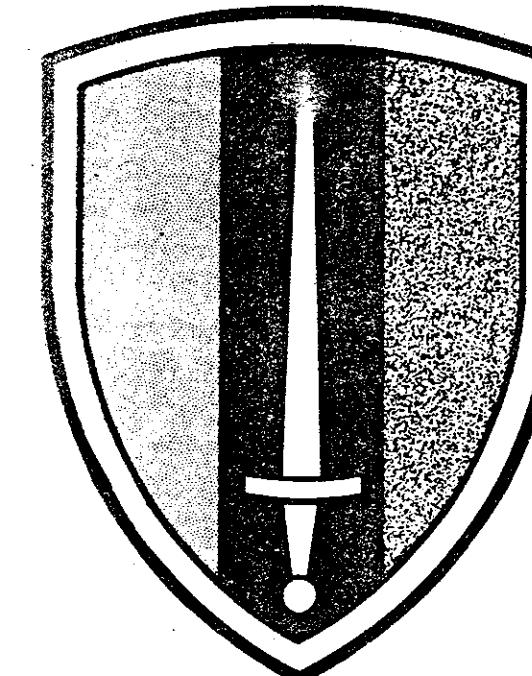


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DAIM-FAR-RR # 19-1987 DATE: 17 June 1987

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# THE COMMAND PROGRESS REPORT



# ENGINEER

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### FAR INFRARED TARGET INDICATOR (FIRTI)

OBJECTIVE: (C) The AN/VAS-1 (FIRTI) Mine Detection System is a tank-mounted system of thermal imaging. The purpose of the employment of the system was to:

- a. determine the effectiveness of FIRTI in indicating the presence of land mines under combat conditions in RVN.
- b. determine operational techniques for the effective employment of FIRTI in mine detection/road sweep operations in RVN.
- c. identify special training requirements and techniques.

ANALYSIS: (C) Three FIRTI systems are presently in country. Engineer Command has been tasked with conducting further evaluation of FIRTI's mine detection capabilities and use of the system in conjunction with a sweep team. Interim and final reports have not been forthcoming.

ACTIONS/FUTURE OUTLOOK: (C) Further testing and evaluations are required to determine FIRTI's overall effectiveness. However, early indications are favorable.

### REDUCTION OF LEASED FACILITIES

OBJECTIVE: To reduce the number of leased facilities in RVN thereby effecting a cost reduction.

ANALYSIS: With a view toward cost reductions in Vietnam, USARV with assistance from MACV has placed command emphasis on terminating leases. During the 4th Qtr, FY 71, 33 leases were terminated and two leases were added to the leased property inventory, leaving a net reduction in annual rentals of 0.63 million dollars and a total of 259 leases in the inventory.

ACTIONS/FUTURE OUTLOOK: During the 1st Qtr, FY 72 additional leases scheduled for termination should add a total of approximately 0.423 million dollars to the savings thus far effected. In addition, this command will place continued emphasis to reduce leased facilities by subordinate commands.

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CLOSED LOOP GENERATOR REQUIREMENTS

OBJECTIVE: To evaluate closed loop generator requirements for contractors providing facilities engineering service to US Army installations throughout Vietnam.

ANALYSIS: Low voltage power generation continues to be a problem at field locations. The Closed Loop Support system has not been supplying low voltage generators at a rate sufficient to satisfy new requirements and the replacement of units retrograded for rebuild. An hour stratification survey has been made of all low voltage generators in Vietnam. The hour stratification indicates the number of generators currently exceeding rebuild criteria and the number of units which will reach rebuild criteria status during FY 72. Data has been provided to USARPAC and USAMECOM for programming FY 72 generator requirements on a monthly basis. This information will be used by DA to procure additional generator assets or increase maintenance programs to obtain an increased influx of overhauled generators.

ACTIONS/FUTURE OUTLOOK: Low voltage generators will continue to be retrograded for rebuild as operational requirements and incoming assets permit. In addition, assets obtained from base transfers will be redistributed to satisfy operational requirements. Until adequate assets become available through the Closed Loop Support system overhour operation of generators must be continued. This will result in a loss of economically repairable units to the Closed Loop Support System, however, this is an operational necessity.

DISPOSAL OF EXCESS FACILITIES

OBJECTIVE: To dispose of excess facilities by transfer to RVNAF.

ANALYSIS: Excess facility transfers to the RVNAF continued at approximately the same rate as experienced during the 3d Qtr, FY 71. Through 31 Mar 71 a total of 83 transfer actions with a total acquisition value of 92.19 million dollars, were completed. During the past quarter there were 24 transfer actions with an initial acquisition value of 17.68 million dollars. Total transfers to RVNAF through 30 Jun 71 are 107 transfer actions valued at total initial acquisition value of 109.87 million dollars. The RVNAF have become saturated with the number of US installations transferred to them. As a result, the RVNAF are accepting some of the installations simply to recover the construction materials for use in maintaining their other installations or to reuse the material for authorized construction projects elsewhere. In these cases USARV makes every attempt to recover all valuable facility components prior to the transfer. Such items as large pre-engineered buildings, AM-2 matting, air conditioners, generators, high voltage distribution systems, ice plants, and transformers are examples of the items being recovered.

ACTIONS/FUTURE OUTLOOK: There are another 40 transfer actions presently in progress to RVNAF, reflecting an initial value of 16.20 million dollars.

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FACILITIES ENGINEERING SERVICES, FY 72

OBJECTIVE: To provide for continuation of contract facilities engineering services for FY 72.

