food wastage to arrive at the calculated nutritional intake within the dining facility.

For a sample population (consisting of three subgroups: RIK personnel, COMRATS – single personnel, and COMRATS – married personnel) data was collected on the intake consumed outside the facility. The method employed was a dietary diary – recall technique where each man in the sample kept a diary of total food intake for each day and was interviewed twice a week to verify the information on the cards. These recall data were then coded and analyzed by Letterman Army Institute of Research (LAIR) personnel.

This data collection method provided two pieces of information concerning an individual's intake: 1) intake within the dining facility and 2) for the sample group total intake both inside and outside the dining facility.

Intake in the Dining Facility – The individual tray selection data was coded, punched, and analyzed using the URCS Computer System at NDC as the nutrient data base. Intake records were sorted by social security number so that individual intake patterns over the 17 days could be presented and analyzed. A sample of one person's intake summary is shown in Figure 6. The Summary Data on this report shows the average intake for each meal attended, the daily intake averages, the average intake over 17 days, and a summary of his attendance pattern over the 17 day period. This information is available for everyone who attended the facility at least once over the 17 days; there is a sizable percentage of personnel in all groups who never utilized the facility.

Tables 12 and 13 present the average calculated intake obtained in the dining facility for the three subgroups of the sample population. Table 12 shows the percentage of the Daily Dietary Allowance (DDA/3) for all meals attended in the facility. All groups consume adequate amounts when they use the facility with the COMRATS groups taking more food than the RIK personnel. The daily average intake within the dining facility over the entire 17 day period is shown in Table 13. The percentage of DDA values show the effect of attendance on the total consumption in the facility. For the population group who supposedly use the facility with higher frequency (i.e., RIK's) the average nutrient intake is only 29% (25% excluding Ascorbic Acid) of DDA. These data (Tables 12 and 13) are representative of those personnel who attended at least once over the 17 day period and do not include the group who never frequented the facility during the test.

NAS ALAMEDA NUTRITIONAL SURVEY (7-23- MAR 75)
INDIVIDUAL STATUS SUMMARY FOR SSN. NO. 374
CALCULATED NUTRITIONAL INTAKE FOR MEALS CONSUMED IN DINING FACILITY

JULIAN DATE	MEAL*	FOOD ENERGY KCAL	PROTEIN (GM)	FAT (GM)	CALCIUM (MG)	IRON (MG)	VTMN A (IU)	THIAMINE B1 (MG)	RIBO-FLAVIN-B2 (MG)	NIACIN (MG)	ASCORBIC ACID-C (MG)	COST
66	21	1388	35.6	72.2	523	5.67	585	.4	.5	11.6	7.2	.36
70	21	1088	46.8	40.7	861	3.87	2269	.8	.7	9.7	56.4	1.13
71	21	1006	39.6	55.6	583	6.01	2660	.6	.4	12.6	70.5	.52
72	21	1920	51.4	110.0	671	10.25	2666	.7	.7	10.8	67.3	.88
73	21	1096	34.6	57.6	633	3.47	6175	.5	.5	10.8	49.4	.40
76	21	698	22.1	24.0	541	3.14	1216	.4	.5	3.0	38.2	.29
77	21	1887	76.0	66.4	987	12.45	3614	1.5	.9	14.4	149.9	1.65
78	21	1130	42.3	50.8	536	6.25	1860	.7	.7	9.6	23.0	.52
79	11	1109	35.3	54.3	233	5.41	1.02	.1	.3	11.6	132.9	.42
79	21	818	37.4	33.4	641	5.11	8389	.4	.5	3.9	69.6	.90
		• • • • S U M M A R Y D A T A • • •										
INTAKE- MEALS ATTENDED (PERCENTAGE OF ODA/3)		107.1	126.4	113.9	233.5	130.9	186.8	120.0	100.0	127.4	329.5	
INTAKE- DAYS ATTENDED (PERCENTAGE OF ODA)		39.7	46.8	42.2	86.2	48.3	69.2	39.9	31.7	47.0	122.1	
INTAKE- 17 DAY AVERAGE (PERCENTAGE OF ODA)		21.0	24.8	22.3	45.7	25.7	36.6	23.5	15.0	25.0	64.7	

