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9 October 1967

SUBJECT: Operational Report - Lessons Learned, Headquarters, 79th Engineer Group

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Section 1. Significant Organization Activities:

1. HEADQUARTERS AND HEADQUARTERS COMPANY, 79TH ENGINEER GROUP.

a. General: Headquarters and Headquarters Company, 79th Engineer Group (Construction) remained stationed at the "Plantation Compound" in Long Binh. The reporting period brought about a continual improvement of the facilities in the compound primarily under the self-help program using Vietnamese laborers. The replacement of the
canvas tent roofs on the barracks huts, started during the last quarterly period, was completed during this reporting period. The headquarters was joined by the 547th Engineer Map Depot Platoon which occupied a 70 x 144 foot prefabricated building constructed by the 46th Engineer Battalion of the 159th Engineer Group, the unit responsible for construction in the Long Binh area.

In general the period February 1967 through April 1967, the height of the Vietnamese dry season in the 79th Engineer Group area, saw continued emphasis on operational support missions in support of tactical units of II Field Force, Vietnam (II FFORCEN). The period also brought about a significant organizational change with the arrival of the 34th Engineer Group and its assumption of areas and units of the 79th Engineer Group.

b. Force Development: The period February through April 1967 saw a radical change in the force structure of the 79th Engineer Group. The United States Army Engineer Command (Provisional) (USAECV(P)) was augmented during the months of March and April by the arrival of the 34th Engineer Group from the United States. This new group headquarters, stationed in Vung Tau, was given a large portion of the area responsibility formerly belonging to the 79th Group. Two battalions and several separate companies were transferred from the 79th to the 34th Engineer Group on 20 April 1967. Within the same approximate time frame, the 554th Engineer Battalion (Construction) arrived in Vietnam from the United States and was assigned to the 79th Group. These changes required an extensive redeployment of units. A summary of deployment actions follows:

21 February 1967 - An engineer combat company packet (E-Series TOE) arrives in country, is stationed at Cu Chi, and is assigned to the 588th Engineer Battalion as Company D.

8 March 1967 - 362d Engineer Company (Light Equipment), a 588th Engineer Battalion attachment, moves from Cu Chi to Tay Ninh.

23 March 1967 - 595th Engineer Company (Light Equipment) and 573rd Engineer Company (Float Bridge) arrive in country and are assigned to 79th Engineer Group pending arrival of 34th Engineer Group. The 595th is immediately attached to the 27th Engineer Battalion and stages in Long Binh pending arrival of its equipment. The 573d is stationed at Long Binh and remains directly under Group control.
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31 March 1967 - 595th Engineer Company (Light Equipment) moves from its Long Binh staging area and joins the 27th Engineer Battalion at Long Giao.

15 April 1967 - 554th Engineer Battalion arrives in country and is assigned to the 79th Engineer Group. Headquarters and Headquarters Company, Company A, and Company B stage at Cu Chi, Companies C and D stage at Phu Loi.

16 April 1967 - 86th Engineer Battalion headquarters and Company A move from Phu Loi to Bearcat (Long Thanh).

19 April 1967 - Headquarters 588th Engineer Battalion moves from Cu Chi to Tay Ninh. Company A, 588th Engineer Battalion remains at Cu Chi for eventual attachment to the 554th Engineer Battalion.

20 April 1967 - 38th Engineer Detachment (Well Drilling) at Lai Khe relieved from attachment to 86th Engineer Battalion and attached to 554th Engineer Battalion.

Following units relieved from assignment to 79th Engineer Group and assigned to 67th Engineer Group: 27th Engineer Battalion, 86th Engineer Battalion, 67th Engineer Company (Dump Truck), 573rd Engineer Company (Float Bridge), 595th Engineer Company (Light Equipment), and 156th Engineer Detachment (Well Drilling).

The procedures for the movement of units, transfers of responsibility, and other actions pertaining to the reorganization of group forces were directed by two letters of instruction published by 79th Engineer Group. These are attached as inclosures 1 and 2. One other additional change is included. On 20 April 1967 the quarry section of the 554th Engineer Battalion, a unit with no quarry responsibility, was attached to the 588th Engineer Battalion to operate the rock quarry at Bu La Doi Mountain, northeast of Tay Ninh. The proximity of the quarry to the 588th Headquarters in Tay Ninh and the fact that the output of the quarry would be used to support 588th construction projects were the factors considered in making the decision to continue the quarry as a 588th Engineer Battalion operation and cross-attach the construction battalion's quarry section.
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The cross-attachment of another element, 5th Float Bridge
Platoon, 100th Engineer Company which had been attached to the 588th
Engineer Battalion, was terminated on 15 April 1967 and the platoon
returned to the control of its parent company. Under the previous
deployment, the platoon was stationed with the 588th Engineer Battalion
in Cu Chi, a centralized location from which it could haul supplies from
Long Binh/ Saigon to 588th elements in Cu Chi, Tay Ninh, and Dau Tieng.
With the displacement of the battalion from Cu Chi support would
primarily be for the long haul directly from Saigon/Long Binh to the
battalion at Tay Ninh. This could be just as easily controlled from
Long Binh as it could from another location. Stationing of all
elements of the 100th Engineer Company at their home station in Long
Binh permits greater flexibility and centralized control. All of the
trucks of the 100th Engineer Company now serve in general support of
the 79th Engineer Group.

The structure of the 79th Engineer Group at the end of
the reporting period is shown in enclosure 3.

c. Command. Throughout the reporting period the 79th Engineer
Group served directly under USAECV(P) whose headquarters was located
at Bien Hoa. The group continued under the command of Colonel Walter
C. Gelini. No significant changes in the staff structure of the group
took place during the period. The group continues to react to
operational support missions directed by II FFORCEV.

The changes in the organizational structure of the
79th Engineer Group have already been described. With the structural
changes came a radical change in the area of responsibility. The
79th Engineer Group entered the reporting period with the engineer
responsibility for virtually all of the III and IV Corps Tactical
Zones (with the exception of three areas specifically given to the
159th Engineer Group and described in the report for the previous
quarter).

On 20 April 1967 the newly arrived 34th Engineer Group
became fully operational. This brought about a three-way division
of responsibilities between the three groups (34th, 79th and 159th)
in the III and IV Corps Zones. The 159th Engineer Group retained
responsibility for three areas: Saigon - Tan Son Nhut (consisting
of the area bounded by the city limits of Saigon and the Tan Son
Nhut Army and Air Force Base), Bien Hoa - Long Binh, and Vung Tau.

The 34th Engineer Group took over the responsibility
for the Mekong Delta and most of the III Corps Zone southeast of the
Song Dong Nai River. This is responsibility for all areas in the IV
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Corps Zone and those portions of the III Corps Zone and the Capital Military District not assigned to the 79th and 159th Engineer Groups.

The new area of responsibility for the 79th Engineer Group, effective 20 April 1967, can be described as: that portion of the III Corps Zone and the Capital Military District north of a line from XS306030 east to the east bank of the Song Saigon (River) at coordinates XS891390 (excluding the area within the city limits of Saigon and Tan Son Nhat Army and Air Force Base) and southeast from coordinates XS891390 along the east bank of the Song Saigon until it flows into the Song Dong Nai (River) and from there northeast along the west bank of the Song Dong Nai to the II - III Corps boundary at coordinates YT671668.

d. Personnel, Administration, Morale, and Discipline: Until mid-March all units suffered from a lack of replacement personnel.

As of 30 April 1967 the two combat battalions have remained at about 105% strength and the separate companies at relative strengths of between 102% and 110% depending upon mission requirements. The 554th Engineer Construction Battalion arrived in mid-April at approximately 96% and is now over 100% strength. The high strength figures are deceptive in one respect. Replacements received are generally privates trained in basic engineer MOS's. This leaves a shortage of critical skilled MOS's, eg. radio operators and medical aidmen. This shortage has been partially corrected by carefully screening personnel records of replacement personnel to identify those with unusual skills acquired by civilian experience or schooling or those with high area aptitude scores. Each of these men is interviewed and assigned with instructions reflecting assignment for duty in a particular MOS.

An additional problem which appears to be command wide is the shortage of experienced personnel in grades E4 and E5.

During March 1967 this Group was informed of "Operation Fuze". This was conceived to infuse personnel of the 15th Combat Engineer Battalion, 9th Infantry Division into other Engineer elements to reduce the high (almost 100%) September rotational hump of the 15th Engineers. The personnel were to be distributed to the receiving units in increments during the months of April, May, and June. The number finally selected for infusion was 234. The program of distributing those troops broke down. As originally planned, the infused personnel would be divided among the Groups of USAECV(P). Actually the men were, and will be, all sent to the 79th Engineer Group. This will cause a September rotational hump of more than 600 men within this Group.

The decision to send the infused personnel to the 79th was based upon two considerations: (1) all other combat engineer battalions in this area of Vietnam have high rotational humps in September; and (2) it was deemed impractical to transport these personnel to units up country.

Although the full impact of this program will not be felt until September
some problems are evident already. The administrative capacity of the unit personnel sections will be sorely taxed when it comes time for outprocessing. Receiving all those men with September rotation dates may result in an additional rotational hump problem next year for the 79th Engineer Group. If other programs of this type are conducted, it is recommended that arrangements be made before hand to distribute the infused personnel in small increments to as many different groups as possible. This will preclude rotational humps within the receiving units.

Late receipt of assignment instructions is a problem which cannot be solved at this level but is generating large amounts of paperwork and causing morale problems throughout the command. In many cases personnel are not receiving assignment instructions until the last few days or even as late as 24 hours prior to their rotation dates. This situation is particularly hard on men with families and those who wish to ship baggage or household goods to their next unit of assignment. This problem may get worse as the heavy losses anticipated in September, October and November occur. This headquarters keeps a close surveillance over rotation dates. As the date becomes dangerously close without the receipt of assignment instructions, a query is made to USAECV(P). The personnel section of this headquarters requires the subordinate battalions to keep it informed of personnel who are approaching their rotation date without assignment instructions.

e. Logistics: For the period of February through April 1967 supply support has been adequate except for many Class II and IV items. Shortages of items listed in the previous report (November through January) continue to exist. Major critical shortages are: some types of engineer construction equipment, refrigerators, hand tools, and expendable office supplies. There has been some difficulty experienced in obtaining weapons and organizational equipment for replacements, but only for short durations.

Supply for project activities (consisting of 37 numbered MCA projects) was carried out for the following locations: Phu Loi, Cu Chi, Dau Tieng, Phuoc Vinh, Tay Ninh, Hoc Mon, Lai Khe, Di An, and Xuan Loc/Long Giao. Construction and combat support materials, amounting to approximately 20,000 short tons, were hauled by organic vehicles from 79th Engineer Group units. All transportation, except to Di An, Long Binh, and Phu Loi, is by armed convoy.