ANSLYSIS:

Pacific Architects & Engineers (PAE) Facilities Engineering Contract. During 4th Qtr, FY 71, PAE submitted several manning proposals for the FY 72 facilities engineering contract. Negotiations for a noncompetitive award were conducted with PAE during the 4th Qtr, which resulted in a refined performance evaluation criteria, the establishment of a lower manning ceiling for the Contract Management Office (CMO), augmenting the capability of the construction group, and increasing the level of services at major residual bases. Significant cost reductions resulted from a manpower survey of CMO and a detailed analysis of the base data used to justify manning levels. As a result of negotiations, an increased level of facilities engineering services will be provided during FY 72 at reduced cost to the US Government.

Philco-Ford Facilities Engineering Contract. Negotiations for a non-competitive award were conducted with Philco-Ford Corporation for the FY 72 facilities engineering services for the Da Nang and Chu Lai areas during 4th Qtr, FY 71. The technical provisions and performance evaluation criteria were refined. Additional manning was authorized to provide support for the facilities vacated by the Marines in the Da Nang area.

Land Based Power Contract. During the 4th Qtr, FY 71, responsive bids were received from five different contractors. Technical negotiations were conducted and all five bidders were found technically responsive. A last and final offer by the contractors resulted in reducing the cost of the contract by approximately one million dollars. PAE was awarded the contract on 24 Jun 1971.

Marine High Voltage Contract. Negotiations for the noncompetitive award were conducted during the 4th Qtr, FY 71. Vinnell Corporation proposed and the Government accepted to change the type of contract from a Cost Plus Incentive Fee to a Firm Fixed Price.

ACTIONS/FUTURE OUTLOOK: All facilities engineering contracts were successfully negotiated and awarded during 4th Qtr, FY 71 to provide continuous essential services during FY 72.

O&MA MINOR NEW CONSTRUCTION

OBJECTIVE: To review all O&MA Minor New Construction Projects for feasibility and necessity in light of current austere funding situation.

ANALYSIS: The USARV Facilities Review Board reviewed 89 O&MA Minor New Construction projects during the 4th quarter of FY 71. Of these projects, 64 were approved at a cost of \$286,100 and 25 were disapproved costing \$163,900.

ACTIONS/FUTURE OUTLOOK: The Facilities Review Board is continuing to review all projects costing over \$500 in light of current funding situation and the New Start Criteria to assure that only those projects which are urgent and essential in nature are approved.

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LINES OF COMMUNICATION (LOC)

OBJECTIVE: To repair and upgrade those key national, provincial and interprovincial roads in Vietnam essential to support military operations, and to provide for civilian traffic necessary for continued political and economic development of the country.

ANALYSIS: USARV is responsible for the construction of 3,642 kilometers (KM) of the MACV LOC program. The figures for USARV's portion have been revised and the current status, by construction agency, follows:

## USARV LOC Program \*

	Paved Prior CY 71 (KM)	Scheduled CY 71 (KM)	Paved CY 71 (KM)	% CY 71 Paved	Scheduled CY 72 (KM)
US Troops	1003	413	190	46	186
ARVN	23	135	50	37	324
Contractor	686	210	89	42	158
Deferred/ Unassigned	---	55	---	--	443
<b>TOTALS</b>	<b>1712</b>	<b>813</b>	<b>329</b>	<b>40</b>	<b>1117</b>

\* As of 19 Jun 71

ACTIONS/FUTURE OUTLOOK: During the 2nd Qtr, CY 71, progress continued on all major roads with attention focused on completing by the end of the coming quarter the US portion of all roads with the exception of QL-20 and LTL-7A. In this regard, the following significant actions occurred or are planned:

(1) The Clarke Plan has been approved which will result in a troop to local contractor shift of 83 KM of MR 4 roads.

(2) A troop to contractor switch was made of 158 KM on QL-19, QL-13, and QL-22, which require repairs and shoulders in order to turn over to DGOH. This accounts for the reduction in the paved prior to CY 71 column by US troops in the above table.

(3) RVNAF took over operational control of one industrial site on 1 Jun 71 and will take over two more NLT 1 Sep 71.

(4) RVNAF has agreed to take over a portion of QL-20 from US troops in the Oct 71 time frame.

ELIMINATION OF CONTRACT ENGINEERING SERVICES SUPPORT

OBJECTIVE: To reduce cost by termination of the engineering services contract which augments engineering in-house capabilities.

ANALYSIS: An engineering services contract has been in effect with Quinton-Budlong to provide 26 personnel to augment in-house engineering capabilities to accomplish the heavy workload which existed until recently. The cost of the contract over the last six months of FY 71 was about \$300,000. As major troop withdrawals began to occur and closer control over new construction was exercised, the number of construction projects requiring major design effort began to diminish. Therefore, it was possible to forecast a time when the contract could be closed out.

ACTIONS/FUTURE OUTLOOK: The engineering services contract with Quinton-Budlong was terminated 30 June 1971.

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REDEPLOYMENTS - INCREMENT VI

OBJECTIVE: To summarize the impact of Increment VI redeployments on the organization of the Engineer Command.

ANALYSIS: Increment VI saw the drawdown of the 18th and 20th Engineer Brigades and the 937th Engineer Group with the result that the Engineer Command now controls the remaining four Engineer Groups directly. Also drawn down in the increment were the 589th Engineer Battalion and the 46th Engineer Battalion. The 500th Engineer Company (PB), 572nd Engineer Company (LE) and D Co, 31st Engineer Battalion were inactivated in-country.

ACTIONS/FUTURE OUTLOOK: The Engineer Command now consists of four engineer groups, three engineer districts, eleven construction battalions, six combat battalions, one land clearing battalion, and a number of separate companies and detachments. The outlook for the future is for continued redeployments in consonance with Vietnamization and the US troop withdrawal plan.

FORCE STRUCTURE CHANGES

OBJECTIVE: To describe the Force Structure Changes made involving the HQ TDA, Group MTOE's and inactivation of the Brigade Headquarters.

