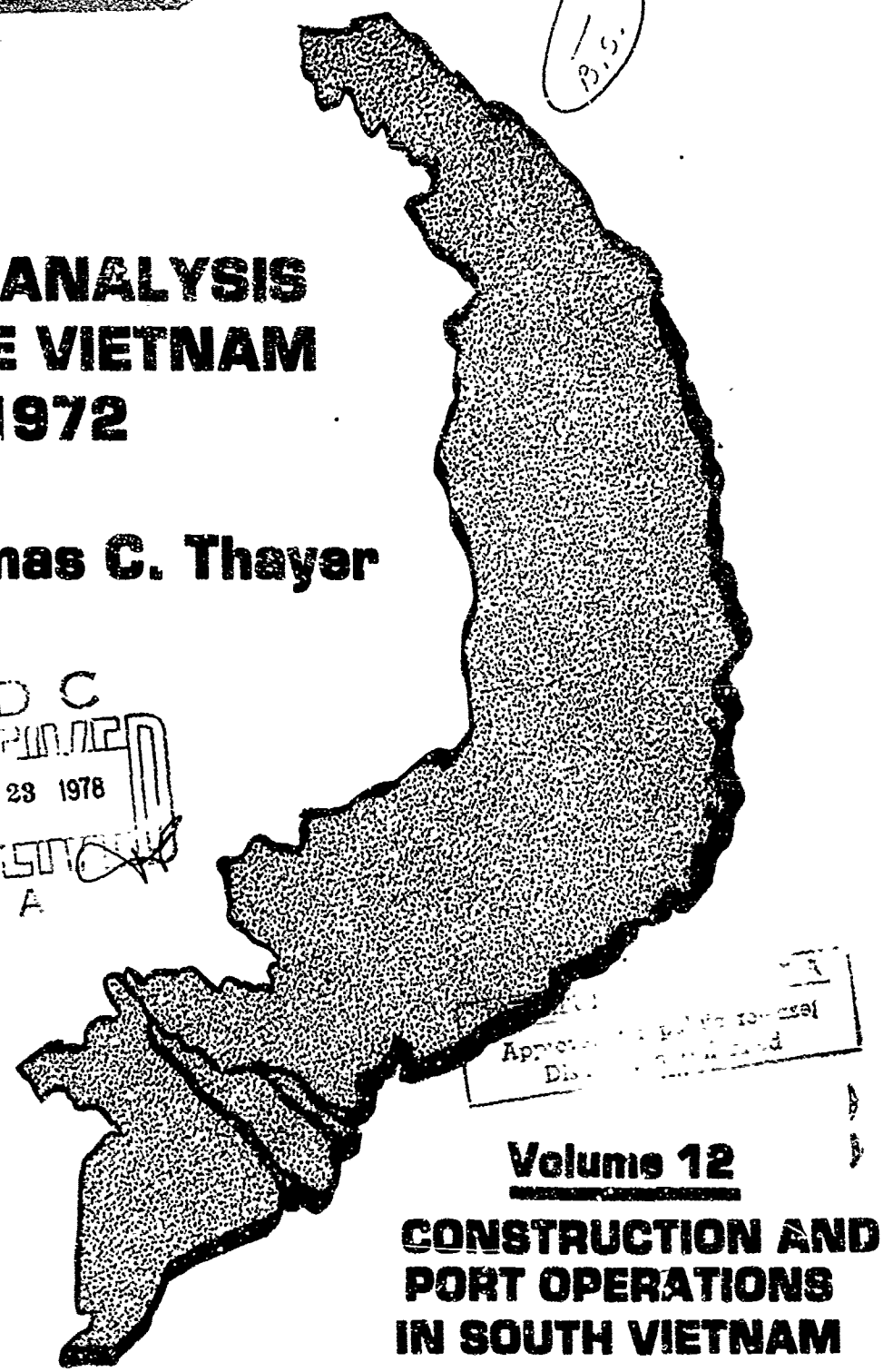
A SYSTEMS ANALYSIS VIEW OF THE VIETNAM WAR 1965-1972

Editor: Thomas C. Thayer



Volume 12

CONSTRUCTION AND PORT OPERATIONS IN SOUTH VIETNAM

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SEA Analysis Report	SE Asia Air Operations
VC/NVA	SE Asia Deployments
Pacification	SE Asia Logistics/Construction

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This twelve volume set includes every article printed in the fifty issue series of the Southeast Asia Analysis Report. The SEA Analysis Report represented a month-by-month analysis of Vietnam War activity including forces and manpower, VC/NV operations, Allied ground, naval and air operations, RVNAF, casualties and losses, population security, war costs and inflation and construction and port operations in South Vietnam.

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VOLUME 12

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A SYSTEMS ANALYSIS VIEW OF THE VIETNAM WAR: 1965-1972

Contents of the 12 Volumes

A Systems Analysis View Of The Vietnam War: 1965-1972

VOLUME 12

CONSTRUCTION AND PORT OPERATIONS IN SOUTH VIETNAM

A Systems Analysis View Of The Vietnam War: 1965-1972

INTRODUCTION

This volume, plus the other eleven volumes in the series, contains every article ever printed in the Southeast Asia Analysis Report (a few additional papers not printed in the report are occasionally included, too.).

Fifty issues of the Southeast Asia Analysis Report were published from January 1967 through January 1972 by the Southeast Asia office under the Assistant Secretary of Defense (Systems Analysis). The Report had two purposes. First, it served as a vehicle to distribute the analyses produced by Systems Analysis on Southeast Asia. It thus provided other agencies an opportunity to tell us if we were wrong and to help prevent research duplications. We solicited and received frequent rebuttals or comments on our analyses which sharpened our studies and stimulated better analysis by other agencies. Second, it was a useful management tool for getting more good work from our staff -- they knew they must regularly produce studies which would be read critically throughout the Executive Branch.

The first page of the Report stated that it "is not an official publication of the Department of Defense, and does not necessarily reflect the views of the Secretary of Defense, Assistant Secretary of Defense (Systems Analysis), or comparable officials." The intent was solely to improve the quality of analysis on Southeast Asia problems -- and to stimulate further thought and discussion.. The report was successful in doing precisely this.

We distributed about 350 copies of the Report each month to OSD (Office of the Secretary of Defense), the Military Departments, CINCPAC, and Saigon, and to other interested agencies such as the Paris Delegation, AID, State Department, CIA and the White House Staff. Most copies circulated outside OSD were in response to specific requests from the individual person or agency. Our readership included many of the key commanders, staff officers, and analysts in Washington and in the field. Their comments were almost always generous and complimentary, even when they disagreed with our conclusions. Some excerpts appear below:

"I believe the 'SEA Analysis Report' serves a useful purpose, and I would like to see its present distribution continued." (Deputy Secretary of Defense, 31 May 1968)

"We used a highly interesting item in your May Analysis Report as the basis for a note to the Secretary, which I've attached." (State Department, 28 June 1967)

"We were all most impressed with your first monthly Southeast Asia Analysis Report. Not only do we wish to continue to receive it, but we would appreciate it if we could receive 4 (four) copies from now on." (White House, 9 February 1967)

"Ambassador _____ has asked me to tell you that he has much appreciated and benefited from the studies and analyses of this publication." (State Department/White House, 24 January 1969)

"Congratulations on your January issue. The 'Situation in South Vietnam' article was especially interesting and provoking." (State Department, 24 January 1969)

"I let Ambassador _____ take a swing at the paper. He made several comments which may be of interest to you. Many thanks for putting us back on distribution for your report. Also, despite the return volley, I hope you will continue sending your products." (MACV-CORDS, 17 June 1968)

"As an avid reader (and user) of the SEA Analysis Report, I see a need for more rounded analyses in the pacification field and fewer simplistic constructs." (MACV-DEPCORDS, 17 April 1968)

"The SEA Programs Division is to be commended for its perceptive analysis of topics that hold the continuing concern of this headquarters... The approach was thoughtfully objective throughout and it was particularly pleasing to note a more incisive recognition of factors that defy quantified expression." (Commander, US Army Vietnam-USARV, 29 November 1967)

"In general, I think it is becoming the best analytical periodical I've seen yet on Vietnam (though there's not much competition)." (MACV-DEPCORDS, 21 April 1967)

"Statistical extrapolations of this type serve an extremely useful purpose in many facets of our daily work." (CIA, 6 February 1967)

"One of the most useful Systems Analysis products we have seen is the monthly Southeast Asia Progress Report.... Indeed it strikes many of us as perhaps the most searching and stimulating periodic analysis put out on Vietnam." (President of The Rand Corporation, 22 October 1969)

In November 1968, 55 addressees answered a questionnaire about the Report: 52 said the report was useful, 2 said it was not, and 1 said, "The report does not meet an essential need of this headquarters;" nonetheless, it desired "to remain on distribution" for 7 copies. From 48 questionnaires with complete responses, we found that an average 4.8 people read each copy -- a projected readership of 500-950, depending on whether we assumed 1 or 2.4 readers of copies for which no questionnaire was returned.

Readers responding to the questionnaire reported using the Report for the following purposes:

Information	42%
Analysis	31%
Policy Making	11%
Briefings	7%
Other	9%
	100%

In addition, readers reported about equal interest in each of the seven subject areas normally covered in the Report.

VC/NVA	18%
Air Operations	20%
RVNAF	17%
Pacification	13%
Friendly Forces	12%
Deployments	12%
Logistics/Construction	8%
	100%

There was some negative reaction to the Report. Concern was expressed about "the distorted impressions" the Report left with the reader and its wide dissemination which "implies its acceptance by the Secretary of Defense, giving the document increased credibility."

Given the way in which the Southeast Asia Analysis Report was used, the important responsibilities of many of its readers, and the controversial aspects of the report, I decided to include in these twelve volumes every article ever published in a Southeast Asia Analysis Report. This will allow the users of these volumes to arrive at their own conclusions.

Thomas C. Thayer
February 18, 1975

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SEA CONSTRUCTION

Program Summary

The military construction program in support of SEA operations is currently funded (through FY-66S) at $1,728.2 million. (See Table 1). As of December 31, 1966, the Military services reported that $1,616.0 million had been released to the field. The current cost estimate of the projects under way with those funds is $1,782.8 million, and the dollar value of the construction completed (i.e., Work-In-Place, or W-I-P) is $667.8 million, indicating a 37.5 percent completion based on current cost estimates.

Progress Reporting

Table 2 shows progress on the MILCON program by month and by country. The table starts in March 1965 with data from the first monthly Construction Progress Report (DD-6610). "Work-Planned" is the forecast of the W-I-P to be completed in next month. A comparison of the Work-Planned and Work-Actual entries for a given month indicates the success of the construction units, contractors and troops (in SVN and Thailand), in meeting their monthly estimate. Table 3 shows progress and planning at selected bases and ports. These data also come from the DD-6610 report.

Program/Budget Decisions

The December decisions for the FY 1967 Supplemental and FY 1968 MILCON program budget are summarized on the right side of Table 1. Included in the 67S figures is $126.4 million to cover the unfunded part of the RMK-BRJ contract overrun in SVN. Including $77 million provided from the FY 66S, the total overrun funding will be $203.4 million. However, data in the NAVFAC Construction Status Report of January 1, 1967 shows that the difference between current cost estimate and funding is $231.5 million. OASD(I&L) states any increase in cost over programmed funds must be absorbed by the necessary scope reductions.

Jet Airbase Pavements Analysis

An analysis of the programmed airfield pavements at the eight jet-capable bases in South Vietnam was conducted to determine if the pavements (runways, taxiways, and operational aprons) will be adequate to support approved Program #4 aircraft deployments. Planned base loadings for all types aircraft were considered at Bien Hoa, Cam Ranh Bay, Chu Lai, Da Nang, Phan Rang, Phu Cat, Tan Son Nhut, and Tuy Hoa. Pavement assets considered were those originally available plus MAP and MILCON projects funded through FY-68. The time frame was December 1968, when all programmed pavement should be completed.

The analysis concluded that:

1. Runways programmed at the eight jet bases will support sustained Program #4 operations. This table summarizes the major characteristics of these fields:

Airfield	Runways		
	Length(Ft)	Type	Operational Date
Bien Hoa	10,000	Concrete	Completed
	10,000	Concrete	May 1968
Cam Ranh Bay	10,000	Concrete	May 1967
	10,000	AM-2	Completed
Chu Lai	10,000	Concrete	Completed
	8,000 a/	AM-2	Completed
	4,000 a/b/	AM-2	Completed
Da Nang	10,000	Asphalt	Existed
	10,000	Concrete	Completed
Phan Rang	10,000	Concrete	Completed
	10,000	AM-2	Completed
Phu Cat	10,000	Concrete	April 1967
Tan Son Nhut	10,300	Concrete	Existed
	10,000	Concrete	June 1967
	7,800 b/	Asphalt	Existed
Tuy Hoa	10,000	Concrete	June 1967
	9,000	AM-2	Completed

a/ USMC Short Airfield for Tactical Support (SATS).
b/ Crosswind.

At Cam Ranh Bay, Chu Lai, Phan Rang, and Tuy Hoa, where the secondary runways are AM-2 expeditionary matting, continued close attention must be paid to maintaining them for backup use, especially during the rainy periods.

2. Sufficient taxiways, holding and warmup aprons, and wash racks will be provided at all bases to meet Program #4 aircraft and operational needs.

3. In operational apron, Cam Ranh Bay, Chu Lai, Phan Rang, and Tuy Hoa will have surpluses, which should be considered for reprogramming. At Bien Hoa, Da Nang, Phu Cat, and Tan Son Nhut there will be significant deficiencies, some of which could be met by reprogramming. At Tan Son Nhut this would not help because of the lack of real estate. However, crowded parking could be reduced there by redeploying units to other bases. The details by base are shown on the following Table.

OPERATIONAL APRONS (SQ YDS)

Base	Required	Programmed	Deficiency	Surplus a/
Bien Hoa	618,000	576,566	41,434	
Cam Ranh Bay	443,000	545,530		102,530
Chu Lai	260,000	390,377		130,377
Da Nang	595,000	512,640	82,360	
Phan Rang	254,000	295,980		41,980
Phu Cat	240,000	133,600	106,400	
Tan Son Nhut	965,600	544,497	421,103	
Tuy Hoa	155,000	165,833		10,833

a/ OASD(I&L) states that this apparent surplus may represent pavement programmed for other than aircraft parking, and that this aspect must be explored further.

By considering the aggregated jet bases only, there is a sizeable deficiency (365,577 SY) in total operational apron. This could pose a serious problem in case one or more fields was closed for an extended time due to enemy action or other emergency. In those cases, redeployments would have to be made, and non-jet aircraft might have to be sent to other than jet bases.

This SA/SEA Programs Division analysis is available in that office to interested parties.

TABLE 1

SOUTHEAST ASIA MILITARY CONSTRUCTION FUNDING SUMMARY ($ millions)

	FY-65 MCP PL 88-390	FY-65 Supp PL 89-18	FY-66 MCP PL 89-188	FY-66 Amend PL 89-213	FY 66 Supp[a/] PL 89-374	MAP Transf PL 89-3
ARMY	15.5	44.8	29.6	64.6	591.5	68.
South Vietnam	15.5	36.1	29.6	35.9	358.5	68.0
Thailand	0	8.7	0	12.7	47.3	0
United States	0	0	0	7.0	123.3	-
Other	0	0	0	9.0	62.4	-
NAVY	14.5	22.0	39.8	43.2	275.9	10.
South Vietnam	9.4	17.4	30.3	32.9	177.6	10.6
Thailand	0	0	0	0	16.3	0
United States	0	0	0	0.3	25.4	-
Other	5.1	4.6	9.5	10.0	56.6	-
AIR FORCE	23.1	41.0	13.5	57.9	335.3	27.
South Vietnam	11.2	21.4	13.5	39.2	148.4[b/]	27.1
Thailand	8.9	11.9	0	14.2	97.1	0
United States	0.5	0	0	0	5.0	-
Other	2.5	7.7	0	4.5	84.8	-
TOTAL	53.1	107.8	82.9	165.7	1,202.7	105.
South Vietnam	36.1	74.9	73.4	108.0	684.5	105.7
Thailand	8.9	20.6	0	26.9	160.7	0
United States	0.5	0	0	7.3	153.7	-
Other	7.6	12.3	9.5	23.5	203.8	-

a/ Includes transfers of $168.5 million from DOD Contingency Fund to Services.
b/ Includes $2.5 million for RVNAF facilities.
c/ United States and Other.
d/ Includes $6.95 million for NIKE-X TACMAR Building on Kwajalein.
e/ Includes for PRACTICE NINE: Army, $9.3 mil. in US; Air Force, $6.0 million in SVN and $4.0 million in
f/ Plus $200 million DOD World-wide Contingency Fund.

4

4

SOUTHEAST ASIA MILITARY CONSTRUCTION FUNDING SUMMARY
($ millions)

	FY-65 MCP PL 88-390	FY-65 Supp PL 89-18	FY-66 MCP PL 89-188	FY-66 Amend PL 89-213
ARMY	15.5	44.8	29.6	64
South Vietnam	15.5	36.1	29.6	35.9
Thailand	0	6.7	0	12.7
United States	0	0	0	7.0
Other	0	0	0	9.0
NAVY	14.5	22.0	39.8	43
South Vietnam	9.4	17.4	30.3	32.9
Thailand	0	0	0	0
United States	0	0	0	0.3
Other	5.1	4.6	9.5	10.0
AIR FORCE	23.1	41.0	13.5	57
South Vietnam	11.2	21.4	13.5	39.2
Thailand	8.9	11.9	0	14.2
United States	0.5	0	0	0
Other	2.5	7.7	0	4.5
TOTAL	53.1	107.8	82.9	165
South Vietnam	36.1	74.9	73.4	108.0
Thailand	8.9	20.6	0	26.9
United States	0.5	0	0	7.3
Other	7.6	12.3	9.5	23.5

a/ Includes transfers of $168.5 million from DOD Contingency Fund to
b/ Includes $2.5 million for RVNAF facilities.
c/ United States and Other.
d/ Includes $6.95 million for NIKE-X TACMAR Building on Kwajalein.
e/ Includes for PRACTICE NINE: Army, $0.3 mil.in US;Air Force, $6.0 mil
f/ Plus $200 million DOD World-wide Contingency Fund.

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FY 66 Supp PL 89-374 [a]	MAP Transfer PL 89-374	TOTAL SEA MILCON	PROGRAM/BUDGET DECISIONS: SERVICE REQUESTS (FYs 67 & 68)	SEC DEF APPROVALS FY-67S	SEC DEF APPROVALS FY-68
591.5	68.0	814.3	698.2	288.5	41.0
358.5	68.0	543.6	493.4	217.6	39.2
47.3	0	68.7	72.9	39.2	1.7
123.3	-	130.6[e]	131.9[e]	26.7[d]	0
62.4	-	71.4	-	5.0	0.1
275.9	10.6	406.0	491.5	140.0	38.0
177.6	10.6	278.2	257.4	76.2	13.7
16.3	0	16.3	10.0	0	1.9
25.4	-	25.7	224.1[e]	43.8	16.6
56.6	-	85.8	-	20.0	5.8
335.3	27.1	507.9	400.4	196.0	35.0
148.4[b]	27.1	266.8[e]	207.2	103.5	24.2
97.1	0	136.1[e]	144.9	69.3	9.8
5.0	-	5.5	48.3[e]	3.4	0
84.8	-	99.5	-	19.8	1.0
1,202.7	105.7	1,728.2	1,590.1	624.5	114.0[f]
697	105.7	1088.6 [e]	958.0	397.3	77.1
	0	221.1[e]	227.8	108.5	13.4
	-	161.8[e]	404.3[e]	73.9[d]	16.6
203.8	-	256.7	-	44.8	6.9

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ion in SVN and $4.0 million in Thailand. (Budget Accnt. FY-1967B)

OASD/SA/SEA Programs Division
February 1, 1967

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Country	March	April	May	June	July	August	September	October	November
1. [illegible]									
a. Program Amount Funded (b)	275,500	533,472	602,???	[illegible]	632,671	[illegible]	910,054	975,996	[illegible]
b. Current Working Estimate	342,146	[illegible]	633,673	[illegible]	916,379	9?,472	[illegible]	1,??1,??2	1,200,123
c. Physical Completion	[illegible]	[illegible]	[illegible]	110,0?5	133,20?	[illegible]	217,???	[illegible]	[illegible]
d. Work - Planned	(a)	19,7??	2?,??8	3?,?11	33,095	[illegible]	57,162	63,0??	[illegible]
e. Work - Actual	NR	20,0?5	22,975	26,763	33,643	[illegible]	54,676	52,??1	60,7??
2. Thailand									
a. Program Amount Funded (b)	1?1,607	223,062	220,974	207,752	208,741	2?0,741	203,741	210,015	210,0?5
b. Current Working Estimate	160,445	327,746	14?,537	227,670	213,017	[illegible]	235,195	225,557	233,7??
c. Physical Completion	15,596	19,252	29,557	3?,504	39,683	44,735	54,212	59,???	65,354
d. Work - Planned	(a)	2,468	4,619	3,425	152	[illegible]	1,697	3,?22	2,337
e. Work - Actual	2,515	4,108	10,958	2,741	5,593	5,1??	9,730	4,771	9,7??
3. Philippines									
a. Program Amount Funded (b)	18,790	62,201	69,769	72,247	72,589	72,3??	7?,???	71,322	71,322
b. Current Working Estimate	45,1??	61,5??	70,233	73,633	77,707	[illegible]	71,527	72,1??	74,0??
c. Physical Completion	3,49?	6,337	9,231	11,492	13,523	1?,1??	15,930	20,653	22,1??
d. Work - Planned	(a)	3,313	4,523	4,343	2,600	?,1??	4,0?3	5,433	4,6??
e. Work - Actual	150	2,275	2,687	641	2,094	1,953	1,7?0	695	5,539
4. Guam									
a. Program Amount Funded (b)	1?,??6	15,?46	16,903	16,?23	16,942	16,7?2	16,612	15,903	15,903
b. Current Working Estimate	10,?63	15,533	16,975	15,052	16,055	16,37?	16,073	14,575	15,722
c. Physical Completion	1,631	2,974	4,03?	4,463	6,174	7,06?	6,70?	7,7??	9,661
d. Work - Planned	(a)	1,135	1,010	2?0	1,641	1,415	1,589	913	1,315
e. Work - Actual	NR	1,172	1,071	2,529	1,627	702	624	1,035	1,519
5. Okinawa									
a. Program Amount Funded (b)	34,637	69,512	70,037	67,697	67,697	67,69?	67,697	67,693	67,693
b. Current Working Estimate	32,936	[illegible]	83,779	9?,3?5	93,098	[illegible]	91,991	73,301	69,742
c. Physical Completion	?,650	2,69?	3,495	4,169	4,912	5,763	7,764	9,053	11,057
d. Work - Planned	(a)	[illegible]	493	670	339	703	1,739	1,599	1,951
e. Work - Actual	322	795	1,324	793	681	900	1,390	1,852	1,452
6. Taiwan									
a. Program Amount Funded (b)	22,513	[illegible]	24,905	24,755	24,755	24,755	24,755	24,735	24,755
b. Current Working Estimate	23,149	[illegible]	25,458	23,562	24,452	24,416	26,772	26,205	26,024
c. Physical Completion	1,337	2,225	2,2?0	3,245	4,469	5,5??	6,969	9,315	13,415
d. Work - Planned	(a)	15?	29	2	3	0	0	4,477	3,682
e. Work - Actual	250	265	41	967	2,189	1,072	1,437	2,342	4,101
7. Japan									
a. Program Amount Funded (b)	3,199	18,293	14,880	14,890	14,880	15,306	15,306	12,306	11,976
b. Current Working Estimate	3,495	16,341	23,033	23,495	15,493	15,7?0	15,732	12,635	11,9??
c. Physical Completion	303	142	486	675	920	955	1,176	1,757	2,061
d. Work - Planned	(a)	94	59	146	81	239	156	667	533
e. Work - Actual	NR	139	44	189	261	201	221	581	525
8. Midway									
a. Program Amount Funded (b)	none	2,100	2,100	2,100	2,100	1,991	1,991	1,991	1,991
b. Current Working Estimate		2,100	2,100	2,100	2,100	1,575	1,576	1,576	1,582
c. Physical Completion		0	0	0	0	0	1	153	361
d. Work - Planned		0	0	21	0	0	32	16	155
e. Work - Actual		0	0	0	0	0	1	157	203
9. Wake									
a. Program Amount Funded (b)	1,010	1,010	1,074	1,074	1,074	1,074	1,074	1,074	1,074
b. Current Working Estimate	1,010	1,010	1,4??	1,4?4	1,471	1,471	1,633	1,6??	1,6??
c. Physical Completion	0	0	0	0	0	0	0	0	3
d. Work - Planned	(a)	0	0	0	0	0	0	0	0
e. Work - Actual	0	0	0	0	0	0	0	0	3
10. United States (Includes Cuba & Puerto Rico)									
a. Program Amount Funded (b)	19,675	[illegible]	[illegible]	153,019	153,002	153,?81	151,5??	1?1,297	155,559
b. Current Working Estimate	19,33?	[illegible]	9?,333	[illegible]	151,??9	[illegible]	156,051	1?9,077	157,4??
c. Physical Completion	10,727	11,195	13,118	[illegible]	27,022	[illegible]	51,??6	66,0??	77,0??
d. Work - Planned	(a)	[illegible]	[illegible]	[illegible]	3,227	4,933	7,443	?,325	?,7?2
e. Work - Actual	1,374	[illegible]	[illegible]	?,312	7,8??	13,???	13,153	?,773	15,535
TOTALS FOR ALL [illegible] TO PROJECTS									
a. Program Amount Funded (b)	5?8,0??	[illegible]	[illegible]	[illegible]	[illegible]	1,471,2??	1,4??,02?	[illegible]	1,605,3??
b. Current Working Estimate	[illegible]	[illegible]	[illegible]	[illegible]	1,511,727	[illegible]	1,614,2?9	1,?7?,570	[illegible]
c. Physical Completion	50,331	[illegible]	[illegible]	[illegible]	2?5,?18	[illegible]	36?,671	[illegible]	[illegible]
d. Work - Planned	(a)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7?,???	[illegible]	[illegible]
e. Work - Actual	NA	[illegible]	[illegible]	[illegible]	59,5?5	[illegible]	83,079	[illegible]	99,3??

NOTE: NA - Not Applicable
NR - Not Reported
(a) - [illegible] report system started in March 196?.
(b) - [illegible] received at field level from all [illegible] in the military departments.
(c) - [illegible]
[illegible]
(d) - [illegible] physical completion [illegible] projects.

SOURCE: [illegible] Report
[illegible]
[illegible]

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TABLE

COUNTRY 1966	March	April	May	June	July
1. South Vietnam					
a. Program Amount Funded (b)	276,300	333,[illegible]	[illegible]	830,[illegible]	[illegible]
b. Current Working Estimate	348,160	[illegible]	[illegible]	[illegible]	[illegible]
c. Physical Completion	45,494	[illegible]	[illegible]	[illegible]	[illegible]
d. Work - Planned	(a)	[illegible]	[illegible]	[illegible]	33,[illegible]
e. Work - Actual	NR	20,[illegible]	[illegible]	[illegible]	39,643
2. Thailand					
a. Program Amount Funded (b)	161,607	218,[illegible]	[illegible]	207,[illegible]	[illegible]
b. Current Working Estimate	162,445	317,[illegible]	[illegible]	[illegible]	213,[illegible]
c. Physical Completion	15,596	17,252	[illegible]	34,[illegible]	39,[illegible]
d. Work - Planned	(a)	2,163	[illegible]	3,[illegible]	[illegible]
e. Work - Actual	2,516	1,1[illegible]	10,[illegible]	2,741	5,[illegible]
3. Philippines					
a. Program Amount Funded (b)	48,790	62,[illegible]	69,[illegible]	72,247	72,[illegible]
b. Current Working Estimate	48,156	61,56[illegible]	70,233	73,639	[illegible]
c. Physical Completion	3,994	6,337	9,[illegible]	11,492	13,[illegible]
d. Work - Planned	(a)	3,329	4,[illegible]	[illegible]	2,[illegible]
e. Work - Actual	150	2,275	2,[illegible]	641	2,[illegible]
4. Guam					
a. Program Amount Funded (b)	10,246	15,946	16,928	15,965	16,[illegible]
b. Current Working Estimate	10,153	15,623	16,775	16,052	16,[illegible]
c. Physical Completion	1,895	2,[illegible]	4,032	4,[illegible]	6,17[illegible]
d. Work - Planned	(a)	1,135	1,0[illegible]	240	1,6[illegible]
e. Work - Actual	NR	1,172	1,071	2,929	1,62[illegible]
5. Okinawa					
a. Program Amount Funded (b)	32,537	69,519	70,037	67,687	67,63[illegible]
b. Current Working Estimate	32,926	84,[illegible]	83,979	50,396	93,0[illegible]
c. Physical Completion	1,650	2,636	3,[illegible]	4,108	4,[illegible]
d. Work - Planned	(a)	[illegible]	433	670	339
e. Work - Actual	321	705	1,974	793	6[illegible]
6. Taiwan					
a. Program Amount Funded (b)	22,513	23,[illegible]	24,005	24,759	24,[illegible]
b. Current Working Estimate	23,149	24,[illegible]	25,458	23,962	24,[illegible]
c. Physical Completion	1,392	2,225	2,[illegible]	3,245	4,[illegible]
d. Work - Planned	(a)	11[illegible]	29	2	3
e. Work - Actual	250	165	41	967	2,159
7. Japan					
a. Program Amount Funded (b)	3,199	18,293	14,[illegible]	14,050	14,[illegible]
b. Current Working Estimate	3,495	18,[illegible]	23,0[illegible]	23,495	15,[illegible]
c. Physical Completion	303	442	486	675	970
d. Work - Planned	(a)	54	59	116	[illegible]
e. Work - Actual	NR	13[illegible]	45	189	2[illegible]
8. Midway					
a. Program Amount Funded (b)	none	2,100	2,100	2,100	2,100
b. Current Working Estimate		2,100	2,100	2,100	[illegible]
c. Physical Completion		0	0	0	0
d. Work - Planned		0	0	21	[illegible]
e. Work - Actual		0	0	0	0
9. Wake					
a. Program Amount Funded (b)	1,010	1,010	1,074	1,074	1,07[illegible]
b. Current Working Estimate	1,010	1,010	1,469	1,464	1,4[illegible]
c. Physical Completion	0	0	0	0	0
d. Work - Planned	(a)	0	0	0	[illegible]
e. Work - Actual	0	0	0	0	0
10. United States (Includes Cuba & Puerto Rico)					
a. Program Amount Funded (b)	19,675	94,59[illegible]	[illegible]	153,019	153,00[illegible]
b. Current Working Estimate	19,398	94,421	[illegible]	146,024	151,[illegible]
c. Physical Completion	10,027	11,[illegible]	13,[illegible]	19,205	2[illegible]
d. Work - Planned	(a)	90[illegible]	1,[illegible]	2,427	3,[illegible]
e. Work - Actual	1,374	1,23[illegible]	1,[illegible]	6,312	7,[illegible]
TOTALS FOR ALL [illegible] TO PROJECTS					
a. Program Amount Funded (b)	578,077	1,3[illegible]	1,350,318	1,33[illegible]	1,3[illegible]
b. Current Working Estimate	643,227	1,[illegible]	1,[illegible]	[illegible]	1,[illegible]
c. Physical Completion	80,311	111,[illegible]	[illegible]	132,761	[illegible]
d. Work - Planned	(a)	25,[illegible]	[illegible]	16,987	[illegible]
e. Work - Actual	NA	30,[illegible]	41,303	10,940	[illegible]

NOTES: NA - Not Applicable
NR - Not Reported
(a) - NA, [illegible] report system started in March 1966.
(b) - [illegible] at field level [illegible] allocations made by the military departments.
(c) - [illegible]
(d) - [illegible] physical completion reflects $67 million in MAP projects.