Supplies of construction materials have been generally good. Several work stoppages of short duration have occurred during the reporting period. These were caused by shortages of such materials as electrical supplies, corrugated metal and insect screening. Replacement of battle loss equipment has been unsatisfactory except for...
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minor items such as individual weapons and organizational equipment.
Major items lost during the reporting period and still outstanding
include dump trucks, outboard motors, pneumatic boats, a radio, and a
gasoline tank truck. The inadequate supply of refrigeration and
constant power supply equipment continued to be a problem throughout
this reporting period; newly arrived units must wait up to four or
five months to receive these critical items.

Additional 12-cubic-yard LeTourneau-Westinghouse
scrapers have been received for the engineer light equipment
companies. Front dolly assemblies were part of the component issue and
upon modification, will be used with full-tracked tractors. Further
tractor modernization has been accomplished by standardizing the
Caterpillar D7E full-tracked tractor. Approximately 20% of other model
tractors are still on hand but these will be phased out as soon as
additional D7E's become available. The Group received in late April
five Caterpillar D6F air可operable and transportable full-tracked
tractors. These, complete with Rome Flow blade attachments, have been
placed with the two engineer light equipment companies.

Unit messes and their food service procedures continued to
be inspected and assisted at least monthly. The eighteen operational
messes are widely deployed and consequently cannot be visited as often
as desired. The supply of rations has been excellent with an ample
issue of fresh foods. There are shortages of trained mess personnel.
At the end of the reporting period (30 April 1967) there were 15
first cooks short-out of 60 authorized; and six second cooks short
out of 42 authorized within the 79th Engineer Group. To alleviate this
problem a program of OT and cross-training has been conducted with
considerable success.

The problem of the incompatibility of the issued Le
Tourneau-Westinghouse CT-4 scrapers and the D7E tractors present
in the command (as described in the last report) was resolved during
the quarter. The Group received twelve dolly's with the Caterpillar
830H and Curtis - Wright 12 cubic yard scraper combinations when
the rigs were received on lateral transfer from the 156th Engineer
Group in early March. It was found that these dolly's could be easily
modified for use with the D7E/CT-4 combination by installing two
hydraulic hose brackets on the dolly's.

The 183rd and 610th Maintenance Battalions continue to
provide direct support to the units of the 79th Engineer Group. The
move of the 383rd Engineer Battalion and the 362nd Engineer Company from
Cu Chi to Tay Ninh brought about some maintenance problems. At Tay
Ninh these units came under the 546th Maintenance Company (formerly
of the 610th Maint En); since April, under the 236th Supply and Service

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En) for direct support. The addition of the additional engineer units placed excessive burden on this direct support unit. Their main problem appears to be two-fold: the distance from their source of repair parts, and the shortage of engineer repairmen in a light maintenance company TOE.

The arrival of the 554th Engineer Construction Battalion gave the 79th Engineer Group its first organic field maintenance capability. The division of the battalion between two mutually inaccessible areas, Cu Chi and Pim Loi, required the division of their field maintenance shop with facilities placed at each of these locations.

As a result of the lessons learned during Operation CEDAR FALLS in the last reporting period, the 79th Engineer Group has made it a standard practice to request field maintenance contact teams to accompany subordinate elements to forward areas during combat operations. These contact teams provided forward area field maintenance on Operations LAM SON II, JUNCTION CITY, PORTSEA, and MANHATTAN.

No major maintenance difficulties developed during the reporting period. The major problem in the maintenance area is the time required in locating and delivering repair parts to the using units. The procurement of repair parts for non-standard equipment (e.g. crawler mounted rock drills, well-drilling rigs, Japanese-made air-compressors and generators) has been unsatisfactory.

Administration for the Supply and Maintenance Section of the 79th Engineer Group Headquarters has increased considerably during the period. This is attributable in some degree to reports of battle lost equipment, reports of survey, and increasing numbers of "one time" reports. There have been 32 of the latter during the 3-month period and six are in suspense for May submission.

f. Intelligence and Counterintelligence: The 79th Engineer Group Headquarters continues to distribute intelligence documents from II FFORCEV, USAECOV(P) and higher headquarters. Spot reports of enemy actions are forwarded to USAECOV(P) and, when they have not been reported by subordinate elements to supported tactical units, to II FFORCEV. The headquarters continues to handle personnel security actions, e.g. validation of clearances up to and including TOP SECRET, granting of CONFIDENTIAL clearances, and the granting of interim clearances up to and including TOP SECRET. The subordinate battalions have been delegated the same clearance validation and granting authority as the group.
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The majority of the reconnaissance effort expended during the quarter has been in support of proposed or actual operations. Two general reconnaissance missions were assigned. In March the group was requested by II FFORCEV to assist their 517th Engineer Detachment (Terrain) in upgrading the route data on Sheet 6330 IV (Saigon) of their 1:50,000 scale II FFORCEV Special Road Net Series. The mission for the deliberate reconnaissance was given to the 86th Engineer Battalion. On 9 April 1967 deliberate reconnaissance reports of 52 bridges, complete with photographs, were forwarded to II FFORCEV.

In late April the 79th Engineer Group was tasked by USAECV(P) to perform periodic inspections of airfields in its area of responsibility. II FFORCEV provided a list of C-130, C-123, and C-74 capable airfields and the responsibility for monthly inspections was given to the three battalions: the 568th inspecting in the western sector, the 366th inspecting in the eastern sector, and the 554th inspecting those fields lying in the center of the area along the Route QL-13 axis. Airfield inspection responsibilities with their coordinates are as shown in enclosure 4.

The operation of the 79th Engineer Group during the reporting period was characterized by a continued emphasis on operational support missions which are directed by II FFORCEV. This is a continuation of the trend started during the last quarterly period. Cantonment construction and other MCA funded construction projects continued during the quarter with a reduction of effort directly proportional to the effort expended on operational support commitments.

In allocating the resources of the group, operational support missions were given priority over MCA funded construction projects. The critical area seemed always to be the availability of engineer equipment for horizontal construction. Most of the major combat operations supported by the group during the reporting period required all available bulldozers for jungle clearing operations and construction. Limited numbers of dozers remained behind for quarry operation and base camp work. This slowed down the horizontal construction at all base camps and did not permit the extensive work on base camp drainage that was planned for the current dry season.

The two large-scale operations (multi-division) supported by the 79th Engineer Group during the reporting period were Operation JUNCTION CITY and Operation MANHATTAN. These were both multi-division search and destroy operations in the II FFORCEV area. The general concept employed by the 79th Engineer Group on both operations was to place battalions in direct support of the infantry divisions engaged. This was the concept tried and proven during Operation
CEDAR FALLS in January. Advantages of direct support employment are many. There is a close relationship developed between the tactical commander and his supporting engineer element. This results in better coordination between the maneuvering elements and the engineers for worksite security, location of operating bases, and convoy movement. There is a corresponding advantage in the field of administration and logistics. The supported division can easily make provisions for such things as logistical support, medical evacuation, and administrative aircraft support. The last becomes especially important in view of the widespread and inaccessible areas of operations and the lack of organic aircraft in the group and group units.

A characteristic of the combat operations conducted was the requirement for engineer equipment in excess of what is organic to the supporting units. Consequently on the large scale operations the battalions moved to the field equipment heavy. This was accomplished by augmenting the supporting battalions with equipment from within the resources of the 79th Engineer Group and from other resources (eg., the 159th Engineer Group, the 34th Engineer Group, and the non-participating divisional engineer battalions).

Many of the operations conducted required the airlift of men, supplies, and heavy equipment into forward areas. Airlift coordination was carried out on group level based upon plans and estimates made both at group and battalion. The efficiency of the airlift operations was greatly enhanced by the development of close liaison and a good working relationship between the group operations staff and the Air Force liaison personnel at II FFORCE. The spirit of cooperation and mutual respect developed between the group and the Air Force was instrumental in the success of the airlift operations.

Several problems approached a solution during the quarterly reporting period. The shortage of rock and the great haul distances required to bring rock into the eastern parts of the group area were alleviated when the rock quarry at Gia Ray went into production during the second week in February. This quarry, at the base of Nui Chua Chan Mountain east of Xuan Loc, was established and operated by the 27th Engineer Battalion. Control passed to the 34th Engineer Group on 20 April 1967.

The limited amount of compaction equipment organic to group units continued to be a problem area. A stop-gap solution was to borrow rollers from other engineer organizations. The situation improved greatly with the assignment of the 554th Engineer Battalion, the first construction battalion assigned. Their organic compaction equipment almost doubled the resources of the 79th Engineer Group.
The supply of sand to the cantonment areas still remains somewhat of a problem. With the exception of Phuoc Vinh, where sand is supplied by a local contract, all base camps depend upon sand transported from Long Binh. The long haul from the source resulted in sand shortages at several of the remote areas and, although no stoppages have occurred, work slowed down several times. The unit has enlisted the aid of a geologist from the Terrain Detachment attached to USAECV(P) to help search for a suitable source. The search has met with little success.

This quarterly reporting period represented the height of the dry period in the 79th Engineer Group area. The dry weather brought with it severe dust problems at airfields and heliports throughout the zone. Dust palliation using penprime, diesel oil, and cut-back asphalt received a high priority. Areas treated included Cu Chi, Trai Bi, Dau Tieng, Di An, Quan Loi, Phuoc Vinh, Minh Thanh, Phu Loi, Bien Hoa, Lai Khe, Suoi Da, Prek Klok, Long Giao, and tactical forward operating bases. The dust palliation was limited by the number of asphalt distributors available. Diesel and penprime can be applied with locally fabricated field expedient distributors, but the cut-back asphalt requires a distributor capable of being heated. The transportability of the trailer mounted distributor by helicopters makes it more suitable than the truck mounted equipment for use in forward areas.

There continues to be a problem with delays in the acquisition of real estate rights for projects. Units requesting real estate must coordinate with local officials (Province Chiefs) to initiate the action. The province chief is often reluctant to give his initial concurrence or non-concurrence and this results in an inordinate delay and often lost paperwork. The request must then go up through U.S. channels and back down through Vietnamese channels to province officials. This is time consuming.

There are no electricians authorized in combat battalions and there is usually insufficient talent within the battalion to train electricians. The result has been inadequate or marginally adequate interior wiring in some of the cantonments. USAECV(P) has made arrangements with the R & U personnel in the area to provide on-the-job training for battalion electricians in each cantonment.

The dispersal of subordinate units throughout the II FFORCEV area made the maintenance of radio communications difficult. To solve this problem, the group communications section established a radio relay station on the summit of Nui Ba Den Mountain (elevation 986 meters; coordinates XT281581) on 28 February 1967. Since opening this facility, radio communications have been excellent.

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With the increase of activity in the Mekong Delta there was a consequent increase in the need for bulk construction materials. Stone, aggregate, and laterito, none of which are available in the Delta, had to be hauled through Saigon from the Long Binh area. This was inefficient and created additional congestion in the city. Hauling of materials by barge started during the period. Failure to recognize the need for a well-developed off-loading site caused a tie-up of barges at Ben Luc, the terminal selected. Barges were diverted to Dong Tan where a suitable off-loading site existed, but the problems of the Ben Luc site pointed up the need for thorough planning before the initiation of barging operations. Summaries of operational support missions and construction projects are attached as inclosures 5 and 6.

b. Information. The Pioneer, the 79th Engineer Group newspaper, continued monthly publication during the reporting period. Circulation was increased to 1500 copies per month. The group continued to get excellent coverage in the Castle Courier, the two-monthly newspaper published by USAECVF. Stories in other command newspapers and Stars & Stripes appeared regularly.

i. Inspector General. The Headquarters and Headquarters Company, 79th Engineer Group was given its annual general inspection by an IG team from Headquarters U.S. Army Vietnam on 27 March 1967. No written report has been received but the comments of the inspectors were very favorable.