ANALYSIS: (1) During the final quarter of FY 71 it was decided that the Brigade Headquarters should be inactivated in order to economize on staff personnel within the Engineer Command. To make this possible, many Brigade functions were assumed by this headquarters. Subsequently, personnel increases were required mostly by the Administration and Materiel Directorates, and the HQ TDA was increased in response to this need.

(2) The Engineer Groups also underwent some change. The 937th Group Headquarters drew down for inactivation and responsibility for its subordinate units was assumed by other Groups. With the loss of the two Brigades and the 937th Group, changes were necessary in the disposition of the Engineer Command aviation assets. The aviation assets of these three units were distributed among the four remaining groups.

(3) A Force Structure Change concerning the above actions was made by USARV and forwarded to USARPAC in late June. DA approval of this action should be forthcoming in late September 1971.

ACTIONS/FUTURE OUTLOOK: The above discussed force structure changes eliminated much duplication of administrative work and subsequently resulted in a personnel savings of 227 spaces.

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COUNTERMINE/BOOBY TRAP ASSISTANCE TEAM (CBAT) (U)

OBJECTIVE: (U) The purpose of the CBAT was to provide instruction in identifying and disposing of enemy mines and booby traps. It was also oriented toward providing instruction and practical exercise in the proper use of two types of mine detectors found in RVN; the AN/PRS-7 and the AN/P-153/158. The team was also available to units for guidance and evaluation in perfecting mine sweep team procedures. All this was an effort to improve the countermine and counterbooby trap tactics among units in RVN.

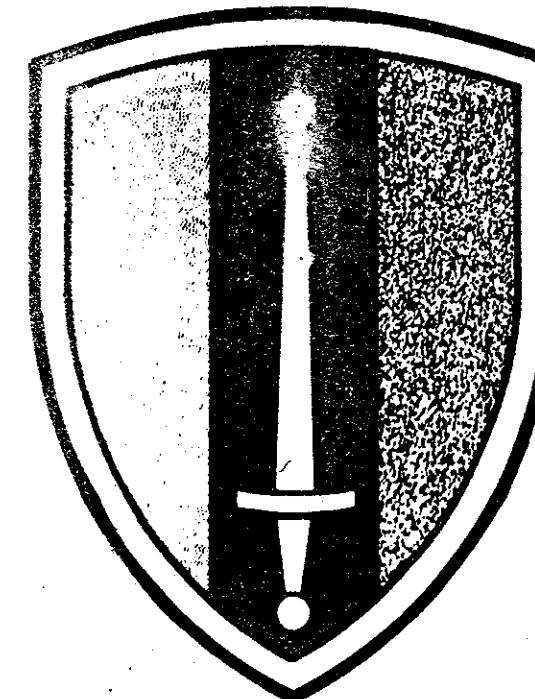
ANALYSIS: (U) The CBAT was made available to all of the commands presently in Vietnam during the period 15 February to 15 June 1971. A large majority of the Engineer units and several Infantry and Armored units were visited by CBAT. In most cases, a combination of formal instruction, practical exercise and observation were requested by the units. A majority of the troops and commanders who received CBAT training agreed that they had gained useful information which would be valuable in their countermine and booby trap activities.

ACTIONS/FUTURE OUTLOOK: (U) On 30 June, the CBAT was officially discontinued. However, prepared lesson plans and 35mm slides will be made available to units upon request.

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REDUCTION IN FACILITIES ENGINEERING BUDGET

OBJECTIVE: To curtail Facilities Engineering (FE) Contractor services throughout Vietnam and thus satisfy the reduced and revised FF OMA budget.

ANALYSIS: On 1 July 1970 FE Budget requirements were as follows:

FE PA&E Contract	\$ 81,900,000
FE Philco-Ford Contract	12,880,000
Power PA&E Contract	6,320,000
Power Vinnell Contract	7,450,000
Other	210,000
	<b>\$108,760,000</b>

Due to a reduction in the USARV Budget in August, the Engineer Command was required to reduce its budget severely in the area of Facilities Engineering services. After computing possible savings from all FE and power contracts, considering base closures and other identifiable areas which might result in savings, the Engineer Command was still required to reduce FE services performed by contractors by \$16.85 million; \$16,000,000 in the PA&E FE contract and \$850,000 in the Philco-Ford FE contract. Both contractors submitted proposed new manning levels on 21 Sep 70; these proposals did not reduce contractual services by the needed \$16,850,000, so were returned to the Contractors for further modification.

CONCLUSION/FUTURE OUTLOOK: Both Contractors are to re-submit manning levels on 5 Oct 70, and these proposals will be a basis for re-negotiating the terms of the contracts. Whether the Engineer Command can adjust to the Annual Operating Program (AOP) will depend upon (1) the success of these negotiations, (2) cost savings realized by the Contractors, and (3) the timely closure of bases. If more large bases were closed than are currently anticipated, there would be less problem in meeting the revised AOP. With only speculative information available on base closures and other cost savings, the administration of the contracts requires extensive effort in order to provide minimum, essential facilities Engineering services.

LINES OF COMMUNICATION (LOC)

OBJECTIVE: The purpose of the MACV LOC Restoration program is to repair and upgrade those key national, provincial and interprovincial roads in Vietnam essential to support military operations and provide for civilian traffic necessary for continued political and economic development of the country.