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Southeast Asia [illegible] Construction [a]
[illegible]

TABLE 3

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I. [illegible] Base (Service) with estimated cost over $25 million

Item	CY-1966 March	April	May	June	July	August	September	October	November	December	1967 January
Bien Hoa (Air Force)											
a. Program Amount Funded (c)	5,202	5,81[illegible]	14,192	15,016	18,689	19,961	18,961	15,569	16,770	15,223	
b. Current Working Estimate	7,677	[illegible]	14,503	20,232	32,443	32,724	32,724	33,146	32,649	31,029	
c. Physical Completion in $	1,303	2,351	2,330	2,345	5,311	5,833	6,283	6,258	7,237	8,104	1,244
d. Work - Planned	(a)	656	740	541	541	650	534	943	470	395	
e. Work - Actual	NR	744	68	115	2,164	812	413	308	731	625	
f. Scheduled BOD (Airfield Pavements) [d]	07,6	07,6	02,7	02,7	02,7	02,7	04,7	04,7	04,7	04,7	
Cam Ranh Bay (Army)											
a. Program Amount Funded (b)	29,118	60,591	69,804	75,952	76,740	59,133	79,929	65,781	83,400	80,534	
b. Current Working Estimate	31,595	61,126	72,730	73,503	74,150	54,534	81,072	81,549	57,513	85,031	
c. Physical Completion in $	2,527	3,157	7,013	12,637	13,022	14,763	19,131	19,256	26,667	25,478	3,756
d. Work - Planned	(a)	952	1,417	3,940	4,395	3,315	5,433	5,153	3,161	3,746	
e. Work - Actual	NR	759	4,067	5,621	2,469	2,159	4,368	95	7,415	4,933	
f. Scheduled BOD (Port Facilities) [d]	NFS	NFS	NFS	NFS	07,7	07,7	07,7	03,7	03,7	03,7	
Cam Ranh Bay (Navy)											
a. Program Amount Funded (b)	4,000	15,047	15,143	15,145	15,190	15,770	13,521	16,793	16,793	17,330	
b. Current Working Estimate	3,772	14,891	14,897	14,920	19,576	22,599	19,683	28,012	23,610	20,379	
c. Physical Completion in $	0	0	0	469	569	2,475	3,143	4,293	5,068	4,521	1,036
d. Work - Planned	(a)	0	0	0	0	400	3,027	3,023	1,279	1,262	
e. Work - Actual	0	0	0	159	0	2,029	665	1,274	826	0	
f. Scheduled BOD (Port Facilities) [d]	NFS	NFS	NFS	NFS	NFS	NFS	05,6	05,6	04,7	04,7	
Cam Ranh Bay (Air Force)											
a. Program Amount Funded (b)	25,340	21,074	23,248	42,549	43,607	42,506	42,156	48,314	51,451	51,456	
b. Current Working Estimate	35,830	21,074	25,782	42,501	49,065	49,065	43,415	62,901	62,890	62,756	
c. Physical Completion in $	7,533	7,212	9,757	11,534	14,611	17,564	18,761	26,423	28,379	31,701	2,363
d. Work - Planned	(a)	965	850	630	606	755	1,365	1,933	1,099	1,009	
e. Work - Actual	-	664	1,878	1,817	1,840	2,755	1,805	8,096	3,178	5,179	
f. Scheduled BOD (Airfield Pavements) [d]	05,7	05,7	01,7	01,7	01,7	01,7	01,7	04,7	04,7	05,7	
Da Nang [illegible]											
a. Program Amount Funded (b)	27,300	34,265	57,569	62,491	64,132	64,132	70,705	74,998	74,807	74,003	
b. Current Working Estimate	31,219	35,226	62,143	62,510	66,552	65,671	71,082	75,765	75,437	75,309	
c. Physical Completion in $	2,430	5,733	7,379	7,318	11,506	12,594	19,309	23,023	30,557	34,335	5,323
d. Work - Planned	(a)	522	3,817	3,846	3,093	2,394	3,635	4,114	5,385	3,977	
e. Work - Actual	NR	2,564	2,166	1,524	3,473	2,653	6,733	4,238	8,065	4,150	
f. Scheduled BOD (Airfield Pavements) [d]	09,6	10,6	NFS	NFS	NFS	03,7	03,7	03,7	03,7	03,7	
Da Nang (Navy)											
a. Program Amount Funded (b)	36,507	34,705	69,766	71,3[illegible]1	69,352	69,632	68,146	61,733	66,362	144,073	
b. Current Working Estimate	37,168	35,395	67,151	72,993	71,157	69,632	69,242	69,367	69,375	149,552	
c. Physical Completion in $	7,259	5,524	8,513	10,376	15,725	18,773	21,425	25,333	30,559	72,149	13,023
d. Work - Planned	(a)	3,014	3,662	4,527	4,549	3,504	7,971	5,215	5,639	5,107	
e. Work - Actual	NR	733	3,174	2,413	6,789	4,333	4,163	4,019	5,434	10,230	
f. Scheduled BOD (Cantonments) [d]	07,6	07,6	NFS	NFS	NFS	03,7	03,7	03,7	03,7	04,7	
Da Nang - East (Navy)											
a. Program Amount Funded (b)	17,913	25,982	49,303	49,181	64,726	65,476	69,319	64,716	76,077	(Combined with Da Nang above)	
b. Current Working Estimate	21,544	27,431	49,554	49,974	70,131	65,335	68,727	74,996	82,407		
c. Physical Completion in $	5,010	10,351	12,667	14,221	20,023	25,557	29,592	35,425	44,670		
d. Work - Planned	(a)	1,595	3,736	2,777	3,480	3,731	5,953	5,431	5,078	5,064	
e. Work - Actual	NR	4,613	2,607	2,229	5,312	6,537	7,605	7,512	5,626		
f. Scheduled BOD (Port Facilities) [d]	05,6	10,6	NFS	NFS	NFS	10,6	10,6	03,7	05,7		
Long Binh (Army)											
a. Program Amount Funded (b)	1,087	2,350	15,974	18,821	27,359	50,716	50,716	96,062 [e]	96,607	33,527 [f]	
b. Current Working Estimate	1,087	2,350	18,934	18,821	27,973	51,334	50,549	126,483	137,269	94,771	
c. Physical Completion in $	596	1,323	1,159	1,451	1,976	2,879	3,157	16,397	18,823	12,356	2,984
d. Work - Planned	(a)	257	151	453	556	515	1,543	3,527	3,673	5,931	
e. Work - Actual	NR	158	76	359	342	565	276	5,356	2,426	4,334	
f. Scheduled BOD (Admin. Bldgs.) [d]	04,6	04,6	06,6	06,6	06,7	06,7	03,7	03,7	03,7	03,7	

NA: Not applicable
NR: Not reported
(a) NA, since report system started in March 1966.
(b) Funds received at field level from allocations made by the military departments.
(c) Funded under PL [illegible], FY-65 MILCON [illegible] PL [illegible], FY-65 MCA SUPP: PL 89-105, FY-66 MILCON [illegible]: PL [illegible], FY-66 MCA Amend; PL [illegible], FY-66 MCA Supp.
(d) BOD for the principal item of construction at that base. 01,7 is read as January 1967.
NYC: Not Yet Committed.
NFS: Not Firm Schedule.
(e) Long Binh complex includes [illegible] formerly reported at Bien Hoa.
(f) Does not include Bien Hoa. (See footnote e).

SOURCE: [illegible]-6510 Report

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GROUP 4
Downgraded at 3 year intervals;
Declassified after 12 years.
DOD Dir. 5200.10

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SOUTHEAST ASIA MILITARY CONSTRUCTION a/
($ Thousands)

TABLE 3

	CY-1966 March	April	May	June	July	August	September	October	November	December	1967 January
Phan Rang (Air Force)											
a. Program Amount Funded (b)	12,810	[illegible]	[illegible]	25,799	26,253	26,187	26,187	25,717	31,425	31,425	
b. Current Working Estimate	23,246	22,578	[illegible]	25,055	33,697	33,691	33,691	35,422	35,555	35,690	
c. Physical Completion in $	312	530	[illegible]	3,625	5,678	7,532	10,779	12,095	17,374	15,957	
d. Work - Planned	(a)	721	[illegible]	770	790	1,055	1,260	1,606	2,630	1,462	1,578
e. Work - Actual	NR	302	1,202	1,273	2,065	2,154	2,947	1,759	5,100	6,585	
f. Scheduled BOD (Airfield Pavements) d/	07,7	NFS	NFS	03,7	03,7	03,7	03,7	04,7	04,7	01,7	
Phu Cat (Air Force)											
a. Program Amount Funded (b)	5,263	5,745	11,127	11,145	21,374	21,309	21,309	27,849	27,949	27,949	
b. Current Working Estimate	5,265	5,745	11,127	11,050	37,526	37,616	37,626	23,060	28,642	30,575	
c. Physical Completion in $	(a) 0	0	0	33	317	551	4,646	6,784	10,009	10,738	
d. Work - Planned		0	0	10	50	500	300	2,003	5,250	4,036	2,895
e. Work - Actual	0	0	0	33	284	234	4,094	4,625	2,525	2,545	
f. Scheduled BOD (Airfield Pavements) d/	NFS	04,7	04,7	03,7	03,7	03,7	03,7	03,7	03,7	03,7	
Pleiku (Army)											
a. Program Amount Funded (b)	NYC	2,394	12,257	12,566	12,566	17,202	17,525	20,353	20,501	21,209	
b. Current Working Estimate		2,396	12,233	12,566	13,063	17,766	16,905	29,218	28,329	23,911	
c. Physical Completion in $		62	245	465	558	672	2,468	3,829	4,129	4,697	
d. Work - Planned		NA	291	374	381	377	759	862	997	838	838
e. Work - Actual		62	184	219	116	195	1,796	1,465	300	521	
f. Scheduled BOD (Cantonments) d/		NFS	NFS	NFS	NFS	177	03,7	03,7	03,7	03,7	
Qui Nhon (Army)											
a. Program Amount Funded (b)	7,005	25,313	30,979	31,360	31,360	46,901	47,219	39,351	39,624	39,306	
b. Current Working Estimate	7,005	29,313	31,022	31,442	29,735	43,701	45,484	49,710	49,723	47,507	
c. Physical Completion in $	0	2,832	3,095	3,693	3,299	7,279	8,199	12,644	12,976	17,253	
d. Work - Planned	(a)	0	525	1,137	1,056	764	5,325	4,553	3,795	4,097	3,046
e. Work - Actual	0	811	183	623	842	3,615	920	2,398	1,409	4,744	
f. Scheduled BOD (Port Facilities) d/	NFS	01,7	01,7	01,7	01,7	01,7	01,7	01,7	01,7	01,7	
Saigon (Army)											
Program Amount Funded (b)	17,816	19,266	46,463	46,695	58,772	53,522	56,296	93,246	94,531	65,818	
Current Working Estimate	19,525	26,711	53,916	54,144	37,583	59,149	62,036	101,140	76,864	70,500	
Physical Completion in $	1,475	4,405	5,509	8,395	10,057	11,720	15,243	18,042	20,653	21,008	
d. Work - Planned	(a)	2,934	4,492	5,236	2,547	2,199	4,130	6,399	9,332	9,276	1,714
e. Work - Actual	NA	2,247	1,759	2,801	2,974	2,521	3,528	4,510	2,611	2,059	
f. Scheduled BOD (Port Facilities) d/	11,6	09,6	12,7	12,7	12,7	12,7	02,7	02,7	02,7	02,7	
Tan Son Nhut (Air Force)											
a. Program Amount Funded (b)	13,031	16,055	20,566	22,052	22,361	22,361	22,361	14,358	19,354	19,354	
b. Current Working Estimate	15,733	16,055	20,705	29,134	34,520	34,241	34,241	34,948	35,048	35,012	
c. Physical Completion in $	1,922	3,673	4,501	6,851	6,632	9,955	10,553	10,039	11,035	11,014	
d. Work - Planned	(a)	1,632	1,155	1,030	1,142	1,719	1,527	2,071	1,067	1,329	1,446
e. Work - Actual	NA	1,542	1,655	1,530	2,546	1,353	568	314	675	175	
f. Scheduled BOD (Airfield Pavements) d/	NFS	NFS	04,7	04,7	04,7	04,7	04,7	04,7	04,7	06,7	
Tuy Hoa (Air Force)											
a. Program Amount Funded (b)			NYC	25,300	25,343	40,343	40,343	40,343	40,343	52,043	
b. Current Working Estimate				25,343	25,343	40,343	51,965	51,965	51,965	52,043	
c. Physical Completion in $				0	0	0	2,690	3,721	10,947	17,580	
d. Work - Planned				NA	0	0	0	3,300	3,000	6,000	NR
e. Work - Actual				0	0	0	2,690	1,483	7,228	6,633	
f. Scheduled BOD (Airfield Pavements) d/				12,6	12,6	12,6	05,7	05,7	05,7	05,7	
Vung Tau (Army)											
a. Program Amount Funded (b)	5,711	10,213	14,881	14,881	14,881	15,711	15,711	17,698	16,961	19,861	
b. Current Working Estimate	5,703	10,246	16,356	16,332	16,332	17,152	17,663	23,601	23,640	20,752	
c. Physical Completion in $	345	441	747	1,153	1,854	1,839	2,077	7,079	7,209	8,406	
d. Work - Planned	(a)	1,045	333	1,314	1,031	1,278	1,053	1,047	915	2,057	2,721
e. Work - Actual	NR	235	353	416	727	123	158	1,404	280	1,216	
f. Scheduled BOD (Cantonments) d/	NFS	NFS	06,7	06,7	06,7	06,7	06,7	06,7	06,7	06,7	
II. THAILAND											
Base (Service) with estimated cost over $10 million											
Sattahip (Army)											
a. Program Amount Funded (b)	800	22,700	21,200	19,975	20,470	20,470	19,975	20,530	20,655	22,917	
b. Current Working Estimate	800	69,223	[illegible]	19,175	20,470	20,470	22,377	22,377	22,302	23,404	
c. Physical Completion in $	0	100	620	756	1,015	1,263	4,991	6,554	8,608	5,524	
d. Work - Planned	(a)	0	38	38	24	336	77	1,765	925	697	23
e. Work - Actual	0	100	490	141	100	158	2,693	2,109	2,095	105	
f. Scheduled BOD (Port Facilities) d/	NFS	10,8	10,8	10,8	10,8	10,8	11,7	11,7	11,7	12,7	
Sattahip (Navy)											
a. Program Amount Funded (b)	NYC	16,300	11,300	16,300	16,300	16,300	16,300	16,300	16,300	16,300	
b. Current Working Estimate		16,300	11,300	16,300	16,300	16,300	14,482	10,839	16,302	13,566	
c. Physical Completion in $		0	0	0	0	[illegible]	40	55	372	1,559	
d. Work - Planned		NA	356	356	0	244	493	367	597	1,342	1,550
e. Work - Actual		0	0	0	0	34	6	35	317	274	
f. Scheduled BOD (Port Facilities) d/		10,7	11,7	10,7	10,7	10,7	07,7	07,7	07,7	07,7	

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	1966 March	April	May	June	July	August	September	October	November	December	1967 January
	62,149	52,653	47,755	46,636	46,636	46,636	51,201	54,894	54,894	54,894	
	64,495	52,728	52,648	51,534	54,519	62,513	65,103	62,356	70,341	71,142	
	4,022	6,966	13,241	16,545	17,956	20,040	23,031	22,994	27,241	33,999	
	(a)	911	2,000	804	NR	NR	NR	NR	NR	NR	NR
	844	1,902	6,764	1,590	2,556	2,272	4,019	542	4,614	7,167	
	03,7	04,7	04,7	04,7	10,6	11,6	02,7	02,7	02,7	02,7	
	16,977	38,673	39,778	38,651	38,619	35,414	37,919	38,404	37,919	38,404	
	15,974	37,576	39,267	39,345	39,615	39,271	36,620	35,366	39,974	37,978	
	2,273	3,991	6,710	5,959	7,220	8,008	8,874	8,945	13,015	13,435	
	(a)	1,800	2,821	2,358	2,212	2,519	3,470	4,133	3,465	4,962	3,962
	NR	1,718	2,410	351	1,301	788	1,149	71	4,069	512	
	12,6	09,7	09,7	09,7	09,7	09,7	09,7	09,7	03,8	03,8	
	17,835	19,293	19,907	24,057	24,057	24,057	24,057	24,057	24,057	24,057	
	18,304	19,941	20,706	23,513	23,978	27,030	24,057	24,028	23,062	23,365	
	1,470	2,187	2,753	3,000	3,237	3,330	3,596	3,899	3,992	3,530	
	(a)	257	341	295	106	145	-130	205	139	2,167	2,242
	184	412	482	345	114	106	205	303	183	471	
	NFS	04,7	04,7	04,7	08,7	08,7	08,7	08,7	08,7	08,7	
	NYC	17,233	17,511	15,161	19,343	17,843	18,063	17,982	17,944	18,001	
		16,465	16,537	15,379	21,753	18,480	18,912	19,718	19,653	19,073	
		220	491	824	1,311	1,922	2,952	4,278	5,239	6,249	
		0	114	205	156	437	1,321	830	1,166	805	500
		158	271	334	487	611	1,030	1,327	951	1,009	
		10,7	10,7	10,7	10,7	10,7	04,8	04,8	04,8	05,8	
	9,590	9,590	10,572	10,572	10,572	10,572	10,572	10,572	10,572	10,572	
	9,607	9,378	10,715	10,321	10,325	10,643	10,522	10,839	10,565	10,557	
	1,855	2,850	3,902	4,267	5,209	6,082	6,663	7,541	8,480	9,167	
	(a)	1,085	976	175	1,295	1,066	1,143	556	518	683	558
	903	1,048	1,067	2,161	858	688	584	877	952	683	
	02,7	02,7	02,7	02,7	03,7	03,7	03,7	03,7	03,7	03,7	
	21,549	23,030	23,946	23,796	23,796	23,796	23,796	23,796	23,796	23,796	
	21,979	23,125	25,491	22,894	23,439	23,429	25,772	25,229	25,088	25,251	
	641	1,458	1,452	2,430	3,653	4,730	6,152	8,479	12,573	13,869	
	(a)	83	5	0	NR	NR	NR	4,476	3,679	4,712	6,255
	152	134	0	965	2,183	1,072	1,415	2,342	4,096	2,446	
	02,8	12,6	02,7	12,6	12,6	10,6	01,7	01,7	01,7	01,7	

ver $10 Million

SOURCE: DD-4610 Report

OASD/(C)/SSA Programs Div.
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SOUTHEAST ASIA MILITARY CONSTRUCTION a/

TABLE 3

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	CY-1966 March	April	May	June	July	August	September
U-Tapao (Air Force)							
a. Program Amount Funded (b)	62,149	52,658	47,755	46,636	46,636	46,636	51,201
b. Current Working Estimate	64,495	52,728	52,648	51,534	54,519	65,513	65,103
c. Physical Completion in $	4,022	6,066	13,241	16,545	17,955	20,040	23,031
d. Work - Planned	(a)	911	2,000	804	NR	NR	NR
e. Work - Actual	844	1,902	6,764	1,590	2,556	2,272	4,019
f. Scheduled BOD (Airfield Pavements) d/	03,7	04,7	04,7	04,7	10,6	11,6	02,7
III. PHILIPPINES							
Base (Service) with estimated cost over $10 million							
NS Subic Bay (Navy)							
a. Program Amount Funded (b)	16,977	38,673	39,778	38,651	38,619	38,414	37,919
b. Current Working Estimate	15,974	37,576	39,267	39,945	39,818	39,271	36,620
c. Physical Completion in $	2,273	3,991	6,710	5,959	7,220	8,008	8,874
d. Work - Planned	(a)	1,800	2,821	2,358	2,211	2,519	3,470
e. Work - Actual	NR	1,718	2,410	351	1,301	788	1,149
f. Scheduled BOD (Port Facilities) d/	12,6	09,7	09,7	09,7	09,7	09,7	09,7
IV. OKINAWA							
Base (Service) with estimated cost over $10 million							
1. Kadena (Air Force)							
a. Program Amount Funded (b)	17,835	19,293	19,907	24,057	24,057	24,057	24,057
b. Current Working Estimate	18,304	19,941	20,706	23,513	23,973	27,090	24,087
c. Physical Completion in $	1,470	2,187	2,753	3,000	3,237	3,300	3,596
d. Work - Planned	(a)	257	341	295	106	145	-130
e. Work - Actual	184	412	482	345	114	106	205
f. Scheduled BOD (Airfield Support) d/	NFS	04,7	04,7	04,7	08,7	08,7	08,7
2. Machinato (Army)							
a. Program Amount Funded (b)	NYC	17,233	17,511	15,161	19,343	17,843	18,063
b. Current Working Estimate		16,466	16,537	15,379	21,753	18,480	18,912
c. Physical Completion in $		220	491	824	1,311	1,922	2,952
d. Work - Planned		0	114	205	156	437	1,321
e. Work - Actual		158	271	334	487	611	1,030
f. Scheduled BOD (Warehouse Facilities) d/		10,7	10,7	10,7	10,7	10,7	04,8
V. Other Bases (Service) With Estimated Cost Over $10 million							
1. Andersen, Guam (Air Force)							
a. Program Amount Funded (b)	9,590	9,590	10,572	10,572	10,572	10,572	10,572
b. Current Working Estimate	9,607	9,378	10,715	10,321	10,325	10,642	10,522
c. Physical Completion in $	1,855	2,850	3,902	4,267	5,209	6,082	6,663
d. Work - Planned	(a)	1,085	976	175	1,295	1,056	1,143
e. Work - Actual	903	1,048	1,067	2,461	858	688	584
f. Scheduled BOD (Fuel Storage) d/	02,7	03,7	02,7	02,7	03,7	03,7	03,7
2. Ching Chuan Kang, Taiwan (Air Force)							
a. Program Amount Funded (b)	21,549	23,030	23,946	23,796	23,796	23,796	23,796
b. Current Working Estimate	21,979	23,125	25,491	22,854	23,439	23,429	25,772
c. Physical Completion in $	641	1,458	1,452	2,430	3,553	4,730	6,152
d. Work - Planned	(a)	83	5	0	NR	NR	NR
e. Work - Actual	152	134	0	965	2,183	1,072	1,415
f. Scheduled BOD (Airfield Pavements) d/	02,8	12,6	02,7	12,6	12,6	10,6	01,7

Notes on page 1, Table III

SOURCE. DD-6610

OASD/SA/SEA
February
Page

SEA CONSTRUCTION

Program Summary and Progress

The military construction program in support of SEA operations is currently funded (through FY 1966S) at $1,728.2 million. As of January 31, 1967, the Military Services reported that $1,669.4 million had been released to the field. The projects started with those funds are now estimated to cost $1,849.4 million. Construction completed on January 31 was valued at $804.6 million, which indicates a 44 percent completion based on current cost estimates. Table 1 shows progress on the MILCON program by month and by country. A review of Work-Actual and Work-Planned for the ten reporting months shows that in all but two the actual output of the construction units, contractor's and troop (in SVN and Thailand), exceeded their planned performance. December 1966 output exceeded the planned by 16% and January 1967, 45 percent. This table summarizes the Work-in-Place performance:

WORK-PLANNED vs WORK ACTUAL FOR ALL SEA MILCON

($ millions)	1966 April	May	June	July	August
Work-Planned	28.3	40.5	46.0	41.1	44.3
Work-Actual	30.4	41.3	40.9	59.8	59.2

	1966 September	October	November	December	1967 January
Work-Planned	74.7	87.9	86.2	91.9	90.8
Work-Actual	83.1	78.7	99.3	106.6	131.3

Underfunding of SVN Projects

Data in the NAVFAC Construction Status Report of February 1, 1967 shows that the difference between current cost estimate and funding for projects under way in SVN is $176.1 million. Included in the FY 1967S budget request is $126.4 million to complete funding of the $203.4 million cost overrun estimated in September 1966. When these FY 1967S funds are applied to the current estimate of underfunding, there is still a deficit of $49.7 million, up $4.6 million over 1 January. OASD(I&L) states that scope adjustments must be made to absorb any cost growth.

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TABLE 1

SOUTHEAST ASIA MILITARY CONSTRUCTION :
($ Thousands)

CONTENT	1966 March	April	May	June	July	August	September	October	November	December	1967 January	February
1. South Vietnam												
a. Program Amount Funded (b)	278,500	833,452	862,939	830,999	832,671	909,212	910,034	976,903	1,045,049	1,855,706	1,050,121	
b. Current Working Estimate	342,160	868,122	893,173	846,084	919,379	989,472	964,739	1,211,582	1,200,123	1,190,272	1,264,136	
c. Physical Completion	45,494	66,041	87,106	110,268	139,299	168,110	217,449	266,852	304,1278/	427,741	536,913	
d. Work - Planned	(a)	19,744	28,298	34,711	33,399	31,893	57,162	63,031	62,617	64,918	64,796	70,497
e. Work - Actual	NR	20,626	22,978	26,768	39,643	34,281	54,678	52,441	60,710	78,738	99,133	
2. Thailand												
a. Program Amount Funded (b)	181,607	218,062	220,974	207,752	209,741	206,741	208,741	210,016	210,016	218,813	221,642	
b. Current Working Estimate	162,445	317,746	440,537	227,670	213,217	230,220	236,195	228,257	233,756	235,849	220,803	
c. Physical Completion	15,396	19,252	29,657	34,804	39,583	44,739	54,217	56,306	68,334	85,418	98,634	
d. Work - Planned	(a)	2,668	4,619	3,428	152	934	1,687	3,422	2,307	2,344	2,123	4,105
e. Work - Actual	2,516	4,108	10,355	2,741	5,553	9,144	9,780	4,771	9,740	16,979	20,246	
3. Philippines												
a. Program Amount Funded (b)	49,790	62,201	69,769	72,247	72,589	72,986	71,260	71,322	71,322	71,322	72,318	
b. Current Working Estimate	48,486	61,567	70,238	73,639	77,707	76,799	71,327	71,156	74,939	72,444	68,327	
c. Physical Completion	3,994	6,337	9,291	11,492	13,529	15,131	15,930	18,638	22,160	25,938	32,946	
d. Work - Planned	(a)	3,312	4,523	4,343	2,600	4,140	4,853	5,423	4,831	6,331	5,709	9,885
e. Work - Actual	150	2,275	2,987	641	2,094	1,553	1,760	886	3,539	2,136	4,415	
4. Guam												
a. Program Amount Funded (b)	18,346	15,946	16,928	16,928	16,842	16,742	16,612	15,903	15,903	15,903	15,903	
b. Current Working Estimate	18,158	15,638	16,975	16,852	16,956	16,374	16,873	16,875	15,722	15,582	15,780	
c. Physical Completion	1,853	2,974	4,030	4,443	6,174	7,001	8,704	7,741	9,642	10,472	11,495	
d. Work - Planned	(a)	1,135	1,038	240	1,641	1,411	1,509	913	1,318	1,844	1,206	1,323
e. Work - Actual	NR	1,172	1,071	2,529	1,627	702	634	1,036	1,519	839	996	
5. Okinawa												
a. Program Amount Funded (b)	32,537	69,512	70,037	67,687	67,687	67,687	67,687	67,693	67,693	67,693	67,693	
b. Current Working Estimate	39,926	36,948	88,979	90,396	83,098	93,192	91,951	73,301	69,742	69,398	71,363	
c. Physical Completion	1,458	2,096	3,693	4,108	4,912	5,763	7,744	9,685	11,013	12,742	15,801	
d. Work - Planned	(a)	442	693	678	339	708	1,739	1,599	1,951	3,358	3,703	5,014
e. Work - Actual	321	705	1,924	793	681	990	1,980	1,492	1,452	1,623	3,021	
6. Taiwan												
a. Program Amount Funded (b)	22,513	23,909	24,903	24,733	24,733	24,733	24,733	24,733	24,733	24,733	24,733	
b. Current Working Estimate	23,149	24,084	26,458	23,862	24,482	23,418	26,772	26,305	26,044	26,230	25,661	
c. Physical Completion	1,392	2,226	2,226	3,243	4,459	5,344	6,909	9,135	13,415	14,784	16,957	
d. Work - Planned	(a)	133	29	2	3	0	0	4,477	3,682	4,722	4,248	6,719
e. Work - Actual	236	165	41	967	2,189	1,072	1,437	2,342	4,181	2,546	1,381	
7. Japan												
a. Program Amount Funded (b)	3,199	18,299	14,899	14,899	14,899	13,306	13,306	12,306	11,967	11,967	11,974	
b. Current Working Estimate	3,495	18,341	23,983	23,495	15,488	13,750	13,732	12,855	11,563	11,574	11,686	
c. Physical Completion	303	442	456	673	920	955	1,176	1,737	2,061	2,723	3,956	
d. Work - Planned	(a)	96	39	148	81	239	136	669	538	646	579	332
e. Work - Actual	NR	139	44	189	261	281	221	902	525	898	468	
8. Midway												
a. Program Amount Funded (b)	none	2,198	2,198	2,198	2,198	1,991	1,991	1,991	1,991	1,998	1,991	
b. Current Working Estimate		2,198	2,198	2,198	2,198	1,975	1,976	1,982	1,982	1,982	1,985	
c. Physical Completion		0	0	0	0	0	1	158	341	361	776	
d. Work - Planned		0	0	21	0	0	32	16	138	138	144	133
e. Work - Actual		0	0	0	0	0	1	157	243	0	442	
9. Wake												
a. Program Amount Funded (b)	1,818	1,818	1,674	1,674	1,674	1,674	1,674	1,674	1,674	1,674	1,674	
b. Current Working Estimate	1,818	1,818	1,669	1,444	1,471	1,471	1,633	1,636	1,662	1,668	1,668	
c. Physical Completion	0	0	0	0	0	0	0	0	3	7	216	
d. Work - Planned	(a)	0	0	0	0	6	0	0	0	0	0	0
e. Work - Actual	0	0	0	0	0	0	0	0	3	4	43	
10. United States (Includes Cuba & Puerto Rico)												
a. Program Amount Funded (b)	19,675	94,994	96,712	153,019	153,972	153,218	31,544	161,897	153,989	155,589	988,925	
b. Current Working Estimate	19,398	94,621	93,599	148,824	157,929	151,961	156,881	160,827	157,496	159,822	168,976	
c. Physical Completion	16,427	11,185	13,218	19,206	27,227	46,372	51,446	66,241	77,889	88,736	99,867	
d. Work - Planned	(a)	984	1,315	2,437	3,227	4,923	7,643	8,386	2,762	7,479	6,068	3,573
e. Work - Actual	1,324	1,229	1,880	6,312	7,417	13,252	11,188	10,779	13,435	11,458	11,238	
TOTALS FOR ALL WORK COMPLETED OR PROJECTS												
a. Program Amount Funded (b)	578,977	1,339,174	1,389,318	1,391,441	1,394,441	1,471,173	1,469,824	1,543,163	1,603,368	1,616,025	1,480,488	
b. Current Working Estimate	643,227	1,468,539	1,634,831	1,472,795	1,511,727	1,606,965	1,614,299	1,607,570	1,702,665	1,702,846	1,849,485	
c. Physical Completion	89,311	111,133	149,649	186,261	235,918	287,671	361,671	437,613	596,388	667,838	886,617	
d. Work - Planned	(a)	30,258	46,968	45,989	41,141	64,282	76,662	87,876	84,234	91,894	89,788	99,705
e. Work - Actual	NA	30,629	41,523	48,948	59,353	59,157	83,679	78,665	99,327	106,429	131,384	

NOTES: NA - Not Applicable
NR - Not Reported
(a) - NA, since report system started in March 1966.
(b) - Funds received at field level from allocations made by the military departments.
(c) - Funded with PL 88-390, FY 65 MILCON Supp; PL 89-18, FY 65 MCA SUPP; PL 89-188, FY-66 MILCON Sup; PL 89-213, FY 66 MCA Amend. PL 89-367; FY-66 MCA Supp.
(d) - November physical completion reflects $67 million in RVN projects.

SOURCE: DD-6611 Report
OASD/ISA/SEA Programs Div.
15 March 1967

CONFIDENTIAL

Jet-Capable Airbase MILCON Costs

The eight jet capable airbases in SVN will cost about $401 million, or 37% of the total MILCON funds now approved for in-country construction. The following table summarizes the estimated costs for airfield pavements, airfield support facilities, cantonments, and communications facilities under construction at eight sites.

SVN JET AIRFIELD CWE SUMMARY
($ million)

Base (Service User)	Airfield Pavements	Airfield Support Facilities	Cantonments a/	Communications Facilities	TOTAL CWE
Bien Hoa (AF, A) f/	22.3	10.4	4.2	0.3	37.2
Cam Ranh Bay (AF, N) b/	48.2	24.6	14.4	0.4	87.6
Chu Lai (MC) c/	23.3	12.7	3.7	1.0	40.7
Da Nang (AF, MC, A)	22.3	24.9	8.2	1.0	56.4
Phan Rang (AF)	26.0	18.1	7.6	0.9	52.6
Phu Cat (AF)	18.0	3.6 d/	11.6	0.1	33.3
Tan Son Nhut (A, AF)	18.0	16.7	5.2	1.6	41.5
Tuy Hoa (AF)	22.4	8.9	15.3	0.3	52.0 e/

DATA SOURCE: January 1967, DD-6610 Report.

a/ Proportionate share of total base program that will be occupied by aviation units.
b/ Includes Ky Ha Air Facility.
c/ Includes Marble Mountain Air Facility (Da Nang-East).
d/ Includes FFCG 08, Ammunition Storage.
e/ Includes interim Port Facilities with CWE of $5,069,000.
f/ Excludes Hospital: 200 bed with CWE of $900,000.
CWE: Current working estimate of cost.

At Cam Ranh Bay, Phu Cat, Phan Rang, and Tuy Hoa virtually no facilities existed before the military construction projects started. However, at the other sites, sizeable assets existed and the MILCON projects have added runways, parking aprons, and supporting facilities to handle high density jet aircraft operations.

C-130 Capable Airfields in SVN

CINCPAC's requirement through FY 1968, as revalidated by message of January 24, 1967, is for 62 C-130 capable airfields in SVN (in addition to 8 jet capable and 17 other airfields). These fields will fulfill all currently known tactical and operational requirements in SVN.