2. 66TH ENGINEER COMPANY (TOPOGRAPHIC) (CORPS).

a. Command. Continuous technical liaison was maintained with II Field Force Vietnam Engineer Section and the Assistant Chief of Staff, Mapping and Intelligence, United States Army Engineer Command Vietnam (Provisional). The company has continued under the administrative control of the 79th Engineer Group. On 1 February 1967 the 547th Engineer Platoon (Map Depot) moved from Saigon and was attached to the 66th Engineer Company for all administrative functions. On 28 February 1967, the 66th gained operational control of the depot. Weekly company inspections were held during the period with emphasis on individual weapons and field equipment. During the quarter the unit was visited by General Creighton W. Abrams, Vice Chief of Staff, US Army; Major General Thomas J. Hayes, Director of Topography and Military Engineering, Office of the Chief of Engineers; and Major General Robert R. Ploger, CG, USAECVF.
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b. Personnel, Administration, Morale and Discipline. There were no critical personnel shortages during the quarter. Administrative reports and records were prepared as needed. Morale continued to be high as all unit personnel continued the unit mission of providing topographic support to the free world forces in Vietnam. In the quarter, 15 individuals were punished under Article 15 of UCMJ. There were no trials by Court Martial. On 26 February 1967 the unit received its first casualty when Sp5 Robert Umfleet was lightly wounded by hostile rifle fire while on an administrative mission in the Long Binh area.

c. Plans, Operations, and Training. The unit was fully operational throughout the period. The Survey Platoon completed LORAN monitor positions for the US Coast Guard at Duong Dong (on Phu Quoc Island), Tan Son Nhut, and Dong Ha. The unit also established artillery positions for the 12th Marine Regiment near Dong Ha. The surveyors reestablished a 3rd order position by triangulation at Hui Ba Ra for artillery usage. Project eleven, currently in progress, is extending vitally needed artillery control in the Mekong Delta region south of Saigon. The Cartographic and Reproduction Platoons have remained on a continuous two shift operation throughout the quarter, preparing data for upcoming operations and afteraction reports. Working through the Mapping and Intelligence Division of USLEW(P) and the Engineer Section, II FFORCEN, the 66th Engineer Company completed cartographic and reproduction work for all major units within the III and IV Corps areas. Tactical scale intelligence studies, uncontrolled mosaics, Inland Waterway Overlays, town plans and afteraction reports were the major projects completed. The Cartographic and Reproduction Platoons made the 66th the most productive corps topographic company in the Army during the report period. The 547th Engineer Platoon remained fully operational throughout its move from Saigon to Long Binh. Continuous on-the-job training was conducted in all operational areas. Semi-annual weapons familiarization firing took place on 5 February 1967. Two 20 x 72 tropical buildings were completed during the quarter and work was begun on the overhead cover on the operational pad.

d. Logistics. Topographic supplies were received on a regular basis during the period and it appears that aggressive unit action aided by the Topographic Supply Project Officer at 1st Logistical Command have succeeded in getting topographic supplies into the in-country system. In general, topographic instruments functioned well although continuous problems have been experienced with the MC-6 Electronic Distance Measuring Equipment. Retrofitted MC-6s are currently on requisition from Granite City Army Depot. Four Bilby Survey Towers were received for survey use on 2 April 1967.
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having been air shipped from the 71st Survey Detachment in Liberia. Motor maintenance problems have not been critical. However, unit generators are all within 10% of their rebuild criteria and breakdowns are frequent, but power failures affecting unit operations have been few and of short duration. If the planned outside power source is not made available soon, interruptions in operations from power failures will become more serious.

e. Inspector General. The unit was inspected by the USARV Inspector General on 23 March 1967. Although no report has yet been received, the IG's exit critique indicated that all facets of the inspection were either satisfactory or noteworthy.

f. Information. Command information programs were scheduled weekly by the Commanding Officer. The unit Operations Report is distributed monthly, and PIO information is submitted as events of interest take place.

3. 100TH ENGINEER COMPANY (FLOAT BRIDGE).

a. General. During the period 1 February 1967 through 6 April 1967 the 100th Engineer Company operated two raft sites in support of the 199th Light Infantry Brigade at Cau Maong and Long Kien, Vietnam for Operation Fairfax. The total crossing at these two sites were as follows: 5,950 vehicles, 1,188 trailers, and 6,849 personnel. These figures do not include 291 ambush patrols put out in the evenings. These patrols were transported to and from the ambush sites in either LTR half-pontons powered by outboard motors or in 274 Bridge Erection boats.

During this period at the same locations as the two river crossing sites, the company supported the 86th Engineer Battalion with a six float reinforced raft and a five float reinforced raft constructed from the N476 bridge sets. These rafts were used in conjunction with the repair of an Eiffel Bridge at Cau Maong.

While elements of the company were involved with this support, the remainder of the company continued its mission of cargo hauling for all elements of the 79th Engineer Group. The major units supported were the 27th Engineer Battalion, 86th Engineer Battalion, 168th Engineer Battalion, 588th Engineer Battalion, Group Headquarters, and the various separate companies of the group. The Fifth Platoon was attached to the 588th Engineer Battalion until 15 April 1967.
b. Command. The 100th Engineer Company (EB) remained stationed at Long Binh in a military area extending along the east side of Route IA north of the intersection of Route 15 and 11, and remained attached to the 79th Engineer Group for all purposes.

c. Personnel, Administration, Morale, and Discipline. The end of the quarter found the company slightly overstrength (5%) in personnel. This added immeasurably in allowing the company to provide assistant drivers required for convoys. The morale of the company remained high throughout the entire reporting period.

d. Logistics. During the quarter the company received the ten bridge erection boats which were the unit's major shortages at the time of overseas deployment. Maintenance problems and actions taken in support of the units operations are outlined in subparagraph e below.

e. Plans, Operations, and Training.

(1) Rafting Operations in support of Operation FAIRFAIR. The 3rd Bridge Platoon assumed operational control of two raft sites (Cau Muong, X893560 and Long Kien, X866278) on 15 January 1967 from Company E, 15th Engineer Battalion, 9th Infantry Division. The rafts in operation at this time were of light tactical raft (LIR) components. Since under the 15th Engineer Battalion the rafts were operated by power boats, many preparations had to be made to enable them to be operated with outboard motors. First an upstream anchor cable had to be erected. This was accomplished by placement of a 3/4 inch wire rope across the river utilizing base plates, and tower caps with no intermediate tower sections on both banks. A 12 x 12 timber deadman was used on the near shore and a chain holdfast was used on the far shore. A modified trail ferry with a bicycle traveler to assist in the crossing of the raft during outgoing tides was put into use. The major problem encountered with the anchorage system was how to hold the ferry in place when the tide was incoming. The swiftness of the current, 12-15 feet/second, indicated that nothing short of permanent long-range anchorage should be used. Due to the time, criteria established to put the raft in operation, a flying ferry for use during incoming tides was determined to be the most practical solution. A Bailey bridge panel with 22 D-handled pickets welded at right angles to the plane of the panel was sunk 450 feet downstream of the centerline of the ferry. However, when tested by a 27' boat, the anchor failed. The principle was sound but not enough distance had been allowed between the anchor and the ferry to obtain maximum holding power from the anchor. The idea was tried again with the addition of two 100-pound kedge anchors on 30' cables attached to the Bailey panel. This anchor was dropped 700' downstream of the site. This system held when tested with a power boat.
SUBJECT: Operational Report - Lessons Learned (ROS OSFOR-65) for Quarterly Period Ending 30 April 1967

Upon assumption of control of the site, the company had no trained outboard motor operator and an untested system of operation. Many lessons were learned during the first few days of operation. It was found that three motors, two on the downstream side and one on the upstream side, were sufficient to propel the raft. When the current obtained a velocity of 15 feet/second, a fourth motor was added on the upstream side of the raft. The approaches, existing Eiffel bridge piers, and abutments posed a different type of problem than had previously been encountered. The approaches were nothing more than laterite roads built up out of rice paddies. As this was the only solid ground in the area, the cable towers had to be positioned on the road. Because of the location of the towers, the hi-line cable was extremely close to and in some cases (due to the tidal action) rested against the existing bridge. When the tide was out-going, sufficient tension had to be maintained in the cable to insure clearance of the bicycle traveler as it passed by the intermediate pier. When the tide turned, the traveler had to be unhooked from the cable to obtain this clearance. The nearshore abutment and the nearshore approach were of such close proximity to each other that a nearly perfect landing had to be made every time, to avoid damage to the upstream outboard motors. The raft approaches were at a slope of approximately 50 degrees at low tide. Being wet, slick and steep they created a major hazard for loading and unloading vehicles. Sand was used on the approaches to improve the traction but did not prove satisfactory. Assault trackway was obtained and placed on the approaches. The traction gained by using the trackway proved to be the most successful.

Maintenance of the outboard motors was, throughout the operation, a source of constant concern. By having eight motors and five mechanics at Site 1 on a full time basis, we were able to maintain four outboards operational at all times.

The problems encountered at the Cau Muong Site were also encountered at the Long Kien Site, but because of the small amount of traffic passed, these problems were not compounded. It was found that a downstream anchor cable was more effective than an upstream anchor cable at this site.

By far, the major difficulty encountered during the operation was the class of the LTR in use. A loaded 2½ ton truck far exceeded the class of the LTR when the current reached 9 feet/second. Risk crossings had to be made to perform the mission. When a 2½ ton truck and the LTR upon which it was being transported sank, the need for a raft of much higher classification became apparent. The solution was to construct two 4-float reinforced rafts at both rafting sites. The third platoon was given the mission of constructing these rafts while the second platoon assumed the operational phase of this mission. After completing the M4T6 rafts and placing them in operation it was found necessary to make the following modifications:
Subject: Operational Report - Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 30 April 1967

1) Hinged ramps were placed on the rafts to compensate for the varying water levels. Those hinged ramps replaced the normal fixed end sections.

2) A hand winch system was installed to raise and lower the ramps. This increased the class of the ramp and allowed heavier vehicles to be crossed and appreciably cut down on the on and off loading time. The hinged ramps enabled the rafts to be used under all conditions and water levels.

3) The bicycle traveler from the LTR set was replaced by a heavy duty pulley. This was necessary due to the increased weight of the M476 rafts over the LTR rafts.

4) Bridge erection boats were placed into use as propulsion of the rafts. Two boats were first used, one tied to the first and second floats and the other tied to the third and fourth floats. This was unsuitable during "riptides". A third boat was placed between the original two boats parallel to the centerline of the raft. This gave us the capability of being able to propel the rafts across the river in an almost straight line. This aided immeasurably in the landing of the rafts on the restricted approaches.