ANALYSIS: USARV is responsible for the construction of 3672 Kilometers (KM) of the MACV LOC program. The figures for USARV's program by Construction Agency have been revised and the current status is as follows:

## USARV LOC PROGRAM

	Paved Prior CY 70 (KM)	Scheduled CY 70 (KM)	Paved CY 70 (KM)	% CY 70 Paved	Scheduled CY 71 & 72 (KM)
US Troops	690	635	458	72	123
ARVN	0	80	3	4	438
Contractor	517	222	158	71	163
Deferred/ Unassigned					399
<b>TOTALS</b>	<b>1207</b>	<b>937</b>	<b>619</b>	<b>66</b>	<b>1528</b>

CONCLUSION/FUTURE OUTLOOK: During the quarter, preparations for movement of units and industrial complexes to support the CY 71 program have continued. Planning for Vietnamization has progressed and 2 additional ARVN units have been designated to participate in LOC construction during CY 71. Funding for the LOC program has been reduced from \$496 million to \$447 million, removing 109 KM from the contractor program. The US Troop program has been examined in detail and, based on actual performance during CY 70, a new schedule has been prepared which provides for completion of 635 KM during CY 70. The troops are scheduled to complete about 450 KM in CY 71.

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DISPOSITION OF REAL PROPERTY VIETNAM

OBJECTIVE: To provide information concerning the disposal of USARV facilities on real property records which were made excess by the redeployment of forces from RVN.

ANALYSIS: A large number of facilities have become excess to US requirements as US troop redeployments occur. We recognize that a considerable investment has been made in base construction in Vietnam. At the peak of the US troop build-up, base construction proceeded at a rapid pace to meet requirements throughout Vietnam. Under the current program of phased troop redeployments, the previous assets are becoming excess to USARV needs. Disposal of these facilities in a timely and efficient manner requires continuous and coordinated planning at all levels.

Our initial experience with the disposal of excess facilities was gained in Aug 69 when Dong Tam was transferred to ARVN. The lessons learned there were applied during the subsequent transfer of Blackhorse. In order to preclude recurrences of the problems encountered with the previous transfers, MACV Directive 735-3 and USARV Regulation 700-26 were implemented. Since Sep 69, thirty transfers of installations or parts of installations on real property records have been accomplished. The total initial acquisition cost of the facilities transferred to the RVNAF has been almost forty-six million dollars. There are eleven more transfer actions presently being processed.

CONCLUSION/FUTURE OUTLOOK: As US troop redeployments continue, the capability of RVNAF to occupy the excess US facilities will be greatly exceeded. Plans are now underway to determine ways of dismantling the installations in the most economic manner. In all cases, strict procedures are being followed to insure proper documentation and a clear audit trail is maintained in all disposal actions.

ARVN ENGINEER IMPROVEMENT AND MODERNIZATION

OBJECTIVE: The goal of this program is to expand the ARVN Engineer construction force, modernize equipment and train personnel for engineer missions.

ANALYSIS: The Engineer Command has completed the transfer of equipment to three ARVN construction battalions and two heavy equipment companies. Transfer of equipment to the 318th ARVN Land Clearing Company is 95 percent complete. Transfer of equipment to the 118th ARVN Land Clearing Company was initiated on 2 October 1970. Training of ARVN Engineer personnel is being accomplished by OJT on an individual basis and as a unit. Over 1200 ARVN engineers have completed OJT in various engineer skills with US units. An additional 200 are currently undergoing training. The 318th ARVN Land Clearing Company completed OJT with the 62nd Engineer Battalion (LC) and has completed its first independent mission with highly satisfactory results. The 118th ARVN Land Clearing Company has completed individual OJT and will continue training as a unit with the 18th Engineer Brigade. The 218th ARVN Land Clearing Company is currently undergoing individual OJT which is scheduled for completion on 15 November 1970. Unit training will continue with the 18th Engineer Brigade.

CONCLUSION/FUTURE OUTLOOK: The program to train and equip ARVN Engineers has been successful. ARVN personnel are capable of developing new skills and upgrading current skill levels through OJT. ARVN units are becoming capable of taking over more of the construction and land clearing missions.

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USARV STOCKADE FACILITIES AT LONG BINH

OBJECTIVE: Complete design drawings for construction of new USARV stockade facilities at Long Binh.

ANALYSIS: Plans for the maximum security portion of the stockade, which were done "in-house", are complete and construction is progressing. Plans for the remainder of the stockade work, which was originally to be built by contract construction, are currently being prepared by Trans-Asia Engineering Associates through OICC, using design criteria provided by the Engineering Division. "On-board" design reviews were conducted at the 20 percent and 50 percent completion stages. Extensive revisions were required at the 50 percent stage to simplify details and construction procedures, since the decision had been made to change to construction by troops. These changes caused delay in completion of these plans.

CONCLUSION/FUTURE OUTLOOK: Plans by Trans-Asia Engineering are now scheduled to be completed by 15 October 1970, at which time final scheduling, procurement of materials and construction may commence.

LOC BRIDGE DESIGN

OBJECTIVE: To provide bridge designs to the brigades for those LOC bridge sites for which they requested assistance from USAFCV (P).

ANALYSIS: The brigades have requested a total of 21 bridge designs from USAFCV (P). Of this total, 8 were prestressed concrete design, 10 were 36" built-up beam design and three were 36" wide flange design. At present, we have completed 8 designs on schedule. We have experienced delays on 2 bridges due to incomplete soils data from the OICC contractor. The OICC Engineering firm is presently re-drilling the holes in question.

CONCLUSION/FUTURE OUTLOOK: Quinton-Budlong has done an exceptional job in meeting our design schedule. The designs have been accepted readily by the brigades and their subordinate units. All but one of the remaining designs will be completed by 31 Dec 1970, which gives a substantial schedule to meet in the coming fiscal quarter. No problems are anticipated.

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ASSUMPTION OF FACILITIES ENGINEERING

MISSION IN MR I

OBJECTIVE: To insure continuance of facilities engineering support to US Forces in MR I when Navy supporting elements are withdrawn.

ANALYSIS: USAECV(P) assumed the complete facilities engineering (FE) mission in MR I on 1 Jul 70. Some minor problems occurred during the past quarter, however, most of these problems have been solved. In addition, the Navy has requested termination of the Interservice Support Agreement (ISSA) for maintenance of submarine POL lines. Possible solutions that were considered were utilization of a contractor or a port construction company. Due to current funding limitations and other operation support requirements the Navy has been requested to continue maintenance of the lines under the terms of the ISSA.