ATTENDANCE SUMMARY

TOTAL BREAKFAST MEALS ATTENDED- 1
TOTAL NOON MEALS ATTENDED- 6
TOTAL DINNER MEALS ATTENDED- 0
TOTAL MIDNIGHT MEALS ATTENDED- 0
TOTAL ALL MEALS ATTENDED- 10

ATTENDANCE FOR 17 DAY PERIOD- 19.61 %

*First Digit Represents Meal Period (1-Breakfast, 2-Lunch, 3-Supper, 4-Midrats)
Second Digit Represents Type of Meal (1-A Ration, 2-Short Order)

Figure 6. NAS Alameda Nutrition Survey - Sample Printout

TABLE 12

Dining Facility Intake
(Percentage of DDA/3 for All Meals Attended)

	Food Energy	Protein	Fat	Calcium	Iron	Vitamin A	Thiamine	Ribo-flavin	Niacin	Ascorbic Acid
RIK (n=39)	80.9	92.2	84.2	141.7	101.1	125.0	91.6	64.8	75.2	259.6
COMRATS – Single (n=24)	91.2	113.2	91.9	174.6	121.4	115.7	92.8	84.9	92.2	281.5
COMRATS – Married (n=9)	95.6	132.2	91.1	188.0	132.4	154.1	84.2	96.1	98.3	223.5

TABLE 13

Dining Facility Intake
(Percentage of DDA for 17 Day Period)

	Food Energy	Protein	Fat	Calcium	Iron	Vitamin A	Thiamine	Ribo-flavin	Niacin	Ascorbic Acid
RIK (n=39)	21.5	24.2	21.8	36.5	27.0	34.9	20.7	15.6	20.0	69.2
COMRATS – Single (n=24)	12.9	16.0	13.0	24.7	17.1	17.2	11.8	10.2	12.9	39.7
COMRATS – Married (n=9)	5.6	7.7	5.3	11.0	7.7	8.8	3.3	4.4	5.7	13.0

Intake Outside the Dining Facility – The analysis of the daily dietary recall data was performed entirely by LAIR. A complete report detailing their findings will be published under a separate cover.

SECTION IV

COST ANALYSIS OF SYSTEMS

Current System Costs – NAS Alameda

Cost data for a 9-month period (July 1974 – March 1975) were collected at NAS Alameda for raw food, military direct labor, K.P. contract, supplies, utilities, and equipment repairs. The dining area complex contained one kitchen area and two separate serving and eating areas, one for all station personnel and the other for personnel assigned to ships-in-port. (The second eating area was opened when the ships could not provide adequate food service due to extensive repairs while in port). The total cost of feeding was calculated for two situations: (a) all meals served in both sections and (b) meals served to station personnel only. Table 14 presents the total annual costs for food service operations at NAS Alameda for both these situations. From the attendance data and staffing level information collected on station the direct costs for feeding station personnel only was calculated to be 70% of the direct costs for the entire operation over a yearly period. The figures for "Other Costs" for "Station Personnel Only" were derived by applying 70% to the actual costs incurred for the total operation.

A breakdown of the total system costs showing (1) the total cost per meal, (2) the direct cost per meal, and (3) the contribution of raw food, military labor and the K.P. Contract to the direct cost per meal figure are presented in Table 15. Again, the data is presented for two situations: all meals served, and meals served to station personnel only. The major cost disparity occurs for military labor/meal; this could be attributed to the large number of commissarymen from the USS Ranger working in the facility in proportion to the total number of meals fed to USS Ranger personnel.