During the support of rafting operations, the company was called upon to assist the Infantry in transporting their ambush patrols. Several methods were used with the following found to be most effective:

1) Four half pontons from the LTR set tied abreast and pulled by a 27' bridge boat could transport upwards of forty troops without difficulty.

2) For smaller patrols, the bridge boat was used by itself since it was fast and maneuverable. This also committed a minimum of equipment needed for operation of the rafts.

The maintenance aspect of this mission was largely that of keeping the outboard motors and 27' bridge boats running. The inexperience of the operators contributed to the maintenance problems encountered. Replacement parts were a problem that was solved only through the continuous concerted efforts of the organic maintenance personnel of the company. Close supervision of operator maintenance proved to be vital. Several half-pontons were lost due to combat action and from running through debris in the water at night. Components of the M476 sets were damaged or lost due to the tidal action and current velocities encountered. Throughout the entire period of operation, the rafts were maintained so as to perform the mission on a twenty-four hour basis.
The personnel of the company on both rafting sites had to perform their own security. Help from the Infantry units in the area could not be obtained due to their heavy commitments. It was necessary to reinforce the platoon handling the operation of the rafts just to provide sufficient personnel to perform the security of the sites. In a future similar situation, hand receiving M-60 machine guns from another unit would be accomplished. This Unit has virtually no automatic weapons capability other than fifty caliber machine guns. It is felt that a modification to the existing TOE be accomplished or other arrangements be made to provide this company with high rate of fire weapons such as the M-60 machine gun. Basically this company has neither the personnel nor the weaponry to adequately secure such a site while conducting its rafting mission. Booby trapping of floating equipment occurred during this mission. A satchel type charge made from a form of plastic explosive or Composition B was found affixed to the nearshore pier of the damaged bridge early one morning. Two firing devices were employed, one being an electrical firing method and the other being a timer run-down device. The charge was attached to the pier, apparently by UDT men, in such a manner that as the tide rose over the charge, the natural tampering factor provided by the water would be utilized to the best advantage. Fortunately both firing means failed and the charge was discovered the following morning at low tide.

(2) Cargo Hauling Operations. During this report period the company was tasked with one major haul mission: the transportation of approximately 325 tons of cargo for the 588th Engineer Battalion in preparation for Operation MANHATTAN. This was accomplished by the 4th and elements of the 5th Bridge Platoon. Total tonnage hauled in support of the 79th Engineer Group during this report period was 5,483 tons of construction and associated materials. Total mileage for the vehicles of the unit were 122,501 miles. Throughout the entire period, a near zero deadline rate has been maintained. This outstanding record can be attributed to the internal maintenance program within the unit. The drivers have performed their first echelon maintenance in a far superior manner as has the Equipment and Maintenance Platoon. The low deadline rate is the result of close supervision and hard work by all personnel concerned.

4. 104TH ENGINEER COMPANY (DUMP TRUCK).

a. Command. The 104th Engineer Company (DT) remained stationed at Long Binh in a military area extending along the east side of Route 14 north of the intersection of Routes 15 and 14, and remained attached to the 79th Engineer Group for all purposes.
EGE-3

SUBJECT: Operational Report - Lessons Learned (RCS OSPOR-65) for Quarterly Period Ending 30 April 1967

b. Personnel, Administration, Morale, and Discipline. The following is extracted from the report of the annual general inspection of the company by the Inspector General of USAECV(P) dated 18 April 1967:

"The results of the inspection indicated the company had accomplished assigned missions with a high degree of efficiency. Esprit, morale, and military courtesy were excellent."

It has become apparent that this unit cannot fully perform its assigned mission, under current conditions, with the total TOE personnel authorization. There are six Dump Truck sections in the company consisting of twelve personnel, i.e., one section sergeant, eight drivers, and three assistant drivers. Each section has eight 5-ton dump trucks assigned and is required, under current conditions, to have an assistant driver for each truck. This creates an overall shortage of four assistant drivers per section, or twenty-four for the company.

c. Plans, Operations, and Training. During the period 1 through 10 February 1967 and again from 5 through 10 April 1967 the entire company was engaged in general support of the four engineer battalions of the 79th Engineer Group with daily mission requirements directed by the Group S-3.

Between 10 February and 5 April two complete sections from the 2nd Platoon, including sixteen dump trucks and twenty-four personnel, were attached to the 27th Engineer Battalion at Long Binh. During the period of their attachment the sections covered 7,632 miles and hauled 14,270 yards of bulk materials. During the period 19 February through 23 March one section of the 1st Platoon, including eight dump trucks and nine personnel, were attached to Company A, 168th Engineer Battalion for Operation JUNCTION CITY I. The section drove 7,067 miles and hauled 4,770 yards of bulk materials. Two of the eight dump trucks were destroyed on this mission, one on 21 February and another on 10 March. Neither of the drivers were injured due to inadequate sandbagging of the dump truck floors. On 22 February another section of the 1st Platoon was dispatched to Operation JUNCTION CITY I and attached to Company B, 588th Engineer Battalion. Prior to their return on 16 March the section had driven 9,428 miles and had carried 3,040 yards of bulk materials. Throughout the report period two sections, one from each platoon, remained at Long Binh in general support of the 79th Engineer Group and directed to the four battalions by the Group S-3.

The total company mileage for the entire period was 307,821 miles while the total yardage hauled in support was 48,375 yards of bulk materials. This yardage figure does not include materials hauled into the 104th Engineer Company area for construction and improvement; it includes only those yards hauled on group assigned missions.
SUBJECT: Operational Report - Little Shop Learnod (RCS GSFOR-65) for Quarterly Period Ending 30 April 1967

In addition to the construction of a hardstand for the company area and motors pool, the company constructed fourteen concrete pads of various sizes, a shower with toilets, two latrines, four permanent bunkers, one water tank, a dispatch office, an ordnance supply office, a welding shop, a POL storage area, a tool shop, and began construction on two of the eight Adams huts authorized to house the troops.

Training consisted primarily of monthly command information, an orientation briefing for all newly assigned personnel, monthly character guidance, and, on 9 April, familiarization firing by the entire company on the rifle range.

Currently the unit is engaged in hauling approximately 10,000 yards of rock from the University Quarry near Long Binh to Phu Loi to assist the 554th Engineer Battalion in construction of an airfield.

d. Logistics. The principal problem encountered by the unit supply has been in the ordnance repair parts (OLL) system. Repair parts are rarely received through normal requisition. They are supplied primarily through trading with other organizations repair parts clerks. As a result there are continuing repair parts shortages. If this unit were required to function strictly in accordance with the regulated system, we would be unable to stay within the authorized maintenance deadline tolerance of 10%.

This unit has also experienced delay in the receipt of critical TOE equipment. The following shortages affect the mission performance of this unit:

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<td>Lube &amp; Svc Unit Pow Op Trl Mtd</td>
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</table>

Other shortages of supplies have had an impact on the unit's ability to perform necessary functions. One of these shortages is drill bits; size #3 and #4 which are necessary for the erection of the Adams huts. The unit buys them on the local economy from donated funds. There is also a current shortage of armored vests and helmets for a small percentage of the company.
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o. Inspector General. The Annual General Inspection of the 104th Engineer Company (DT) located at Long Binh, was conducted on 3 April 1967. Although an overall rating of the results of an Annual General Inspection is not made in the Republic of Vietnam, some idea of the company standing may be obtained in the verbal rating given individual subject areas. These areas are usually rated Satisfactory or Unsatisfactory, however, a more definite description is used when appropriate. Of the twenty specific areas rated, the unit was described as deserving of special favorable comment (once), Noteworthy (twice), Highly Effective (four times), Excellent (once), Satisfactory (ten times), and Unsatisfactory (twice). The unsatisfactory ratings were in connection with a consolidated EM Club and Sundry Fund which the unit had just volunteered to manage the week before the inspection.

5. 500TH ENGINEER COMPANY (PANEL BRIDGE).

a. Command. The 500th Engineer Company (Panel Bridge) remained stationed at Long Binh in a military area extending along the east side of Route 11 north of the intersection of Routes 15 and 1A. In the immediate vicinity of the unit are two of the other separate companies of the 79th Engineer Group: the 100th Engineer Company (Float Bridge), and the 104th Engineer Company (Dump Truck). Temporarily located in the area is the 595th Engineer Company (Float Bridge) of the 34th Engineer Group, while awaiting a permanent area elsewhere in the Long Binh complex. As the senior commander of the separate engineer companies in the compound, the commanding officer of the 500th Engineer Company serves as the area coordinator.

b. Personnel, Administration, Morale, and Discipline. At the close of the quarterly reporting period the 500th Engineer Company had a personnel strength overage of approximately 13%. This excess helps to enable the company to put an assistant driver, or "shotgun rider," in each dump truck, a requirement when the unit operates over roads of marginal security. The morale of the unit is exceptionally good. There have been no casualties in the unit since its arrival in the Republic of Vietnam. No member of the unit was court-martialed during the reporting period; nine punishments under Article 15, UCMJ were given.

c. Plans, Operations, and Training. During the quarterly report period, the 500th Engineer Company served both in its primary mission of providing panel bridge support and in its secondary mission of providing dump truck support to the units of the 79th Engineer Group. Panel bridge missions were as follows:
SUBJECT: Operational Report — Lessons Learned (RCS CSFOR-65) for
Quarterly Period Ending 30 April 1967

(1) Support of the 65th Engineer-Battalion, 25th
Infantry Division in preparation for Operation JUNCTION CITY.
Starting on 15 February 1967 and completing on 16 February 1967 the
unit supported the 65th Engineer Battalion for the construction of
a 160-foot double-single panel bridge (two spans at 80-feet each)
on Route QL-22 north of Trai Bi at coordinates XT07764. (The
intermediate support was a 10-foot double-double panel crib pier.
The company supported the 65th Engineer Battalion for the removal
of this bridge on 11 March 1967.)

(2) Support of 1st Engineer Battalion, 1st Infantry
Division on Operation JUNCTION CITY. The commanding officer of the
500th Engineer Company made initial coordination with the executive
officer of the 1st Engineer Battalion on 25 February 1967; planning
coordination continued through 3 March 1967. Based upon a reconna-
issance made by the 1st Engineers, the company was requested to furnish
sufficient bridge for the construction of a 200-foot TS panel bridge
and a TS 2V-2H panel crib pier. The 2d platoon (reinforced) departed
Long Binh on 4 March 1967, joined Company E, 1st Engineers at Di An,
and convoyed to Lai Khe where they remained overnight. The task
force convoyed from Lai Khe to An Loc on 5 March 1967, remained
overnight, and on 6 March 1967 proceeded to the engineer basecamp
approximately 6 miles east of the bridge site. An attempt to remove
the destroyed bridge at the site (XT620816) was made by the 1st Engineers
but they met with no success and decided to relocate the new bridge
40 feet to the north. This action required a 10-foot increase in
span over the proposed structure. On 8 March 1967 the 1st Engineers
again decided to increase the span by 10 feet making the final
design a 120-foot DD span, a 100-foot TS span, and a 20-foot TD
2V-2V panel pier. Additional bridge components were called up
from the 1st Engineer stockpile in Di An without consulting the
500th Engineer Company. Construction was started on 10 March and
completed on 12 March 1967. Work was delayed while additional bridge
parts, necessary for completion, were brought in. During the
construction period the unit supported the 1st Engineers with dump
trucks for hauling in the Quan Loi area and hauled 246 loads. The
company was supported with bridge trucks from the 100th Engineer Company
for the transportation of Bailey bridge components.