The C-130 airfields selected by MACV and validated by CINCPAC are divided into three categories according to tactical use; thirty Forward Deployment Fields, twelve Logistical Airfields, and twenty Tactical Unit Bases. The pavement characteristics of these fields are summarized in this table:

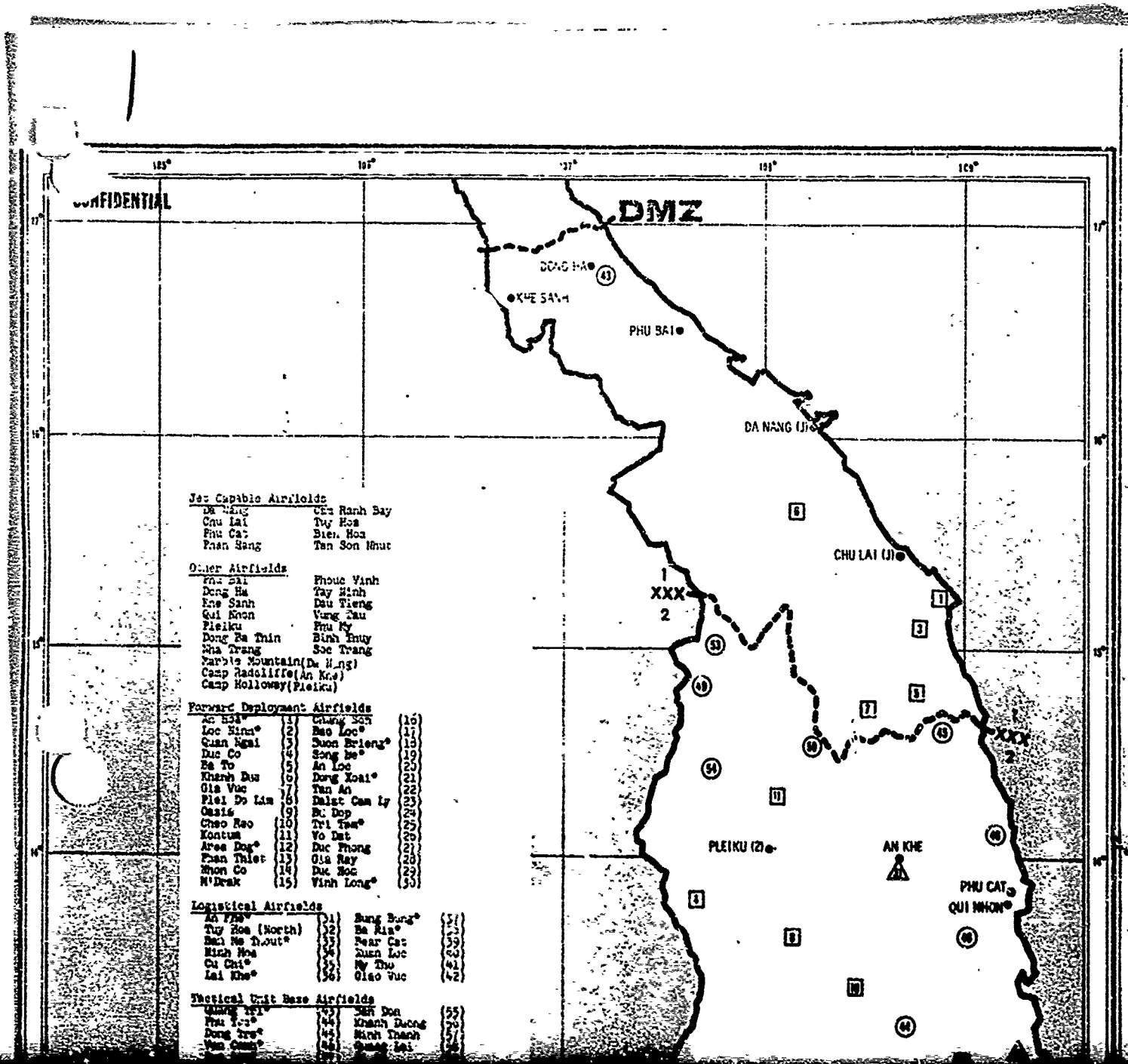
Type Field	No. of Fields Req'd.	Runway	Turn-arounds, 2 Each	Taxiway	Parking Apron (Sq Ft)	Total Pavement (Sq Ft)
Fwd Deployment	30	3500'x60'	150'x150'	1260'x36'	153,000	430,860
Tactical Unit	20	3500'x60'	150'x150'	1260'x36'	153,000	430,860
Logistical	12	5000'x60'	150'x150'	2760'x36'	374,000	795,860

The runways and turnaround areas will be constructed of AM-2/MX-19 heavy duty aluminum matting and taxiways and parking aprons will be of M8A1 steel matting. Average material cost of aluminum matting is $4.83/sq ft and $1.35/sq ft for steel, or $1,498,950 for a Forward Deployment Base.

Locations of the 87 airfields planned for SVN are plotted on Chart 1. Changes in the tactical situation may require that some of the C-130 fields be built at other sites, but the chart shows current CINCPAC plans. This table summarizes the types of airfields by Corps Tactical Zone:

CTZ	Jet Capable	Avn Units & Helicopter	Forward Deployment	Logistical	Tactical Unit	Total Fields
I	2	4	6	0	1	13
II	4	6	12	4	12	38
III	2	5	11	6	5	29
IV	0	2	1	2	2	7
Total	8	17	30	12	30	87

In general, the C-130 fields will be built in the most expeditious manner, using matting, troop labor and expeditionary airfield techniques not requiring MCP support. The matting requirements and its availability are under close control by the Services in Vietnam and MACV J-4 so that operational needs will be met on schedule. A review of the MACV report "Construction Program, South Vietnam, Status and General Requirements" revised 1 December 1966, shows that requirements have been stated for permanent asphalt runways at 7 single runway fields where matting runways are also being programmed. These bases are Ban Me Thout, Phan Thiet, Dalat Cam Ly, Boa Loc, Phu Loi, Lai Khe, and Baria. Construction plans for these bases should be reviewed to confirm the type runways that will be built, so that only the necessary supporting resources are programmed and required material procured.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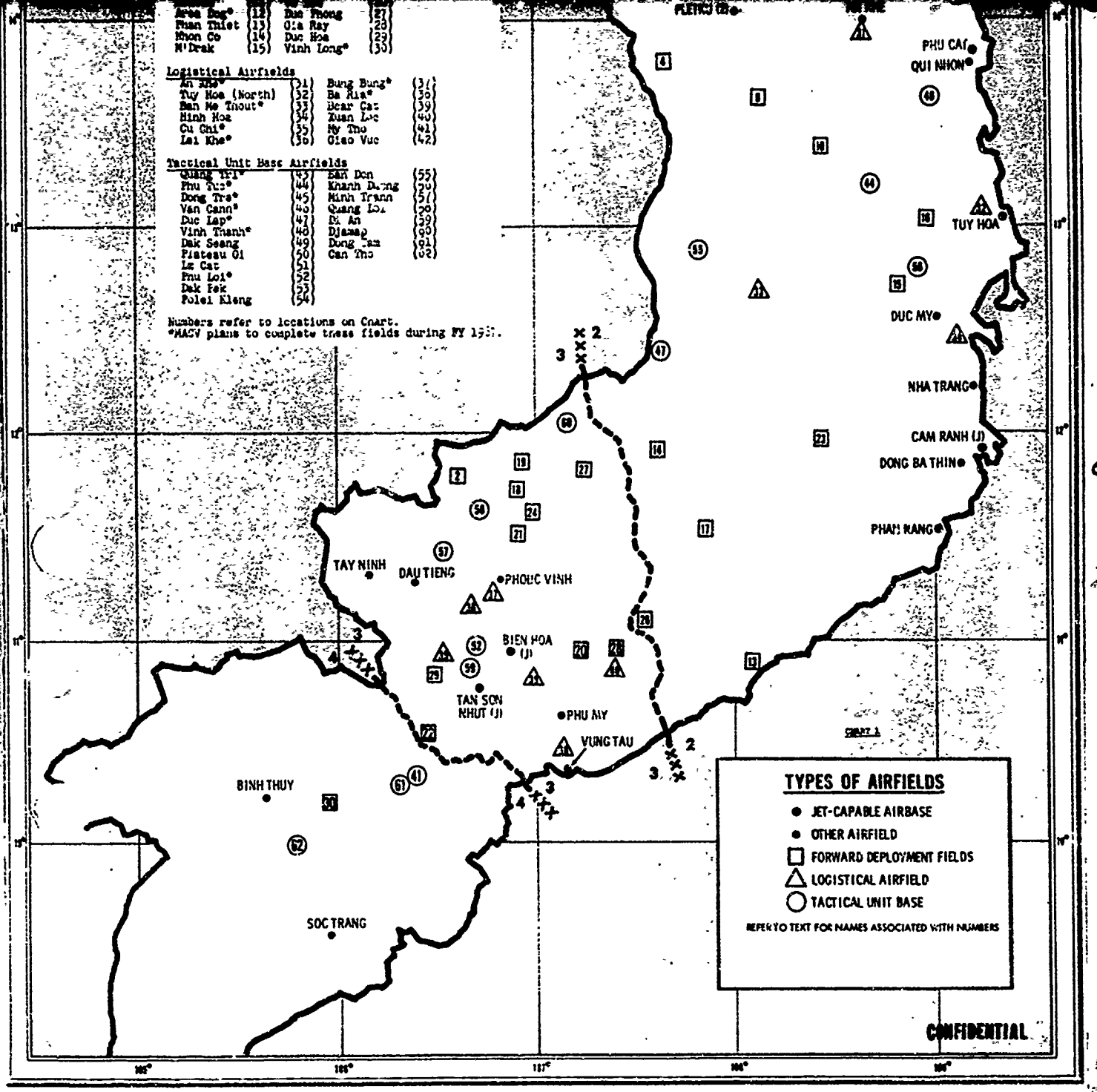
PHU CAT
QUI NHON
XXX
2
Jet Capable Airfields
Da Nang — Cam Ranh Bay
Chu Lai — Tuy Hoa
Phu Cat — Bien Hoa
Phan Rang — Tan Son Nhut
Other Airfields
Phu Bai — Phouc Vinh
Dong Ha — Tay Ninh
Khe Sanh — Dau Tieng
Qui Nhon — Vung Tau
Pleiku — Phu My
Dong Ba Thin — Binh Thuy
Nha Trang — Soc Trang
Marble Mountain(Da Nang)
Camp Radcliffe(An Khe)
Camp Holloway(Pleiku)
Forward Deployment Airfields
An Khe* (1) Chang Mek (16)
Loc Ninh* (2) Bao Loc* (17)
Quan Ngai (3) Buon Brieng* (18)
Duc Co (4) Song Be* (19)
Ba To (5) An Loc (20)
Khanh Duc (6) Dong Xoai* (21)
Gia Vuc (7) Tan An (22)
Plei Do Lim (8) Dalat Cam Ly (23)
Oasis (9) Bu Dop (24)
Cheo Reo (10) Tri Ton* (25)
Kontum (11) Vo Dat (26)
Aree Dog* (12) Duc Phong (27)
Phan Thiet (13) Gia Ray (28)
Khon Co (14) Duc Hoa (29)
M'Drak (15) Vinh Long* (30)
Logistical Airfields
An Khe* (31) Bung Bong* (57)
Tuy Hoa (North) (32) Ba Ria* (58)
Ban Me Thout* (33) Near Cat (59)
Binh Hoa (34) Xuan Loc (60)
Cu Chi* (35) My Tho (41)
Lai Khe* (36) Cieo Vuc (42)
Tactical Unit Base Airfields
Quang Tri* (43) Soc Trang (55)
Phu Bai* (44) Khanh Duong (56)
Dong Ha* (45) Minh Thanh (57)
Nha Trang* (46) Quang Loi (58)


Area Sog* (12)
Phan Thiet (13)
Nhon Co (14)
M'Drak (15)
Dau Phong (27)
Gia Ray (28)
Duc Hoa (29)
Vinh Long* (30)
Logistical Airfields
An Khe* (31)
Tuy Hoa (North) (32)
Ban Me Thout* (33)
Hinh Hoa (34)
Cu Chi* (35)
Lai Khe* (36)
Bung Bung* (37)
Ba Ria* (38)
Bear Cat (39)
Xuan Loc (40)
My Tho (41)
Giao Vuc (42)
Tactical Unit Base Airfields
Quang Tri* (43)
Phu Tuc* (44)
Dong Tre* (45)
Van Canh* (46)
Duc Lap* (47)
Vinh Thanh* (48)
Dak Seang (49)
Plateau Gi (50)
Le Cat (51)
Phu Loi* (52)
Dak Pek (53)
Polei Kleng (54)
Bien Hoa (55)
Khanh Duong (56)
Minh Tranh (57)
Quang Loi (58)
Bi An (59)
Djamap (60)
Dong Tam (61)
Can Tho (62)
Numbers refer to locations on Chart.
*MACV plans to complete these fields during FY 1971.
PLEIKU
PHU CAT
QUI NHON
TUY HOA
DUC MY
NHA TRANG
CAM RANH (J)
DONG BA THIN
PHAN RANG
TAY NINH
DAU TIENG
PHUOC VINH
BIEN HOA (J)
TAN SON NHUT (J)
PHU MY
VUNG TAU
BINH THUY
SOC TRANG
CHART 1
TYPES OF AIRFIELDS
JET-CAPABLE AIRBASE
OTHER AIRFIELD
FORWARD DEPLOYMENT FIELDS
LOGISTICAL AIRFIELD
TACTICAL UNIT BASE
REFER TO TEXT FOR NAMES ASSOCIATED WITH NUMBERS
CONFIDENTIAL

Apr 67

CONSTRUCTION COST GROWTH IN SVN

The estimated cost to complete MILCON projects underway in SVN increased sharply during February; the underfunding (difference between current working estimate and funding) increased by $95.2 million to a total of $145 million, according to the March 1, 1967 NAVFAC Construction Status Report, Vietnam. This table shows the cost growth and underfunding for the past six months.

CONSTRUCTION COST GROWTH IN SOUTH VIETNAM a/
($ Million)

Total MILCON and MAP b/	1966 Aug	Sep	Oct c/	Nov c/	1966 Dec c/	1967 Jan c/	Feb d/
Current Working Estimate	862.1	1,044.9	1,147.7	1,153.3	1,173.1	1,207.2	1,302.4
Funds Released to Field	806.9	832.0	998.6	1,000.7	1,001.6	1,031.2	1,031.2
Indicated Underfunding	55.2	212.9	149.1	152.6	171.5	176.0	271.2
Overrun Funds Not Released	203.2	203.2	143.2	143.2	143.2	126.2	126.2
Actual Underfunding	(148.0)	9.7	5.9	9.4	28.3	49.8	145.0

a/ Source: NAVFAC Construction Status Report, Vietnam (monthly).

b/ Excludes TURNKEY, for which in February 1967 CWE = Funding = $52.0 million.

c/ Includes funding from FY 1965R thru FY 1966S.

d/ Includes funding from FY 1962R thru FY 1966S. For FY 1962R thru FY 1964 Reprog. CWE = $5.3 million, Funding = $5.0 million.

CINCPAC established a study group in February, chaired by CINCPAC J-4, to study the history of SVN construction cost growth, and to determine the causes and methods of preventing it in the future. Results of the study are not yet available.

As a means for keeping construction costs within approved funds, the Level of Effort (LOE) concept was developed and is currently being placed in effect. Under this concept MACV and the OICC-RVN will establish a financial plan within which the contractor must operate. The contractor's level of effort and workforce plans will be tailored to fit the established financial envelope. This allows contractor control on the basis of out-of-pocket expenses rather than the previous "CWE" control. Inherent in the LOE plan will be authority for the OICC-RVN to have the contractor partially complete projects. In essence the LOE plan encompasses the following:

a. Those projects assigned for contractor completion within the contractor funding envelope.

b. Those projects to be partially completed by the contractor within his funding and workforce level and to be finished by troop units using contractor material assets.

c. Those projects to be accomplished by troop construction only.

d. Those projects requiring appropriate scope reductions or deletion.

MACV 69

SVN LINES OF COMMUNICATIONS (LOCs)

The funded construction program provides $24 million through FY 66S for LOC improvement, maintenance and new construction. In addition $59 million has been provided in the FY 67S and FY 68 budgets for additional intra-facility programs. However, MACV has stated requirements for a major inter-facility program costing over $200 million (in contractor costs) that has not been funded. Besides being costly, the latter program raises questions of design, security, and whether it should be funded by AID or DOD.

Current Program. The funded (through FY-1966S) LOC program in SVN provides for minimal improvements to road networks local to military installations and port areas. Major bridges at Da Nang and Cam Ranh Bay are partially funded, and some intra-base railroad spur work has been done.

Table 1 shows existing LOC improvement projects, which are estimated to cost $41.6 million, are funded at $24.4 million, and were $9.4 million complete on March 23, 1967. Excluded from this list, because the costs are unidentifiable, are projects under way for roads and railways in the the local areas of cantonments, ports, airfields, and supply facilities. Besides these projects funded in the MILCON appropriation, there are many projects for intra-facility LOC maintenance and improvement funded from O&M appropriations. This work is done by base civil engineering units and contractors. Since O&M funds are interchangeable among projects, subject only to over-all Service ceilings, it is impossible to identify the amount of construction being done with O&M funds.

The FY-1967S and FY-1968 MILCON budgets have the following funds approved for LOC improvement projects:

	($000)	
	FY-1967S	FY-1968
Army	6,638	36,174
Navy	4,919	10,380
Air Force	668	None
Total	12,225	46,554

A breakdown of these funds into projects by base appears in Table 2. The projects all support military bases and operations and are therefore funded in the MILCON program.

Some of MACV's interfacility requirements in the I-CTZ will be met by construction approved for PRACTICE NINE. National Route 1 will be upgraded to a 2-lane, 35-ton capacity, all-weather road from Da Nang to Dong Ha (110 miles). The work will be done by an NMCB for an estimated material cost of $4.6 million. In addition Route 9 from Dong Ha to Thon Son Lam (15 miles) will be upgraded to similar standards by troop labor for a cost of $0.4 million. Bridges along these routes will be 2-way, 35-ton capacity.

Requirements. In addition to the program discussed above, MACV has stated a need for 1166 miles of priority road improvement and new construction and over 300 miles of railway main lines and spurs.

The priority road program would provide two-way, all-weather, 50-ton capacity, 22 feet wide roads with 5-foot shoulders. In general, this program would provide improvements and new construction where necessary for:

1. 627 miles of coastal Route 1-1A from Saigon to Dong Ha, near the DMZ;

2. 95 miles of Route 9 from Qui Nhon to Pleiku;

3. 94 miles of Route 21 from Ninh Hoa (33 miles north of Nha Trang) west to Ban Me Thout;

4. 68 miles of Route 11 from Phan Rang northwest to Dalat;

5. 104 miles of Route 4 from Saigon to Can Tho, in center of the Mekong Delta Region; and

6. 178 miles of roads connecting Saigon with Trang Bang, Phouc Vinh, Tai Khe, and Vung Tau.

These roads are plotted on Chart 1.

VC Action Against LOC's

Only limited data are available on Vietcong interdicting of LOC's. Chart 1 shows those sections of the national highway system, which MACV has given priority for improvement, which have been reported closed for at least the last three months. Intelligence data does not disclose if these roads are closed because of VC activity against traffic or because of enemy damage to the roadbed or bridges. Nor have we determined the sections closed for short periods. The CY 1967 Combined Campaign Plan for SVN set a goal of 900 miles of national and inter-provincial routes secure for unescorted travel. Recent intelligence indicates that this goal may be met, thus providing one essential element for the interfacility highway improvement program.

Funding Responsibility. The MACV national highway and railroad construction program, desired also by AID for country redevelopment, has not been funded or started. The question is who is to fund the program if it is to be initiated. The Army has responsibility for funding sabotage repair of the highways and railways. Approved O&M funds for the Army to carry out this work are the following:

	($ million) FY 1967S	FY 1968
Highway Maintenance	13.3	3.1
Railroad Replacement	9.6	4.2

MACV feels that these funds are only enough to provide minimum support to the GVN Ministry of Public Works, and that they will not permit the major upgrading that should be undertaken.

MACV, with Embassy/Saigon and AID/Saigon support, has requested $100 million and authority to contract with RMK-BRJ for upgrading the RVN highway system. Both CINCPAC and the JCS have endorsed MACV's request, including a proposal for AID funding of the work, and have emphasized the importance of LOC improvements to military operations in SVN. This matter will require prompt attention by OSD and AID if the funds are to be found and the contractor assigned projects starting in July 1967.

TABLE 1.

LOC Improvement Projects Funded thru FY 1968 a/

($000)

Site	Project	Sponsor	Scheduled Completion	Cost Estimate	Funding	Completed
Cam Ranh Bay	Railroad/Highway Bridge, 1400 Ft.	Army	Dec. 67	$10,640	$ 8,400	0
Cam Ranh Bay	13 miles Railroad to GVN Nat. System	Army	Dec. 67	7,108	3,000	0
Chu Lai	Roads and drainage, 8 miles	Navy	Mar. 68	2,387	809	239
Da Nang	Roads and drainage, 10.5 miles	Navy	Mar. 67	1,775	1,575	686
Da Nang	Da Nang Bridge, 5400 Ft.	Navy	Apr. 67	14,676	7,042	7,236
Da Nang	Roads, 15 miles	Navy	Mar. 68	2,161	1,042	141
Da Nang	Roads (no scope reported)	Navy	Mar. 68	1,472	1,107	0
Nha Trang	Roads, 2 miles	Army	Mar. 67	65	65	0
Pleiku	Roads, 6 miles	Army	Feb. 67	1,071	773	1,018
Qui Nhon	Roads, 6 miles	Army	Apr. 67	150	150	50
				41,596	24,373	9,370

a/ Source: 9 March 67, NAVFAC U4444 Report.
MILCON funding, FY 1965 thru FY 1968

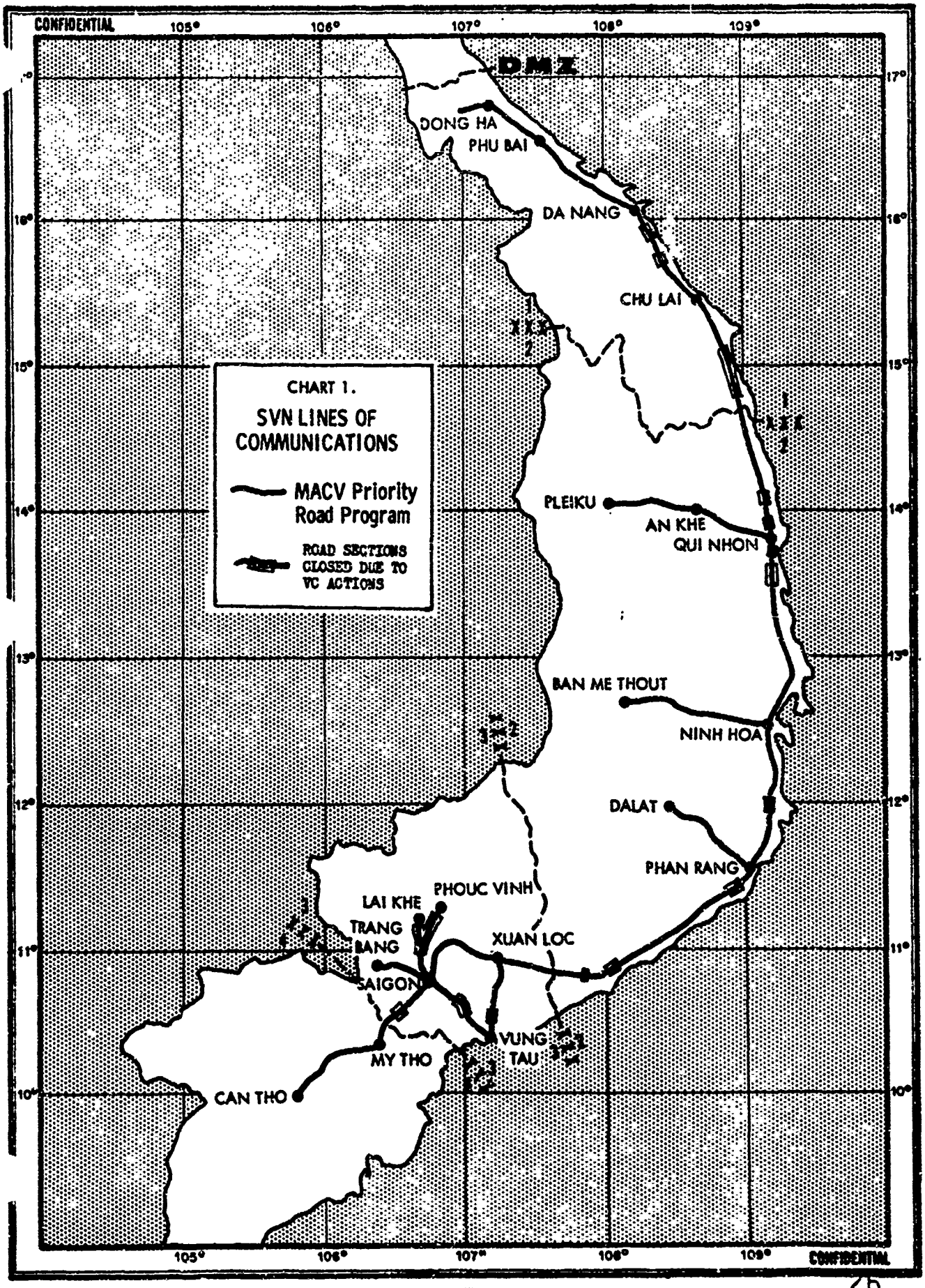
TABLE 2

LOC Improvement Projects Funded in FY 1967S and FY 1968

FY 1967S	Funding ($000)
ARMY	
Newport RR Spur, 0.84 miles	265
Road, Vung Ro to Tuy Hoa	3,200
Local roads at various locations	3,173
	6,638
NAVY	
33 miles of local roads at Da Nang, Da Nang-East, Chu Lai, Phu Bai, Cam Ranh Bay, and Game Warden bases in Delta	4,919
AIR FORCE	
30 miles of local roads at Bien Hoa, Binh Thuy, Cam Ranh Bay, Da Nang, and Nha Trang	668
Total FY 1967S Funding	12,225

FY 1968	
ARMY	
An Khe-24 mile RR spur	7,560
An Khe-.09 mile RR Bridge	1,758
Chan Rang-14.5 mile RR spur	4,568
Cam Ranh Bay-4 mile RR spur	1,260
Long Binh-14 mile RR spur	5,282
Newport-Rt 1A Road Interchange	977
Qui Nhon-17 mile RR to Ammo area	5,361
Qui Nhon-3.3 mile RR spur	354
Saigon-8.3 mile RR network	2,605
Saigon-0.33 mile RR Bridge	6,449
	36,174
NAVY	
Local roads at Da Nang, Da Nang-East, Chu Lai, and Phu Bai	10,380
AIR FORCE	None
Total FY 1968 Funding	46,554

GDS AT 3 YEAR INTERVALS; DEC ED AFTER 12 YEARS. DOD DIR 5200.10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DALAT
PHAN RANG
PHOUC VINH
LAI KHE
TRANG BANG
XUAN LOC
SAIGON
VUNG TAU
MY THO
CAN THO
CHART 1.
SVN LINES OF COMMUNICATIONS
MACV Priority Road Program
ROAD SECTIONS CLOSED DUE TO VC ACTIONS
CONFIDENTIAL

26

May 1967

CONSTRUCTION PROGRAM SUMMARY AND PROGRESS

The following table summarizes the status of SEA MILCON funding, estimated cost, and work completed as of March 30, 1967.

	FUNDING			FY 1966S AND PRIOR PROJECTS			
($000)	FY 1966S & Prior	FY 1967S FY 1968	TOTAL	Funds Released to Field	Current Working Est.	$ Completion	% Completion
SVN	1,089	474	1,563	1,088[b]	1,356[b]	731[b]	54
Other	639	464[a]	1,103	584[c]	591[c]	329[c]	55
TOTAL	1,728	938	2,666	1,672	1,947	1,060	54

a/ Includes $200 million DOD worldwide Contingency Fund.
b/ Re: 1 April 1967 NAVFAC Construction Status Report, Vietnam, plus TURNKEY.
c/ Re: March 1967 DD-6610 Reports.

During March contractor (RMK-BRJ) and troop work-in-place in SVN fell about 21% short of their planned output ($85 million vs. $107 million).

The apparent cost overrun (excess of planned scope cost over available funds) for SVN construction dropped by about $4 million during March. The table above shows that the current cost estimate for projects started exceeds the released funds by $268 million. When the $126 in FY 1967S overrun funds are applied to the current estimate of underfunding, there is still a deficit of $142 million.

The Level of Effort (LOE) system for control of contractor construction in SVN discussed in the April SEA Analysis Report was started on April 1. Under this concept the total contractor effort will be sized to live within funds available. In addition, a site-by-site reappraisal of construction plans is being conducted by MACV to make appropriate scope adjustments and assign the remaining work to the contractor or troop units. The LOE concept is designed to get the maximum construction from the available construction dollars.

MILITARY CONSTRUCTION

SVN Summary

As of June 30, 1967, the approved (through FY 1967S) military construction program in SVN was 63.5% complete. Work assigned to the contractors was 69% done, and troop projects, 39%. Port facilities in the approved program are 92% complete, while airfields are 71%, troop housing and utilities 51%, and hospitals and dispensaries 75%. Table 1 summarizes the status of SVN MILCON funding, estimated cost, and work completed by contractor and troops.

The apparent cost overrun (excess of planned scope cost over available funds) has dropped to $43 million, down $100 million from that indicated on March 30, 1967. As a part of the Level of Effort management system now used in SVN, many projects are still being evaluated for conversion from contractor to troops. These changes will bring the cost in terms of military construction funds of FY 1966S and prior year projects to within available MCP funds.

TABLE 1

STATUS OF SVN MILCON a/

	($ Million) FUNDS	CWE	COMPL.	% COMP.	Over/(Under)-Funding ($Million)
ALL SERVICES					
Contract	1,204.4	1,237.2	851.6	68.8	(32.8)
Troop	253.0	262.9	101.3	38.5	(9.9)
TOTAL	1,457.4 b/	1,500.1	952.9	63.5	(42.7)

Data Source: MILCON Status Report, SVN, dated July 7, 1967 (End of June 1967 Report).

a/ All Funding Programs, FY 1964 through FY 1967S.
b/ Additional approved funding for SVN incudes $2.5 million for AF MAP, FY 64 and Prior, work completed; $1.45 million AF Unassigned; and $9.735 million OICC Undistributed.

SVN CONSTRUCTION PROGRAM SUMMARY AND PROGRESS

On 30 September 1967, the approved (through FY 67S) military construction program in SVN was 66% complete. The funded program is divided 82% contractor and 18% for troop construction. (Since only the construction materials part of the troop effort is charged to the MilCon appropriation, the scope of work is divided almost equally between contractor and troop effort.) The contractor program is 71% complete while the troop assigned program is 37% complete. Table 1 summarizes the status of SVN MILCON funding by Service. Not included in the funding totals is $55.6 million in the FY 68 regular MILCON program for SVN or any portion of the FY 68 contingency funds.

TABLE 1

Status of SVN MILCON
($ millions)

Sources	Funds b/	Completed	Completed (%)
Army	757	430	57
Navy	356	251	71
Air Force	364	280	77
Subtotal	1,477	961	66
Other a/	315	N/A	N/A
Total	1,792		

Source: Construction Report Vietnam dated 1 Oct 67 (End of September Report).

a/ Includes MAP transfers (all from FY 1962-1966), AID, AIK, State Department, and miscellaneous.

b/ FY 1968 funds not included.

The lag of the Army program behind the Navy and Air Force reflects the Army's greater use of military troop effort. Contractor construction capability reached a peak in July 1966, whereas the major buildup of military construction units did not occur in SVN until 4 to 10 months later.

A closer analysis of the work completed shows that several categories in the Army program are considerably less than 50% completed (based on percentage of current working estimate), and all of these are lagging the construction plan. These are shown in Table 2.

TABLE 2

Status of Army Low Priority Construction Program

Category	Planned	Actual	Actual less Planned
Communications Facilities	41%	40%	- 1%
Operations Bldg.	60%	45%	-15%
Maint. Facilities	51%	40%	-11%
Ammo. Storage	41%	38%	- 3%
Covered Storage	27%	23%	- 4%
Community Facilities	29%	27%	- 2%
Roads & RR	59%	45%	-14%

Source: Army Buildup Progress Report dated 8 November 1967.

The above percentages reflect MACV action in assigning highest priority to operational facilities such as ports and major airfields and lower priority to logistical facilities, particularly covered storage.

Level of Effort (LOE) System

The LOE system for control of contractor construction in SVN was discussed in the April and May SEA Analysis Reports. The system was initiated on 1 April 1967 to get maximum construction from the available construction dollars and to prevent costly overruns. Since that time contractor personnel strength and construction capability have decreased substantially as shown in Table 3.

TABLE 3 a/
CONTRACTOR (RMK-BRJ) CONSTRUCTION EFFORT

Date	Work Force Total	U.S.	FW	VN	WIP ($ millions)	Average Placement/Man
Jun 66	48,886	3,832	5,028	40,026	28.9	$ 591
Sep 66	44,091	3,726	5,543	34,822	36.8	835
Dec 66	44,207	3,529	5,231	35,447	47.1	1064
Mar 67	31,697	2,900	4,322	24,475	53.5	1688
Jun 67	22,228	1,967	2,238	18,023	36.4	1638
Sep 67	15,891	1,402	1,195	13,294	14.5	912
Oct 67	15,000 (target)					

Source: NAV FAC

a/ Totals as of the end of the month.

Contractor reached a peak strength of over 51,000 in July 1966 and is now approaching his planned strength of 15,000 by the end of October 1967. Correspondingly, the construction capability has been reduced from a high of $58 million to $14.5 million in September 1967. The Contractor work force has been regrouped into three major enclaves - Da Nang, Cam Ranh Bay and Saigon/Delta for more efficient utilization of his reduced resources. The current LOE labor plan calls for phasing out the contractor starting in October 1968. If Congress substantially reduces funds requested for FY 1968, an earlier phase out may be required.

Military Engineer Strength

As of 30 September 1967 the total Engineer strength in SVN is as shown in table 4.

TABLE 4

Military Engineer Strength
(Thousands)

Service	Total Force	Engineers	Percentage
Army	297.5	35.9	12.1
Navy - MC	105.2	17.0	16.2
Air Force	56.8	4.7	8.3
Total	459.5	57.6	12.5

In SVN one man out of every eight is an engineer. Engineers are organized into some 52 battalions or equivalents, 42 separate companies and several miscellaneous detachments. In WWII the engineer strength in the South Pacific Theater averaged 16.2% of the Army strength. During the Korean War Army engineers made up about 14% of the Army troops in Korea. Data for the other Services is not available.

January 68

SVN FY 69 MILITARY CONSTRUCTION PROGRAM

The FY 69 South Vietnam Military Construction Program approved by the Secretary of Defense totals $282.8 million including a $70 million SEA contingency fund; an additional $30 million contingency fund is provided for world-wide use. The FY 69 program is about $137 million larger than the $146 million provided in the FY 68 program ($65.7 million plus an estimated $80 million contingency) but considerably less than the programs in FY 66 and 67 ($973 and $394 million respectively). Table 1 summarizes the history of SVN construction funding. Table 2 shows the funds made available by Calendar year. The dollars provided to the field peaked in 1966 at nearly $800 million and have declined significantly in subsequent years.

TABLE 1

SVN MILITARY CONSTRUCTION PROGRAMS
($ Millions)

Program	Army	Navy	Air Force	Total[a/]
FY 65 Basic	14.7	9.4	16.2	40.4
FY 65 Supplement	36.0	17.4	20.9	74.4
FY 66 Basic	29.8	30.3	13.5	73.6
FY 66 Amendment	36.0	32.9	39.2	108.1
FY 66 Supplement	424.2	189.0	178.2	791.5
FY 67 Supplement	217.6	76.1	100.2	393.8
FY 68 Basic	31.4	10.4	23.9	65.7
FY 68 Contingency	b/	b/	b/	80.0[b/]
FY 69 Basic	144.1	54.1	14.6	212.8
FY 69 Contingency	c/	c/	c/	70.0
Total	933.8	419.6	406.8	1,910.0

Source: RCS DD-I&L(6727)

a/ Does not add due to rounding.

b/ FY 68 contingency not broken out. Eighty million estimated for use in SVN.

c/ In addition to $70 million in FY 69 contingency funds for SEA, each Service has a $10 million contingency fund for world-wide use, some of which may be used in SEA.