Cost Comparison with Loring AFB

The size and type of operation at Loring AFB is similar to that at NAS Alameda and provides a reasonable basis for cost comparisons and for projecting the cost of a BAS/A La Carte system at NAS Alameda. Cost information collected at Loring AFB included the conventional RIK/BAS mixed systems for the period Oct-Dec 1974, and the BAS/A La Carte system costs for the Jan-Mar 1975 period. The annual direct costs for both the conventional and the BAS/A La Carte system are presented in Table 16. The figures for the major cost components found at the bottom of the table highlight the real difference in the two systems. Based on the information presented the raw food cost per meal decreased by 29% ($0.89-0.63) after the BAS/A La Carte system was installed. A similar level of saving for raw food expenditure was experienced at Shaw AFB, South Carolina. The increased cost of military labor/meal can be attributed to two changes: (1) increased number of military cooks from 22-24 (see Table 10) and (2) a reduction in the total meals actually fed. The increase in military cooks at Loring AFB was not a direct result of the BAS Test, it just reflects the normal fluctuations in staffing levels experienced by all military food service operations.

TABLE 14

NAS Alameda Total System Costs

	A. All Meals Served[1]		B. Meals Served to Station Personnel Only[2]	
Direct Costs				
Raw food	$410,973		$341,139	
Military Labor	443,448		277,680	
KP Contract	301,956		211,200	
Total Direct Costs:	$1,156,377		$830,019	(70% of A)
Other Costs				
Utilities	$42,000		$29,455	
Maintenance	234,000	(times 70% =)	163,880	
Supplies	47,880		33,516	
Total Other Costs:	$323,880		$226,781	
Total Annual Cost	$1,480,257		$1,056,800	

[1] July 74 – Jan. 75 data.

[2] Oct. 74 – Jan. 75 data.

TABLE 15

NAS Alameda Major Meal Costs

	A. All Meals Served[1]	B. Meals Served to Station Personnel Only[2]
a. Total Annual Costs	$1,480,257	$1,056,800
b. Total Meals Served	501,607	415,797
c. Total Cost/Meal	2.951	2.542
d. Total Annual Direct Cost	$1,156,377	$ 830,019
e. Direct Cost/Meal (d ÷ b)	2.305	1.996
f. Major Components		
Raw Food/Meal	0.81[illegible]	0.820
Military Labor/Meal	0.884	0.668
KP Contract/Meal	0.602	0.508

[1] July 74 – Jan. 75 data.

[2] Oct. 74 – Jan. 75 data.

TABLE 16

Loring AFB Total Direct Costs
(Main Dining Facility)

	Conventional System[1]	BAS/A La Carte System[2]
a. Raw Food	$339,462	$215,678
b. Military Labor	136,519	165,379
c. Civilian Labor	251,155	234,760
d. Cashiers	0	21,591
e. Total Direct Costs	$727,136	$637,408
f. Total Meals Served	380,448	342,216
Direct Cost/Meal (e ÷ f)	$1.91	$1.86
Major Components		
Raw Food/Meal	$.89	$.63
Military Labor/Meal	.36	.48
Civilian Labor/Meal	.66	.69
Cashiers/Meal	–	.06

[1] Months of Oct. – Dec. 1974 extrapolated for 12 months.

[2] Months of Jan. – Mar. 1975 extrapolated for 12 mor ths

A comparison of the direct meal costs for three systems (NAS Alameda, and Loring AFB, with conventional system and the BAS/A La Carte system) is presented in Table 17. The variation in the Basic Daily Food Allowance ($) for the specific periods covered is probably the reason for the difference in raw food costs between NAS Alameda and Loring AFB – conventional. The military labor cost figures point out that NAS Alameda is adequately staffed (in numbers of commissarymen at least) and should not require any additional commissarymen to operate the BAS/A La Carte system.