(3) Upgrading of bridge near Cat Lai as requested by
1st Logistical Command. The 1st Logistical Command requested that
USAVCWP (P) upgrade the existing 100-foot DS Bailey bridge on Route
QL-25 (X3944993) to permit greater loads to be hauled from the off-
loading facility at Cat Lai. The company reinforced the bridge by
adding an 80-foot partial second story on 26 March 1967.
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(4) Support of 1st Australian Task Force on Operation PORTSEA. The 500th Engineer Company departed Long Binh on 20 March 1967 and convoyed to Long Giao to join Company A, 27th Engineer Battalion. The following day the task force moved south in convoy to the 1st Australian Task Force (1st ATF) base camp at Nui Dat for the beginning of Operation PORTSEA, a joint operation of the 1st ATF and the 11th Armored Cavalry Regiment east of Nui Dat. On 29 March 1967 the company, supported by a squad from 1 Troop, 1st Squadron, Royal Australian Engineers (RAE) and a platoon from Company A, 27th Engineer Battalion constructed a 120-foot DS panel bridge on Route LTL-23 at coordinates YS599637. The following day the company built a second bridge (70-foot DS) at YS607641, again supported by troops of 1 Troop and Company A.

(5) Support of 15th Engineer Battalion on Operation ENTERPRISE. On 9 April 1967 the unit supported Company C, 15th Engineer Battalion, 9th Infantry Division for the construction of a 110-foot DS panel bridge on Route 225 east of Tan An at coordinates X630638.

In providing dump truck support to the units of the 79th Engineer Group during the reporting period, trucks of the 500th Engineer Company drove 76,218 miles and hauled 33,745 cubic yards of material, primarily stone and sand.

Section 2, Part I. Observations (Lessons Learned)

1. Personnel.

Assistant Drivers

Item: The separate companies have insufficient personnel for assistant drivers.

Discussion: Operation of vehicles over roads of questionable security requires an assistant driver as "shotgun rider" in the cab of each vehicle. The TOE of the Dump Truck and Float Bridge Companies does not provide sufficient personnel to provide these assistants. Initially the problem was solved by furnishing personnel from the battalions being supported. Later, the companies were maintained overstrength to allow assignment of assistant drivers.

Observation: Separate Dump Truck and Float Bridge Companies

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SUBJECT: Operational Report - Lessons Learned (ROCS COPO-65) for Quarterly Period Ending 30 April 1967

must be augmented with personnel to provide assistant drivers when operating in marginally secure areas.

2. Operations.

Drainage

Item: Base Camp Drainage

Discussion: Operational support missions, which have priority over base camp construction projects, can strip base camps of equipment for horizontal construction. If this occurs during the dry season, when drainage improvement can best be accomplished, camp conditions can become intolerable during the wet season.

Observation: Every possible effort must be made to retain sufficient equipment in the base camps to insure continuation of drainage work during the dry season.

Construction Responsibilities

Item: Transfer of Construction Responsibilities Between Units

Discussion: The transfer of construction projects from one unit to another can cause turbulence in the construction effort at a base camp. The old and new units must thoroughly coordinate the transfer of responsibilities at all levels (battalion and company level). To insure thorough coordination the transfer actions must be monitored by group.

Observation: Group headquarters must take positive action to insure that all details of a transfer of construction responsibility between battalions are coordinated.

Driver Protection

Item: Sandbags on vehicle floors will protect drivers from mines.

Discussion: During Operation JUNCTION CITY two vehicles of a dump truck company were totally destroyed by mines. The floors of both trucks were sandbagged. Both trucks sustained extensive damage and numerous holes were found in the floorboards of the vehicles. The drivers were not injured.

Observation: Units operating vehicles in areas where mines are a hazard should make the sandbagging of vehicular floors a routine practice.
Operational Report - Lessons Learned (RCS GSPOR-65) for Quarterly Period Ending 30 April 1967

Radio Communications

Item: Administrative traffic on FM nets.

Discussion: Experience has shown that AM voice radio in this theater is not as reliable as FM transmissions. AM is more subject to atmospheric and man-made interference. There is a tendency to rely on FM command nets to support administrative traffic. These nets have become increasingly congested.

Observation: Use of single-sideband equipment, whenever it is available, is less subject to interference and should be used for administrative traffic. This will free the FM nets for tactical communications.

Topographic Surveying

Item: Survey production.

Discussion: The experience of this unit's Survey Platoon after six months of field operations in Vietnam has been that it has been able to accomplish only 1/3 of that which experience shows would have been produced in a non-combat situation.

Observation: Several factors have contributed to the slowdown of survey operations, chief of which have been lack of transportation to survey sites, enemy control of otherwise ideal station locations and lack of an integrated security force for protection at isolated locations.

Cartographic Operations

Item: Symbols on film

Discussion: Often unique, non-standard symbols must be devised for use in terrain intelligence studies. Each symbol must be standardized and reproduced for subsequent use.

Observation: The unit devised a method of making those symbols by using the required symbol model in the Headliner Machine. Although the Headliner is designed for producing letters, it can easily be used for reproducing symbols, thereby providing professional-looking symbols for use on specialized maps.
SUBJECT: Operational Report - Lessons Learned (HGS GSFOR-65) for Period Ending 30 April 1967

Cartographic Symbolization

Item: Contour Plate Symbolization

Discussion: The unit was required to portray slope variation with a meaningful and effective symbol on cross country movement (CCM) maps.

Observation: This symbolization was accomplished by adding black dashes of varying intensity to the contour plate of the base map thus providing an expedient and highly effective method of depicting differing degrees of slope.

Mylar Acetate

Item: Use of Mylar Acetate

Discussion: Often mylar is difficult to obtain through supply channels in Vietnam. In the interest of supply economy the unit has begun using the same sheet of mylar for dual purposes.

Observation: Rather than discard the mylar material after a drafted overlay has been shot on camera, the image is removed from the frosted acetate and the material can then be used for lettering, stickups, thereby saving materials.

3. Training and Organization

TOE Augmentation

Item: Construction equipment

Discussion: Neither the Combat Engineer Battalion nor the Construction Engineer Battalion are ideally equipped for operation in RVN. The Combat Battalion is light on construction equipment, e.g., concrete mixers, wheelbarrows, rollers, wheeled tractors and scrapers. The Construction Battalion is light on combat equipment, e.g., mine detectors, radars, grenade launchers, and machine guns. Authority for immediate augmentation is not available. Temporary issue is no longer authorized. Temporary loan, though seldom available, is a stop-gap measure at best. TOE action is effective only upon approval, which takes 8 months to 1 year.

Observation: Suggested alleviation of equipment problems are as follows:

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SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for Period Ending 30 April 1967

a. Installation of theater wide equipment pools,

b. Establishment of a Theater Table of Allowances for construction, security and communication,

c. Augmentation of existing TOE's at Theater or DA levels,

Driver Training:

Item: Safe Driving Procedures

Discussion: During the reporting period 23 Reports of Survey involving motor vehicles were processed, with a monetary value exceeding $300,000.00. More than 80% of these were rear end collisions caused by "tailgating." The great amount of convoy operations, long hauls of supplies, equipment and materials, road conditions, dust obscuration, and the necessity of "closed-vehicle" convoying for security are all contributing factors.

Observations:

a. Continuous and repetitive driver training is called for, with emphasis on driver vigilance. This must be stressed by all echelons of responsibility and command,

b. Allowance of time and supervision for proper maintenance to insure instant vehicular response to driver operation.

Item: Insulated Conexes

Discussion: This unit has had problems of sensitive topographic supplies spoiling when stored in tents or conexes where temperatures rise greatly during the tropical day.

Observation: An expedient method to store these supplies under field conditions is to sandbag conex containers on all exposed surfaces with a 3' thick layer of sandbags. This maintains temperatures at levels which will not damage heat sensitive supplies stored inside,
SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for Period Ending 30 April 1967

15-ton Bridge Jacks

Item: Failure of Jack Handles

Discussion: The jack handle issued with the 15-ton bridge jack bends easily under stress.

Observation: Used rock-drill bits make an excellent substitute for 15-ton bridge jack handles.

Repair Parts

Item: Timely reaction to repair parts requirements.

Discussion: In many cases units in the field do not have the ability to obtain critical repair parts within the timeframe dictated by the situation.

Observation: A recommended procedure is to have the unit immediately apprise its superior headquarters of the shortage. At group level, calls and visits to supporting maintenance units and supply depots can usually determine availability within 24 hours.

Materials Handling Equipment

Item: Operation of supply yards for construction materials can deplete organic lift capabilities.

Discussion: Units engaged in HCA funded construction at base camps must establish and operate supply yards for class IV construction materials. To handle these materials the unit must have materials handling equipment or it must tie up cranes, wreckers, or other engineer equipment needed for other operations. The ideal item is the rough terrain fork lift.

Observation: Units operating Class IV supply yards should take action (temporary loan or MTOE) to obtain MRE for use in the yard. This would preclude diverting organic equipment from construction or operational support missions.

Section 2, Part II, Recommendations

1. Personnel, None.

2. Operations, The procedures for the acquisition of real estate in Vietnam are only marginally satisfactory. The unit requesting
real estate rights must first contact local province officials to obtain an initial concurrence or non-concurrence. This seems to be the principal bottleneck. Unit commanders or their staff are seldom proficient in negotiating with the province chiefs and are often not familiar enough with the policies and procedures governing real estate acquisition to properly negotiate with the local officials. This can result in great delays, especially when the province chief, who is often not familiar himself with such procedures, is reluctant to sign a concurrence or non-concurrence statement. The papers must then be forwarded through channels for action at Joint General Staff level. It is recommended that a real estate acquisition agency be established with the mission of carrying out coordination at all levels for obtaining real estate rights. Under the proposed system, the unit desiring real estate would submit its request through channels to the real estate agency. The agency, with its staff of trained personnel, would then make all necessary coordination, get the necessary approvals, and return to the requesting unit the documentation establishing real estate rights. It is believed that this procedure would reduce administrative errors and delays and make the acquisition of real estate faster and more efficient.

3. Training and Organization. None.

4. Intelligence. None.

5. Logistics. Recommend that an increased number of engineer equipment repairmen be assigned to this theater and that these individuals be placed in areas according to the engineer equipment density supported. This would preclude the situation which currently exists at Tay Ninh where a shortage of engineer equipment repairmen adversely affects the supporting maintenance unit's capabilities.