TABLE 2

CONSTRUCTION FUNDING ON YEARLY BASIS
($ Millions)

	CY 64	CY 65	CY 66	CY 67	CY 68	TOTAL[a]
FY 65	40.4	74.4	-	-	-	114.7
FY 66	-	181.7	791.5	-	-	973.1
FY 67	-	-	-	393.8	-	393.8
FY 68	-	-	-	145.7[b]		145.7
FY 69	-	-	-	-	282.8[c]	282.8
	40.4	256.0	791.5	539.5	282.8	1910.0

a/ Totals do not add due to rounding.
b/ Includes $80 million from contingency fund.
c/ Includes $70 million from contingency fund.

FY 69 Program

The FY 69 program is about half the amount requested by the JCS and the Military Departments as shown in Table 3.

TABLE 3

FY 69 MILITARY CONSTRUCTION PROGRAM - SVN
($ Millions)

	Army	Navy	Air Force	Contingency	Total
Military Department Recommendations	$317.5	$232.0	$50.1	-	$599.6
JCS Recommendation	$314.9	$199.6[c]	$23.2[c]	-	$537.7
OSD Alternate Program	$144.1[a]	$ 54.1	$14.6	70.0[b]	$282.8

a/ Approved program includes $41 million for LOC/highway rehabilitation that was not contained in the JCS and Department's recommended programs.
b/ Does not include an added contingency fund of $10 million for each of the Military Departments which may be applied to unanticipated construction requirements world-wide.
c/ JCS did not address all requirements.

The bulk of the hard core facilities (ports, airfields, storage, troop housing, maintenance, etc.) was funded prior to this year. As a result, about 65% of the recommended programs of the Departments consisted of up-grading existing facilities (housing, hospitals, etc.), provision of welfare and community buildings, and furnishing utilities. While these projects might have aided morale and comfort of the troops and perhaps increased somewhat the efficient operation of our support forces, most were either not essential or would not have had sufficient probable use to amortize their cost. Deletion or delay in construction of these projects should not have an adverse effect on military operations.

Army Program

The Army requested $317.5 million of which 65% was for added and upgrading of troop housing, community facilities, utilities and ground improvements. Table 4 compares the Army proposed program and the approved OSD alternative program by major project category.

TABLE 4

ARMY FY 69 MILITARY CONSTRUCTION - SVN
($ Millions)

Type Facility	DA Request	OSD Approved
Operational	$ 16.4	$ 3.5
Maintenance	43.1	10.2
Supply	27.2	3.2
Hospital/Medical	21.0	5.1
Administrative	2.3	-
Troop Housing/Community	146.1	61.9
Utilities/Real Estate	61.4	19.2
LOC Rehabilitation	-	41.0
Total	$317.5	$144.1

The Secretary of Defense added $41 million to the Army program for construction and rehabilitation of major lines of communication.

Navy Program

The Navy requested $232 million for FY 69; the approved program totaling $54.1 million provides the urgent items in support of Program 5 deployments and anticipated military operations in Vietnam (largely in the I CTZ). The most significant new requirements were in support of the buildup in the Phu Bai complex which includes Hue, Dong Ha and Quang Tri. In addition, funds were provided for limited upgrading of troop housing and utility systems in various other locations.

TABLE 5

NAVY FY 69 MILITARY CONSTRUCTION
($ Millions)

Type Facility	DN Request	OSD Approved
Operational and Training	$ 58.0	$ 14.9
Maintenance	18.7	6.1
Supply	33.0	5.0
Hospital/Medical	5.4	.1
Administrative	5.9	1.1
Troop Housing/Community	44.2	12.2
Utilities/Ground Improvements	54.8	10.7
LOC I CTZ	12.0	4.0
Total	$232.0	$ 54.1[a]

a/ Does not contain any portion of the recommended contingency fund.

Air Force Program

The Air Force request totaled $50.1 million and consisted primarily of Program 4 related requirements and replacement and upgrading of existing aircraft aprons, runways, housing and utility systems. The Air Force only had a few Program 5 force increases, thus a large requirement for new facilities did not exist. The approved alternative program of $14.6 million provided for limited operational, maintenance, supply, living quarters, and utilities.

TABLE 6

AIR FORCE FY 69 MILITARY CONSTRUCTION
($ Millions)

Type Facility	AF Request	OSD Approved
Operations & Training	$24.5	$ 8.1
Maintenance	2.5	1.4
Supply	1.7	1.2
Hospital/Medical	-	-
Administrative	.2	-
Troop Housing/Community	4.2	1.9
Utilities, Ground Improvements	17.0	2.0
LOC	-	-
Total	$50.1	$14.6

Contingency

The OSD approved program contains $100 million for contingencies. Seventy million is earmarked for new requirements in Southeast Asia that cannot be foreseen at this time. In addition, the Army, Navy, and Air Force each were provided a $10 million contingency fund for construction in support of operations world-wide.

Other Military Construction Costs

Military construction appropriations constitute only a portion of the total dollar cost of the construction effort in South Vietnam. Substantial amounts of operation and maintenance (O&M) and procurement funds are also used to support the construction effort. For example, much of the upgrading and finishing work on cantonments is done with O&M funds and bridging material and airfield matting are purchased with procurement funds. Only fragmentary information is available on amounts of O&M and procurement funds used in the construction effort. Our preliminary estimate is that they now total about $100 million per year. We hope to acquire better data on this question in the coming months.

An even larger element of cost is the pay, allowances and normal operating expenses of the U.S. military personnel in construction units in Vietnam. At present we have 49 engineer battalions in SVN. In addition, there are a large number of smaller units (e.g., dump truck companies, light equipment companies) supporting the engineering battalions which raise the total number of military engineering personnel to about 60,000. Divisional combat

battalions are engaged almost entirely in combat support and do not contribute to the construction effort. A portion of the effort of the other battalions is also devoted to combat support, maintenance, mapping, etc., not new construction. We estimate that 43,600 military personnel are actually engaged in military construction work. An estimated $550 million is required annually for the operations (including pay) of these 43,000 engineer personnel.

Thus, the total cost of the construction effort in South Vietnam during FY 69 will be closer to $1 billion than the $282 million in the military construction funds for FY 69 that were approved by the SecDef.

Expected Change in Future MilCon Programs

Even though the hard core major facility requirements in Vietnam have been largely provided for, limited amounts of military construction funds will continue to be required as long as we maintain a sizeable presence there. Funds will be necessary to provide for essential upgrading or replacement of existing substandard facilities, to meet contingency requirements, and to provide for adjustments in the base structure as they occur. Additionally, as facilities are built, more and more resources (funds and personnel) must be allocated to maintenance and repair. This will most likely result in growing requirements for O&M funds.

One area that will undoubtedly require large inputs of construction and O&M funds for years to come is LOC construction and rehabilitation to support military operations and economic development. There are 2800 miles of major roads in the Vietnamese highway system that require maintenance and upgrading. The road beds are in bad condition in many places and bridges that have been destroyed have to be replaced. The rail net must be rehabilitated and modernized as much of it is virtually worthless. Many of the key canals and waterways must be reopened and cleared of debris and silt. To accomplish this work will probably require the use of U.S. and ARVN military engineers or civilian contractors or both. The costs will undoubtedly be very heavy and the requirements could be virtually open-ended.

~~March~~ April 68

SVN CONSTRUCTION PROGRESS

The presently funded SVN construction program is approximately 70% completed. Approved military and contractor construction forces should be able to complete the assigned military construction program by early CY 1970. Barring a major increase in US forces or a decision to rebuild communication lines and civilian facilities, we should begin phasing out the 18,000-man contractor force and withdrawing some of the 60,000 military construction troops about mid-1969. The status of construction in South Vietnam as of end February is shown on the table below:

CONSTRUCTION STATUS
($ Millions)

Service	Program[a/]	WIP	Percent Complete
Army	$ 813.1	$ 504.9	62%
Navy	365.4	265.1	73%
Air Force	379.6	313.1	82%
Total	$1558.1	$1083.1	70%

SOURCE: RCS DD-I&L #6727 dated February 29, 1968.
a/ Includes $55.8 million FY 1968 regular program plus $24.0 million from the FY 67 contingency fund.

Current Engineer Deployments

At the present time there are 64 engineer battalions/squadrons in SVN and nearly 200 smaller engineer units. These units are manned by approximately 60,000 engineer troops. The bulk of these personnel (approximately 55,500) are assigned construction and combat and combat support missions, while the rest are engaged in such activities as "repairs and utilities," maintenance and supply, mapping, staff, and advisory roles. Of these, 16,500 engineer personnel are in units organic to or in direct support of the divisions. Thus, about 40,000 engineer personnel are available for projects funded by the military construction appropriation. The engineer units in SVN are shown below:

ENGINEER UNITS IN SVN

	Bde/Agency	Gps/Regt	Bns/Sqdns	Co's	Misc
Army	3	7	33[a/]	40	133
Navy	1	2	12	2	12
Marine Corps	-	-	5[b/]	2	1
Air Force	-	1	14[c/]	-	-
	4	10	64	44	146

SOURCE: MACV Strength Report dated March 28, 1968 Data as of February 29, 1968.
a/ Includes 7 Division Bns.
b/ All 5 considered Division Bns.
c/ Includes 9 Base Civil Engineer squadrons.

CINCPAC Construction Review

A recent CINCPAC review, held on 25-28 March 1968, showed that currently deployed construction units, augmented by the RMK-BRJ contractor, should be able to complete the assigned military construction program by February 1970. The fold out table shows the projected capability and the approved construction program.

Barring a major increase in US forces which would generate new construction requirements, or a decision to rebuild the road, canal, rail net or other non-military projects, a phase-down of our construction capability may begin next year. Decision is required as to whether to retain the contract capability, and begin withdrawing US forces, or hold on to the military capability as long as possible. Retaining the military units gives the most construction output for each dollar of MCP funds. Using the contractor permits a reduction in US personnel (and probably in the total cost) and has "nation-building" advantages.

Construction Trends

The troop construction effort has gradually shifted from military construction projects to lines of communications (LOC) maintenance and combat support. A year ago over 60% of the troop effort was devoted to military construction funded projects. Now, only 40% of the troop effort is for Milcon, with over 60% now funded from procurement and operations appropriations. Should this trend continue, completion of the Milcon program will be delayed and more O&M funds will be needed. The breakdown of the work during March is shown below:

ENGINEER CAPABILITY UTILIZATION

Agent	Milcon	LOC	Other Combat Support
Army Units	40%	20%	40%
Navy Units	40%	20%	40%
Air Force Units	32%	-	68%
Contractor	90%	5%	5%

SOURCE: CINCPAC R 300218, March 1968.

Moreover, a number of engineer units have been relocated. A year ago all construction in I CTZ was performed by contractor or Navy construction battalions. Most of the units were located south of the Hai Van pass in the Hue and Da Nang areas. The Army had construction responsibility for II, III and IV CTZ. The Air Force units were engaged in air base construction assisted by Army and Navy units and the contractor.

However, with the deployment of additional Marine and Army units to I CTZ, several engineer units have moved from II and III CTZ, delaying the completion of some on-going projects. At present, there are seven Army

engineer battalions (including three divisional battalions) in I CTZ. An additional Seabee battalion was deployed in February and 60% of the Navy horizontal construction capability has moved north of Hai Van Pass to work on LOC maintenance and upgrading.

The RMK-BRJ contractor will increase his work force because of an added workload rather than decrease it as had been planned in the fall. The original goal as outlined in the Full Funding Concept dated February 28, 1967 was to reduce the force to 15,000 personnel. The current RMK-BRJ work force is 17,844 (1399 US, 1280 TCN, and 15,165 LN) and they can expand the work force to 22,000 personnel if required. The extent and rate of the buildup will depend on the funds made available, the rate at which projects can be assigned, the availability of contractor capability in the area where the work is to be done, and the urgency of the work.

VIETNAM MILITARY CONSTRUCTION PROGRAM
MACV CAPABILITY FORECAST
(Includes FY 1968 & Prior Programs)
($ Millions)

	CONSTRUCTION WORKLOAD				
	FY 67S & Prior	FY 67S & Prior Adjusted	FY 68	FY 69	Total
PART I					
Troop Capability Based on Units Included in Program #5 & #6					
ARMY					
No. Bns In-Country[g]	121.9	80.4[a]	4.3	30.0	114.7
Capability[h/i/j]					
NAVY					
No. Bns In-Country[g]	27.1	33.0[b]	4.8	13.5	51.3
Capability[h/j]					
AIR FORCE					
No. Bns In-Country[g]	11.3	6.3[c]	2.2	2.2	10.7
Capability[h/j]					
Sub-totals	160.3	119.7	11.3	45.7	176.7
Capability (Quarterly) Cumulative Workload Remaining					
PART II					
Contractor Capability	79.8	205.3[d]	126.0	166.3	497.6
Cumulative Workload Remaining					
PART III					
Combined Troop Contractor Capability					
Cumulative Workload Remaining	440.1	325.0	137.3	212.0	674.3

a/ Workload adjusted by $41.5 Mil: $5.9 transferred to Navy Troops; Est. $15 Mil transferred to
b/ $5.9 Mil Army Troop transferred to Navy Troop
c/ $5.0 Mil troop to contractor.
d/ Workload adjusted by $74.5 Mil -$50.0 Mil contractor prepaid assets; -$44.5 Mil error correc
e/ Includes $55.8 FY 68 basic plus $81.3 Mil FY 68 contingency. Does not include $10 Mil for s
f/ FY 69 contingency not included. ($212 million basic)
g/ Based on approved deployments as of April 3, 1968, does not include seven divisional engines
h/ Total troop effort available has been reduced to provide for combat support & O&M projects.
i/ Includes $1 Mil/month for Vinnell Contractor.
j/ MACV estimated capability; $3.4 M Army troop for 27 engr bns; $2.1 M Navy troop for 12 NMCB
k/ RMK-BRJ workforce increased to 19,000 in May. Contractor capability $1 million per 1000 em
l/ RMK-BRJ workforce increased to 20,000 in August.
m/ Excess capability available.

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TION WORKLOAD — CAPABILITY FORECAST

FY 68	FY 69	Total	1968 1st Qtr	1968 2nd Qtr	1968 3rd Qtr	1968 4th Qtr	1969 1st Qtr	1969 2nd Qtr	1969 3rd Qtr	1969 4th Qtr	1970 1st Qtr
4.3	30.0	114.7	26.0	27.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
			13.2	13.4	13.6	13.8	13.8	13.8	13.8	13.8	13.8
4.8	13.5	51.3	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
			5.9	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
2.2	2.2	10.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
			1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
11.3	45.7	176.7									
			20.3	20.9	21.1	21.3	21.3	21.3	21.3	21.3	21.3
			156.4	135.5	114.4	93.1	71.8	50.5	29.2	7.9	(20.5)
126.0	166.3	497.6	54.0	56.0[k/]	59.0[l/]	60.0	60.0	60.0	60.0	60.0	60.0
			443.6	387.6	328.6	268.6	208.6	148.6	88.6	28.6	
			74.3	76.9	80.1	81.3	81.3	81.3	81.3	81.3	81.3
137.3	212.0	674.3	600.0	523.1	443.0	361.7	280.4	199.1	117.8	36.5	(71.9)[m/]

s; Est. $15 Mil transferred to contractor; Est $20.6 Mil WIP not reported.

ssets; -$44.5 Mil error correction: +$20 Mil troop transfer.
Does not include $10 Mil for shelters.

clude seven divisional engineer bns(units become effective 2nd month in-country) or 5 USMC bns.
mbat support & O&M projects.

$2.1 M Navy troop for 12 NMCBs; $.4 M Air Force troop for 5 CE squadrons.
bility $1 million per 1000 employees.

OASD/SA
April 18, 1968

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May 68

THAILAND CONSTRUCTION PROGRAM

The approved military construction program in Thailand for FY 68 and prior years is 70% complete as of March 31, 1968 (see Table 1). By the end of this year practically all of the FY 67S and prior programs will be completed.

TABLE 1

CONSTRUCTION STATUS
($ Millions)

Service	Program	Work in Place	Percent Complete
Army	114.7[a]	70.3	61
Navy	16.0[b]	13.5	84
Air Force	235.8[c]	174.7	74
	366.5	258.5	70

Source: RCS: DD-I&L (THN) 6727 March 31, 1968 Report
a/ Includes $1.7 million FY 68R program.
b/ Includes $1.9 million FY 68R program.
c/ Includes $18.4 million FY 68R program.

About one-quarter of the Army construction program is being done by troops and three-quarters by contract. The Navy program is being constructed entirely by contract and over 90% of the Air Force program is assigned to contractors.

Future Milcon Program

The military construction program in Thailand is rapidly being completed with no major new requirements anticipated. The FY 70 construction program should be less than the $12.6 million projected for FY 69. Table 2 shows the Milcon program by Fiscal Year.

TABLE 2
THAILAND MILCON PROGRAM
($ Millions)

	FY66 & Prior	FY 67S	FY 68	Projected FY 68S	Projected FY 69	Total
Air Force	134.9	82.6	26.8[c]	3.0[b]	3.0	250.3
Navy	13.9	-	2.1[a]	-	.6	16.6
Army	73.4	39.6	1.7	2.0	9.0	125.7
Total	222.2	122.2	30.6	5.0	12.6	392.6

Source: OSD(I&L)SEA Construction Division.
a/ $199,000 being reprogrammed to the Philippines.
b/ Contains $1.9 million for Laos.
c/ Includes $8.5 million FY 68 Contingency.

Current construction backlog is about $100 million. The contractors are placing $10 million work-in-place (WIP) per month. The troop units are placing another $1 million per month. As of April 3, 1968, the Officer-in-Charge of Construction (OICC) Bangkok expected to have all but three contracts awarded. The current OICC estimate is that work will be largely completed by April 1969. Architect-engineer contracts will have been reduced to three by July 1968 from a high of 29 in January 1967. The two Cost-Plus-Adjusted-Fee (CPAF) contractors should be phased out by end FY 69. Residual work or new requirements can easily be accomplished by local contractors (who do high quality and low cost work) and US military construction units.

Use of Military Construction Units

The major engineer units in Thailand consist of one engineer construction group, nine engineer battalions/squadrons and some 23 smaller engineer companies and detachments totaling nearly 4400 military personnel. Of these troops only 3200 are available for use in the military construction program. The remainder (1200) are utilized on repairs and utilities, maintenance, advisory and other miscellaneous assignments. Engineer troop make up 9.5% of the military population in Thailand.

TABLE 3

ENGINEER UNITS IN THAILAND

Service	Gp	Bn/Sqdns	Co's	Miscellaneous	Total Personnel
Army	1	2	4	13	2818
Navy/MC	-	-	-	5	84
Air Force	-	7[a]	-	1	1478
Total	1	9	4	19	4380

Source: CINCPAC RCS 5314-2 dtd March 31, 1968.
a/ Includes 6 Base Civil Engineer Squadrons (1056 airmen).

The mission of the Army's 44th Engineer Group (Construction) consists of road building, construction of training facilities for the Thai Voluntary Division force, and providing facilities for the logistic infrastructure. The Air Force Red Horse Squadron (556 CE Squadron, Heavy Repair) is divided among the six major Air Force bases. Its work consists of revetment and lighting construction, emplacement of relocatable facilities such as modular dispensaries and hospitals, and erection of pre-engineered storage and maintenance facilities. We estimate that less than 50% of the Red Horse construction is funded by the military construction program.

Construction Augmentation

Both the Army and the Air Force use rental contracts to obtain large amounts of construction equipment to augment their organic capability. These contracts provide equipment with local operators and mechanics. These augmentations together with direct hire Local National laborers and military supervisors provide a substantial increase to troop construction capability. During the 1st half of FY 68, the Army spent over $2 million for equipment rental services and the total cost for the year is expected to exceed $4 million. The Air Force has at least eight contracts totaling $3.1 million in FY 68, almost entirely from operations and maintenance funds.

The Army in Thailand employs about 2500 Local Nationals of which 2200 are paid from Milcon funds. The Air Force employs another 4300 Local Nationals in addition to the 1700 LN utilized by the six Base Civil Engineer squadrons.

Thus, overall, the troop construction capability in Thailand has been augmented by 400 major items of equipment (185 Army, 211 Air Force) at a cost of over $7 million. The military work force on troop construction projects has been further augmented by 6800 Local Nationals.

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SEA MILITARY CONSTRUCTION PROGRAM

FY 70 marks the first time since the US involvement in the conflict in South Vietnam that no military construction (MILCON) funds are being programmed for SEA construction. A $25 million world-wide contingency fund is being requested for unforeseen projects that may occur. Since FY 65, about $2.8 billion has been provided to support the war effort in SEA. Table 1 summarizes the history of SEA military construction funding by fiscal year. Table 2 (enclosed) breaks out the construction program by country and indicates progress.

TABLE 1

MILITARY CONSTRUCTION AUTHORIZATION
IN SUPPORT OF SEA
($ Millions)

Program	Army	Navy	Air Force	Total
Transfers from MAP	65.8	-	-	65.8
FY 1965	59.5	37.0	69.6	166.1
FY 1966	655.1	352.8	430.7	1,438.6
FY 1967	288.5	133.9	190.4	612.8
FY 1968	142.8	60.6	111.8	315.2
FY 1969	108.8	56.4	16.5	181.7
Total	1,320.5	640.7	819.0	2,780.2

Of the $2.8 billion authorized, $1.7 billion (64%) has been used in SVN; $367 million in Thailand (14%); and $588 million (22%) for training, operational and logistical support bases in CONUS and the western Pacific bases. This work was nearly 80% complete by end of February 1969. The major elements of the construction program in SVN include:

a. Six deep water ports at Da Nang, Qui Nhon, Cam Ranh Bay, Vung Ro, Vung Tau, and Saigon with 27 deep draft berths providing capacity of 600,000 short tons per month (Saigon was the only deep draft port prior to US involvement). In addition, shallow draft facilities were provided at nine other ports to handle 800,000 short tons per month of coastal shipping. Mooring buoys and unloading facilities capable of discharging 1,250,000 barrels of POL daily were constructed at or near the various ports.

b. Eight jet-capable air bases with fifteen 10,000 foot concrete runway/taxiway systems and parking aprons (3 existed prior to 1965). In

TABLE 2

AUTHORIZATION BY COUNTRY
(FY 1965 - 1969 SEA Construction)
($ Millions)

Country	Army	Navy	Air Force	Total 1/	% Complete 28 Feb 69	%/Country
Vietnam	887.0	418.7	411.0	1,716.7	77.0	64.1
Thailand	122.1	15.0	237.2	374.3	89.2	14.0
Okinawa	28.4	9.7	30.7	68.8	92.8	2.6
Philippines	-	68.6	19.4	88.0	87.2	3.3
Korea	51.5	-	46.0	97.5	12.8	3.6
Taiwan	-	.2	27.2	27.3	91.9	1.0
Guam	.5	8.9	12.1	21.5	86.0	.8
Japan	10.1	5.4	2.5	18.0	90.8	.7
United States	163.9	84.7	11.8	260.3	92.2	9.7
Other 2/	.8	1.6	4.5	7.0	85.1	.2
Total 1/	1,264.2	612.8	802.4	2,679.4 3/	78.8	10.0

SOURCES: Table 600 Military Construction in Support of SEA, Feb 28, 1969.
Format II RCS DD-I&L(M) 915, dtd Feb 28, 1969.

1/ May not add due to rounding
2/ Other includes countries such as Midway, Wake, Laos, Canal Zone, Cuba, and Puerto Rico.
3/ Total varies from Table 1 by unapportioned FY 69 funds.

addition, there are some 83 auxillary logistical airfields capable of handling C-123 or C-130 type aircraft. The facilities support over 5,750 aircraft of all types.

c. 9760 hospital beds for US and Free World personnel.

d. Four major depot complexes at Na Nang, Qui Nhon, Cam Ranh Bay and Long Binh. Each of these complexes support a deep water port and two or more major air bases.

e. Maintenance and upgrading of 2537 miles of Vietnamese highways.

In Thailand, the construction program provided operational, logistical, and personnel support facilities for 49,000 US personnel. Major facilities include: expansion of six existing Royal Thai Air bases; construction of a new $110 million airbase at U-Tapao with 11,500 foot runway for B-52s; a deep water port and depot complex at Sattahip; a forward depot at Korat; and about 300 miles of new and upgraded roads. The Thailand program is nearing completion and our construction capability there is being phased down.

Support facilities for aircraft, waterfront operations, ship repair, storage of supplies, POL, and ammunition, maintenance of aircraft and equipment, communications and troop housing were provided in the offshore Pacific Islands. CONUS construction in support of SEA consisted primarily of an expansion of the training base.

The bulk of the remaining construction workload is located in SVN. On March 1, 1969, MACV had a work backlog of $409 million. All other SEA countries combined had a MILCON workload remaining of $159 million. The rest of this paper focuses on the work still to be completed in SVN.

SVN Construction

Periodic six-month reviews are being made of the SVN construction capabilities, workload and requirements by the JCS and OSD. These reviews are being performed to reduce unobligated backlogs, and to match funding with capabilities and requirements. Work remaining to be placed is divided between the contractor ($260 million) and the military troops ($149 million). While the contractor has the largest part of the funds (64%) remaining, the troops actually have more projects to be completed since troop costs are largely unfunded by the MILCON program. The generally accepted ratios of MILCON costs between troop and contractor is 1 : 2.5 to 3. Total costs are estimated to be about equal.

Contract construction in SVN is performed under the supervision of the Navy Facilities Engineering Command through its field office in Saigon. Project directives are prepared and approved by MACV for submittal to OICC (Office In Charge of Construction). OICC prepares the design and assigns the work to its contractors for construction. The bulk of the contract construction in SVN is accomplished by Raymond, Morrison, Knudson - Brown, Root and Jones (RMK-BRJ) operating under a

cost-plus-adjusted fee (CPAF) contract. Its work force consists of about 25,500 personnel and is staffed and equipped to construct about $22 million per month of MILCON work. The contractor requires about $100 million of useable backlog (projects designed, notice to proceed issued, and materials ordered or on hand) in order to operate efficiently. Hence, it was recognized at the time of the FY 70 budget reviews that no FY 70 MILCON program for SVN would require phasing down or terminating the RMK-BRJ contract in CY 70.

Some contract capability will always be required in SVN as long as US forces are employed there. Specifically, contractors performing dredging, electric power and distribution, and mechanical construction will be required. It will be more economical to terminate the CPAF contractor and keep the speciality contractors because of the large overload involved with the RMK-BRJ contractor. Local lump sum contractors have the capability of performing about $1.5 million of work per month.

The MILCON work remaining for troop accomplishment amounts to $149 million broken out by Service as shown in Table 3. The military engineer work force and its assigned JCS capability for MILCON is shown in Table 4. It is interesting to note that the current troop MILCON capability is about $5 million per month. This work placement rate represents about 20% of the total effort available for MILCON work (exclusive of LOC) and about 17% of the total military engineer effort in SVN. Table 5 shows the battalion/squadron equivalent capability by type of mission.

TABLE 3

MILITARY TROOP CONSTRUCTION
SVN
($ Millions)

	Assigned Program	Work Completed	Work Remaining	% Complete
Army	223.4	118.7	104.7	53.1
Navy	95.4	58.9	36.5	61.7
Air Force	18.4	10.4	8.0	56.5
Total	337.2	188.0	149.2	55.7

SOURCE: MACV Placement SITREP dated February 28, 1969.

TABLE 4

MILITARY ENGINEER BNS/SQDNS
IN SVN

	Program 6	Assigned MILCON Missions	Monthly Unit Capability	Total Monthly Capability
Army				
Combat Bns	20	13	$ 41,000	$ 533,000
Construction Bns	14	13	$183,000	$2,379,000
Navy				
MCBs	10	10	$150,000	$1,500,000
Marine Corps				
Combat Bns	2	0	0	0
Force Bns	3	0	0	0
Air Force				
Red Horse Sqdns	5	5	$ 80,000	$ 400,000
Total	54	42		$4,812,000

1/ Divisional engineer battalions are excluded since their work is entirely combat support.
2/ One Construction battalion converted into a land clearing Bn to support combat operations
3/ The 116th Army Engineer Combat Bn (a reserve unit) is scheduled to depart SVN in September 1969.

TABLE 5

ENGINEER BN/SQDN EQUIVILENT
BY MISSION

	Operational Support 1/	LOC 2/	MILCON Base Development 3/	Non MILCON Base Development 4/	Total
Army					
Combat Bns	6.1	2.5	1.6	2.8	13.0
Construction Bns	3.5	3.1	4.1	3.3	14.0
Navy					
NMCBs	3.0	2.3	2.4	2.3	10.0
Marine Corps					
Force Bns	.4	1.1	0	1.5	3.0
Air Force					
Red Horse Sqdns	0	0	.9	4.1	5.0
Total	13.0	9.0	9.0	14.0	45.0
Percentage	28.9%	20.0%	20.0%	31.1%	100%

SOURCE: Field data collected from MACVDC on March 1969 trip. Data based on information submitted to MACV during July 68 - January 69.

1/ Operational Support - includes maintenance and construction support provided in active or projected areas of operations to assist maneuver elements, combat support elements, or immediate supporting units. Effort includes tactical bridging, assault airfields, land clearing, combat roads, etc.

2/ LOC - includes work expended on LOCs such as national, interprovincial and local highways and railroads. It excludes on-base roads and maintenance and construction of roads in direct support of tactical operations.

3/ MILCON Base Development - includes all Milcon projects except for LOCs.

4/ Non-MILCON Base Development - includes all projects built with other funds (O&M, procurement, AIK, etc.).

FUTURE SVN REQUIREMENTS

Most of the hard core logistical requirements (i.e., ports, airfields, and depots) have been essentially completed in SVN. Current projects reflect improvements to the existing bases and fluctuating requirements in conformance to tactical operations and the shifting of troop units. Remaining uncompleted and unfunded projects concern primarily of the LOCs and support of RVNAF accelerated improvement and modernization. The LOC requirements are well identified and discussed in detail below. RVNAF construction requirements are being identified and analyzed by MACV. Some MILCON funding will be required in SVN each year to meet expected contingency requirements and to provide for base structure adjustments. Funds to be provided, however, will be limited to well defined urgent requirements and matched with the construction capability in-country.

Line of Communications

The land lines of communication (LOC) are in dire need of extensive restoration and improvement. Prior years of sabotage, lack of maintenance and heavy wartime traffic have virtually destroyed the road and rail networks. Reconstruction of these national assets are necessary to reduce heavy reliance on air and coastal shipping to support military operations; to improve internal security; and to assist in nation building. Prior to FY 68, the military construction program concentrated on on-base roads and largely ignored the railroads.

Now the highway emphasis is placed on the upgrading of 2,537 miles of national and interprovincial highways and city streets. This program covers minimum essential requirements to link population centers and military facilities. It does not include upgrading and new road construction required for support of combat operations in areas not served by the major road networks. Cost of this restoration is borne by a multiple funding program that includes MILCON, O&MA, AID/DOD, OPN, USAID, MAP, and GVN funds.

Railroads have received increased attention during the past year. Forty-four percent (552 km) out of a total 1240 kilometers have been restored to an operational condition. Current plans call for restoration of all rail lines from Saigon to Phu Cat plus the line between Da Nang and Hue by the end of CY 69. Funding of the Vietnamese National Railway Service (VNRS) involves both GVN piaster funding and US AID/DOD support in commodities. MILCON funding has been limited to railway spurs connecting the VNRS with US military installations. For a more complete discussion of the VNRS see August 1968 SEA Analysis Report pp. 8-15.

The road program is funded as shown in Table 6.

Additional FY 70 and FY 71 funding to complete the current approved road program are estimated by COMUSMACV to be $79.5 million as shown in Table 7.

TABLE 6

ROAD FUNDING IN SVN 1/
($ Millions)

	FY 67 & Prior	FY 68	FY 69	Total
MILCON	24.7	28.6	33.8	87.1
O&MA	8.6	76.0	19.8	104.4
OPN	2.2	10.0	14.8	27.0
AID/DOD	25.6	21.3	23.1	70.0
USAID	0	9.8	3.4	13.2
MAP	7.0	0	0	7.0
Total	68.1	145.7	94.9	308.7

SOURCE: Construction Program South Vietnam (Complex Review) HQ MACV dated March 1, 1969.

1/ DOD assumed responsibility for major repair and upgrading of key GVN roads on 1 July 1966 since the GVN lacked the resources to fulfill this responsibility. Maintenance of the highways is a GVN responsibility.

TABLE 7

ADDITIONAL ROAD FUNDS REQUIRED
($ Millions)

Fund Source	FY 70	FY 71	Total
MILCON	25.8 1/	4.5	30.3
O&MA	13.6	0	13.6
OPN	5.3	0	5.3
AID/DOD	22.2	0	22.2
USAID	3.5	5.0	8.5
Total	70.4	9.5	79.9

1/ No MILCON funding is being requested for SEA in FY 70. This action reduces the available funding for road upgrading and restoration to $49.1 million in FY 70.

As of the end CY 68 about 500 miles (19.7%) of highways had been restored to MACV standards. Another 500 miles are presently under construction by a combination of troop-contractor effort. The CY 69 goal calls for completion of 750 miles of roads so that by the end of this year, 49.3% of the road program will be completed. Final completion of the current road program is scheduled for end CY 71.

Five classes of roads are being constructed under the current program. Four-lane highways are to be built where traffic is heavy (over 6000 vehicles per day). Lesser standards are provided for traffic at various traffic densities as shown in Table 8.