Projection for BAS/A La Carte System

Ration Cost – The calculation of the extra cost required to operate a BAS Test at NAS Alameda were based on the following data:

a) Value of BDFA – $2.53; COMRAT rate – $2.41
b) Personnel on-board at NAS
   RIK – 355
   COMRAT – 2390
   TOTAL – 2745

	Existing System —		BAS/A La Carte —	
Raw food Cost: RIK	$111,460[1]			
COMRAT	103,731[2]			
		215,191		$161,393[3]
COMRAT ALLOWANCE	$2,102,363		$2,414,639	
Receipts	−98,811[4]		−161,393	
		2,003,552		2,253,246
TOTAL RATION COST		$2,218,743		$2,414,639
ADDITIONAL ANNUAL COST		$195,896		

NOTES ON CALCULATIONS:

[1]355 x $2.53 x 365 days x 34% (attendance rate) = $111,460
[2]2390 x $2.53 x 365 days x 4.7% (attendance rate) = $103,731
[3]Estimated savings in raw food 25%; $215,191 x 75% = $161,393
[4]2390 x $2.41 x 365 days x 4.7% (attendance rate) = $98,811

TABLE 17

Comparison of NAS Alameda and Loring AFB Meal Costs

	NAS Alameda (Station Personnel Only)	Loring AFB (Conventional)	Loring AFB (BAS Test)
Total Meals Served/Yr.	415,797	380,448	342,216
Component Costs:			
Raw Food/Meal	$0.82	$0.89	$0.63
Military Labor/Meal	.67	.36	.48
Contract or Civilian Labor/Meal	.51	.66	.69
Cashiers/Meal	0	0	.06
Total Direct Cost/Meal	$2.00	$1.91	$1.86

As shown by the above calculations the BAS/A La Carte system will cost approximately $195,896 over the existing ration cost at NAS Alameda. This increase is directly attributable to the cost of giving 355 more personnel the COMRAT allowance of $2.41 per day. This amount ($313,276) is offset by the reduction in the outlay for raw food, a savings of $116,380 ($215,191 – 98,811). The net ration cost of the new system can then be derived: $313,176 – 116,380 = $195,896.

Equipment – The specific equipment and items required to run the BAS/A La Carte concept would necessarily vary from installation to installation. No additional equipment will be required at NAS Alameda except the electronic cash registers.

Personnel – As the all cash system uses cash registers, personnel will be required to operate the cash registers during the meal hours. The USAF approach both at Shaw and Loring AFB was to hire civilian employees at the grade of GS-2 to be cashiers. An alternative for NAS Alameda would be to use supervisory contract personnel for the six month test.

Other Costs – There is no other direct or indirect cost associated with the BAS/A La Carte system. Any training of food service workers will be performed at NAS Alameda, i.e., no training cost. The administrative cost of converting the pay records of those currently on RIK status would be very minor and not worth considering.

SECTION V

FOOD SERVICE OPERATION AND MANAGEMENT CONSIDERATIONS

Assessment of Current System at NAS Alameda

NAS Alameda was chosen as the site for the preliminary data collection for several reasons including: the size of the facility; the population mix at the activity; the attendance patterns of population; and the level of competition of other food outlets both on and off station. Other positive points of the food service system at NAS Alameda are:

1) The total number of military food service workers is adequate and no increase in the number of workers would be required for a test.

2) The operation and management of the mess attendant contract are assets to the overall system. During a test the cashiers positions could be filled by supervisory contract personnel instead of hiring civilian employees (GS-2's).

3) The majority of the new equipment that would be required in a BAS/A La Carte test is already on-order at NAS Alameda.

4) Close proximity of NAS Alameda to the Letterman Army Institute of Research allows for maximum utilization of their resources for nutritional studies.

5) The data collected and experience gained at NAS Alameda has provided a good "before picture" of the operation there. The measurement of test results would be facilitated by comparing the "Before and After" test data.

There are, however, several potential problems in the overall operation at NAS Alameda including:

1) The dining area in has to be upgraded considerably. This would entail serving line layout redesign, traffic pattern control for the BAS test, and general face lifting of interior walls, etc.