6. Include
1. LOI, 11 Apr 67
2. LOI, 14 Apr 67
3. Organization Chart
4. Airfield Inspection
5. Operational Support
6. Construction Projects
13 May 1967
SUBJECT: Operational Report - Lessons Learned (RCS GSFOR-65) for Period Ending 30 April 1967

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SUBJECT: Operational Report-Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 30 April 1967

HEADQUARTERS, UNITED STATES ARMY ENGINEER COMMAND VIETNAM (PROV), APO. 96491 7 JUli 1967

TO: Commanding General, United States Army, Vietnam, ATTN: AVHCG-DM, APO 96307

1. The subject report, submitted by the 79th Engineer Group (Const), has been reviewed by this headquarters and is considered adequate.

2. The recommendations and comments made by the submitting commander have been reviewed and this headquarters concurs, subject to the following added comments:
   a. Section 1, paragraph 1d, page 5, Rotational Hump. The loss of the 600 men rotating from the 79th Engineer Group in September is recognized by this headquarters, and increased input to units concerned is being made to lessen the impact.
   b. Section 1, paragraph 1e, page 8, Maintenance. Recent changes in 1st Logistical Command support of non-standard equipment (Japanese drills, etc..) provides for in-country stockage of these items. The time lag on receipt of repair parts has been reduced and continues to improve.
   c. Section 1, paragraph 1g, page 11, Real Estate. The position of Real Estate Officer is an additional duty assigned within subordinate units of the Command. The procedures related to the acquisition of real estate are complex and time consuming. Consideration should be given to establishing an Army Engineer Real Estate Team to be employed as outlined in TM 5-300, Real Estate Operations in Overseas Commands.
   d. Section 1, paragraph 1g, page 11, Dust Fallution. The 79th Engineer Group has its full TOE authorization of asphalt distributors, 4 each, on hand. In addition, it has four each trailer mounted asphalt distributors, 600 gallon, on hand. An MTOE has been submitted to authorize the retention of these trailer mounted asphalt distributors.
   e. Section 1, paragraph 2d, page 14, Topographic. A generator standardization and modernization program is presently being implemented at USARV level. Under this program generators near rebuild criteria are to be replaced.
   f. Section 1, paragraph 3e, page 18, Security. The float bridge company is normally in support of an engineer line unit which should provide security. Unusual cases such as the one reported do not warrant MTOE action. Temporary loan of M-60 machine guns will be arranged if needed in the future.

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SUBJECT: Operational Report—Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 30 April 1967

g. Section 1, paragraph 4b, page 19, TOE. The unit has been notified to submit MTOE for additional personnel. At present the unit is being maintained overstrength to supply the necessary assistant drivers.

h. Section 1, paragraph 4d, page 20, Logistics. Although there is some receipt of parts, from other than recognized sources, there should be no difficulty in receiving ordnance repair parts, when proper procedures are followed. Units have been instructed, by letter, to follow correct maintenance procedures for obtaining repair parts. There is no "authorized" dead line rate; the Command goal is 10% for critical items, 5% over-all.

i. Section 2, Part I, paragraph 3, page 26, TOE Augmentation. Much of the equipment shortage was a result of assigning combat units construction missions. The shortage was caused by the lack of engineer units available in Vietnam at the time. The situation should improve during the next reporting period due to the recent arrival of additional Construction Engineer units. At this time there is a shortage of equipment to set up a theater pool. MIOE action is authorized and where sufficient justification exists, units are encouraged to submit such recommendations.

FOR THE COMMANDER:

RICHARD J. DUCOTÉ
Colonel, CE
Chief of Staff
TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-OT, APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the period ending 30 April 1967 from Headquarters, 79th Engineer Group as indorsed.

2. Pertinent comments follow:

a. Reference item concerning shortage of critical skilled MOS's paragraph 1d, page 5: Concur. The shortage of 05B, Radio Operator, personnel exists throughout USARV. Strength projections prepared by this headquarters indicate that a balanced situation in this MOS will not occur until October 1967. A similar shortage of 91B personnel, Medical Specialist, exists in USARV with strength projections indicating no appreciable change until after October 1967. However, a combined projection for both MOS 91A and 91B indicates a shortage of only 25 by the end of July. While the combined 91A/91B picture looks good, it also serves to illustrate the problem of the shortage of experienced personnel in grades E-4 and E-5. Allocation of available replacements continues to be made on an equitable basis throughout the command.

b. Reference item concerning September rotational hump, paragraph 1d, pages 5 and 6 and paragraph 2a, 1st Indorsement: Concur. The September rotational hump can be alleviated by action within the U.S. Army Engineer Command, Vietnam (F). The action planned by the CG, USAECV-P will accomplish the desired leveling of the rotational hump for September 1968.

c. Reference item concerning late receipt of assignment instructions, paragraph 1d, page 6: Concur. This headquarters is instituting procedures to provide each major commander with machine prepared listings of assignment instructions for individuals assigned his command. This method is faster and more effective than the previous procedure using manually prepared rosters which contained assignment instructions for individuals in all commands. Procedures are also being implemented to provide each command with a listing of those individuals for whom assignment instructions have not been received. These listings will provide for closer control of those personnel, and identify individuals on whom special attention should be focused by DA, this headquarters and the major commander. Further improve-
ment of the assignment procedures can be made by Department of the Army Office of Personnel Operations providing more timely notification to this headquarters of individuals' assignments. Special attention by the 79th Engineer Group to insure that individuals are reported for reassignment at the proper time will also assist in solving this problem.

d. Reference item concerning TOE personnel authorization, paragraph 4b, page 19 and paragraph 2q, 1st Indorsement: Concur with action taken by Headquarters, US Army Engineer Command, Vietnam (Prov). The Engineer Command has been notified of the requirement to address the availability of trade-off spaces at each level of command if MTOE submissions reflect an increase in personnel.

e. Reference item concerning major critical logistical shortages, paragraph 1e, page 8: Concur. Engineer equipment continues to be in short supply in RVN. Follow up action to improve equipment availability is being taken by USARV and should be taken at all higher echelons. The supply of refrigeration equipment continues to improve with the completion of large refrigerated warehouses which releases smaller refrigeration units for redistribution. This headquarters has imposed constant surveillance over self service stores for proper issue of hand tools. The supply of expendable office supplies is now adequate to meet all unit requirements.

f. Reference item concerning work stoppages of short duration caused by shortages of materials, unsatisfactory battle loss replacements, inadequate supply of refrigeration and cantonment power supply, paragraph 1e, pages 6 and 7: Concur. The continued shortage of assets precluded immediate replacement issues of battle losses. As assets become available for depot stocks this situation will improve. Efforts by USARV to insure adequate and complete stocks of construction materials have aided in the improvement of the supply position on these items. RBX (Red Ball Expanded) for construction materials has been instituted allowing for requisitioning of materials in a manner similar to Red Ball Express.

g. Reference item concerning maintenance problems caused by the move of the 588th Engineer Company from Cu Chi to Tay Ninh, paragraph 1e, page 8: Concur. The arrival of large quantities of engineer construction equipment in a remote area will normally cause temporary problems for COSTAR maintenance units. One of the primary problems is the lack of adequate demand data for the type of equipment supported and the time lapse caused while augmenting the ASL to support the increased density. No DSU can possibly stock to support every eventuality.
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SUBJECT: Operational Report-Lessons Learned for the Period Ending
30 April 1967 (RCS CSFOR-65) (U)

h. Reference item concerning the time required in locating and de-
delivering repair parts to the using units and the unsatisfactory procurement
of repair parts for non-standard equipment, page 8 and paragraph 2b, 1st
Indorsement: Concur. Continuous movement of supported units disrupts the
normal supply system. The use of Red Ball Express procedures have alleviat-
ed long deadline time, however complete PLL's must be maintained to insure
rapid repair. As stated in 1st Indorsement, the 1st Logistical Command has
taken action to minimize the repair parts problem on non-standard equipment.

i. Reference item concerning delays in acquisition of real estate
rights, paragraph 1g, page 11; paragraph 2, pages 28 and 29 and paragraph 2c,
1st Indorsement:

(1) Concur.

(2) Approval of the following TDAs will authorize sufficient
real estate personnel to staff the 1st Logistical Command Central Real Estate
Office and the Support Command Area Real Estate Offices. Because of the current
lack of authorization for real estate personnel, some of the real estate re-
sponsibilities are, of necessity, the responsibility of the requesting unit.
With the authorized additional personnel, the Central and Area Real Estate
Offices will assume all real estate responsibilities.

(a) 1st Logistical Command Central Real Estate Office:

(1) TDA Number P5 W 2VAAOO.

(2) Submitted to USARPAC by letter dated 14 April 1967
with 1st Indorsement to DA dated 10 May 1967, subject: Acceleration of NAADS.

(3) Total 19 spaces.

(b) 1st Logistical Command Area Real Estate Offices:

(1) Saigon Support Command (Saigon, Vung Tau, Can Tho)
TDA Number P5 W1 ZRAAOO.

(2) Qui Nhon Support Command TDA Number P5 W1 ZMAAOO.

(3) Cam Ranh Bay Support Command TDA Number P5 W1
ZMAAOO.

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(4) Submitted to USARPAC by letter dated 15 March 1967
with 1st Indorsement to DA dated 3 April 1967, subject: Acceleration of NAADS.

(5) Total 33 spaces.

3. Action required at higher Hq: approve TDAs.

j. Reference item concerning generator rebuild criteria, paragraph 2d, page 11 and paragraph 2e, 1st Indorsement: Concur in 1st Indorsement comments. The requirement to replace generators according to hours of use was recognized at the recent Closed Loop Maintenance Conference. It is anticipated that sufficient generators will be available in the near future to commence this program. Receipts to date have been used to fill TOE shortages and to replace non-standard equipment.

FOR THE COMMANDER:

[Signature]

Capt. ADC
Asst AG

6 Incl
nc
SUBJECT: Operational Report for the Quarterly Period Ending 30 April 1967
from HQ, 79th Engr Gp (RCS CSFOR)

HQ, US ARMY, PACIFIC, APO San Francisco 96558

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report, as indorsed, subject to the following comments:

a. By letter, OPS OD TO, Headquarters DA, 5 August 1967, subject: "Combat Service Support Staffing in SVN", DA directed that current organization of 1st Logistical Command and subordinate elements be reviewed and restructured in accordance with the recommendations contained in "USARPAC Analysis of US Army Combat Service Support in RVN and Related Studies".

b. TDA's cited in paragraph 2i, 2d Indorsement were submitted under "Acceleration of NAADS" which was to address authorized strength of organizations as of 31 December 1966 and did not concern new requirements. The three TDA's referred to in paragraph 2i(2)(b) have been approved by DA at authorized strength only. This approval provides the Real Estate section of each TDA with one officer grade 03 for an aggregate of 3 (not 33 as indicated by paragraph 2i(2)(5), 2d Indorsement). Approval of the 1st Logistical Command Central Real Estate Office TDA (paragraph 2i(2)(a)) has not been received from DA. As this was a new requirement, although submitted under "Acceleration of NAADS" by USARV, approval is not anticipated in view of current requirement stated above.