TABLE 8

LOC STANDARDS

	Miles	Traffic Density
4-Lane	15	Heavy (over 6000 per day)
Class A (24' paved roadway with 8' shoulders)	1,097	Heavy (under 6000 per day)
Class B (20' roadway with 8' shoulders)	931	Heavy (under 6000 per day)
Class C (20' roadway with 5' shoulders)	495	Medium (limited two-way traffic)
Class D (15' roadway with 5' shoulders)	0	Light (one-way traffic)
Total	2,537	

Expansion of the road program to include secondary roads to province, district and hamlet levels would add about 18,000 miles of class C and D roads to the program. These roads, though not presently considered or approved by MACV, are receiving increased attention in SVN as the major highways are being completed.

Summary

Essential construction requirements for our forces in SEA have been largely provided for. Future programs will be limited to high priority requirements and funded at levels that can be completed within a year after funds are made available. Some construction will be required as long as the US maintains forces in SEA. After termination of the SVN conflict, additional requirements may develop as our post-Vietnam force and stationing posture is approved.

Jan 67

CARGO DISCHARGE CAPABILITY AND REQUIREMENTS OF U. S. MILITARY PORTS IN SVN

The attached Table summarizes the cargo discharged at all SVN U. S. Military Ports from August, 1965, to December, 1966, and presents the MACV forecast of capability and the OASD(I&L) forecast of requirements through August, 1967.

In view of the number of factors which can affect actual performance (weather, peaks and valleys in ship arrivals, equipment, cargo outload workload, tactical emergencies), the computed "Reserve" capability cannot at this time be equated to Excess" capability.

Nevertheless, in at least 7 of the last 18 weeks in 1966, there was insufficient cargo at Danang to fully utilize available resources and a similar situation may develop in the future at other ports. The following Table summarizes workload data at Danang for the last four months of CY, 1966, the period during which the worst of the Northeast Monsoons occurs.

			DANANG 1/	
Week Ending	Week Disch Capability (M/T)	Week Actual Discharge (M/T)	Total cargo in port end of week (M/T)	Backlog in terms of Capability (Days)
9/3/66	59,500	47,906	15,833	1.9
9/10/66	50,400	25,303*	7,990	1.1
9/17/66	44,100	27,519*	27,569	4.4
9/24/66	44,100	30,117*	25,136	4.0
10/1/66	44,100	34,856	11,116	1.8
10/8/66	51,550	27,896	24,896	3.4
10/15/66	51,450	40,320	46,934	6.4
10/22/66	51,450	51,707	38,479	5.2
10/29/66	51,450	48,424	35,507	4.8
11/5/66	64,050	54,651	33,819	3.7
11/12/66	64,050	36,856	23,449	2.6
11/19/66	64,050	28,501	37,162	4.1
11/26/66	64,050	23,902*	39,632	4.3
12/3/66	64,050	25,397*	71,388	7.8
12/10/66	71,400	51,468	46,547	4.6
12/17/66	71,400	58,190	33,968	3.3
12/24/66	71,400	43,940*	6,607	.6
12/31/66	71,400	13,509*	22,036	2.2

1/ Data from SEA Stat. Summ. Tables 610, 613.

* Low total discharge identified by COMUSMACV as due to inadequate cargo available for discharge.

Note. COMUSMACV is currently forecasting Danang April, 1967 discharge capability as 88,200 M/T per week.

After a longer period of experience, COMUSMACV should be requested to identify resources excess to requirements, plus reasonable contingency or surge reserves, and either to reallocate them within SVN or nominate them for withdrawal. The resources that should be evaluated include lighterage, equipment and contractor/military personnel.

OASD(SA)/SEA Programs Division is in the process of cataloging the cargo handling resources of each major port complex in order to develop the capability to assess productivity rates and identify apparent shortages or excesses.

TOTAL CARGO DISCHARGE BY U.S. MILITARY
ALL SVN PORTS
(000 Short Tons)

Month	Discharged 1/	Capability 2/	Requirements 3/	Computed Reserve Capability
Actual				
1965				
Aug	164			
Sep	280			
Oct	248			
Nov	238			
Dec	226			
1966				
Jan	364			
Feb	358			
Mar	455			
Apr	418			
May	448			
Jun	526			
Jul	611 (25)*			
Aug	649 (37)*			
Sep	659 (48)*			
Oct	661 (53)*			
Nov	626 (54)*			
Dec	713 (36)*			
Forecast				
1967				
Jan		825 (85)*	790 (85)*	35
Feb		915 (85)*	800 (85)*	115
Mar		970 (85)*	800 (85)*	170
Apr		1005(100)*	835(100)*	170
May		1060(100)*	835(100)*	225
Jun		1105(100)*	840(100)*	265
Jul		1160(100)*	850(100)*	310
Aug		1205(100)*	855(100)*	350

1/ Data furnished by SASM.

2/ COMUSMACV Port Capability Forecasts.

3/ OASD(I&L) requirements forecast.

* All figures in parentheses are amount of AID cargo discharged by U.S. military included in total figures.

OASD/SA/SEA Programs Div.
January 10, 1967

OCEAN CARGO SHIPMENTS FROM CONUS TO SEA

The attached Table summarizes the ocean cargo lift from CONUS to SEA for the period August, 1965 to December, 1966, and presents the OASD(I&L) forecast of shipments through December, 1967.

OASD(I&L) and OASD(SA) believe that the forecasted tonnage for CY 1967 is probably a maximum since the experience base used for projection includes a substantial volume of non-recurring shipments for purposes such as construction, establishment of initial levels of supply, contractor mobilization and a number of special project shipments. As soon as the major non-recurring shipments can be quantified the forecast will be revised.

The present level of MSTS ships (including 142 NDRF ships in service and 19 NDRF ships in the process of activation) should be adequate to meet the requirements presently forecasted. The unbooked cargo for SEA is below the 100,000 M/T considered optimum for ship scheduling and efficient ship utilization and ship turnaround time should be reduced as the weather improves and port capability in SVN increases. Barring unforeseen contingencies, it is unlikely that the 20 additional NDRF ships included in the 67 Supplemental ($11 million) will have to be activated. The same view was presented by the MSTS representative at the December 21, 1966, Joint Transportation Board meeting. MSTS stated that although the MSTS long-range forecast showed a 6 - 10 cargo ship deficit each month for the period March through July, 1967, they recommended no additional breakouts since such a deficit would be manageable.

MSTS OCEAN CARGO SHIPMENTS FROM CONUS TO SEA 1/
(000 M/T)

CONFIDENTIAL

MONTH	ALL SOUTH VIETNAM PORTS					TOTAL ALL OTHER	GRAND TOTAL	UNBOOKED CARGO CONUS
2/	Unit Equip	Ammo	Aircraft	Other	Total	SEA DESTINATIONS	SEA	TO ALL SEA DESTINATIO
Actual								
1965								
Aug	197	23	83	145	448	116	564	
Sep	99	22	4	209	334	144	478	
Oct	176	121	21	274	590	255	845	
Nov	32	62	64	251	429	370	799	
Dec	24	10		207	241	275	516	
1966								
Jan	14	48	16	213	291	251	542	16
Feb	23	36	6	418	483	296	779	45
Mar	33	93	31	425	582	380	962	16
Apr	4	72	4	395	475	332	807	84
May	57	46	20	372	495	334	829	235
Jun	46	94	23	452	615	404	1019	213
Jul	79	80	40	382	581	339	920	234
Aug	126	92	14	547	779	598	1377	298
Sep	205	83	17	368	673	396	1069	162
Oct	129	83	16	452	680	427	1107	66
Nov	133	105	3	594	835	504	1339	63
Dec	89	119	7	469	684	317	1001 (a)	87
3/								
Forecast								
1967								
Jan					826	509	1335	
Feb					839	512	1351	
Mar					840	516	1356	
Apr					868	510	1378	
May					867	510	1377	
Jun					871	510	1381	
Jul					883	517	1400	
Aug					898	513	1411	
Sep					886	513	1399	
Oct					907	513	1420	
Nov					906	513	1419	
Dec					908	513	1421	

1/ SEA defined to include all ports west of Hawaii.
2/ Data from MTMTS adjusted to include Air Force Special Express ammo shipments data furnished by SASM. MTMTS data maintained on weekly basis. Monthly totals by aggregation of 4 weekly periods results in some distortion of actual monthly totals. Subsequent editions this Table will be adjusted to eliminate aggregation distortions.
3/ OASD(I&L) forecast (includes AID-CPA military handled cargo).
(a) December 1966, decline attributable in part to weekly aggregations and in part to temporary restrictions on cargo shipments to Cam Ranh, Nha Trang and Qui Nhon because of port congestion and Saigon because of strike. Total cargo withheld by CINCPAC (PAMPA) estimated as 70,000 M/T.

Jan 67

SHIP FLOW (TURNAROUND TIME) IN SVN

As the attached Table shows, the input of shipping into SVN from October to December, 1966, was the highest of any quarter to date. During the same period, however, despite record numbers of ship completions and departures, the average length of time spent in SVN and SEA Holding Ports increased. The significant increase occurred in November which had an average of 22.2 days. This was slightly higher than the 21.9 days experienced in November, 1965, but significantly lower than the all-time peak of 35.4 days experienced in January, 1966. The December, 1966, rate of 19 days shows a 3.2 day improvement over November, 1966.

A major cause of the increased turnaround time during November, 1966, was the inability of Cam Ranh Bay (and to a lesser extent Qui Nhon) to achieve its forecasted discharge rates. The following summarizes the performance of the two ports during the period 30 October to 3 December 1966.

Week Ending	CAM RANH BAY S/T Discharged/Day			QUI NHON S/T Discharged/Day		
	Capacity	Actual	(%)	Capacity	Actual	(%)
11/5/66	6,000	3,286	55	3,550	2,277	64
11/12/66	6,000	3,778	63	3,550	2,941	83
11/19/66	6,000	4,847	81	3,550	3,574	101
11/26/66	6,000	4,312	72	3,550	2,227	63
12/3/66	4,220*	3,964	94	3,240*	2,670	82

*Revised COMUSMACV capability forecast

The following summarizes the substantial reductions which have occurred in COMUSMACV's forecasts of the capability for discharge at Cam Ranh Bay.

	CAM RANH BAY		
Performance Month	S/T per day Original Forecast[a/]	S/T per day Latest Revised Forecast	% Reduction
December, 1966	6,000	4,220	30
January, 1967	7,600	4,100	46
February, 1967	7,600	5,200	32
March, 1967	7,570	5,200	31

a/ Made 4 months prior to forecasted month.

A combination of factors including weather, shortages of Materials Handling Equipment (MHE) and diversion of personnel to Vung Ro have been identified by COMUSMACV as factors responsible for Cam Ranh's current problems. However, indications are that depot receiving capability may be a principal problem. The Joint Transportation Board has tasked SASM to determine what actions are necessary to improve Cam Ranh Bay's cargo handling performance. In addition, the Department of the Army has been requested by COMUSMACV and CINCPAC to expedite production and shipment of MHE.

SHIP FLOW (TURNAROUND TIME) IN SVN (Cont'd)

Since the COMUSMACV capability forecasts control the amount of cargo which is released from CONUS and the off-shore bases into SVN, if the reductions in capability could have been perceived and communicated to shipping control agencies earlier for the months of November and December, greater shipping efficiency would have been achieved. At an average cost of $4,000 per day for each ship in SVN, the increase in the average number of days in SVN between October and November, 1966, resulted in increased costs of approximately $2.4 million and adversely affected the timely return of shipping to CONUS for reloading.

MSTS DEEP DRAFT CARGO SHIP FLOW THROUGH SVN 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar	Apr
No. of ships arriving in SVN		78	87	86	77	60	87	63	92	106
No. of ships departing in SVN	36	57	72	72	70	62	107	76	92	94
No. of ships in SVN at E.O.M.	16	37	52	66	73	71	51	38	38	50
No. of ships in SEA Holding Ports at E.O.M.			2		21	21	2			2

1/ Data derived from MSTS RVN Sealift Digest. Excludes Air Force Special Express Ammo s

ANALYSIS OF TIME SPENT BY MSTS CARGO SHIPS IN SVN AND HOLDING AREAS 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar	Apr
No. of ships	36	57	72	72	70	62	107	76	92	94
Avg No. of days in SVN 2/	8.6	10.6	12.8	18.6	21.2	29.1	30.5	20	14.8	11.7
Avg No. of days in SEA Holding Ports	___	___	___	.2	.7	2.2	4.9	7.3	1.3	___
Total Avg No. of days	8.6	10.6	12.8	18.8	21.9	31.3	35.4	27.3	16.1	11.7

1/ Data from MSTS RVN Sealift Digest. Based on ships departing during month. Excludes storage ships.

2/ Includes unloading/loading time, time holding in SVN, sailing time between SVN ports.

1966 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
87	63	92	106	91	105	98	113	98	148	99	139
107	76	92	94	88	96	104	106	109	115	119	132
51	38	38	50	53	62	56	63	52	85	65	72
2			2	12	12	12	3	11	3	9	8

Force Special Express Ammo ships and floating storage ships.

SVN AND HOLDING AREAS 1/

1966 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
107	76	92	94	88	96	104	106	109	115	119	132
30.5	20	14.8	11.7	14.7	15.9	16.8	14.7	15.6	15.1	20.2	17.0
4.9	7.3	1.3	___	.8	2.3	2.8	2.9	3.0	2.1	2.0	2.0
35.4	27.3	16.1	11.7	15.5	18.2	19.6	17.6	18.6	17.2	22.2	19.0

ting during month. Excludes Air Force Special Express Ammo ships and floating

iling time between SVN ports.

OCEAN CARGO SHIPMENTS FROM CONUS TO SEA

The attached Table summarizes the ocean cargo lift from CONUS to SEA for the period August, 1965, to January, 1967, and presents the revised OASD(I&L) forecast of shipments through December, 1967.

The revised forecast represents approximately a 200,000 M/T monthly reduction from previous forecasts and is based on evidence that the heavy build-up phase, particularly in the off-shore bases, has passed and that the great proportion of material shipped in the future will be resupply for replacement of consumption. Another factor which will result in reductions in shipments to the off-shore bases is the Army plan to reduce the use of Okinawa for logistic support of SVN. In the first half of CY 1965 Army shipments to Okinawa totalled 192,000 M/T; in the last half of CY 1966 these shipments totalled 610,000 M/T. Direct shipment from CONUS to SVN of much of this tonnage, eliminating transshipment through Okinawa, should have negligible effect on the total tonnage handled by the SVN ports.

The increase in unbooked cargo in January to 133,000 M/T was due primarily to actions taken to temporarily reduce shipments from CONUS to Cam Ranh Bay and Qui Nhon because of port congestion. These restrictions were relaxed in early February, resulting in a surge of shipments.

Barring unforeseen contingencies, no further MPRF ship activations should be necessary.

Cargo flow forecasting is subject to a large number of variables, not the least important of which are the essentially decentralized requisitioning systems and the inability to predict requirements under combat conditions. Nevertheless, reasonable accuracy in the forecasting of gross requirements can be achieved by the use of factors applied against in-country force levels and planned deployments. CINCPAC has developed a computer model to do this and it is now operational. Based on the forces to be supported by each port, the model predicts total port throughput requirements separately for 8 SVN ports and each of the off-shore bases. The tonnages are forecasted for 8 major categories of requirements; i.e., supply build-up, resupply, construction material, special projects, MAP, AID, unit equipment and air munitions. The model applies different factors as appropriate to forces of each Service and has the capability to vary the Services' factors by geographic location. The CINCPAC model is a valuable addition to the tools available to logistic planners and strongly merits continued resources support to improve its capabilities. Factors must be further refined to reflect the unique consumption rates being experienced in the SVN environment and transportation management data reporting systems throughout DOD require modifications to facilitate analysis of variances between forecast and actual.

MSTS OCEAN CARGO SHIPMENTS FROM CONUS TO SEA a/
(000 M/T)

MONTH	ALL SOUTH VIETNAM PORTS						ALL OTHER SEA DEST.	
	Unit Equip	Ammo	Aircraft	Other	Total	Jan '67 Forecast	Total	Jan Fore
1965								
Aug	211	23	83	171	488		128	
Sep	130	44	4	229	407		163	
Oct	129	108	24	248	509		243	
Nov	47	50	47	209	353		316	
Dec	28	13	13	230	284		308	
1966								
Jan	19	51	16	260	346		284	
Feb	21	35	10	402	468		262	
Mar	28	86	25	376	515		339	
Apr	7	76	6	424	513		352	
May	57	46	20	398	521		363	
June	43	92	21	404	560		347	
July	87	84	42	419	632		393	
Aug	115	88	14	476	693		520	
Sep	210	83	17	412	722		439	
Oct	139	90	18	518	765		485	
Nov	120	94	2	491	707		416	
Dec	94	125	8	514	741		362	
1967								
Jan	67	93	29	570	759	745	382	37
Feb						753		37
Mar						763		38
Apr						770		37
May						784		37
June						796		37
July						810		38
Aug						825		
Sep						835		
Oct						853		
Nov						850		
Dec						870		

a/ SEA defined to include all ports west of Hawaii. Actual data from MTMTS adjusted to include Air SASM. Forecast data from OASD(I&L).

MOTS OCEAN CARGO SHIPMENTS FROM CONUS TO [illegible]

(000 M/T)

MONTH	ALL SOUTH VIETNAM PORTS				
	Unit Equip	Ammo	Aircraft	Other	Total
1965					
Aug	211	23	83	171	488
Sep	130	44	4	229	407
Oct	129	108	24	248	509
Nov	47	50	47	209	353
Dec	28	13	13	230	284
1966					
Jan	19	51	16	260	346
Feb	21	35	10	402	468
Mar	28	86	25	376	515
Apr	7	76	6	424	513
May	57	46	20	398	521
Jure	43	92	21	404	560
July	87	84	42	419	632
Aug	115	88	14	476	693
Sep	210	83	17	412	722
Oct	139	90	18	518	765
Nov	120	94	2	491	707
Dec	94	125	8	514	741
1967					
Jan	67	93	29	570	759
Feb					
Mar					
Apr					
May					
June					
July					
Aug					
Sep					
Oct					
Nov					
Dec					

a/ SEA defined to include all ports west of Hawaii. Actual dat[illegible] SASM. Forecast data from OASD(I&L).

ALL OTHER SEA DESTINATIONS		GRAND TOTAL SEA		UNBOOKED CARGO CONUS TO ALL SEA DESTINATIONS
	Jan '67		Jan '67	
Total	Forecast	Actual	Forecast	
128		616		
163		570		
243		752		
316		669		
308		592		
284		630		16
262		730		45
339		854		16
352		865		84
363		884		235
347		907		213
393		1025		234
520		1213		298
439		1161		162
!		1250		66
		1123		63
		1103		87
382	374	1141	1119	133
	376		1129	
	380		1143	
	375		1145	
	375		1159	
	375		1171	
	381		1191	
	377		1202	
	377		1212	
	376		1229	
	375		1226	
	375		1246	

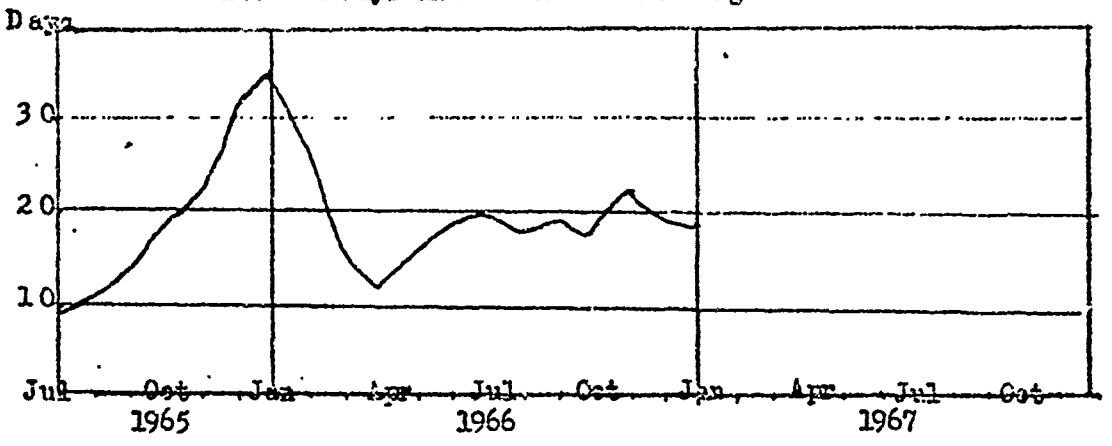
adjusted to include Air Force Special Express ammo shipments data furnished by

OASD/SA/SEA Programs Div.
February 13, 1967

Feb 67

SHIP FLOW (TURNAROUND TIME) IN SVN

Average Days in SVN and SEA Holding Ports



As the attached Table shows, January was the second consecutive month in which the average number of days spent by ships in SVN and SEA holding ports decreased. The average of 18.5 days compares favorably with the most recent peak of 22.2 days which occurred in November, 1966. The 138 ships completed during January was the highest monthly total achieved to date in SVN.

Continued improvement can be expected from better weather and a policy change by COMUSMACV. He has directed that ships with minimum levels of cargo remaining on board (1,000 M/T of ammunition or 1,500 M/T of general cargo) will be given the highest discharge priority. This should eliminate the uneconomical practice of holding ships in SVN ports with remnant or other low priority cargo remaining on board.

The progress made in cargo operations in SVN can be appreciated by comparing performance in January, 1967, with January, 1966.

	January 1966	January 1967
Total cargo discharged (000 M/T)	749	1,170
Total cargo backloaded (000 M/T)	121	291
Total cargo handled (000 M/T)	870	1,461
Total average number of days of ships in SVN and SEA Holding Ports*	35.4	18.5

*based on ships departing during month and excluding Air Force Special Express Ammo ships and floating storage ships.

MSTS DEEP DRAFT CARGO SHIP FLOW THROUGH SVN 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar
No. of ships arriving in SVN		78	87	86	77	60	87	63	92
No. of ships departing in SVN	36	57	72	72	70	62	107	76	92
No. of ships in SVN at E.O.M.	16	37	52	66	73	71	51	38	38
No. of ships in SEA Holding Ports at E.O.M.			2		21	21	2		

1/ Data derived from MSTS RVN Sealift Digest. Excludes Air Force Special Express Ai

ANALYSIS OF TIME SPENT BY MSTS CARGO SHIPS IN SVN AND HOLDING AREAS 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar	Ap
No. of ships	36	57	72	72	70	62	107	76	92	9
Avg No. of days in SVN 2/	8.6	10.6	12.8	18.6	21.2	29.1	30.5	20	14.8	11.
Avg No. of days in SEA Holding Ports	___	___	___	.2	.7	2.2	4.9	7.3	1.3	___
Total Avg No. of days	8.6	10.6	12.8	18.8	21.9	31.3	35.4	27.3	16.1	11.7

1/ Data from MSTS RVN Sealift Digest. Based on ships departing during month. Exclud storage ships.

2/ Includes unloading/loading time, time holding in SVN, sailing time between SVN por

[redacted] SVN 1/

CONFIDENTIAL

[redacted]	Nov	Dec	1966 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
[redacted]	77	60	87	6[illegible]	92	106	91	105	98	113	98	148
[redacted]	70	62	107	76	92	94	88	96	104	106	109	115
[redacted]	73	71	51	38	38	50	53	62	56	63	52	85
	21	21	2			2	12	12	12	3	11	3

[redacted] Excludes Air Force Special Express Ammo ships and floating storage ships.

[redacted] CARGO SHIPS IN SVN AND HOLDING AREAS 1/

[redacted]	Nov	Dec	1966 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
[redacted]	70	62	107	76	92	94	88	96	104	106	109	115
[redacted]	[redacted].2	29.1	30.5	20	14.8	11.7	14.7	15.9	16.8	14.7	15.6	15.1
[redacted]	[redacted].7	2.2	4.9	7.3	1.3	[redacted]	.8	2.3	2.8	2.9	3.0	2.1
[redacted]	[redacted].9	31.3	35.4	27.3	16.1	11.7	15.5	18.2	19.6	17.6	18.6	17.2

[redacted] ships departing during month. Excludes Air Force Special Express Ammo ships and [redacted]

[redacted] in SVN. sailing time between SVN ports.

CONFIDENTIAL

OASD/SA/SEA Program[illegible]
January 13, 1[illegible]

Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1967 Jan
63	92	106	91	105	98	113	98	148	99	139	123
76	92	94	88	96	104	106	109	115	119	132	138
38	38	50	53	62	56	63	52	85	65	72	57
		2	12	12	12	3	11	3	9	8	7

ecial Express Ammo ships and floating storage ships.

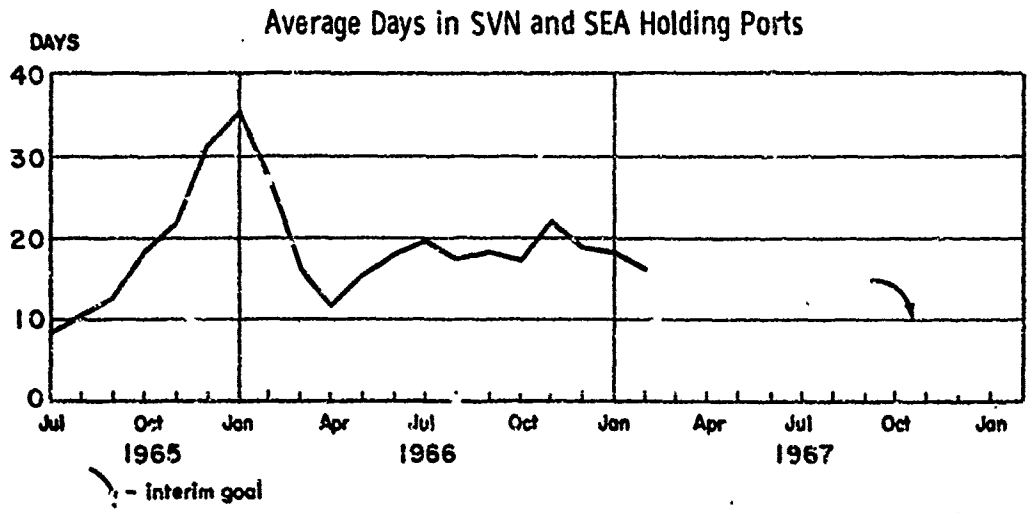
OLDING AREAS 1/

Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1967 Jan
76	92	94	88	96	104	106	109	115	119	132	138
0	14.8	11.7	14.7	15.9	16.8	14.7	15.6	15.1	20.2	17.0	16.6
7.3	1.3	—	.8	2.3	2.8	2.9	3.0	2.1	2.0	2.0	1.9
7.3	16.1	11.7	15.5	18.2	19.6	17.6	18.6	17.2	22.2	19.0	18.5

ng month. Excludes Air Force Special Express Ammo ships and floating

between SVN ports.

SHIP FLOW (TURNAROUND TIME) IN SVN



As the attached Table shows, February was the third consecutive month in which the average number of days spent by ships in SVN and SEA holding ports decreased. The average of 16.1 days was the lowest since May 1966 (15.5 days) and was 11.2 days lower than February 1966. The significance of the reduction over a year ago is that if it had not been achieved, ship demurrage charges in February 1967 would have been approximately $5.7 million higher (average of $4,000 per ship day of delay).

The interim goal for average days should be 10 days since current MSTS shipping contracts provide for 10 days agreed "lay time" (discharge/delay time) without additional charges. Any subsequent improvements could result in reduction of the agreed lay time and commensurate reductions in shipping costs to the Government.

The number of ships in SVN ports at the end of the month was 54; this is only 3 in excess of the current MACV prescribed optimum of 51. The optimum level is computed on the basis of port capability and the ship flow necessary to maintain maximum cargo discharge rates. However, under-utilization of some ports and over-commitment of others can be expected on the basis of cargo generation patterns and port operation experience to date.

MSTS DEEP DRAFT CARGO SHIP FLOW THROUGH SVN 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar	Apr
No. of ships arriving in SVN		78	87	86	77	60	87	63	92	106
No. of ships departing in SVN	36	57	72	72	70	62	107	76	92	94
No. of ships in SVN at E.O.M.	16	37	52	66	73	71	51	38	38	50
No. of ships in SEA Holding Ports at E.O.M.			2		21	21	2			2

1/ Data derived from MSTS RVN Sealift Digest. Excludes Air Force Special Express Ammo s

ANALYSIS OF TIME SPENT BY MSTS CARGO SHIPS IN SVN AND HOLDING AREAS 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar	Apr
No. of ships	36	57	72	72	70	62	107	76	92	94
Avg No. of days in SVN 2/	8.6	10.6	12.8	18.6	21.2	29.1	30.5	20	14.8	11.7
Avg No. of days in SEA Holding Ports	___	___	___	.2	.7	2.2	4.9	7.3	1.3	___
Total Avg No. of days	8.6	10.6	12.8	18.8	21.9	31.3	35.4	27.3	16.1	11.7

1/ Data from MSTS RVN Sealift Digest. Based on ships departing during month. Excludes storage ships.

2/ Includes unloading/loading time, time holding in SVN, sailing time between SVN ports

66	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1967 Jan	Feb
7	63	92	106	91	105	98	113	98	148	99	139	123	125
7	76	92	94	88	96	104	106	109	115	119	132	138	128
2	38	38	50	53	62	56	63	52	85	65	72	57	54
2			2	12	12	12	3	11	3	9	8	7	6

ce Special Express Ammo ships and floating storage ships.

AND HOLDING AREAS 1/

66 n	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1967 Jan	Feb
07	76	92	94	88	96	104	106	109	115	119	132	138	128
5	20	14.8	11.7	14.7	15.9	16.8	14.7	15.6	15.1	20.2	17.0	16.6	14.4
9	7.3	1.3	___	.8	2.3	2.8	2.9	3.0	2.1	2.0	2.0	1.9	1.7
4	27.3	16.1	11.7	15.5	18.2	19.6	17.6	18.6	17.2	22.2	19.0	18.5	16.1

during month. Excludes Air Force Special Express Ammo ships and floating

ng time between SVN ports.

SAIGON PORT

Background

The rate of discharge and movement of cargo through the port of Saigon is critical to ensuring that the supply of civilian goods is adequate to control inflation, since approximately 90% of all non-military cargo enters SVN through Saigon. The attached Chart shows the tonnage handled by the port, on a monthly basis, since September 1965.

The capability of the port to handle cargo has increased from approximately 287,000 short tons of cargo a month to over 450,000 tons since July 1965. Of the current total approximately 45% is U. S. military cargo. As the Chart shows, the key problem is discharge of the commercial/AID cargo, not the military cargo.

December Crisis

The commercial/AID cargo sector of the port reached a crisis point in December 1966, when the discharge fell to a record low of 102,000 S/T and the backlog soared to a record high of 311,000 S/T. This was due to several factors:

(1) There was a strike against the port by Vietnamese longshoremen over the decision to operate Newport with U. S. military instead of Vietnamese stevedores.

(2) The limited in-transit storage facilities were saturated by goods since importers were not taking delivery. This situation was a manifestation of market congestion, rather than port congestion, resulting from the heavy imports during the preceding months. Import licensing in FY 1966, peaking late in the year, totalled $494.7 million as compared to $239.5 million in FY 1965.

(3) The then incumbent GVN Port Director (who was replaced in January) experimented, contrary to U.S. advice, with discharging barges at deep draft berths with the result that not only did the deep draft tonnage discharge decline sharply but also the staging areas became further congested with cargo which the importers either would not or could not pick up.

Remedies

The drastic drop-off in discharge performance in December made it apparent that the entire port was in danger of becoming paralyzed. To correct the situation a number of actions were taken -- some of which previously had been recommended by MACV and USAID but were not agreed to by the GVN. Actions taken included:

(1) Improved responsiveness by the GVN Port Authority to U.S. advice.

(2) Active U.S. military participation in barge discharge operations at one of the principal sites, Block 22 on the Kinh Te Canal (Map attached). Specific barges are being called forward by the GVN Port Authority for discharge and consignees are being notified in advance of cargo arrivals by USAID Importer Contact Teams. USAID continues its actions to ensure that the consignees accept their cargo and remove it from the port area. As part of the operation, the U.S. military provides personnel to document all cargo discharged from barges and prepares inventories of all cargo in transit storage at Block 22.

(3) Bulk commodities are being pre-cleared through GVN Customs based on barge manifests which permits discharge at improvised sites along the extensive Saigon canal system.

(4) Pressures are being exerted to discharge general cargo at alongside berths and restrict the use of barges as much as possible to bulk commodities. This should help to minimize mixed consignee loads in the barges which delays and complicates port clearance and acceptance by importers.

(5) MACV is discharging additional commodities designated by USAID, principally fertilizer, to relieve the workload of the commercial port.

(6) Construction of additional barge facilities and warehousing is being expedited, principally along the Kinh Te Canal and at Thu Duc. The Thu Duc facility is now partially in use and is expected to be fully operational in April 1967. It will have double the capability of existing Saigon in-transit storage facilities.

(7) The GVN has implemented a new port tariff which acts as an incentive for importers to take delivery of their cargo. The previous unrealistically low charges encouraged leaving cargo in barges and scarce in-transit storage as cheap warehousing. (The still missing action is confiscation of goods left in the port over specified maximum time.)

(8) MACV is inventorying the Saigon barge fleet and monitoring the barge turnaround rate (Chart attached). The inventory has not yet been completed because of the problem of locating and identifying the many barges constantly moving in the port and the canals

(9) USAID is constructing warehouses at Nha Trang and Danang in order to permit cargoes to be discharged and distributed directly from up-country ports to avoid imposing the burden on the already over-committed Saigon port.

Recent Performance

The results achieved to date by the above-described actions can best be measured by comparison of data for the latest three months (December, 1966 - February, 1967) with the previous three month period (September - November, 1966).

SAIGON PORT - COMMERCIAL/AID CARGO DISCHARGED
(Short Tons)

	Sep - Nov 1966				Dec 1966 - Feb 1967		
	Disch	Daily Avg	Backlog EOM		Disch	Daily Avg	Backlog EOM
Sep	191,000	6,367	162,000	De	102,000	3,290	311,000
Oct	215,000	6,935	222,000	Jan	267,000	8,613	264,000
Nov	244,000	8,133	209,000	Feb	199,000	8,652*	171,000
Mo Avg	216,700	7,145		Mo Avg	189,300	6,851	
				Mo Avg Excl Dec	233,000	8,633	

*Feb. computed on 23-day month because of TET (8-12 Feb).