2) The administrative problems created in feeding Reserve personnel on weekends and personnel from ships-in-port have to be resolved before any testing begins. Similarly, the Marine Corps personnel on station, approximately 300, will have to be accommodated during the testing period.

3) The level of competition of the Retail Exchange food service operation cannot be ignored. They will be fighting for part of the COMRAT food dollar.

Preparation for Testing

The following steps should be taken to prepare NAS Alameda for testing the BAS/A La Carte concept:

1. The dining area within the facility needs some renovation. This would include general clean-up, painting of walls and ceilings, new drapery, floor covering, and control of traffic flows in the eating area. The Corps of Engineers, Construction Engineering Research Laboratory personnel are providing assistance in this work, and plans are being finalized to upgrade the facility decor.

2. The layout of the serving line has to be configured in order to (1) control customer flow better and (2) provide for cash registers at the end of the line and proper control of the cash collection function.

3. The operation of a BAS/A La Carte system will necessitate changes in the accounting and inventory control procedures for dining hall operations. The system requires better control of cash receipts and tighter control of raw food costs. Coordination with finance personnel at NFSSO is essential.

4. Food service workers at NAS Alameda (both military and contractor personnel) have to be trained in the operation of a BAS/A La Carte system.

5. Guidelines for the conduct of the test have to be developed and coordinated with NFSSO and NAS Alameda. The cooperation and support of all Station departments (i.e., Public Works, Procurement, and Finance) as well as all tenant activities should be obtained as soon as possible to ensure a timely transition to a BAS test.

APPENDIX A

BUPERS 5314–19

INTERVIEW PROTOCOL FOR PRE-TEST AT NAS ALAMEDA

1. Name

2. Social Security Number

3. Unit

4. Age (to the nearest year)

5. Time in service (to the nearest year)

6. Are you married and currently living with your spouse (no = 0; yes = 1)

7. Are you currently receiving COMRATS: (no = 0; yes = 1)

8. Will you make a career of the military? (no = 0; yes = 1; uncertain = 2)

9. How many meals do you eat during a typical week?

10. How many meals do you have in the dining hall during a typical week?

11. (If answer to #10 is "none" ask the following, otherwise enter a X.)
Have you ever eaten in the dining hall? (no = 0; yes = 1)

12. What is the one main reason you don't have meals in the dining hall more frequently?

13. (When he appears finished, ask the following.) Are there any other reasons? (If not, enter a Z.)

14. In general, are you satisfied with the effort the Navy has made to provide you with good food ashore? Please use this chart to answer (A). (Mention to those on COMRATS that COMRATS is part of that effort as far as they are concerned.)

15. What one change would you most like to see in the Navy ashore food system as it affects you? This includes the food; the dining facility, the service, and the overall ration system in general.

16. (When he appears finished, ask the following.) Are there any other changes you would like to see? (If not, enter a Z.)

17. On the other side of the coin, what **one** thing do you best like about the Navy ashore food system as it affects you? Again, this includes the food, the dining facility, the service, and the overall ration system.

18. (When he appears finished, ask ' ' following.) Are there any other things which you like about the food system. (If not, enter a Z.)

19. Is there anything the Navy can do to increase attendance in its ashore dining halls? (no = 0; yes = 1)

20. (If the answer to #19 is "yes" ask the following, otherwise enter a X.) What is that?

21. (If the answer to #19 is "yes" ask the following, otherwise enter a X.) Would your attendance increase if these changes were made? (no = 0; yes = 1)

22. Have you heard about any changes in the food system here at Alameda which are planned for the near future? (no = 0; yes = 1)

23. (If the answer to #22 is "yes" ask the following, otherwise enter a X.) What exactly have you heard?

24. Do you know what the current daily COMRAT allowance is? (If not, enter a Z.)

25. Would you rather be on COMRATS, where you are given $2.41 per day for food, or on rations-in-kind where you are authorized to eat in the dining hall for free? Please use this chart to give your answer (B).