FOR THE COMMANDER IN CHIEF:

K. F. OSBOURN

6 Incl
nc
SUBJECT: Letter of Instruction (Transfer of Units and Responsibilities to 34th Engineer Group)

TO: See Distribution

1. PURPOSE. This letter of instruction directs the actions to be taken and the coordination to be made to ensure the orderly transfer of units from the 79th Engineer Group to the 34th Engineer Group, for the transfer of construction and operational support projects, and for the relocation of units.

2. CONCEPT OF OPERATION.

a. The following units are to be transferred from command of the 79th Engineer Group to the command of the 34th Engineer Group on 20 April 1967:

(1) 86th Engineer Battalion
(2) 27th Engineer Battalion
(3) 67th Engineer Company (Dump Truck)
(4) 573rd Engineer Company (Float Bridge)
(5) 595th Engineer Company (Light Equipment)
(6) 156th Engineer Detachment (Well Drilling)

b. The following changes of station will take place:

(1) HQ and HQ Company, Company A, and Company B, 86th Engineer Battalion will move from Phu Loi to Bearcat and be replaced by elements of the 554th Engineer Battalion.

(2) Company C, 86th Engineer Battalion will move from Le Khe to Dong Tam and be replaced by elements of the 554th Engineer Battalion.

(3) 67th Engineer Company will move from Tay Minh to Bearcat.
SUBJECT: Letter of Instruction (Transfer of Units and Responsibilities to 34th Engineer Group)

- The following actions will take place on 20 April 1967:

  (1) 156th Engineer Detachment: Transferred from assignment to 79th Engineer Group to assignment to 34th Engineer Group. Remains attached to 27th Engineer Battalion.

  (2) 38th Engineer Detachment: Relieved from attachment to 86th Engineer Battalion and attached to 554th Engineer Battalion.

  (3) 67th Engineer Company: Relieved from attachment to 588th Engineer Battalion and attached to 86th Engineer Battalion.

3. (c) EXECUTION.

a. 86th Engineer Battalion will:

- In coordination with CG, 9th Infantry Division and CO, 554th Engineer Battalion, move units from Bu Loi and Lei Khe to Bearcat. Move may be made at the discretion of the CO, 86th Engineer Battalion but should provide for the continuation of maximum engineer effort for directed construction projects and operational support missions. Priority of effort is to mission assigned by OPORD 5, this HQ.

  (2) Return all supporting equipment from 79th Engineer Group organizations to parent units not later than 20 April 1967.

  (3) Assume control of 67th Engineer Company upon attachment on 20 April 1967. (With concurrence of CO, 34th Engr Gp) Make provisions for siting this unit at Bearcat.

  (4) Be relieved of assignment to 79th Engineer Group and assigned to 34th Engineer Group effective 20 April 1967.

  (5) Transfer attachment of 38th Engineer Detachment to 554th Engineer Battalion effective 20 April 1967.

  (6) Transfer responsibility for construction and operational support missions in accordance with Annex A.

b. 27th Engineer Battalion will:

- Return all supporting equipment from 79th Engineer Group organizations to parent units not later than 20 April 1967. Requests for exceptions to be submitted to this HQ telephonically MT 15 April 1967.
SUBJECT: Letter of Instruction (Transfer of Units and Responsibilities to 34th Engineer Group)

(2) Retain control of 595th Engineer Company and 156th Engineer Detachment. (With concurrence of CO, 34th Engr Gp)

(3) Be relieved of assignment to 79th Engineer Group and assigned to 34th Engineer Group effective 20 April 1967.

a. 67th Engineer Company will:

(1) Continue support to 86th Engineer Battalion with elements currently in support.

(2) Be relieved of attachment to 588th Engineer Battalion and assigned to 34th Engineer Group for further attachment to 86th Engineer Battalion effective 20 April 1967. (With concurrence of CO, 34th Engr Gp)

(3) Move from Tay Ninh to Bearcat. Move will be made NLT 22 April 1967. Coordination for siting will be made with CO, 86th Engineer Battalion. (With concurrence of CO, 34th Engr Gp)

d. 573rd Engineer Company will:

(1) Be relieved of assignment to 79th Engineer Group and assigned to 34th Engineer Group effective 20 April 1967.

(2) Remain at current area in Long Binh until move to permanent area is practicable. (With concurrence of CO, 34th Engineer Group)

e. 595th Engineer Company will:

(1) Be relieved of assignment to 79th Engineer Group and assigned to 34th Engineer Group effective 20 April 1967. Attachment to 27th Engineer Battalion and stationing at Long Giao continues. (With concurrence of CO, 34th Engineer Group)

(2) Redistribute equipment as follows:

(a) Equipment in support of units listed in paragraph 2a remains in support.

(b) Equipment in support of 79th Engineer Group units will be returned to the 595th Engineer Company NLT 20 April 1967.

f. 168th Engineer Battalion will return all equipment of the units listed in paragraph 2a to parent units not later than 20 April 1967.
SUBJECT: Letter of Instruction (Transfer of Units and Responsibilities to 34th Engineer Group)

538th Engineer Battalion will:

(1) Be relieved of attachment of 57th Engineer Company effective 20 April 1967.

(2) Return all equipment of the units listed in paragraph 2a to parent units not later than 20 April 1967.

(3) In coordination with CO, 36th Engr Bn move the 67th Engineer Company to Bearcat not later than 22 April 1967.

h. 554th Engineer Company will continue to provide limited administrative support to 573rd Engineer Company until that unit moves to their permanent area.

i. 554th Engineer Battalion will:

(1) In coordination with CO, 36th Engineer Battalion, carry out the actions specified by paragraphs 2b(1), 2b(2), and 2c(2).

(2) In coordination with CO, 36th Engineer Battalion, assume responsibility for construction projects at Phu Loi and Lai Khe and certain specified operational support missions. See Annex A.

4. (C) COORDINATION: The following coordination is authorized:

a. CO, 36th Engr Bn coordinates with CO, 538th Engr Bn for assumption of control of 67th Engr Co; with CG, 9th Inf Div for situating at Bearcat and assumption of base construction projects; with CO, 554th Engr Bn for turnover of missions, moves from Lai Khe and Phu Loi, and transfer of the 38th Engineer Detachment.

b. CO, 554th Engr Bn coordinates with CO, 36th Engr Bn for occupation of Phu Loi and Lai Khe, for the transfer of mission responsibility, and for transfer of the 38th Engineer Detachment.

c. CO, 538th Engr Bn coordinates with CO, 36th Engr Bn for transfer and movement of 67th Engr Co.

5. (U) LOGISTICS: Instructions for the transfer of project construction materials will be accomplished by separate letter.

6. (U) ADMINISTRATION: Instruction for the transfer of Civilian Personnel will be accomplished by separate letter.
SUBJECT: Letter of Instruction (Transfer of Units and Responsibilities to 34th Engineer Group)

FOR THE COMMANDER:

Annexes
A - Turnover of Projects

DISTRIBUTION:
CO, 27th Engr Bn
CO, 86th Engr Bn
CO, 168th Engr Bn
CO, 544th Engr Bn
CO, 588th Engr Bn
CO, 500th Engr Co
CO, 573rd Engr Co

Copies furnished:
CG, II FORGEV, ATTN: Engr
CG, USAFIC(V)(P)
CG, 34th Engr Gp
CG, 159th Engr Gp
CG, 1st Inf Div, ATTN: Engr
CG, 9th Inf Div, ATTN: Engr
CG, 25th Inf Div, ATTN: Engr
ANNEX A to Letter

TURNOVER OF PROJECTS AND MISSIONS

1. (U) CONSTRUCTION PROJECTS. The transfer of construction projects will be in accordance with letter EGE-3, this headquarters, 4 April 1967, subject: "Procedure for Transfer of Construction Responsibility."

2. (O) OPERATIONAL SUPPORT MISSIONS:

   a. Responsibility transferred to CO, 24th Engineer Group effective 200001H April 1967:

      (1) Construction of bridge at CAU MUONG. Mission assigned to 79th Engineer Group and further assigned to 86th Engineer Battalion IAW OPORD 19, this HQ, 201300H, 300th Engr Co relieved DS 86th Engr Bn effective 200001H April 67.

      (2) Operation of Ferries at CAU MUONG and LONG KIEN. Mission assigned to 79th Engr Gp by II FFORCEV message. Mission further assigned to 86th Engr Bn with 573rd Engr Co in DS by messages this HQ.

      (3) Upgrading of XUAN LOC airfield. Mission assigned to this HQ by II FFORCEV message and further assigned to 27th Engr Bn by OPORD 2 this HQ, 141600H Jan 67.

      (4) Support of Operation ENTERPRISE. Mission assigned to 79th Engr Gp by II FFORCEV OPLAN 51-66 and further assigned to 86th Engr Bn.

   b. The 86th Engineer Battalion is relieved of responsibility for the following missions effective 200001H April 1967:


SUBJECT: Letter of Instruction (Redeployment of 588th Engineer Battalion and Deployment of 554th Engineer Battalion)

TO: Commanding Officer, 554th Engineer Battalion, APO 96353
    Commanding Officer, 588th Engineer Battalion, APO 96353

1. PURPOSE. This letter of instruction directs the redeployment of the 588th Engineer Battalion, the deployment of the 554th Engineer Battalion, and the transfer of certain projects and missions from the 588th Engineer Battalion to the 554th Engineer Battalion.

2. CONCEPT OF OPERATION.

   a. The 554th Engineer Battalion arrives in country o/a 14 April 1967. Headquarters and Headquarters Company, Company A, and Company B are stationed at Cu Chi and relieve elements of 588th Engineer Battalion from construction projects at Cu Chi and certain operational support missions effective 20 April 1967. Company C and Company D are stationed in Phu Loi and relieve elements of the 86th Engineer Battalion from construction projects at Lai Khe, Phu Loi and certain operational support missions effective 20 April 1967.

   b. Elements of the 588th Engineer Battalion currently stationed at Cu Chi (with the exception of Company A) move to Tay Ninh o/a 20 April 1967.

   c. Company A, 588th Engineer Battalion is attached to the 554th Engineer Battalion on order.

   d. Rock Processing and Quarry Section (para 06, TOE 5-117E), Company A, 554th Engineer Battalion is attached to the 588th Engineer Battalion effective 200001H April 1967.

3. EXECUTION.

   a. 554th Engineer Battalion will:

      (1) Station Headquarters and Headquarters Company, Company A, and Company B at Cu Chi upon arrival in country. Occupation of site will be coordinated with CO, 588th Engineer Battalion.
SUBJECT: Letter of Instruction (Redeployment of 588th Engineer Battalion and Deployment of 554th Engineer Battalion)

(2) Station remainder of units at Phu Loi with at least one augmented platoon detached from Phu Loi and stationed at Lai Khe. Occupation of sites will be coordinated with CO, 86th Engineer Battalion in accordance with reference b.

(3) Assume responsibility for construction projects at Cu Chi, Lai Khe and Phu Loi in accordance with reference a.

(4) Assume responsibility for operational support mission in accordance with reference a.

(5) In coordination with CO, 588th Engineer Battalion, provide required support to the 588th Engineer Battalion for the mission directed by reference d effective 20 April 1967.