The February 1967, performance should be interpreted in the light of the occurrence of TET (8-12 Feb) during which the Vietnamese did not work the port. If the port had worked during TET and February had been a full 30 day month (assuming the same daily average discharge rate of 8,652 tons had been maintained), the total tonnage discharged would have been 260,000 S/T and the backlog would have been down to about 110,000 tons. While the actual February backlog of 171,000 tons was the lowest since September 1966, the following Table demonstrates that a major cause was the lowest input of new cargo since before May of 1966:

Saigon Port Commercial/Aid Cargo Input - Output Analysis
(000 Short Tons)

	Month	Beginning Backlog	Arrivals during month 1/	Total Avail. Cargo	Discharged	Ending Backlog
1966	May *	101	164	265	179	86
	June	86	235	321	198	123
	Jul	123	293	416	235	181
	Aug	181	264	445	249	196
	Sep	196	157	353	191	162
	Oct	162	275	437	215	222
	Nov	222	231	453	244	209
	Dec	209	204	413	102	311
1967	Jan	311	220	531	267	264
	Feb	264	106	370	199	171

1/ Arrivals a computed rather than reported figure.
* No backlog data available prior April 1966.

It should also be noted, however, that the backlog of loaded barges at the end of February was the highest since records have been maintained. Unless the barges can be turned around faster, ship discharge will bog down again.

Future Prospects

On balance, the precipitous decline in discharge that occurred in December has been reversed and pre-December productivity restored. The January to February decline in backlog was due almost entirely to the abnormally low input of new cargo. Lacking a mechanism to control the flow of commercial/AID cargo into SVN, no meaningful forecasts can be made of the future levels of monthly cargo arrivals and resulting backlogs. However, there has been an approximately $90 million decline in the import licenses issued during the 1st half of FY 1967; the effects of this should be felt over the next 6 months. While the port is obviously still congested, particularly the barges with over-age cargo still on-board, even undelivered cargoes serve a useful purpose as they exert a downward pressure on prices. Their presence in the port discourages hoarding and market speculation.

Over the longer run the outlook for the port is favorable due to the accelerated construction programs, the beginning of improved GVN management and cooperation, the stronger "operational" roles of MACV and USAID, and the increased utilization of up-country ports.

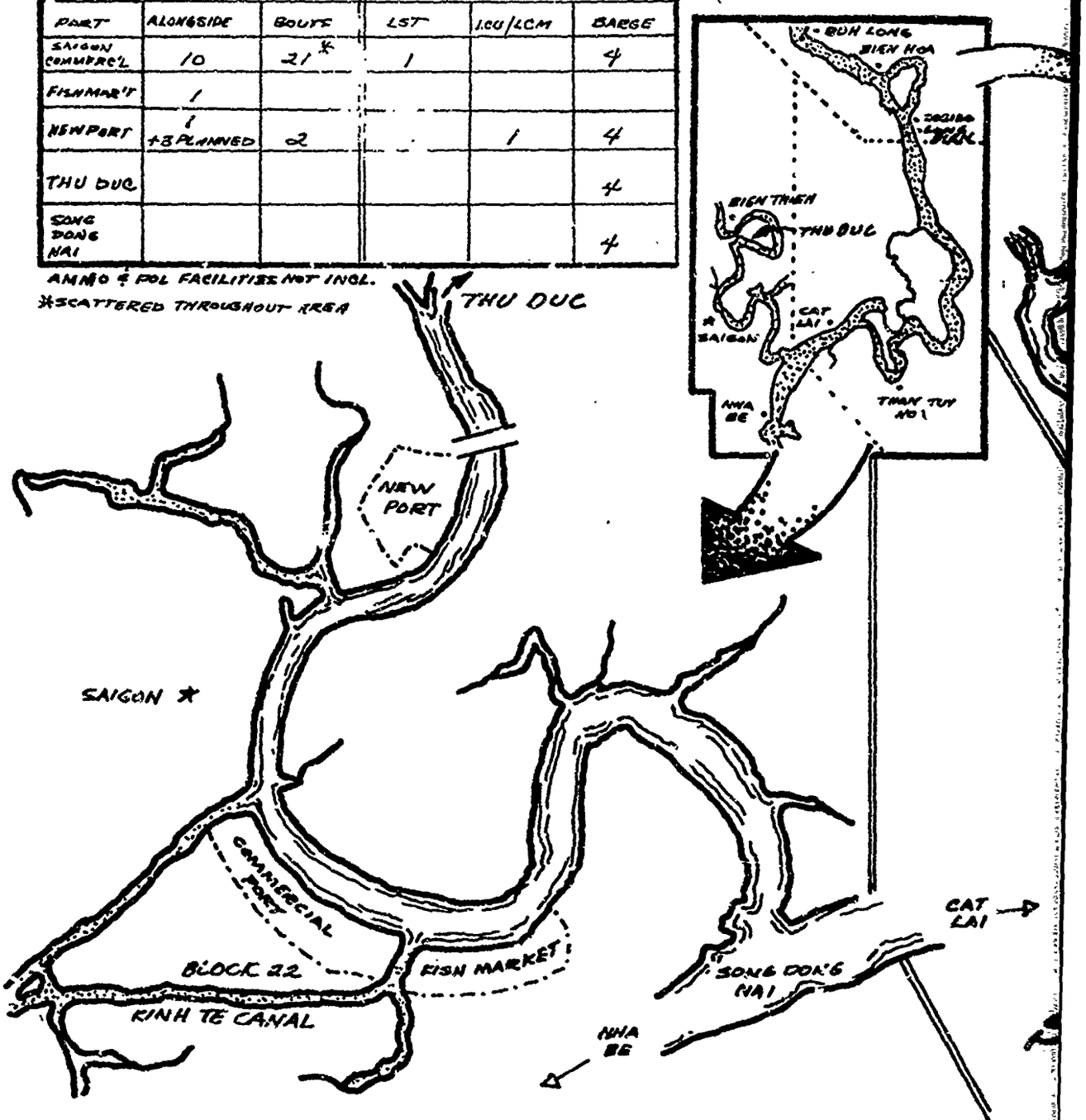
In view of the Saigon port problems, of incidental interest is a March 6, 1967, message from COMUSMACTHAI describing port of Bangkok congestion which now causes ships to wait approximately 12 days for a berth (an average of 26 ships waiting at any one time). COMUSMACTHAI states Bangkok's problems in similar terms as the Saigon experience -- inadequate port clearance capability which affects berthtime, barge discharge and over-all port throughput. While MACTHAI believes U.S. military shipping delays will be eliminated as Sattahip becomes operational, he expects commercial shipping congestion will continue to be a problem for an indeterminate period.

DRY CARGO PORT FACILITIES – MILITARY & COMMERCIAL

	DEEP DRAFT		SHALLOW DRAFT		
PORT	ALONGSIDE	BOUYS	LST	LCU/LCM	BARGE
SAIGON COMMERC'L	10	21*	1		4
FISH MAR'T	1				
NEW PORT	1 +3 PLANNED	2		1	4
THU DUC					4
SONG DONG NAI					4

AMMO & POL FACILITIES NOT INCL.

*SCATTERED THROUGHOUT AREA



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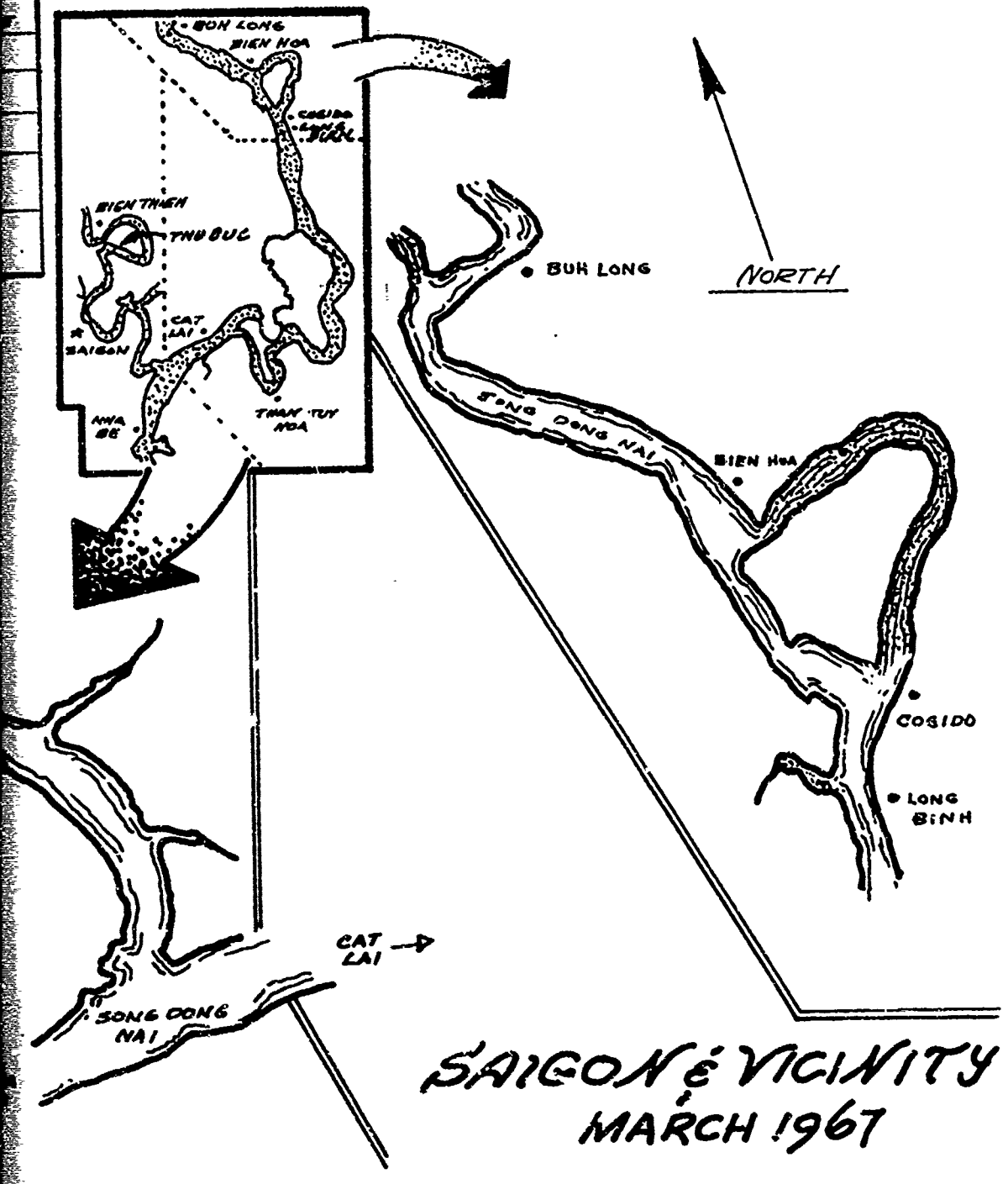
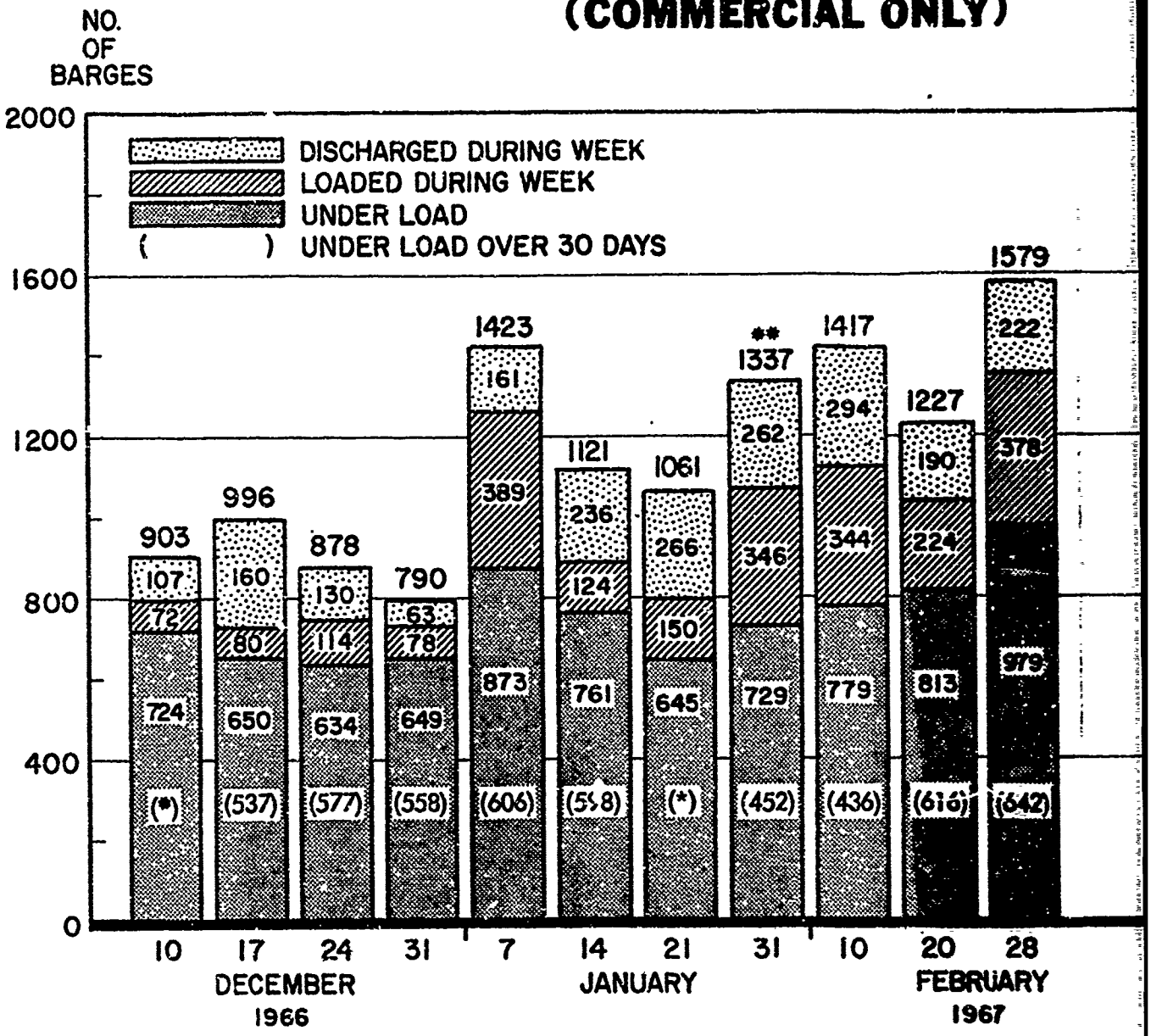


SAIGON & VICINITY
MARCH 1967

SAIGON BARGE REPORT
(COMMERCIAL ONLY)

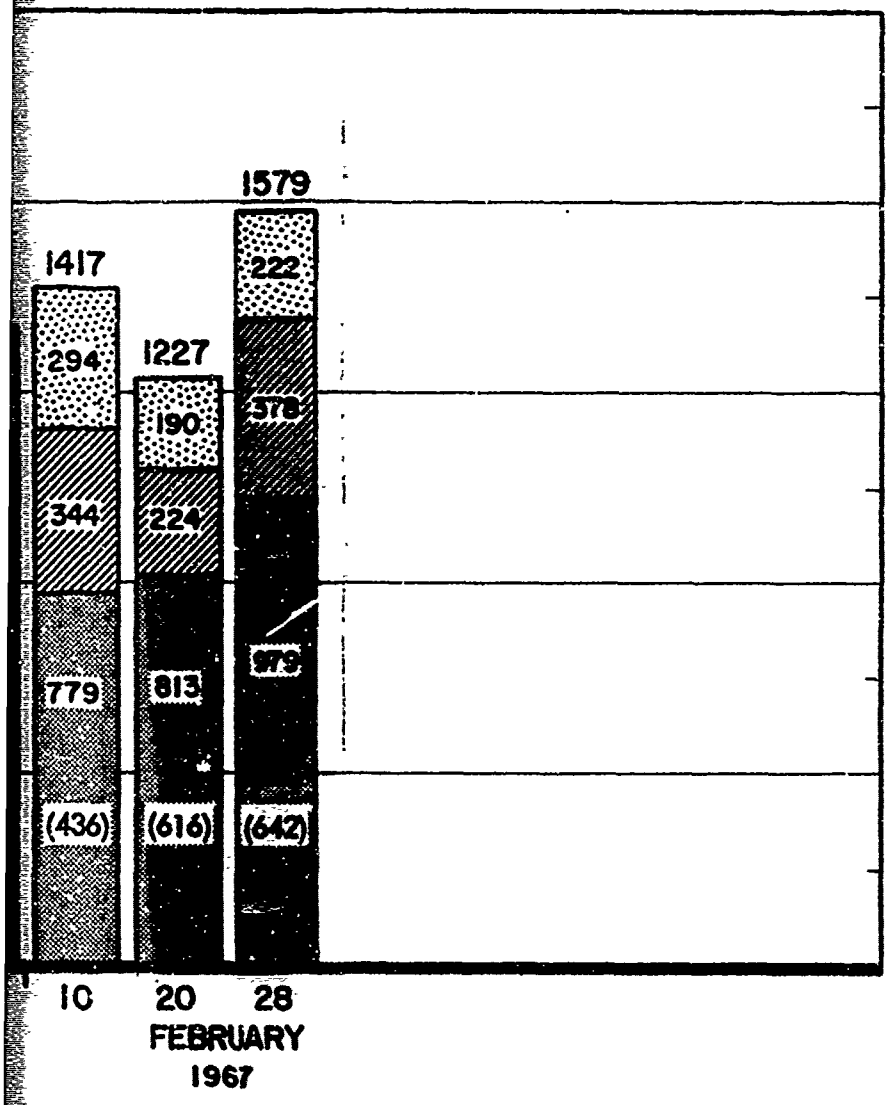


(*) DATA NOT AVAILABLE

(**) REPORTING PERIOD CHANGED TO 10 DAY PERIODS

2

GE REPORT
IAL ONLY)



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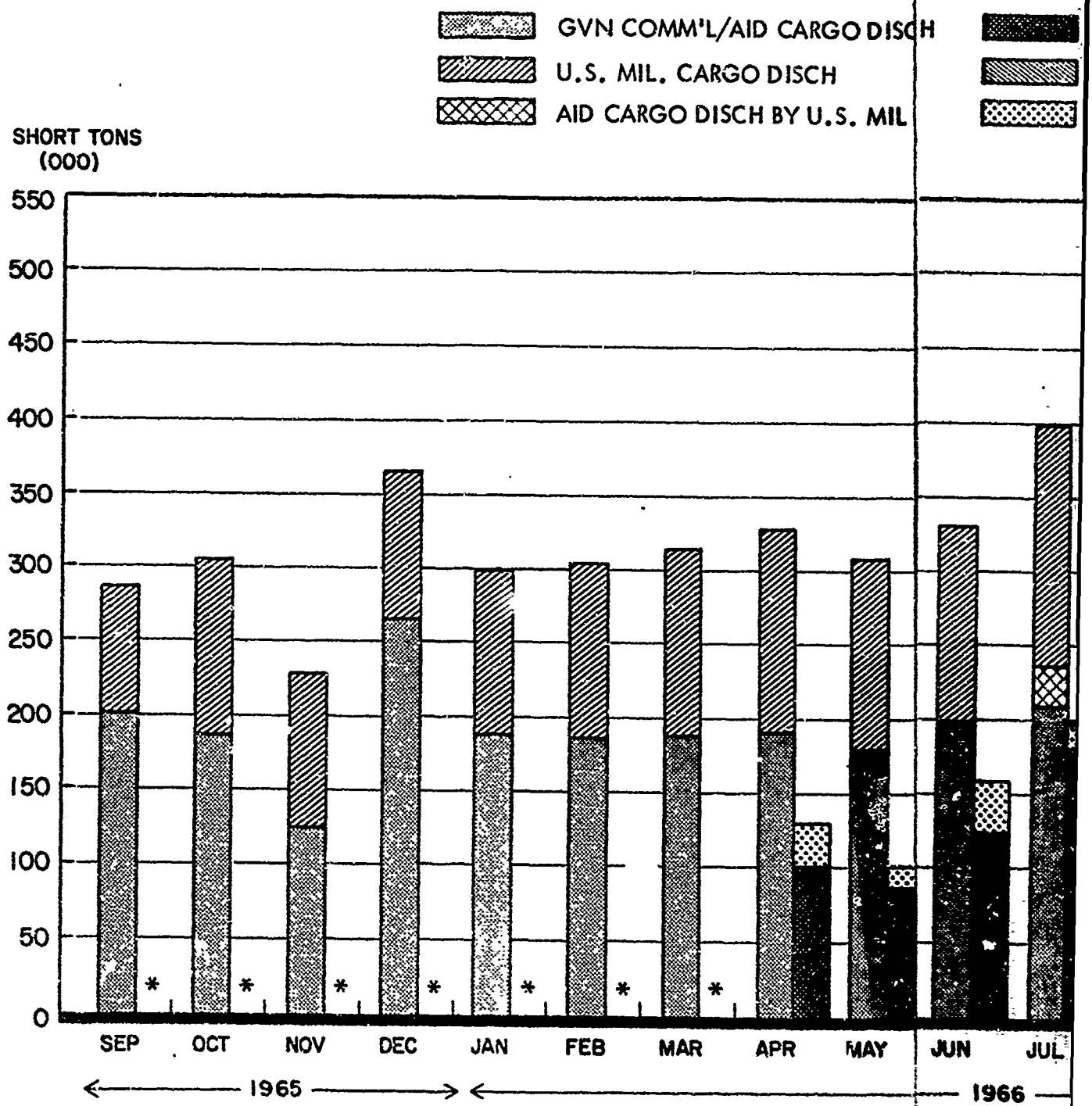
SAIGON PORT CARGO DISCHARGED AND BACKLOG



* GVN BACKLOG FIGURES NOT AVAILABLE

BACKLOG

2

ARGO DISCH

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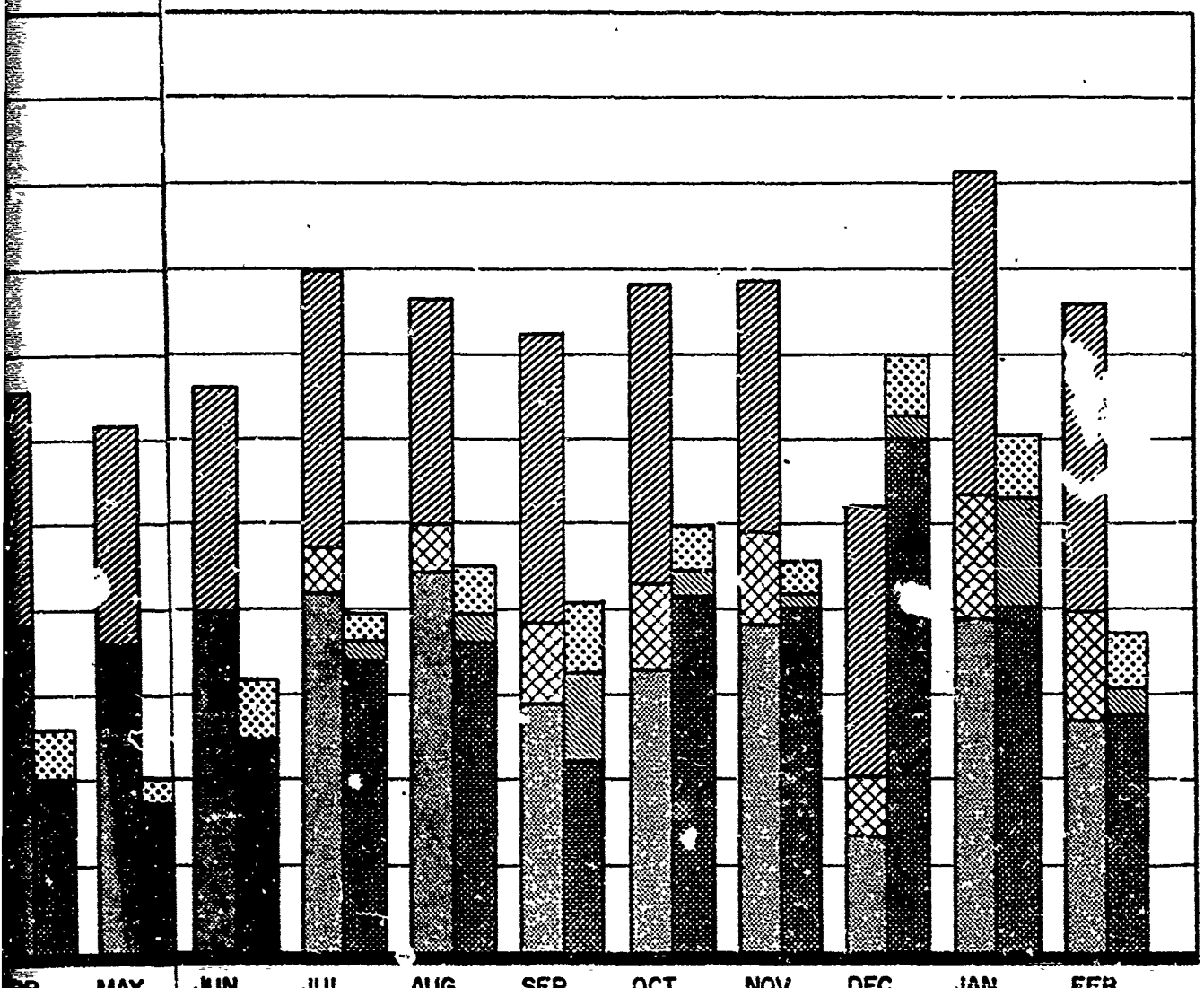
GVN COMM'L/AID CARGO BACKLOG

CPA/CIP AID CARGO U.S. MIL BACKLOG

U.S. MIL. CARGO BACKLOG



PR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB

1966 → 1967

ILABLE

Apr 67

OCEAN CARGO SHIPMENTS FROM CONUS TO SEA

The Table on the following page summarizes the ocean cargo lift from CONUS to SEA for the period August 1965 to March 1967, and presents the OASD (I&L) forecast of shipments through December 1967.

Total SEA shipments reached a new high of 1,289,000 M/T in March, up 129,000 M/T over February, and 13% greater than forecast. Most of the increase was in cargo to other than SVN ports. Non-SVN shipments totaled 493,000 M/T, up 109,000 M/T from February and 30% greater than the forecast. A closer look at non-SVN shipments in the light of shipments during the previous 14 months, shows that the cargo was distributed as follows:

MSTS CONUS to Off-Shore SEA Destinations a/

(000 M/T) Destination	Jan-Jun 1966 Monthly Ave.	Jul-Dec 1966 Monthly Ave.	Jan-Feb 1967 Monthly Ave.	March 1967 b/
Thailand	38.4	58.8	58.6	71.0
Philippines	114.0	117.2	56.9	59.2
Guam	23.7	35.1	50.8	49.3
Okinawa	90.0	98.8	86.9	138.0
Japan	61.3	76.7	67.9	93.7
Korea	63.0	63.8	66.4	69.0
Taiwan	12.0	13.3	14.7	9.8
Total	402.6	463.6	402.2	493.0

a/ Source: MSTS Report RVN Sealift Digest, February 1967
b/ Source: OASD (I&L), interpolated from MTMTS - TI-4 Report for March 1967.

The greatest increases in March were into Thailand and Okinawa with about 50 per cent each. The increase into Thailand was probably due in part to air ordnance for the B-52s that deployed to U-Tapao in early April. There are no apparent reasons for the sharp and surprising increase in Okinawa tonnages. Further investigation into Okinawa shipments will be made in light of the decision by the Secretary of Defense in December to restrict the role of Okinawa in the Army's PACOM logistic system. In view of the reduced role to be played by the Okinawa depots, reduction in shipments should be occurring.

Shipments to Vietnam also hit a new high of nearly 800,000 tons. The cargo mix is shifting, with unit equipment tonnage well below last summer's levels when major combat units were arriving. Ammunition tonnage was down sharply from recent months as shipments on the "push" system are eliminated, and may reflect some diversion of air ordnance to Thailand to support the B-52s. The largest segment of the SVN tonnages is in "other" cargo. This category will continue to grow as the in-country troop population increases and the resupply and replacement demands rise.

Unbooked cargo remained in March at extremely low levels (29,000 tons), well below the optimum 100,000 ton level.

MSTS OCEAN CARGO SHIPMENTS FROM CONUS TO SEA [a/]

(000 M/T)

MONTH	ALL SOUTH VIETNAM PORTS						ALL OTHER SEA DESTINATIONS	
	Unit Equip	Ammo	Aircraft	Other	Total	Jan '67 Forecast	Total	Jan '67 Forecast
1965								
Aug	211	23	83	171	488		128	
Sep	130	44	4	229	407		163	
Oct	1[illegible]	108	24	248	509		243	
Nov	[illegible]	50	47	209	353		316	
Dec	2[illegible]	13	13	230	284		308	
1966								
Jan	19	51	16	260	346		284	
Feb	21	35	10	402	468		262	
Mar	28	86	25	376	515		339	
Apr	7	76	6	424	513		352	
May	57	46	20	398	521		363	
June	43	92	21	404	560		347	
July	87	84	42	419	632		393	
Aug	115	88	14	476	693		520	
Sep	210	83	17	412	722		439	
Oct	139	90	18	518	765		485	
Nov	120	94	2	491	707		416	
Dec	94	125	8	514	741		362	
1967								
Jan	67	93	29	570	759	745	382	374
Feb	78	93	10	595	776	753	384	376
Mar	91	68	25	613	797	763	493	380
Apr						770		375
May						[illegible]		375
June						79[illegible]		375
July						810		381
Aug						825		377
Sep						835		377
Oct						853		376
Nov						350		376
Dec						870		376

a/ SEA defined to include all ports west of Hawaii. Actual data from MTMTS adjusted to include Air For[illegible] SASM. Forecast data from OASD(I&L).

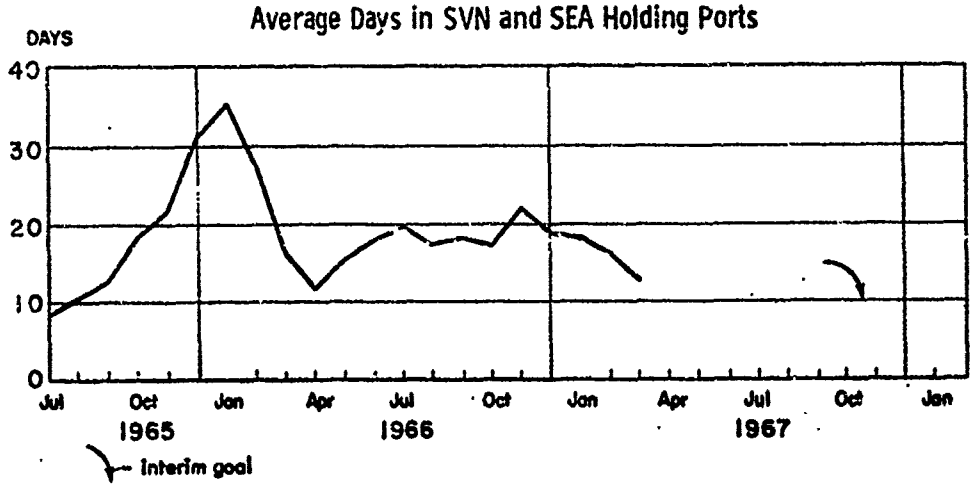
'67 cast	ALL OTHER SEA DESTINATIONS Total	Jan '67 Forecast	GRAND TOTAL SEA Actual	Jan '67 Forecast	UNBOOKED CARGO CONUS TO ALL SEA DESTINATIONS
	128		616		
	163		570		
	243		752		
	316		669		
	308		592		
	284		630		16
	262		730		45
	339		854		16
	352		865		84
	363		884		235
	347		907		213
	393		1025		334
	520		1212		298
	439		1161		162
	485		1250		66
	416		1123		63
	362		1103		87
745	382	374	1141	1119	133
753	384	376	1160	1129	23
763	493	380	1289	1143	29
770		375		1145	
784		375		1159	
796		375		1171	
810		381		1191	
825		377		1202	
835		377		1212	
853		376		1229	
850		376		1226	
870		376		1246	

MTMTS adjusted to include Air Force Special Express ammo shipments data furnished by

ASD/SA/SEA Programs Div.
April 15, 1967

Apr 67

SHIP FLOW (TURNAROUND TIME) IN SVN



As the chart above and the attached Table show, the average number of days spent by ships in SVN and SEA holding ports continued to decrease. The March average of 12.9 days was the lowest since April 1966 (11.7 days) and was 3.2 days lower than a year ago. At the end of March no ships were in SEA holding ports, the first time this has been true in a year.

A new high was achieved in the number of ships completed when 151 ships departed SVN in March. The previous high was 139 in January. The March total was 65% above March of last year and more than double the average number of ships handled during the second half of 1965.

The number of ships in SVN ports at the end of March was 48, three less than the current MACV prescribed optimum of 51 ships working. This optimum is computed on the basis of port capability and the ship flow necessary to maintain maximum cargo discharge rates. Under-utilization of some ports and over-commitment of others can be expected because of cargo generation patterns and port operation experience to date.

MSTS DEEP DRAFT CARGO SHIP FLOW THROUGH SVN 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar	Apr	May	Jun
No. of ships arriving in SVN		78	87	86	77	60	87	63	92	106	91	105
No. of ships departing in SVN	36	57	72	72	70	62	107	76	92	94	88	96
No. of ships in SVN at E.O.M.	16	37	52	66	73	71	51	38	38	50	53	62
No. of ships in SEA Holding Ports at E.O.M.			2		21	21	2			2	12	12

1/ Data derived from MSTS RVN Sealift Digest. Excludes Air Force Special Express Ammo ships and float

ANALYSIS OF TIME SPENT BY MSTS CARGO SHIPS IN SVN AND HOLDING AREAS 1/

	1965 Jul	Aug	Sep	Oct	Nov	Dec	1966 Jan	Feb	Mar	Apr	May	Jun
No. of ships	36	57	72	72	70	62	107	76	92	94	88	96
Avg No. of days in SVN 2/	8.6	10.6	12.8	18.6	21.2	29.1	30.5	20	14.6	11.7	14.7	15.9
Avg No. of days in SEA Holding Ports	___	___	___	.2	.7	2.2	4.9	7.3	1.3	___	.8	1.3
Total Avg No. of days	8.6	10.6	12.8	18.8	21.9	31.3	35.4	27.3	16.1	11.7	15.5	17.2

1/ Data from MSTS RVN Sealift Digest. Based on ships departing during month. Excludes Air Force Spec storage ships.