26. Why?

27. (If the answer to #25 was in favor of COMRATS ask the following, otherwise enter a X.) Would (Is) $2.41 per day enough for you to eat adequately? Please use this chart to answer. (C)

28. (If the answer to #27 is negative ask the following, otherwise enter a X.) According to your present eating habits, how much money would you need to eat adequately on a typical day?

29. (If the interviewee is on RIK ask the following two questions, otherwise enter a X in both cases.) If you were put on COMRATS, would you eat in the dining hall any more or less often than you do now? Please use this chart to give your answer. (D)

30. Would you be any more or less likely to stay in the military if you were put on COMRATS? Please use this chart to give your answer. (E)

31. (If the interviewee is on COMBATS ask the following two questions, otherwise enter a X.) If you were put on rations-in-kind, would you eat in the dining hall any more or less often than you do now? Please use this chart to answer. (D)

32. Would you be any more or less likely to stay in the military if you were put on rations-in-kind? Please use this chart to give your answer. (E)

33. (The first clause is included only if the interviewee is on RIK.) If you were on COMRATS, would you rather pay a flat price for the meals you eat in the dining hall or item-by-item for each food you take? You may assume the cost for a standard meal would be the same under both systems. Please use this chart to answer. (F)

34. Why?

35. (The first clause is again included only if the person is on RIK.) Again assuming you were on COMRATS, would you have meals in the dining hall any more or less often if pricing was by the items rather than by the meal. Please use this chart to answer. (D)

36. Would you eat any differently in the dining hall if you paid for each food you took rather than a flat price for the entire meal? (no = 0; yes = 1)

37. (If the answer to #36 is "yes" ask the following, otherwise enter a X.) What would change?

38. What would you feel about a Navy-wide change in which everybody, from the youngest seaman up, would be placed on COMRATS? Please use this chart to give your answer. (G)

39. (If the answer to #38 disagrees with that to #25, ask the respondent to explain, otherwise enter a X.)

40. At how many other ashore installations have been assigned (where you were accompanied by your family)?

41. How often do you eat meals at this dining hall now in comparison to dining halls at those installations. Please use this chart to answer. (H)

42. How would you rate this dining hall in comparison to dining halls at those installations. Please use this chart to answer. (1)

NOTE: Enter a X – when the question was not asked at all
Enter a Z – when the question is asked and, for whatever reason, not answered

Response Categories for Scaled Questions

Code	No.	Category
A	1	Extremely dissatisfied
	2	Slightly dissatisfied
	3	Neither dissatisfied nor satisified
	4	Slightly satisfied
	5	Extremely satisfied
B	1	Extremely prefer subsistence-in-kind
	2	Slightly prefer subsistence-in-kind
	3	No preference
	4	Slightly prefer separate rations
	5	Extremely prefer separate rations
C	1	Extremely less than what is needed
	2	Slightly less than what is needed
	3	Just enough
	4	Slightly more than what is needed
	5	Extremely more than what is needed
D	1	Extremely less often
	2	Slightly less often
	3	No more or less often
	4	Slightly more often
	5	Extremely more often
E	1	Extremely less likely to stay in
	2	Slightly less likely to stay in
	3	No more or less likely to stay in
	4	Slightly more likely to stay in
	5	Extremely more likely to stay in
F	1	Extremely prefer meal pricing
	2	Slightly prefer meal pricing
	3	No preference
	4	Slightly prefer item pricing
	5	Extremely prefer item pricing
G	1	Strongly oppose such a change
	2	Slightly oppose such a change
	3	Don't care
	4	Slightly support such a change
	5	Strongly support such a change
H	1	Extremely less often
	2	Slightly less often
	3	No more or less often
	4	Slightly more often
	5	Extremely more often
I	1	Extremely worse
	2	Slightly worse
	3	No better or worse
	4	Slightly better
	5	Extremely better