An agreement initiated by the Navy was signed by the Chief of Staff, USAECV(P), for use of Mobile Utility Support Equipment. Under the agreement sixteen generators and six substations are on temporary loan, four generators are on loan until reimbursement is effected and twenty-six generators and four substations were permanently transferred.

CONCLUSION/FUTURE OUTLOOK: USAECV(P) has successfully assumed the FE mission in MR I. Pacific Architects and Engineers is responsible for FE north of the Hai Van Pass and high voltage power generation and distribution throughout the region. Pacific-Ford is responsible for FE south of Hai Van Pass.

PERIL STUDY

OBJECTIVE: The Peril Study will be used as a guide to assist in determining the disposition of excess facilities during phase out operations in Vietnam.

ANALYSIS: The study investigates the economic feasibility of redeploying in Vietnam, or retrograding to Okinawa or CONUS some 935 engineering related components. Detailed procedures for determining the value of items and the costs for troop or contractor recovery operations are included in the study. The Engineering Directorate reorganized the study, eliminating those items with a net worth of less than \$50. The net worth was determined as being the present worth less the cost of retrograding the item to a depot in Vietnam. It is not considered economical to salvage items of a value less than \$50. The item list was also revised to include federal stock numbers to facilitate its use in the Army supply system.

CONCLUSION/FUTURE OUTLOOK: If a facility is scheduled to be closed in lieu of being transferred to ARVN, the revised PERIL Study will be used as a guide to assist in making a detailed inventory of economically salvageable items. Additional information contained in the study may be used to determine the most feasible disposition of the items once they are determined to be salvageable.

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**UNCLASSIFIED****ORTHOPICTOMAP PRODUCTION**

**OBJECTIVE:** To provide complete orthopictomap coverage of the Republic of Vietnam.

**ANALYSIS:** An orthopictomap series covering the RVN is currently being produced by US Army TOPOCOM. The orthopictomap is a highly accurate 1:25,000 scale pictomap in which the displacement of features inherent in earlier series of pictomaps has been removed. In addition it contains a high density of readily identifiable trigonometric control points and is bilingual to accomodate both RVNAF and US personnel. Complete orthopictomap coverage of RVN requires 1065 sheets.

**CONCLUSION/FUTURE OUTLOOK:** Orthopictomap production has been identified by COMUSMACV and CINPAC as the top priority mapping project in South Vietnam. Initial stockage of the orthopictomap has started to arrive in country and currently 29 sheets are available through normal map supply channels. The initial orthopictomap coverage is located in MR IV. Current TOPOCOM schedules program the production of 173 additional sheets in FY 71, 396 sheets in FY 72, and the remaining 467 sheets in FY 73.

**UNAUTHORIZED AIR CONDITIONERS**

**OBJECTIVE:** To bring all air conditioners under USARV control, both authorized and unauthorized.

**ANALYSIS:** Continued efforts are being made to bring all air conditioners under USARV control. Northern District Engineer has recently submitted a listing of air conditioners originally installed by the US Navy at Quang Tri and Dong Ha installations, for after-the-fact approval and assignment of USARV control numbers.

**CONCLUSION/FUTURE OUTLOOK:** Continued efforts will be made to bring all air conditioners under USARV control with particular emphasis placed on air conditioners installed in facilities transferred to USARV for facilities engineering support after 1 July 1970.

**DESIGNS FOR WATER AND SEWAGE TREATMENT FACILITIES**

**OBJECTIVE:** To standardize designs for water and sewage treatment facilities in the Republic of Vietnam.

**ANALYSIS:** A set of thirty standard design drawings for water and sewage treatment facilities is being prepared by the Engineering Division. These can be combined or modified as needed to meet various requirements at different installations, particularly the MACV advisor facilities.

**CONCLUSION/FUTURE OUTLOOK:** The standard designs will be completed by 15 Oct 1970 and are already being referenced in our design specifications. They will eliminate repetitive design work and standardize construction material requirements.

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STANDARDIZED BRIDGE DESIGNS FOR ARVN

OBJECTIVE: To provide ARVN OCE standard designs for short bridges using prestressed/precast concrete for superstructure and precast/steel/wood piling for substructure. These designs will allow the ARVN to assume a larger bridge construction role in the post FY 71 LOC program.

ANALYSIS: Coordination with ARVN concerning equipment, material availability, and troop unit expertise has been completed. Standard designs for superstructure, approach slabs and abutments, and intermediate piers in both 7.5m and 12.0m deck slab widths will be released between 3 Oct and 15 Nov 1970. We will also provide a construction guide and the design for one specific bridge.

CONCLUSION/FUTURE OUTLOOK: The designs are well underway for this project. The total project is substantial, requiring about 90 sheets. We anticipate no problems and plan seven review sessions with the representatives from ARVN OCE.

REDUCTION OF LEASED FACILITIES

OBJECTIVE: To reduce the number of leased facilities presently held by US and I WMAF and to consolidate into rent free facilities, consistent with operational requirements.

ANALYSIS: During 1st Otr, FY 71, 54 leased facilities, having annual rents totaling US \$560,997.34, were terminated. Ten leases were added to the leased property inventory having annual rentals of US \$180,596.61. Twenty additional leases, having annual rentals of US \$77,288.11, were found to be available rent free and were removed from the active lease lists. Thus the total number of leases was reduced to 344.

CONCLUSION/FUTURE OUTLOOK: The program to reduce the number of leased facilities continues to be stressed, receiving the attention of the command. Continuing rotation, reduction of forces, the MOVE OUT OF SAIGON, REPETITIOUSLY Program and other redeployments based on utilization studies give opportunities to terminate leases and prevent unnecessary new ones.