2/ Includes unloading/loading time, time holding in SVN, sailing time between SVN ports.

Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1967 Jan	Feb	Mar
92	106	91	105	98	113	98	148	99	139	125	127	142
92	94	88	96	104	106	109	115	119	132	139	128	151
38	50	53	62	56	63	52	85	65	72	58	57	48
	2	12	12	12	3	11	3	9	8	7	6	0

1/ Express Ammo ships and floating storage ships.

ENG AREAS 1/

Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1967 Jan	Feb	Mar
92	94	88	96	104	106	109	115	119	132	139	128	151
14.8	11.7	14.7	15.9	16.8	14.7	15.6	15.1	20.2	17.0	16.6	14.2	11.9
1.3	___	.8	3.3	2.8	2.9	3.0	2.1	2.0	2.0	1.9	1.7	1.0
16.1	11.7	15.5	19.2	19.6	17.6	18.6	17.2	22.2	19.0	18.5	15.9	12.9

month. Excludes Air Force Special Express Ammo ships and floating

etween SVN ports.

OASD/SA/SEA Programs Div.
April 13, 1967

OCEAN CARGO SHIPMENTS FROM CONUS TO SEA

The attached table summarizes the ocean cargo lift from CONUS to SEA for the period August, 1965 to April, 1967, and presents the OASD(I&L) forecast of shipments through December, 1967.

Total shipments from CONUS to SEA in April remained at the same high level as in March. However, shipments to SVN increased by 10% to establish an all-time high of 876,000 M/T. Within the SVN total, increases occurred in the ammunition and "other" categories. 1/ In view of the steady growth in the "other" category and other indicators, it appears that excessive stocks of material may be building-up in SVN.

Total shipments to the non-SVN ports in SEA totaled 409,000 M/T which was a 84,000 M/T reduction from the March level. Detailed information as to the distribution among the ports is not yet available; however, preliminary information indicates the majority of the reduction may have occurred in shipments to Okinawa. If the final data confirms this, it will be a significant reversal of the March, 1967 experience commented on in last month's Southeast Asia Analysis Report (pp. 47).

In view of the Secretary of Defense decision in December, 1966 to restrict the role of Okinawa in the Army's PACOM logistic system, continued reductions in the tonnage shipped to Okinawa for the 2nd Logistic Command depot should be expected. Information available indicates the following requisition cancellation request actions by the 2nd Logistic Command.

Date of Cancellation Request	No of Line Items	$ Value
March 8, 1967	70,000	192,700,000
March 30, 1967	4,600	11,600,000
March 31, 1967	17,000	34,000,000
	91,600	238,300,000

If a significant portion of these cancellation requests are acted upon before shipment from CONUS, major savings in packing, in-land transportation, ocean shipping and replacement procurement costs should result.

1/ "Other" includes all material except unit equipment, ammunition and aircraft.

MSTS OCEAN CARGO SHIPMENTS FROM CONUS TO SEA a/

(000 M/T)

MONTH	ALL SOUTH VIETNAM PORTS						ALL OTHER SEA DESTINATIONS	
	Unit Equip	Ammo	Aircraft	Other	Total	Jan '67 Forecast	Total	Jan '67 Forecast
1965								
Aug	211	23	83	171	488		128	
Sep	130	44	4	229	407		163	
Oct	129	108	24	248	509		243	
Nov	47	50	47	209	353		318	
Dec	28	13	13	230	284		308	
1966								
Jan	19	51	16	260	346		284	
Feb	21	35	10	402	468		268	
Mar	28	86	25	376	515		339	
Apr	7	76	6	424	513		352	
May	37	46	20	398	521		363	
June	43	92	21	404	560		347	
July	87	84	42	419	632		393	
Aug	115	88	14	476	693		520	
Sep	210	83	17	412	722		439	
Oct	139	90	18	518	765		485	
Nov	120	94	2	491	707		416	
Dec	94	125	8	514	741		362	
1967								
Jan	67	93	29	570	759	745	382	374
Feb	78	93	10	595	776	753	384	376
Mar	91	68	25	613	797	763	493	380
Apr	86	113	16	661	876	770	409	375
May						784		375
June						796		375
July						810		381
Aug						825		377
Sep						835		377
Oct						853		376
Nov						860		376
Dec						870		376

a/ SEA defined to include all ports west of Hawaii. Actual data from MSTS adjusted to include Air Force. Jan '67 forecast data from OSD(I&L).

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CONFIDENTIAL

'67 cast	ALL OTHER SEA DESTINATIONS Total	Jan '67 Forecast	GRAND TOTAL SEA Actual	Jan '67 Forecast	UNBOOKED CARGO CONUS TO ALL SEA DESTINATIONS
	12[illegible]		616		
	163		570		
	24[illegible]		752		
	31[illegible]		669		
	306		592		
	28[illegible]		630		16
	262		730		45
	339		854		16
	352		865		84
	363		884		235
	34[illegible]		907		213
	393		1025		234
	520		1213		298
	439		1161		162
	48[illegible]		1250		66
	416		1123		63
	362		1103		87
745	382	374	1141	1119	133
733	384	376	1160	1129	23
763	493	380	1289	1143	29
770	409	375	1285	1145	22
784		375		1159	
796		375		1171	
810		381		1191	
825		377		1202	
835		377		1212	
853		376		1229	
850		376		1225	
870		376		1246	

MTMTS adjusted to include Air Force Special Express ammo shipments data furnished by

OASD/SA/SEA Programs Div.
May 15, 1967

CONFIDENTIAL

SAIGON PORT

As the table and attached charts indicate, the AID/Commercial cargo sector of the Saigon port is in its best condition in a year. Despite the highest rate of cargo arrivals in the port since October, 1966, the April discharge of 296,000 short tons resulted in the lowest end-of-month backlog of undischarged cargo experienced to date. The backlog on April 30, 1967 was equal to only 1 week's work.

SAIGON PORT COMMERCIAL/AID CARGO INPUT - OUTPUT ANALYSIS
(000 Short Tons)

	Month	Beginning Backlog	Arrivals during month 1/	Total Avail. Cargo	Discharged	Ending Backlog
1966	May*	101	164	265	179	86
	Jun	86	235	321	198	123
	Jul	123	293	416	235	181
	Aug	181	264	445	249	196
	Sep	196	157	353	191	162
	Oct	162	275	437	215	222
	Nov	222	231	453	244	209
	Dec	209	204	413	102	311
1967	Jan	311	220	531	267	264
	Feb	264	106	370	199	171
	Mar	171	211	382	284	98
	Apr	98	260	358	296	62

1/ Arrivals are computed rather than reported.
* No backlog data available prior April, 1966.

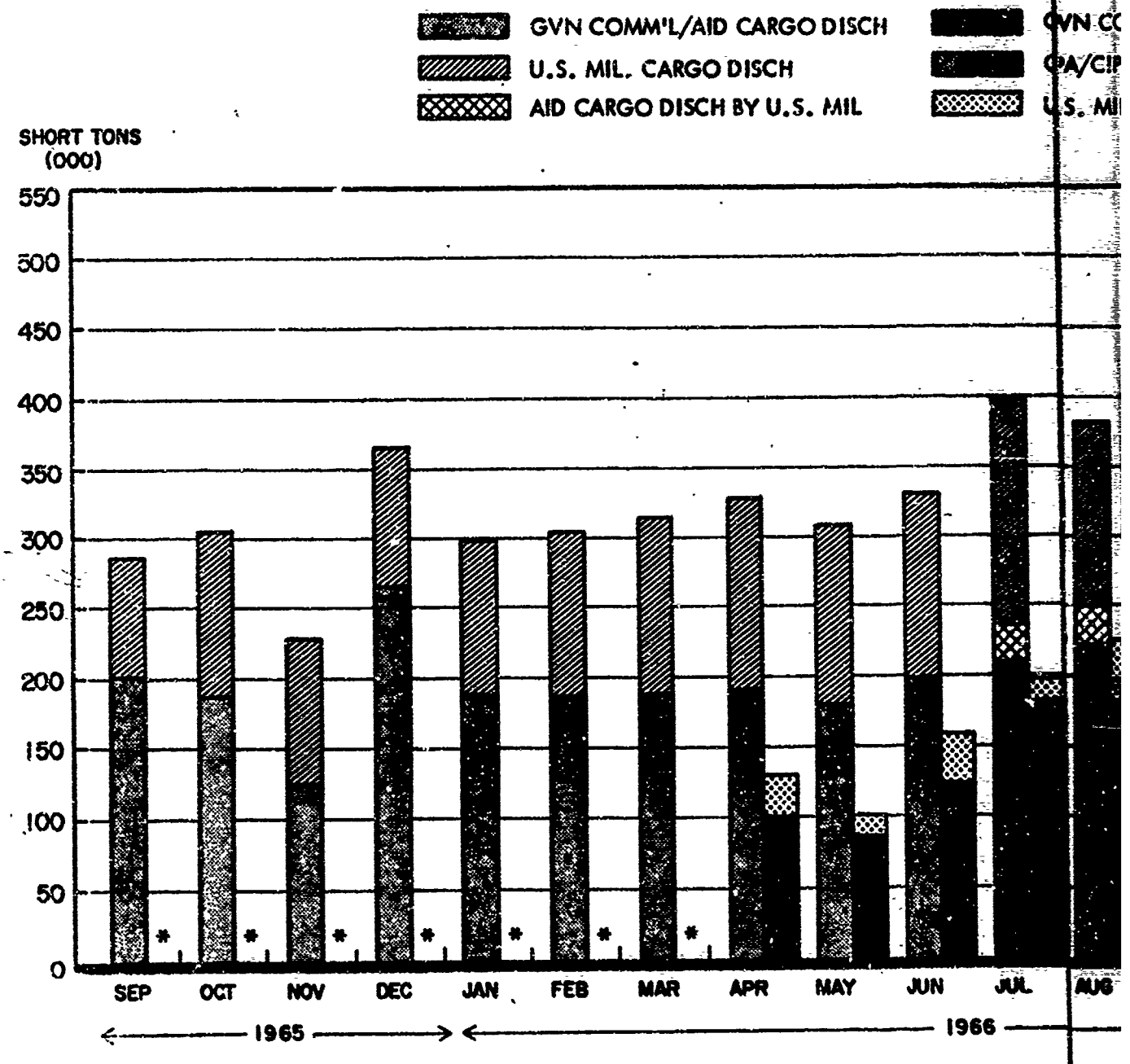
The over-all progress in the port is due to the cumulative effects of improvements in facilities, equipment and management; however, as the following table indicates, U.S. military cargo handling has made a major contribution. While GVN discharge rates have remained relatively constant (excluding the low performance in December, 1966 due to the strike and February, 1967 due to TET), the U.S. military is handling about one-third of the cargo discharged (in addition to 200,000 S/T a month of U.S. military cargo).

SAIGON PORT COMMERCIAL/AID CARGO DISCHARGED BY GVN AND U.S. MILITARY
(000 Short Tons)

	Month	Discharged by GVN	Discharged by U.S. Mil	Total Discharged	% Discharged by U. S. Mil
1966	Jul*	210	25	235	11
	Aug	222	27	249	11
	Sep	143	48	191	25
	Oct	164	51	215	24
	Nov	191	53	244	22
	Dec	66	36	102	35
1967	Jan	194	73	267	27
	Feb	134	65	199	33
	Mar	189	95	284	34
	Apr	204	92	296	31

* U.S. military began discharging AID cargo in July, 1966.

SAIGON PORT CARGO DISCHARGED AND BACKLOG



* GVN BACKLOG FIGURES NOT AVAILABLE

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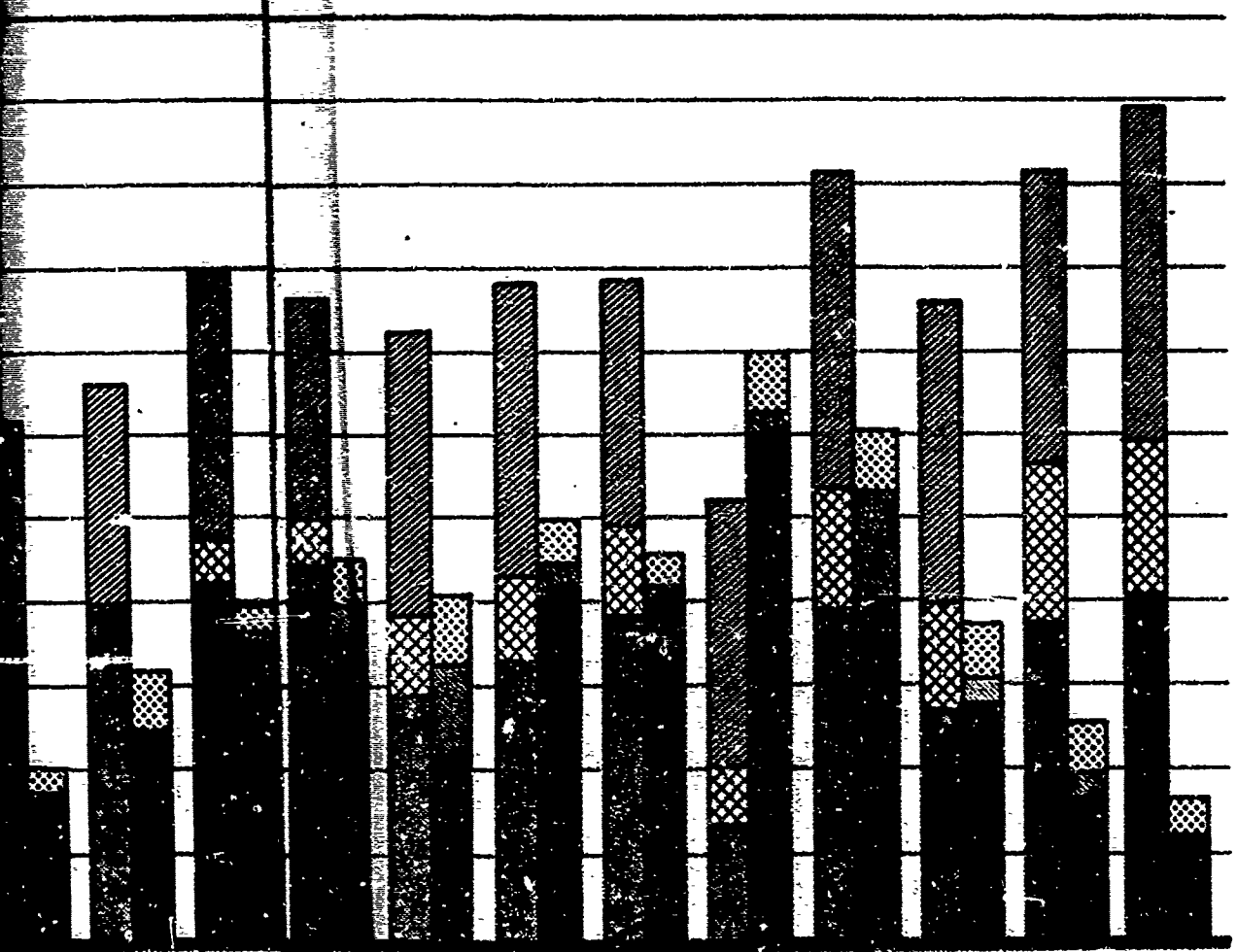
GVN COMM'L/AID CARGO BACKLOG

GVA/CIP AID CARGO U.S. MIL BACKLOG

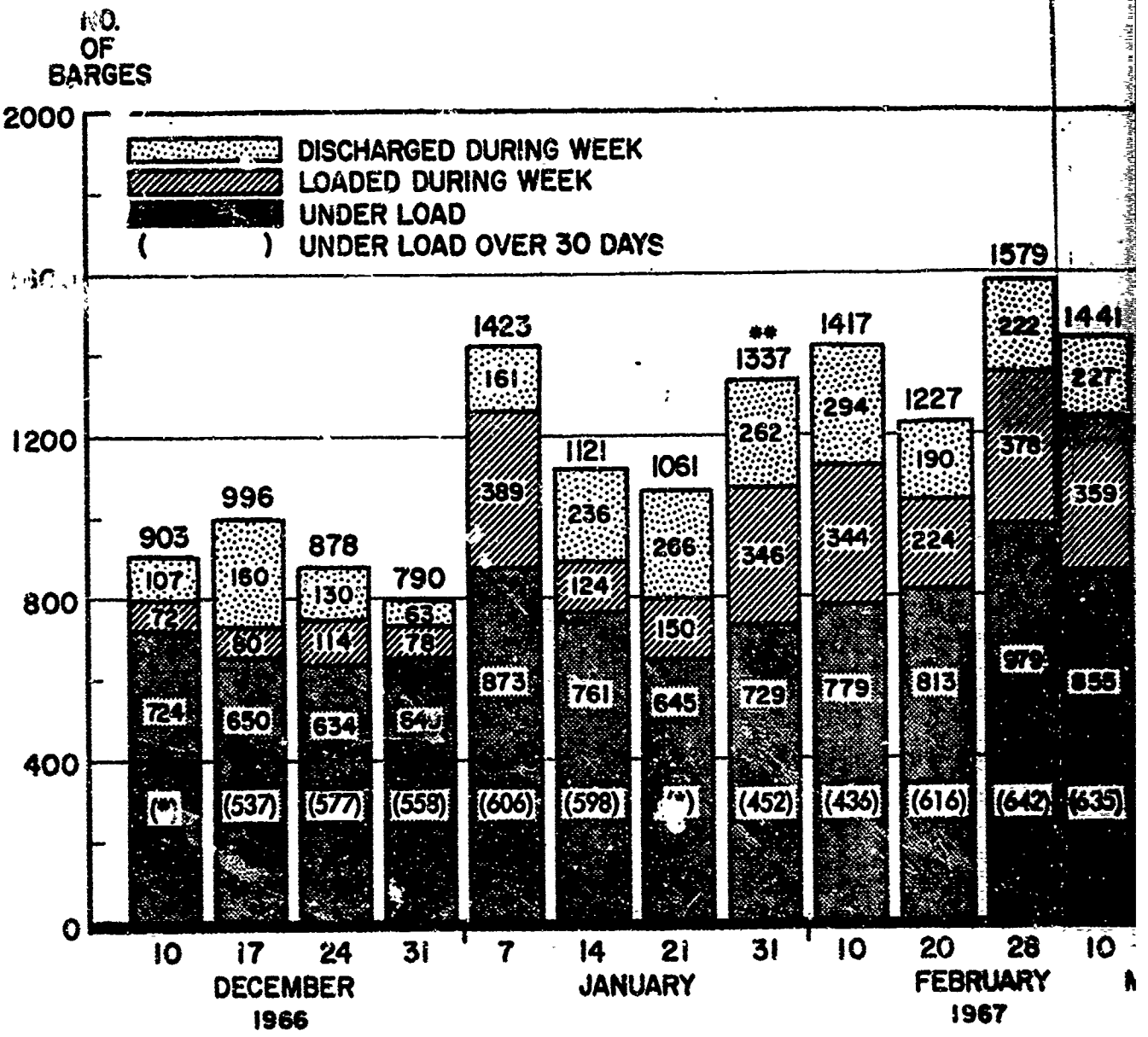
U.S. MIL. CARGO BACKLOG



Y JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR

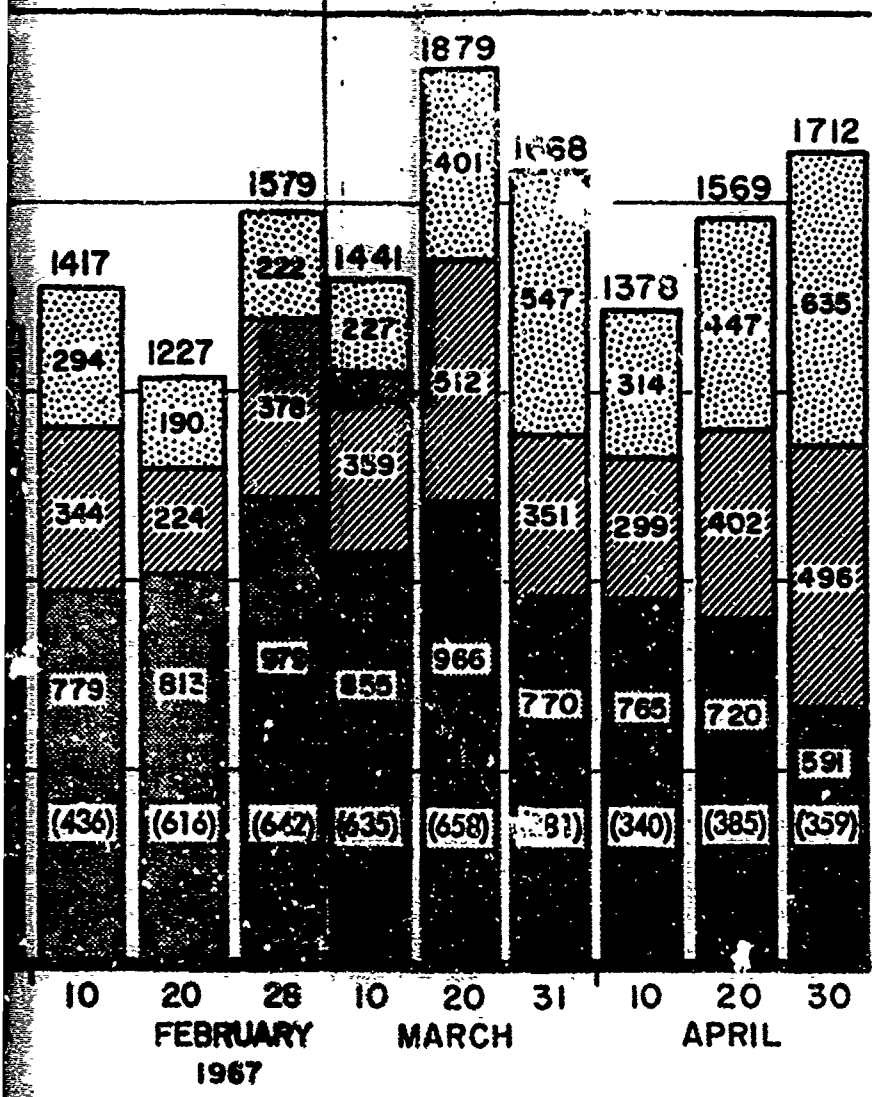
1966 → 1967

SAIGON BARGE REPORT
(COMMERCIAL ONLY)



(*) DATA NOT AVAILABLE

(**) REPORTING PERIOD CHANGED TO 10 DAY PERIODS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344
779
(436)
1227
190
224
813
(616)
1579
222
378
976
(662)
1441
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855
(635)
1879
401
512
966
(658)
1668
547
351
770
(81)
1378
314
299
765
(340)
1569
447
402
720
(385)
1712
635
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591
(359)
10
20
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FEBRUARY
MARCH
APRIL
1967

AIR CARGO SHIPMENTS TO SOUTHEAST ASIA

The following table illustrates the sharp increase in air cargo shipments from CONUS to Southeast Asia.

Air Cargo Shipments from CONUS to SVN and Other Southeast Asia 1/
(Short Tons)

	Monthly Average		
Qtr	SVN	Other SEA	Total SEA
Oct-Dec, 1965	4,200	5,500	9,700
Jan-Mar, 1966	5,600	6,000	11,600
Apr-Jun, 1966	8,100	6,600	14,700
Jul-Sep, 1966	10,400	7,300	17,700
Oct-Dec, 1966	14,600	8,700	23,300
Jan-Mar, 1967	17,300	10,600	27,900

1/ Data source: OASD(I&L). Other SEA defined to include Thailand, Philippines, Taiwan, Okinawa, Japan and Guam.

ASD(I&L) recently instituted a mandatory pre-shipping challenge procedure for all shipments of certain commodities exceeding 1,000 pounds. This action resulted from the continued growth of air shipments to Southeast Asia, an OSD sample of air export cargo which indicated questionable priority assignments, and expenditures for commercial augmentation of MAC reaching the rate of $600 million a year. The commodity groups placed under the mandatory procedure include:

(a) construction materials
(b) fuels, lubricants and gas generators
(c) printed forms
(d) clothing
(e) rations
(f) office supplies

Under the procedure, detailed lists will be submitted to ASD(I&L) and the Services each month identifying all shipments made by air after challenge because of reaffirmation of the requirement for air shipment.

In a parallel action, ASD(I&L) also directed an embargo on low priority shipments in the ocean cargo system called Sea Express (SEA-EX). This will restore the SEA-EX system to its intended use of providing expedited ocean transportation for high priority cargo. The effect of the two sets of actions should be significantly reduced air and Sea Express shipments and costs.

As a direct result of the ASD(I&L) actions, CINCPAC has instituted similar procedures for intra-PACOM air and expedited ocean shipments. CINCPAC also reemphasized that control must be exercised on requisitions to prevent abuses of the priority system.

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June 1967

POL SUPPORT FOR MILITARY OPERATIONS IN SVN

As the table shows, the consumption of POL in SVN has increased sharply since the introduction of U. S. forces in 1965.

	Monthly Average Military POL Consumption (000 Bbls)				
Qtr	JP-4	AvGas	MoGas	Diesel	Total
Sep 1965	398	178	120	92	788
Oct-Dec 1965	569	190	150	122	1,031
Jan-Mar 1966	855	217	184	171	1,427
Apr-Jun 1966	916	203	203	223	1,545
Jul-Sep 1966	1,188	200	255	294	1,937
Oct-Dec 1966	1,325	228	335	454	2,342
Jan-Mar 1967	1,521	240	366	498	2,625
Apr 1967 Level Off	1,473	237	449	606	2,765
Sep 1967(Est.)	1,750	275	385	603	3,013

The current military POL requirements for the entire Pacific Command (PACOM) are approximately 13.9 million barrels a month. The sources of supply for these requirements have been:

Product	Western Hemisphere (000 Bbls)	Middle East (000 Bbls)	Total (000 Bbls)
JP-4	4,100	2,100	6,200
JP-5*	700	-	700
MoGas	200	500	700
Diesel	500	1,100	1,600
AvGas	800	100	900
Navy Special Fuel Oil	1,100	2,700	3,800
TOTAL	7,400	6,500	13,900

* JP-5 is used in Navy carrier-based aircraft.

At the beginning of the Middle East crisis in early June, total PACOM operating stocks and reserves were estimated to be capable of supporting operations at current consumption rates (assuming no interruptions of normal Western Hemisphere inputs) for the following periods:

Product	Days of Supply
JP-4	70
MoGas	100
Diesel	60
Navy Special	75
AvGas and JP-5	*

* Infinite since JP-5 and essentially all AvGas supplied from Western Hemisphere.

Actions have been taken to procure product from Western Hemisphere sources and MSTS is spot chartering tankers to avoid major drawdowns of reserve stocks. Since a shift to the Western Hemisphere requires an additional 15 days steaming time to Western Pacific destinations, approximately 35 extra T-5 (200,000 Bbl) tankers are required to replace the Middle East deliveries.

June 1967

SVN PORT DEVELOPMENT AND CAPABILITY

The $152 million construction effort has increased port capacity from the July, 1965 level of approximately 240,000 ST/month to the present 1.2 million ST/month. Additional projects which are under construction will increase capacity to 1.4 million ST/month by August, 1967, barring slippages in construction. (See attached table).

Port capacity estimates are based on facility design factors. Actual port capability depends not only on facilities but also personnel, equipment, the cargo mix and, particularly in SVN, weather conditions. Consequently, MACV estimates the peak throughput capability at 1.2 million ST to be achieved in September, 1967. This represents a 200,000 ST/month or 15% reduction. The MACV capability estimate coincides closely with the CINCPAC forecasted peak Program 4 throughput requirement of approximately 1.1 million ST in May, 1967 (actual May throughput was 1.0 million ST).

However, MACV's estimates of both design capacity and capability may be too conservative, based on actual performance to date. For example, Danang's capability was estimated at 197,000 ST for May, 1967 despite its handling 216,000 ST in April. Danang actually handled 199,000 tons in May and could have handled more if more ships had been available to offload.

MACV's directives to shipping control agencies state that the optimum number of deep draft ships required to maximize Danang's productivity is 10 (1 at each of the 6 berths and 4 in the stream for lighterage discharge); however, the April performance was achieved with a daily average of only 5.2 deep draft ships available for discharge. The ships at Danang on selected dates were as follows:

Date	No. of Ships
March 31, 1967	4
April 10, 1967	5
April 20, 1967	3
April 30, 1967	2

Overall the 13 SVN ports performed in accordance with forecasted capability and requirements in April and May, 1967. However, the following number of ports reported low performance due to insufficient cargo being available for discharge:

Report Period	No. of Ports with Idle Capacity
1-10 April 1967	2
11-20 April 1967	4
21-30 April 1967	6
1-10 May 1967	4
11-20 May 1967	3
21-31 May 1967	1

The data indicates that improved capacity and capability estimates, together with improved ship scheduling (to minimize peaks and valleys in SVN port workload), would permit the required tonnages to be handled with fewer resources. The healthy stock levels now in place in SVN should permit the improved ship scheduling.

SVN MILITARY PORT DEVELOPMENT STATUS SUMMARY 1/

	NO. OF DEEP DRAFT BERTHS			TOTAL CAPACITY 2/ (ST/mo.)		
	Jul 1965	Apr 1967	Total Planned	Jul 1965 3/	Apr 1967	Total Planned
Cam Ranh Bay	1	9	10	39,000	183,000	258,000
*Chu Lai				7,500	60,000	72,000
Da Nang		6	6	15,000	315,000	315,000
*Dong Tam					9,000	24,000
*Hue-Phu Bai/ Tan My/Dong Ha/ Cua Viet/Dam Sam					27,000	51,000
*Nha Trang				15,000	33,000	33,000
*Phan Rang					27,000	42,000
Qui Nhon		4	6	39,000	135,000	213,000
Saigon 4/	5	7	7	120,000	309,000	309,000
Tuy Hoa/Vung Ro		2	2		69,000	69,000
Vung Tau		1	2	4,500	33,000	51,000
	6	29	33	240,000	1,200,000	1,437,000

1/ Data from CINCPAC SVN port development plan dtd Apr 11, 1967.
2/ Includes deep draft berths, shallow draft and lighterage discharge.
3/ Estimated.
4/ Saigon berth data includes only those used by U.S. military; assumes return of 2 berths to GVN use when last two berths at Newport are completed.
* Shallow draft and/or lighterage ports.

June 15, 1967

OCEAN CARGO SHIPMENTS FROM CONUS TO SEA

The attached table summarizes the ocean cargo lift from CONUS to SEA for the period August, 1965 to June, 1967 and presents the latest OASD(I&L) forecast of shipments through December, 1967.

Total shipments from CONUS to South Vietnam in June resulted in the first significant month-to-month decline which has occured since December, 1965. The June total of 796,000 M/T was 79,000 M/T or 9% below May and 59,000 M/T or 7% below forecast. The major decrease (96,000 M/T) occurred in the "Other" category. 1/ While 1 month's experience does not establish a trend, a reversal of the steady growth of this category should be expected as a result of the levelling-off of new unit deployments, the larger stocks on hand in-country and a general shift into the resupply phase of logistic operations. Efforts are underway in OASD(I&L) to examine the commodity groupings in the "Other" category to determine commodity trends. The data may be useful to appraise whether the shift from initial stock build-up to resupply is being accomplished in a timely enough manner.

Total shipments to the non-SVN SEA destinations also declined from the May level. While complete data for all destinations is not yet available, the June preliminary data confirms that the heavy input trend to Okinawa has been reversed. (April, Southeast Asia Analysis Report, pg. 47). Pertinent statistics are:

Ocean Shipments from CONUS to Okinawa
(CCC M/T)

	Month	Total	
1967	Jan.	66.2	
	Feb.	107.6	
	Mar.	164.1	
	Apr.	116.5	
	May	92.6	
	June	87.5	(P)

It should be of interest to the Logistic Community that while between August, 1965 and June, 1967 ocean shipments from CONUS to SVN increased by only 63%, shipments to all other SEA destinations increased by 200%. When this fact is considered together with the monthly input of an average of 170,000 M/T into SVN from non-U.S. ports, it suggests there may be a considerable amount of unnecessary inventory build-up, transshipments and double-handling of cargo for SVN by the off-shore bases.

1/ "Other" includes all material except unit equipment, ammunition and aircraft.

MSTS OCEAN CARGO SHIPMENTS FROM CONUS TO SEA a/
(000 M/T)

MONTH	ALL SOUTH VIETNAM PORTS					May '67 Forecast	ALL OTHER SEA DE	
	Unit Equip	Ammo	Aircraft	Other	Total		Total	
1965								
Aug	211	23	83	171	488		128	
Sep	130	44	4	229	407		163	
Oct	129	108	24	248	509		243	
Nov	47	50	47	209	353		316	
Dec	28	13	13	230	284		308	
1966								
Jan	19	51	16	260	346		284	
Feb	21	35	10	402	468		262	
Mar	28	86	25	376	515		339	
Apr	7	76	6	424	513		392	
May	57	46	20	398	521		363	
June	43	92	21	404	560		347	
July	87	84	42	419	632		393	
Aug	115	88	14	476	693		520	
Sep	210	83	17	412	722		439	
Oct	139	90	18	518	765		485	
Nov	120	94	2	491	707		416	
Dec	94	125	8	514	741		362	
1967								
Jan	67	93	29	570	759		382	
Feb	78	93	10	595	776		384	
Mar	91	68	25	613	797		493	
Apr	86	113	16	661	876		409	
May	37	132	29	677	875	821	401	
June	69	120	26	581	796	855	384	
July						860		
Aug						872		
Sep						866		
Oct						901		
Nov						873		
Dec						891		

a/ SEA defined to include all ports west of Hawaii. Actual data from MTMTS adjusted to includ SASM. Forecast data from OASD(I&L).