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REPORTING OF MINE AND BOOBY TRAP INCIDENTS (U)

OBJECTIVE: (U) To emphasize compliance with mine and booby trap incidents reporting procedures outlined in MACV Dir 381-53.

ANALYSIS: (C) One of the prime responsibilities of the USARV Mine Warfare Center is to gather and analyze statistics on mine and booby trap incidents. Evaluation of these statistics is particularly valuable in determining the level of mining activity, detection proficiency, and enemy mining trends or patterns. Approximately two-thirds of the mine and booby trap incidents are not being reported to Combined Intelligence Center Vietnam on MACV Form 54 for analysis by a computer program. Without the required broad base of statistics provided by the units, a proper and valid analysis of mine and booby trap incidents cannot be accomplished.

CONCLUSION/FUTURE OUTLOOK: (C) Revitalization of the existing reporting system is being accomplished by command emphasis on the importance of reporting all mine and booby trap incidents. With more data, a better analysis and proposed solutions can be initiated.

MILITARY CONSTRUCTION ARMY (MCA)

OBJECTIVE: To provide on an austere basis facilities which are adequate for the support of Military Operations.

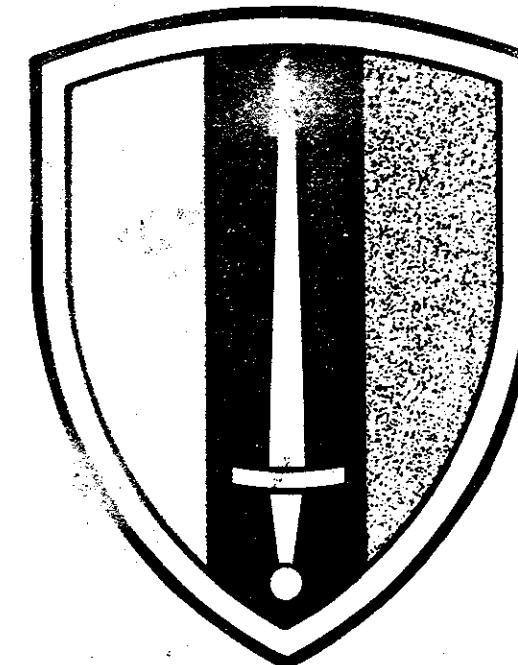
ANALYSIS: During the 1st Qtr FY 71 the funding limitation of \$907 million for the USARV MCA program did not change. By the end of the quarter all of the USARV MCA funds had been programmed. Of the \$907 million total apportioned, \$682.3 million was employed to fund US Troop requirements under USARV direction, \$102.7 million to fund LOC requirements directed by MACV, and \$122.0 million to fund MASF projects also directed by MACV. In the 1st Qtr FY 71 projects valued at \$20.6 million were let to the contractor and \$11.1 were assigned to the troops. These projects were primarily LOC construction. Stringent interpretation of the "New Site Criteria" resulted in only \$253 thousand of \$13 million requested being obligated for construction of US Troop requirements. All other projects were LOC, MASF, or MACV Advisor facilities. The total program is over 51 percent complete. Cumulative Work-In-Place (WIP) and cumulative obligations increased as follows:

( \$ Million)	End of 2d QTR FY 70	End of 3d QTR FY 70	End of 4th QTR FY 70	End of 1st QTR FY 71
Cumulative WIP	746	763	766	789
Cumulative Obligations	828	861	877	882

CONCLUSION/FUTURE OUTLOOK: Unless new funds are apportioned, no new MCA programming can be accomplished. Requirements for US Troops will continue to receive thorough scrutiny and new projects will be held to an austere minimum. Any new projects will be funded by cancelling lower priority previously approved projects. The rate of completed construction increased from \$5 million per month in the 4th Qtr, FY 70 to \$7 million per month during the 1st Qtr, FY 71. This increased rate should hold in the next quarter.

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AN/PRS-7 PORTABLE NON-METALLIC MINE DETECTOR

OBJECTIVE: To provide US tactical units with a means to detect non-metallic mines.

ANALYSIS: An ever increasing number and variety of non-metallic mines are being utilized by hostile forces. Prior to the November arrival of the first shipment of new AN/PRS-7 portable non-metallic mine detectors, US units had no reliable means of detecting non-metallic mines. The new detector replaces the older AN/PRS-4 on a one-for-one basis and supplements, but does not replace, the AN/PD-152 portable metallic mine detector. To date, 102 detectors have been issued to field units with priority of issue going to engineer units in MR I. New equipment training was conducted for operator and supervisory personnel of all engineer units in RVN, and a total of 399 individuals took part in this training. These personnel will be used to train non-engineer units in operation and maintenance of the detector.

CONCLUSION/FUTURE OUTLOOK: It had originally been hoped that all the detectors would be issued by March or April of 1971; however, at present 297 detectors are unaccounted for in transit from CONUS and it is uncertain when these will be available for issue.

GENERATOR DISTRIBUTION THROUGHOUT RVN

OBJECTIVE: To centralize the control of generators and insure their effective distribution throughout the Republic of Vietnam so that requirements are satisfied.

ANALYSIS: Previously generators were allocated to the district engineer, who, in coordination with PA&E activities in his area, satisfied priority requirements within his district. There was virtually no interchange of generators among the three districts to satisfy the country-wide urgent requirements. Recently, the Central Management Office of PA&E established a central control office which records the location and condition of generators within the PA&E country-wide area of responsibility. Based on the urgency of the requirement or on priorities established by USARV, PA&E is now able to move generators from any location within its area of responsibility to satisfy requirements in any other area of RVN.