	ALL OTHER SEA DESTINATIONS		GRAND TOTAL SEA		UNBOOKED CARGO CONUS TO ALL SEA DESTINATIONS
May '67 Forecast	Total	May '67 Forecast	Actual	May '67 Forecast	
	128		616		
	163		570		
	243		752		
	316		669		
	308		592		
	284		630		16
	262		730		45
	339		854		16
	352		865		84
	363		884		235
	347		907		213
	393		1025		234
	520		1213		298
	439		1161		352
	485		1250		66
	416		1123		63
	362		1103		87
	382		1141		133
	384		1160		23
	493		1289		29
	409		1285		22
821	401	408	1276	1,229	33
855	384	408	1180	1,263	24
860		405		1,265	
872		410		1,282	
866		405		1,271	
901		405		1,306	
873		405		1,278	
891		405		1,296	

data from MTMTS adjusted to include Air Force Special Express ammo shipments data furnished by

OASD/SA/SEA Programs Div.
July 1, 1967

July 1967

SAIGON PORT

As the table and attached charts indicate, the Saigon port has maintained the excellent condition reported in the May Southeast Asia Analysis Report (p46-49). The end-of-the month backlogs in May and June were the lowest experienced to date. This performance was achieved despite heavy arrivals of cargo. The end of June backlog was equal to only one week's work.

SAIGON PORT COMMERCIAL/AID CARGO INPUT - OUTPUT ANALYSIS
(000 Short Tons)

	Month	Beginning Backlog	Arrivals during month 1/	Total Avail. Cargo	Discharged	Ending Backlog
1966	May*	101	164	265	179	86
	Jun	86	235	321	198	123
	Jul	123	293	416	235	181
	Aug	181	264	445	249	196
	Sep	196	157	353	191	162
	Oct	162	275	437	215	222
	Nov	222	231	453	244	209
	Dec	209	204	413	102	311
1967	Jan	311	220	531	267	264
	Feb	264	106	370	199	171
	Mar	171	211	382	284	98
	Apr	98	260	358	296	62
	May	62	256	318	258	60
	Jun	60	237	297	237	60

1/ Arrivals are computed rather than reported.
* Data not available for April, 1966 and prior months.

A particularly favorable development is the sharply improved status of the barge fleet. As the attached Saigon Barge Report chart indicates, at the end of June only 94 barges still had cargo on board and of these, only 9 had cargo aboard longer than 30 days. In contrast, on March 20, 1967, there were 979 loaded barges and of these 642 had cargo aboard longer than 30 days. The improved facilities and management of the port have made this significant progress possible.

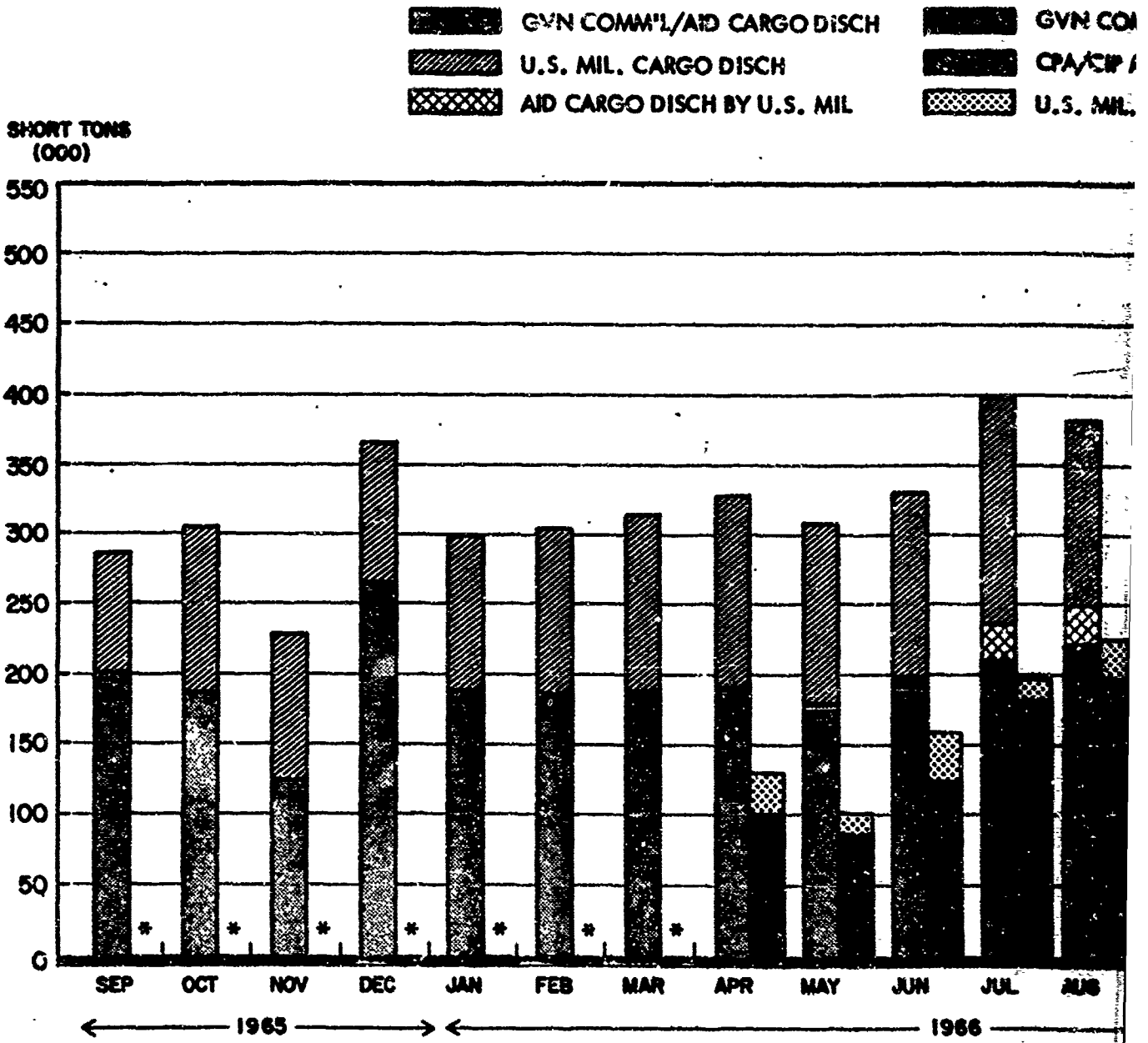
A less favorable aspect is the increase in the percentage of the cargo being discharged by the U. S. military instead of by the GVN. As the following table shows, while the U. S. production was the highest to date, the GVN production was the lowest since February 1967. The U. S. is now discharging 45% of the AID/Commercial cargo in the Saigon port. Perhaps it is now timely to reappraise the continued need for such large-scale U.S. assistance.

SAIGON PORT COMMERCIAL/AID CARGO DISCHARGED BY GVN AND U.S. MILITARY
(000 Short Tons)

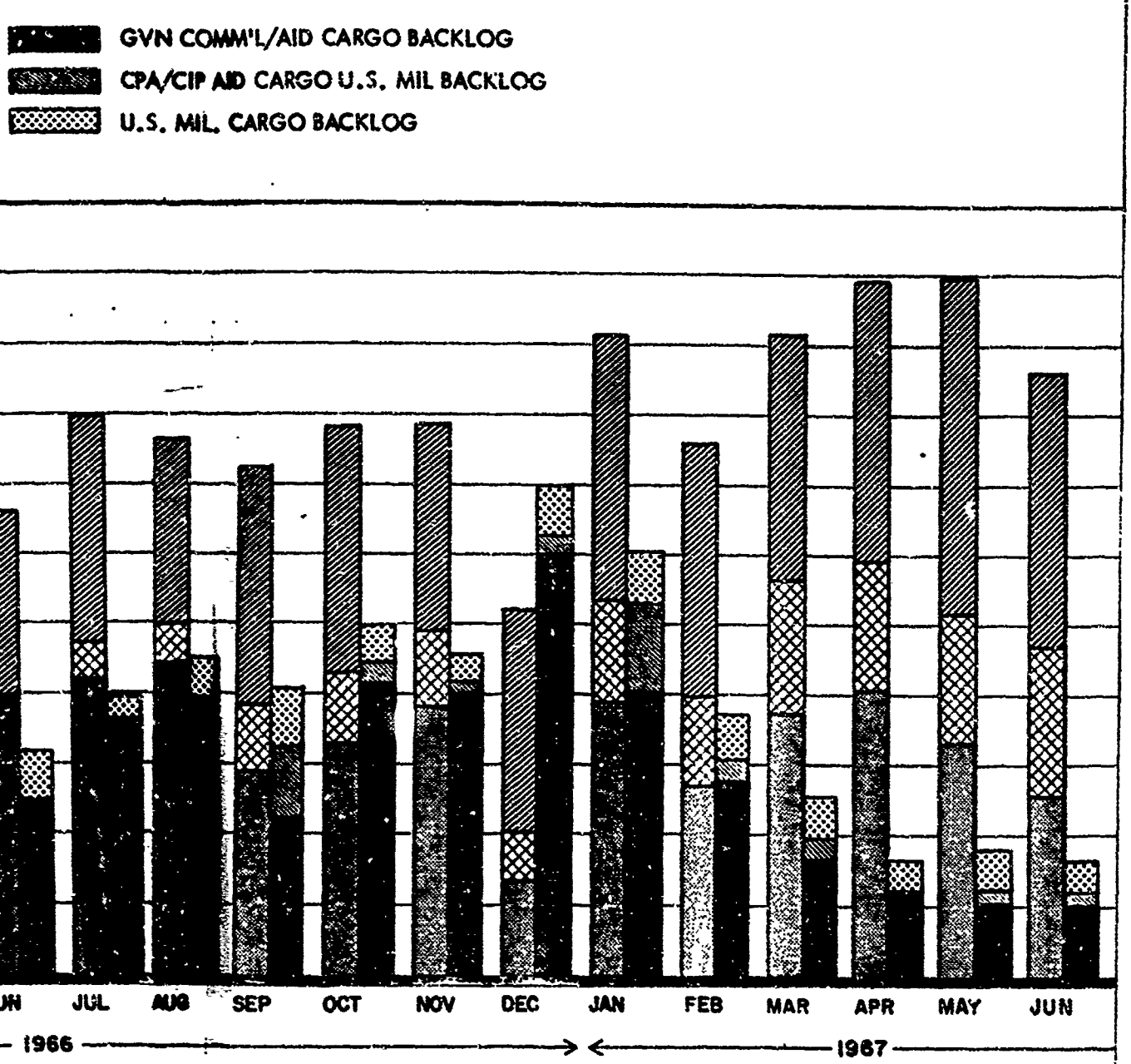
	Month Month	Discharged by GVN	Discharged by U.S. Mil	Total Discharged	% Discharged by U.S. Mil
1966	Jul*	210	25	235	11
	Aug	222	27	249	11
	Sep	143	48	191	25
	Oct	164	51	215	24
	Nov	191	53	244	22
	Dec	66	36	102	35
1967	Jan	194	73	267	27
	Feb	134	65	199	33
	Mar	189	95	284	34
	Apr	204	92	296	31
	May	165	93	258	36
	Jun	131	106	237	45

* U.S. military began discharging AID cargo in July, 1966.

SAIGON PORT CARGO DISCHARGED AND BACKLOG



* GVN BACKLOG FIGURES NOT AVAILABLE


GVN COMM'L/AID CARGO BACKLOG
CPA/CIP AID CARGO U.S. MIL BACKLOG
U.S. MIL. CARGO BACKLOG
JUN
JUL
AUG
SEP
OCT
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DEC
JAN
FEB
MAR
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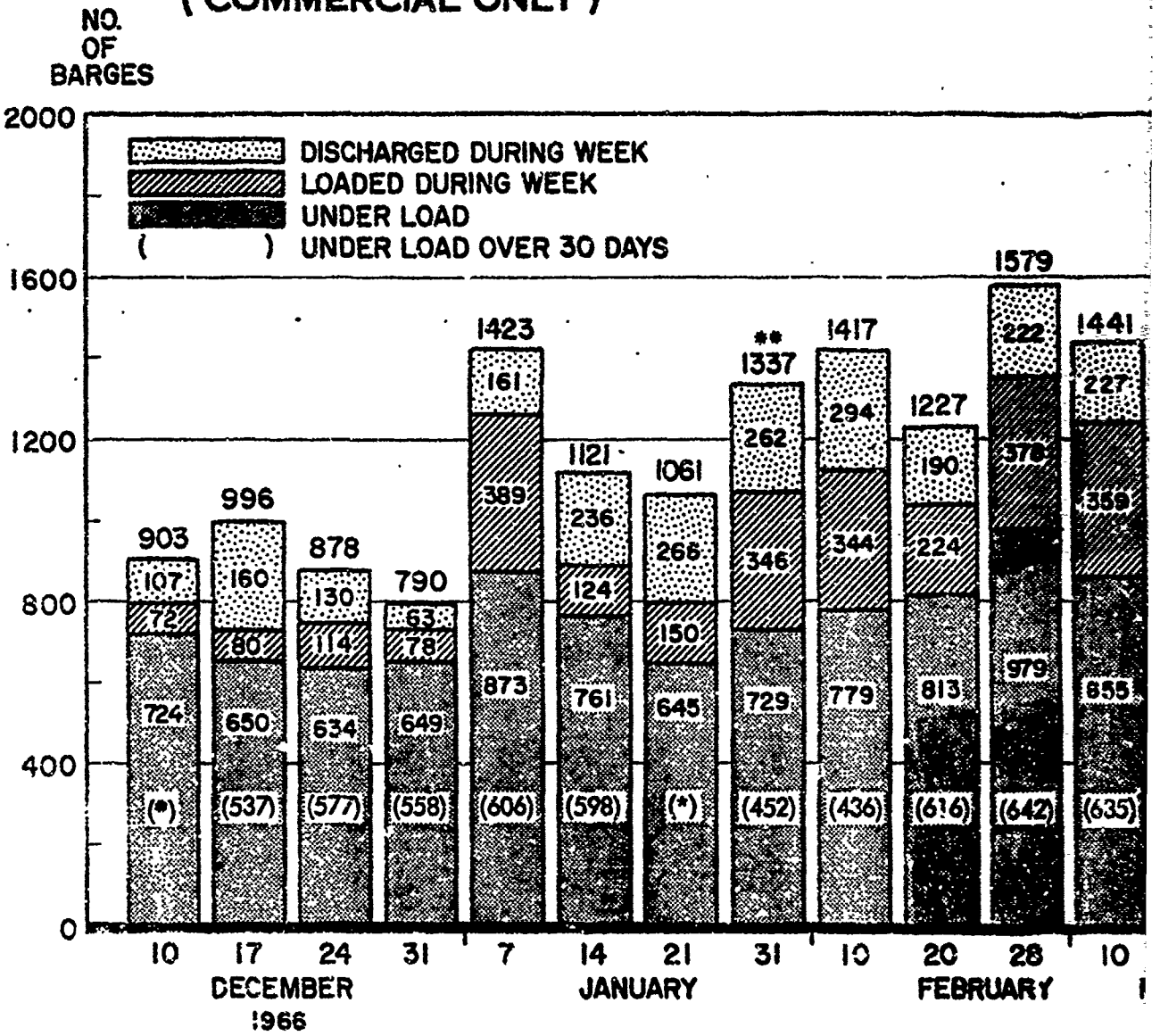
MAY
JUN
1966
1967

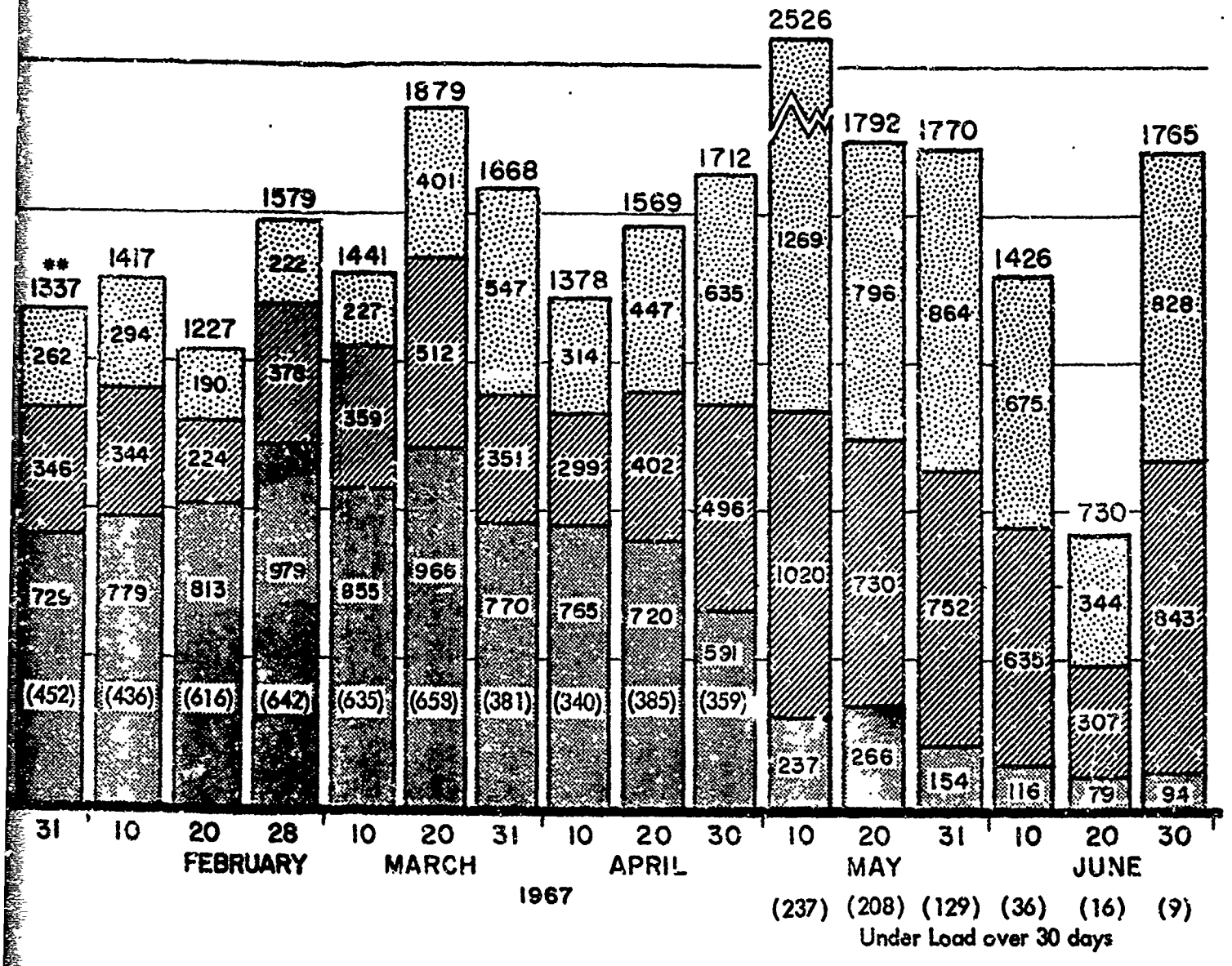
SAIGON BARGE REPORT

(COMMERCIAL ONLY)



(*) DATA NOT AVAILABLE

(**) REPORTING PERIOD CHANGED TO 10 DAY PERIODS



PERIODS

111

112

OCEAN CARGO SHIPMENTS FROM CONUS TO SEA

The attached table summarizes the ocean cargo lift from CONUS to SEA for the period August, 1965 to July, 1967 and presents the latest OASD (I&L) forecast of shipments through December, 1967.

In July shipments from CONUS to South Vietnam continued essentially unchanged from the June level and totaled 783,000 M/T. However, shipments from CONUS to the non-SVN SEA destinations increased by 84,000 M/T to a total of 468,000 M/T. Thus, of the 1.3 million M/T shipped to SEA, shipments to the non-SVN destinations were 37%. In contrast, U.S. military forces in other than SVN (excluding dependents) are only 26% of the total U.S. military population in SEA. Considering the higher tempo of operations and accelerated rates of consumption in SVN, the continued heavy influx into the non-SVN ports appears high.

The following table compares shipments to the non-SVN ports for the 2nd quarter CY 1967 and July 1967 on a port-by-port basis:

SHIPMENTS FROM CONUS TO NON-SVN SEA PORTS 1/
(000 M/T)

	2nd Qtr CY 1967 Mo. Ave.	July 1967	Net Change
Thailand	75.5	73.8	(1.7)
Taiwan	11.7	16.4	4.7
Philippines	57.2	51.6	(5.6)
Japan	74.5	83.2	8.7
Korea	71.6	110.5	38.9
Guam	38.5	33.1	(5.4)
Okinawa	87.7	98.9	11.2

1/ Data from MSTS, July data preliminary.

With the exception of Korea, which increased by 54%, the changes were relatively minor. As there are no known factors which account for the sharp increase in shipments to Korea, OASD (I&L) is asking the Department of Army to investigate.

July was the sixth consecutive month in which the unbooked cargo backlog was less than the optimum 100,000 M/T level. During the month there were several instances of insufficient cargo generation which resulted in idle MSTS ships in CONUS ports. The Secretary of Defense has approved a Navy recommendation that 16 GAA ships should be inactivated and returned to the NDRF. OASD(I&L) is studying the possibility of further inactivations. The excess ship capability, despite continued high lift requirements, results from the improved ship turnaround times in SVN and the employment of a more efficient mix of ships such as the container ships, which have been serving the Philippines and Okinawa and in July began service to SVN.

MSTS OCEAN CARGO SHIPMENTS FROM CONUS TO SEA a/

(000 M/T)

MONTH	ALL SOUTH VIETNAM PORTS					May '67 Forecast	ALL OTHER SEA DES	
	Unit Equip	Ammo	Aircraft	Other	Total		Total	Ma Fo
1965								
Aug	211	23	83	171	488		128	
Sep	130	44	4	229	407		163	
Oct	129	108	24	248	509		243	
Nov	47	50	47	209	353		316	
Dec	28	13	13	230	284		308	
1966								
Jan	19	51	16	260	346		284	
Feb	21	35	10	402	468		262	
Mar	28	86	25	376	515		339	
Apr	7	76	6	424	513		352	
May	57	46	20	398	521		363	
June	43	92	21	404	560		347	
July	87	84	42	419	632		393	
Aug	115	88	14	476	693		520	
Sep	210	83	17	412	722		439	
Oct	139	90	18	518	765		485	
Nov	120	94	2	491	707		416	
Dec	94	125	8	514	741		362	
1967								
Jan	67	93	29	570	759		382	
Feb	78	93	10	595	776		384	
Mar	91	68	25	613	797		493	
Apr	86	113	16	661	876		409	
May	37	132	29	677	875	821	401	
June	69	120	26	581	796	855	384	
July	43	114	31	595	783	860	468	
Aug						872		
Sep						866		
Oct						901		
Nov						873		
Dec						891		

a/ SEA defined to include all ports west of Hawaii. Actual data from MTMTS adjusted to include SASM. Forecast data from OASD(I&L).

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	May '67 Forecast	ALL OTHER SEA DESTINATIONS Total	May '67 Forecast	GRAND TOTAL SEA Actual	May '67 Forecast	UNBOOKED CARGO CONUS TO ALL SEA DESTINATIONS
8		128		616		
7		163		570		
9		243		752		
3		316		669		
4		308		592		
6		284		630		16
8		262		730		45
5		339		854		16
3		352		865		84
1		363		884		235
0		347		907		213
2		393		1025		234
3		520		1213		298
2		439		1161		162
5		485		1250		66
7		416		1123		63
1		362		1103		87
9		382		1141		133
6		384		1160		23
7		493		1289		29
6		409		1285		22
5	821	401	408	1276	1,229	33
6	855	384	408	1180	1,263	24
3	860	468	405	1251	1,265	25
	872		410		1,282	
	866		405		1,271	
	901		405		1,306	
	873		405		1,278	
	891		405		1,296	

data from MIMTS adjusted to include Air Force Special Express ammo shipments data furnished by

OASD/SA/SEA Programs Div.
August 14, 1967

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CARGO SEALIFT FROM CONUS TO SVN

The following table shows DOD dry cargo sealift movements to Vietnam from July 1965 to the present, both in total and by type of ship.

Dry Cargo Moved a/
(000 M/T)

	Nucleus	GAA	Charter	Berth Term	Total
FY 1966					
1st Qtr	378	124	663	69	1,234
2nd Qtr	343	339	524	12	1,218
3rd Qtr	388	478	724	-	1,590
4th Qtr	462	661	894	279	2,296
Total	1,571	1,602	2,805	360	6,338
FY 1967					
1st Qtr	601	729	980	25	2,335
2nd Qtr	563	786	1,069	154	2,572
3rd Qtr	590	906	1,179	134	2,809
4th Qtr	671	1,092	1,292	53	3,108
Total	2,425	3,513	4,520	366	10,824
FY 1968					
1st Qtr	646	923	1,151	83	2,803
2nd Qtr*	613	924	1,176	58	2,771
Total	1,259	1,847	2,327	141	5,574

*Estimated

a/ Includes reefer, aircraft, ammunition, general and AID cargo moved by MSTS controlled ships.

It appears that the peak tonnages occurred in the 4th quarter FY67. Despite the Program #5 force level increases, it is unlikely that the 4th quarter total will be exceeded since stock levels are in place, the heavy influx of construction material is over and improved in-country supply management procedures should result in better utilization of stocks on hand.

The data point up the vital role of the GAA (General Agency Agreement) ships reactivated from the National Defense Reserve Fleet which carried approximately one-third of the total cargo in FY67. The initial request for GAA ships was approved in July 1965 and by March 1967 there were 166 operating as part of the MSTS controlled fleet. In view of the leveling off of shipping requirements and improved ship turnaround times in SVN ports, it was clear that excess shipping capability would exist in FY68. Thus, the Navy was authorized to deactivate and return 15 GAA ships to the National Defense Reserve Fleet. Of the remaining 151 ships, 139 are in full operating status and 12 are in a reduced operating status, available to meet unexpected surge requirements for SVN or elsewhere.

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EFFECTS OF TET OFFENSIVE ON SVN PORT OPERATIONS

The impact of the Tet Offensive on SVN port operations was confined almost entirely to the Saigon port. The following Table displays the data available at the time this publication went to press.

TABLE 1

Saigon Port Deep Draft Shipping Status a/

	Ships with Mil. Cargo				Ships with AID/Comm'l Cargo			
	Working	Waiting	In Hold	Total	Working	Waiting	In Hold	Total
1/20/68	12	3	2	17	17	1		18
1/31/68	13	4	3	20	19			19
2/10/68	16	5	7	28	22	13		35
2/20/68 (P)	14	11	13	38	Data not available.			

a/ Includes Cat Lai ammunition discharge site.

Being heavily dependent upon civilian stevedores and truck drivers, the Saigon port's resumption of work was severely hampered by the curfew which reduced the workday from two shifts of ten hours to less than one full shift. This, coupled with port clearance delays, accounted for the rapid build-up of shipping in the port.

Information available on February 20th indicated the military port's production was back to normal and, barring further interruptions, the number of ships would be reduced to normal levels within approximately 3 - 4 weeks. In view of the number of ships with military cargo in transit to Saigon (46 ships to arrive during the balance of February or in March), MACV has taken the following actions:

a. Limited CONUS outloadings for Saigon (less ammunition) to 30,000 M/T per week. This is a 30% reduction.

b. Curtailed backloading at Saigon except for RO/RO and containerships.

c. Diverted some ships with Saigon cargo to other SVN ports for discharge.

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MILITARY CARGO WORKLOAD IN SVN

The following table compares the military cargo workload of the ports in I CTZ with all other SVN ports over the past 13 months.

TABLE 1

MILITARY CARGO PORT WORKLOAD IN SVN[a/]
(000 Short Tons)

	Month	Dong Ha	Hue	Danang	Chu Lai	Total I CTZ	All Other SVN Ports	Total SVN	I CTZ % of Total
1967	Jan	-	4.5	139.8	36.8	181.1	632.3	813.4	22.3
	Feb	7.7	11.7	141.2	37.0	197.6	678.4	876.0	22.6
	Mar	20.1	9.4	157.0	35.0	221.5	688.0	909.5	24.4
	Apr	19.3	13.5	215.7	62.4	310.9	708.4	1019.3	30.5
	May	26.0	19.2	198.7	50.4	294.3	728.8	1023.1	28.8
	Jun	21.9	18.6	228.2	58.0	326.7	730.2	1056.9	30.9
	Jul	20.9	18.4	209.1	50.2	298.6	683.1	981.7	30.4
	Aug	24.5	20.0	232.7	54.3	331.5	699.0	1030.5	32.2
	Sep	21.7	15.9	211.8	49.8	299.2	647.4	946.6	31.6
	Oct	31.8	12.0	197.7	45.4	286.9	633.3	920.2	31.2
	Nov	39.7	19.4	236.5	49.1	344.7	742.2	1086.9	31.7
	Dec	33.9	15.8	211.7	51.5	312.9	786.1	1099.0	28.5
1968	Jan	34.6	23.9	306.7	54.7	419.9	810.1	1230.0	34.1

a/ Total workload is the sum of cargo discharged and cargo outloaded.

The most significant fact indicated by the data is that while the workload of all other SVN ports increased only 28% between January 1967 and January 1968 the workload in the I CTZ increased nearly 132%. This is a reflection of not only the steadily increasing troop strength in the I CTZ but also the primary reliance on sealines of communications for intra-corps resupply. Danang, the only deep draft port in the I CTZ and thus the site of the major Navy and Marine supply and maintenance facilities, is the logistic hub. All cargo arriving in the I CTZ aboard deep draft ships must be unloaded at Danang and if required elsewhere in I CTZ, must be transshipped either to Chu Lai for the southern sector or north to Hue or Dong Ha. The vast majority of the transshipped cargo must go by sea in shallow draft craft because of the interdicted roads and bridges.

One measure of the volume of intra-corps sea transshipments is the fact that during the past 3 months, 35% (266,000 S/T) of the 755,000 S/T of cargo handled at Danang has been cargo outloaded from the port. In contrast, outloading of cargo at all other SVN ports accounted for only 22% of the total cargo handled during the same period.

When Danang's total port workload is compared only against the other three major deep draft ports in SVN, the following data results:

TABLE 2

PRINCIPAL SVN DEEP DRAFT PORTS MILITARY CARGO WORKLOAD
(000 Short Tons)

	Month	Danang	Qui Nhon	Cam Ranh Bay	Saigon[a/]
1967	Jan	139.8	117.1	173.8	250.8
	Feb	141.2	132.6	186.0	247.3
	Mar	157.0	160.8	189.8	243.1
	Apr	215.7	155.7	169.8	276.1
	May	198.7	159.6	150.4	305.2
	Jun	228.2	166.4	176.2	272.8
	Jul	209.1	161.5	183.1	224.2
	Aug	232.7	186.2	174.2	232.6
	Sep	211.8	184.9	138.7	211.2
	Oct	197.7	135.7	149.7	237.3
	Nov	236.5	143.4	197.6	276.7
	Dec	211.7	178.2	194.9	276.9
1968	Jan	306.7	168.0	199.4	299.1

a/ Includes ammunition at Cat Lai

The data indicates that Danang is now the major U.S. military port in SVN. Its vital importance for support of the augmented forces in the I CTZ is obvious. Even a temporary loss of Danang's integrated logistical capabilities, either through enemy action or natural phenomena, could have grave consequences.

CINCPAC FLAGPOLE ITEMS

The FLAGPOLE System for designating critical items for SEA support was discontinued as an OSD requirement in August 1966; however, CINCPAC has retained it as a system for reporting to JCS. The following provides the current status of the six items on FLAGPOLE:

Item No.	Material	Comments 1/
B-10	Herbicide	COMUSMACV has a stated requirement for 11.9 million gallons of herbicides for defoliation during FY 68. USAF budget provides only for purchase of 6.4 million gallons for that period. Additional funding will be required. Plant expansion will be necessary as well and will require 12-18 months leadtime. Hence, expanded production will not be available prior to 4th quarter FY 68.
E-1	Lightweight Utility Uniforms	Production continues to increase and now essentially meets the demands of all troops in SEA. However, in order to meet the requirement for issuance of 5 sets of the lightweight uniforms to all combat forces in SEA, increased production and time are required. It is expected that by July 1967, production and stocks will permit the issuance of the required 5 sets to all those requiring them.
E-2	Tropical Boots-DMS	Reports from SEA indicate that minimum requirements for all combat troops have now been met. However, requirements for issuance of 2 pairs of boots to each individual combat man in SEA will not be met until July 1967 when production and stocks catch up with demand.
F-5	MK2 MOD1 Impulse Cartridge	Cartridge is used in conjunction with the MER/TER* bomb racks and is a vital part of the system. The cartridge which somewhat resembles a shotgun shell is used to "blow away" or eject ordnance stores (bombs, rockets) away from the bomb rack. Heavy usage by Navy in SEA operations has created temporary shortage of this item. Supply should meet demand by end of February 1967.

1/ Source: JCS J-4
* MER/TER - Multiple ejection rack/Triple ejection rack

Item No.	Material	Comment 1/
F-6	MER/TER* Aircraft Bomb Racks	These racks were principally made by Douglas Aircraft for the A-4 aircraft. Since the A-4 was designed essentially as a nuclear bomb carrier, provision was not originally made for the carriage of multiple loads of "iron" bombs and rockets. The racks are not a "simple" item; they are made of several complex mechanisms and an electrical wiring system in association with the impulse cartridge. Supply should meet demand by November 1967.
F-7	5 Inch/38 AAC/HC Gun Ammunition	Naval gunfire support missions and "SEA Dragon" have markedly increased consumption of 5 inch gun ammunition. To meet immediate needs the Navy has converted 50,000 rounds from VT to HE-PD; production of full charges has been accelerated to provide 40,000 rounds/month; and a portion of CONUS assets were shipped to SEA. Increased production should meet demands by June 1967.**

1/ Source: JCS J-4
* MER/TER - Multiple ejection rack/Triple ejection rack.
** OASD(SA) Comment. Production is now meeting SEA consumption requirements and will fulfill FY 68 logistic guidance objectives in June of 1967.