CONCLUSION/FUTURE OUTLOOK: Total generator assets under centralized management makes it possible to satisfy most urgent requirements for electrical power with full realization of the impact on the total power requirements in RVN. The program will be extended to the Philco-Ford area as soon as their assets are identified.

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**DISPOSITION OF REAL PROPERTY VIETNAM**

**OBJECTIVE:** To dispose of USARV facilities on real property records that are made excess by the redeployment of US Forces in RVN.

**ANALYSIS:** As USARV facilities in RVN become excess to US requirements, they are offered to RVNAF and others in accordance with the priorities established in MACV Directive 735-3. The installations are transferred in accordance with Army regulations to insure that a complete audit trail is maintained. Since September 1969, 49 installations, or parts thereof, carried on real property records have been transferred to RVNAF. The transferred property had an initial value of 62.5 million dollars. Thirteen more transfers valued at 28.2 million dollars are in progress. Currently RVNAF is becoming saturated with facilities. If RVNAF does not plan to utilize excess facilities, USARV recovers the valuable facility components that are available. Routinely, air conditioners, generators, large pre-engineered buildings, AM-2 matting and other high value items are removed if not needed by RVNAF. High voltage generators and related equipment are being recovered and controlled for eventual retrograde to CONUS.

**CONCLUSION/FUTURE OUTLOOK:** As US troop redeployment continues, the capability of RVNAF to accept facilities will be exceeded. USARV will attempt to retrograde valuable facility components as long as troop or contractor effort is available. RVNAF plans to dismantle remaining facilities for use in other locations. In the future other agencies in RVN may desire to accept some of the facilities that become available.

**MILITARY CONSTRUCTION ARMY (MCA)**

**OBJECTIVE:** To provide on an austere basis facilities which are adequate for the support of military operations and the Vietnamization of RVNAF.

**ANALYSIS:** The MCA Program has been funded at a 922 million dollar level. The funds are used for the construction of facilities to support US Forces, Free World Military Assistance Forces and ARVN Forces and for LOC construction. During the last quarter 15 million dollars was added to the program for AMASF requirements. The program is expected to be increased in the future to satisfy additional AMASF requirements by the release of the remaining FY 69 MCA funds (\$19.2 mil), FY 71 MCA funds (\$25 mil), and DOD Contingency funds. The total program is now 87% complete, with a quarterly placement rate averaging 15 million dollars.

( \$ Million)	End of 3d QTR FY 70	End of 4th QTR FY 70	End of 1st QTR FY 71	End of 2d QTR FY 71
Cumulative WIP	763	766	791	
Cumulative Obligations	861	877	884	
Funds Assigned	888	907	907	922

**CONCLUSION/FUTURE OUTLOOK:** The work-in-place continued at a steady rate of 5 million dollars per month and is expected to maintain this rate for the 3rd quarter. Obligation of assigned funds continues at a steady rate as new work is identified. Programming of AMASF, LOC, and MACV Advisor facilities continues to receive priority in construction effort. Reprogramming of funds for residual US Force requirements will continue as requirements and future planning data are formalized.

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## REDUCTION IN FACILITIES ENGINEERING BUDGET

OBJECTIVE: To curtail Facilities Engineering (FE) Contractor services throughout Vietnam and thus satisfy the reduced and revised FE OMA budget.

ANALYSIS: On 1 July 1970, FE Budget requirements were as follows:

FE PA&E Contract	\$81,900,000
FE Philco-Ford Contract	12,880,000
Power PA&E Contract	6,320,000
Power Vinnell Contract	7,450,000
Other	210,000
<b>TOTAL</b>	<b>\$108,760,000</b>

Due to a reduction in the USARV Budget in August, the USAECV was required to reduce its budget severely in the area of FE services. After computing possible savings from all FE and power contracts, and considering base closures and other identifiable areas which might result in savings, the Engineer Command was still required to reduce FE services performed by contractors by 16.85 million dollars; reductions of 16 million dollars in PA&E contract and .85 million dollars in the Philco-Ford FE contract. USAECV resubmitted a manning level on 5 Oct 70 which served as the basis for negotiating the terms of its contract. All portions of the PA&E contract have been negotiated with the exception of the award fee system, and the mix between base fee and maximum cost incentive fee. Philco-Ford is in the process of revising their organization and preparing a new proposal.

CONCLUSION/FUTURE OUTLOOK: The Philco-Ford proposal is expected to be resubmitted by 15 Jan 71. Negotiations should begin about 1 Feb 71. Whether the Engineer Command can then adjust to the Annual Operating Program (AOP) will depend upon: (1) Further additions to the scope of the contracts; (2) Cost savings realized by the Contractor; and (3) The timely closure of bases. If more large bases are closed than currently anticipated, there will be fewer problems in meeting the revised AOP. With only speculative information available in base closures and other cost savings, the administration of the contract requires extensive effort in order to provide minimum, essential FE services.

## LINES OF COMMUNICATION (LOC)

OBJECTIVE: The purpose of the MACV LOC restoration program is to repair and upgrade those key national, provincial, and interprovincial roads in Vietnam which are essential to support military operations and to provide for the civilian traffic necessary for continued political and economic development of the country.

ANALYSIS: USARV is responsible for the construction of 3,672 kilometers (KM) of the MACV LOC program. The figures for USARV's portion have been revised and the current status, by construction agency, is as follows:

## USARV LOC PROGRAM\*

	Paved Prior CY 70 (KM)	Scheduled CY 70 (KM)	Paved CY 70 (KM)	% CY 70 Paved	Scheduled CY 71 & 72 (KM)
US Troops	690	635	540	85	475
ARVN	0	80	18	22.5	438
Contractor	517	222	207	93	163
Deferred/ Unassigned					452
<b>TOTALS</b>	<b>1,207</b>	<b>937</b>	<b>765</b>	<b>82</b>	<b>1,528</b>

\*As of 19 Dec 70

CONCLUSION/FUTURE OUTLOOK: During the quarter, relocation of units and industrial complexes has continued in preparation for the CY 1971 LOC program. Recent and impending troop reductions and review of the overall LOC program requirements have resulted in an additional 53 KM of LOC highway being placed in the deferred/unassigned category. Moreover, in order to obtain usable reconstructed highways at the earliest possible date the construction class for several highways was altered. Active planning for Vietnamization of the LOC program is now underway to include the turnover of industrial sites to ARVN engineers. With the majority of unit relocations complete and good construction weather expected, the upcoming quarter should show a substantial increase in LOC construction.

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ICE PLANTS

OBJECTIVE: To install 15-ton ice plants at those locations where it would economically alleviate a portion of the requirement to purchase ice.

ANALYSIS: Presently USARV is purchasing approximately 350 tons of ice per day at an average cost of 22 dollars per ton. PA&E recently made a study on cost savings in ice production. They found that ice could be produced from 15 ton ice plants for about 6 dollars per ton. In view of the substantial savings in ice production compared to ice purchase, a study was made to determine locations at which it would be cost effective to install 15 ton ice plants. As a result of the study, 8 locations were determined to be feasible locations for installing the ice plants. Ice plants are becoming available as a result of base closures and will be utilized at the locations where they will be cost effective.

CONCLUSION/FUTURE OUTLOOK: Preparations are currently underway to develop projects for the installation of 15 ton ice plants.

POL STORAGE TANKS

OBJECTIVE: To stop leakage from POL storage tanks at US military facilities throughout the Republic of Vietnam.

ANALYSIS: Many of the bolted steel tanks in RVN, particularly those storing JP4, have started to leak resulting in considerable fuel loss and loss of storage capacity. An effective method of repair in-place using coal-tar epoxy and burlap has been developed by USAECV. The necessary materials for the repair of ten POL tanks has been ordered and is projected for delivery between 10 and 15 January 1971. The first tank to be repaired will be used as a teaching vehicle. A team from the 18th Engineer Brigade will train PA&E and 20th Engineer Brigade personnel. PA&E will repair all tanks on the base data of contract DAJBII-71-C-0020; the engineer brigades will repair all others. Tanks will be repaired on an integrated priority list, which will include tanks of other services supported under the terms of an ISSA.

CONCLUSION/FUTURE OUTLOOK: POL tanks can be repaired at a fraction of the cost of replacement, or reassembly. The repair of tanks will stop leakage of fuel and return to service tanks taken out of service because of hazards of leaking fuel. Tanks will be repaired as leaks are discovered thereby precluding large losses of fuel.

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**MINOR NEW CONSTRUCTION PROJECTS**

**OBJECTIVE:** To control the expenditure of minor new construction funds within RVN.

**ANALYSIS:** Prior to August 1969, minor new construction projects (\$25,000 and less) were approved at various levels of the Engineer Command. With the reduction in funds for use in RVN, it was decided to control the expenditure of funds for minor new construction projects by requiring all such projects in excess of \$500, be reviewed by the USARV Facilities Review Board (FRB), and approved by the USARV Deputy Commanding General. The FRB acts upon the recommendations of a working group which inspects each project submitted to insure essentiality, long range tenure, and new start criteria.

**CONCLUSION/FUTURE OUTLOOK:** Non-essential projects are identified and eliminated prior to the expenditure of funds. This screening process will become more effective as additional installations are identified for closure or release to the Vietnamese.

**REDUCTION OF LEASED FACILITIES**

**OBJECTIVE:** To reduce the number of leased facilities presently held by US and FWMAF and to consolidate into rent free facilities, consistent with operational requirements, thereby effecting a cost reduction.

**ANALYSIS:** With a view toward a cost reduction in Vietnam, the Real Estate Division, through MACV, has placed command emphasis on obtaining rent-free facilities in order to reduce lease holdings. During the period 1 October 1970 through 31 December 1970, 31 leases were terminated; 4 leases were transferred to the rent free list; and 5 leases were added to the leased property inventory. The effect of these actions was to save \$639,444.69 in annual rentals and leave 315 leases on the inventory.

**CONCLUSION/FUTURE OUTLOOK:** During the 3rd Qtr FY 71, additional leases scheduled for termination will add a total of \$268,013.69 to the savings thus far effected. In addition, this command will place continued pressure on subordinate commanders to reduce leased facilities whenever possible.

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VIETNAMIZATION

OBJECTIVE: To assist the ARVN Engineers to attain self-sufficiency no later than 31 Dec 1971 by eliminating the necessity for their dependence on US Engineer units for engineer and logistic support.

ANALYSIS: Efforts to hasten the Vietnamization of ARVN Engineers gained momentum during the last quarter of calendar year 1970. Accomplishments during this quarter include the following: The 318th ARVN Land Clearing Company (LCC) became totally independent of US Engineer support on 31 Dec 70; the 118th ARVN LCC was furnished on-the-job-training and was issued 85 percent of its equipment; and the 218th ARVN LCC completed on-the-job-training and moved its advance party to Pleiku. The following actions were initiated during the quarter: Development of an ARVNAF construction materials distribution system to be fully implemented by 1 Jul 71; identification of two US Engineer industrial sites (Nui Le by 1 Jul 71 and Weigt-Davis by 1 Sep 71) for turnover to ARVN in mid 1971; development of a third industrial site near Ban Me Thout for turnover to ARVN in mid 1971; and expansion of on-the-job-training to include industrial site operations and MCA/LOC equipment operations.

CONCLUSION/FUTURE OUTLOOK: The USARV Vietnamization efforts with the ARVN Engineers are proceeding satisfactorily. However, emphasis by the Government of Vietnam on dependent housing, which is a great need, may continue to detract from the effort that ARVN could put on the LOC and secondary road programs.

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