(6) Assume control of Company A, 588th Engineer Battalion on order.

(7) Release control of Rock Processing and Quarry Section upon attachment to 588th Engineer Battalion effective 200001H April 1967.

b. 588th Engineer Battalion will:

(1) Move all elements (less Company A) currently stationed at Cu Chi to Tay Ninh.

(2) Release control of Company A upon attachment to 554th Engineer Battalion.

(3) Assume control of the Rock Processing and Quarry Section, Company A, 554th Engineer Battalion upon attachment effective 200001H April 1967.

(4) Continue responsibility for mission assigned by reference d. Coordinate with CO, 554th Engineer Battalion for required support.

(5) Transfer responsibility for construction projects at Cu Chi to 554th Engineer Battalion in accordance with reference a.

4. COORDINATION. Direct coordination between CO, 554th Engineer Battalion, CO, 588th Engineer Battalion, and CO, 86th Engineer Battalion authorized.

5. LOGISTICS. See reference e.
SUBJECT: Letter of Instruction (Redeployment of 588th Engineer Battalion and Deployment of 554th Engineer Battalion)

6. REFERENCES.


   b. Letter EGE-3, this headquarters, 11 April 1967, subject: "Letter of Instruction (Transfer of Units and Responsibilities to 34th Engineer Group) (U)."

   e. FRAG O 1 to OPORD 5, this headquarters, 14 July 1967.

   d. Message UNCLAS EGE-3-04006, this headquarters, subject: "Support of INF for Repair of Route QL-1."

   e. Letter EGE-4, this headquarters, 12 April 1967, subject: "Transfer of Construction Materials to 554th Engineer Battalion (Const)."

FOR THE COMMANDER:

JOHN KAPALEE
Major, CEE
Adjutant

Copies furnished:
CG, II FORSCV, ATTN: Engr
CG, USAECW (P)
CG, 1st Inf Div, ATTN: Engr
CG, 25th Inf Div, ATTN: Engr
Inclosure 4 to 79th Engineer Group Operational Report - Lessons Learned for Quarterly Period Ending 30 April 1967

AIRFIELD INSPECTION RESPONSIBILITIES

**168th Engineer Battalion:**

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**554th Engineer Battalion:**

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**588th Engineer Battalion:**

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Incl 4
Inclosure 5 to 79th Engineer Group Operational Report - Lessons Learned for Quarterly Period Ending 30 April 1967

SUBJECT: Operational Support and Lines of Communications Upgrading Missions.

1. Support of Operation LAM SON. (168th Engr Bn, 29 Jan 67 - 11 Feb 67.) During the reporting period the 168th Engineer Battalion completed their support to the 1st Infantry Division on Operation LAM SON II. During the period of the operation, which took place in the jungle areas north of Phu Loi, 1305 acres of jungle were cleared, a 175-meter tunnel was destroyed, and mine detection and clearing operations were conducted. The return of all group elements to home station on 11 February 1967 brought to an end participation in the three continuous operations (NIAGARA FALLS, CEDAR FALLS, and LAM SON II) which developed many new concepts in engineer employment in jungle clearing operations.

2. Rafting operations in support of Operation FAIRFAX. (100th Engr Co, 86th Engr Bn, 573rd Engr Co, Continued through 20 Apr 67 when responsibility was assumed by 34th Engr Gp.) The rafting operations at Cau Muong and Long Kien, started during the previous reporting period, continued throughout the current quarter. The 100th Engineer Company remained responsible for the raft operation until 18 March 1967 when the responsibility was given to the 86th Engineer Battalion. The 86th was already on site constructing the Cau Muong bridge and the transfer of responsibility was done to place one single engineer commander in command at the site. The 100th Engineer Company supported the 86th Engineers' operation until 6 April 1967 when the support mission was transferred to the 573rd Engineer Company in anticipation of a mission and unit transfer to the 34th Engineer Group. Details of the raft operation may be found in paragraph 3, basic report. On 20 April 1967, the mission passed to the 34th Engineer Group.

3. Support of II FFORCEV in construction of a base at Trai Bi. (588th Engr Bn. Completed 5 Feb 67.) This mission, started by the 588th Engineer Battalion during the last quarterly period, was completed by the construction of 6 timber artillery firing pads. Work was done in preparation for Operation JUNCTION CITY.

4. Redecking of railroad bridge and construction of Class 55 bypass on Route QL-4 south of Saigon. (86th Engr Bn, 18 Jan 67 - 22 Feb 67.) This operation consisted of placing decking on the abandoned railroad bridge at XS758833 and upgrading the approaches to provide a class 50 bypass around the bridge on Route QL-4 at XS751831. The work consisted of placing 3 x 12-inch decking over 6 x 8-inch transverse stringers on the 400-foot steel truss railroad bridge; construction of a 30-foot steel stringer bridge (4 14-inch steel H-piles with 3 x 12-inch decking) on the south approach road; installation of two 20-foot 18-inch culverts; and upgrading the approach roads with
3500 cu yd of 4-inch rock and 2600 cu yd of laterite. A total of
1.1 miles of approach road were upgraded.

5. Construction of Eiffel Bridge at Cau Muong. (86th Engr Bn,
Started 2 Feb 67; project transferred to 34th Engr Gp on 20 Apr 67.)
The bridge at Cau Muong (XS893800) was a three-span Eiffel bridge
resting on two Eiffel towers as intermediate supports. Enemy action
had destroyed the west pier resulting in severe damage to the center
and westernmost span. The damaged spans were removed. With considerable
difficulty due to 10-foot tidal variations, the damaged pier was cut
below the point of damage (below low-water level) and an extension
to the tower constructed of steel structural members. An Eiffel span
was constructed upstream at Long Kien, moved to Cau Muong on an
M476 raft, and installed as the center span of the bridge. At the
time of mission transfer, the final span was under construction.

6. Support of 11th Armored Cavalry Regiment by clearing
of jungle
on Routes 333 and QL-1 between Gia Ray and Ap Suoi Cat. (27th Engr Bn,
9 - 22 Feb 67.) At the request of the CO, 11th ACR, the 27th Engineer
Battalion supported by elements of the 919th Engineer Company (11th ACR)
cleared jungle 100 meters on both sides of the highway from YT630114
south and west to Ap Suoi Cat (YT5906). A total of 224.9 acres were
cleared by dopes operating a total of 502 hours.

7. Jungle clearing in support of 5th Infantry Division (ARVN)
search and destroy operation. (168th Engr Bn, 12 Feb 67.) In this
one-day operation northwest of Di An, the 168th Engineer Battalion
supported a 5th ARVN Infantry Division search and destroy operation
by using 2 Rome plows and 5 bulldozers to clear approximately 25 acres
of jungle around XT850112.

8. Clearing of rubble at Cau Bong bridge. (588th Engr Bn,
13 - 16 Feb 67.) The 588th Engineer Battalion cleared rubble,
damaged concrete, and reinforcing steel from the site of a damaged
bridge at Cau Bong (XT712071) on Route QL-1 in preparation for the
rebuilding of the bridge by the Ministry of Public Works (RVN).

9. Engineer support to II FFORCEV for Operation JUNCTION
CITY (Phases I and II), a multi-division operation in War Zone C,
(168th Engr Bn, 588th Engr Bn, 27th Engr Bn, 500th Engr Co. 17 Feb 67 -
15 Apr 67.) Operation JUNCTION CITY consisted of a massive search
and destroy operation involving the majority of the tactical elements
assigned to II FFORCEV. The two primary maneuvering elements consisted
of the 1st and 25th Infantry Divisions with attached armor and armored
cavalry. The operation was conducted in two phases. In Phase I the
1st Infantry Division established blocking positions generally along
Route TL-4 which runs north - south to bisect War Zone C, and from
Katum (XT3390) westward to seal off the Cambodian border. The 25th Infantry Division with the 11th Armored Cavalry Regiment then maneuvered to sweep the sealed area west of Route QL-4. During Phase II, the 25th Infantry Division relieved the 1st Infantry Division who then withdrew along the road net south of the War Zone to Route QL-13 in the east from whence they swept in a general westward direction to clear the eastern portion of War Zone C. During the operation two Special Forces camps with associated C-130 airfields were to be constructed: one at Prek Klok (XT2778) and one at Tonle Chan (XT6181). Effective 7 March 1967 the 168th Engineer Battalion was placed in direct support of the 1st Infantry Division and the 588th Engineer Battalion was placed in direct support of the 25th Infantry Division. Throughout the operation the 588th Engineers worked at the forward support area at Trai Bi (XT1710) by maintaining the C-130 airfield, constructing a parking area surfaced with M61 matting, preparing a CH-47 landing and parking area, preparing a utility heliport and staging area, building a road network, and applying dust control measures. The 588th Engineers did extensive work on the road net in the Tay Ninh area as follows: cutting, shaping, and upgrading a 4.3-mile bypass road between Route QL-13 (XT129504) and Route QL-22 (XT161553); clearing, cutting, and shaping a 4.5-mile fair-weather bypass road between Route QL-22 (XT167545) and Route TL-4 (XT225564) including a 48-foot, one-lane, class 60 timber trestle bridge at XT203560; upgrading and maintaining Route QL-22 between the Route 13 bypass and Trai Bi (10.9 miles); maintaining Route TL-4 between Tay Ninh and the base of Nui Ba Den Mountain (7.8 miles); The 588th Engineers also maintained the Tay Ninh - Dau Tieng MSR, maintained roads in the Tay Ninh base camp, upgraded Route QL-22 north of Trai Bi to the intersection of Route 247, and upgraded the western half of Route 247. The 168th Engineer Battalion initially moved into Suoi Da (XT3457) and maintained and supported the forward support area and airfield located there. One company remained in support of the Suoi Da base and performed road maintenance on Routes LRO-13, TL-4, and 243. The battalion CP, the 557th Engineer Company, and one reinforced line company moved with the tactical forces north to Prek Klok and constructed the C-130 airfield and Special Forces camp at that location. The 168th Engineers also completed construction of the C-130 airfield at Katum which had been started by the 1st Engineer Battalion. Upon termination of Phase I, the 168th Engineer Battalion was placed in direct support of the 25th Infantry Division until the work at Prek Klok was completed. On 7 March 1967 the 27th Engineer Battalion was placed in direct support of the 1st Infantry Division for Phase II of the operation. That unit departed their home station on 13 March 1967 and arrived at the vicinity of Tonle Chan the following day. At Tonle Chan they constructed a Special Forces camp, supported the 1st Engineer Battalion in constructing a C-130 airfield, and engaged in daily mine-sweeping operations. Panel bridge support is described in paragraph 5, basic report.
Inclosure 5 to 79th Engineer Group Operational Report - Lessons Learned for Quarterly Period Ending 30 April 1967

10. Support of RVN Ministry of Public Works for repair of Route QL-13. (86th Engr Bn, 500th Engr Co. 21 Feb 67 - 22 Mar 67.) This operation consisted of providing dump truck support to MPW for hauling of laterite on Route QL-13 between Phu Cuong and Ben Cat.

11. Repair of Route 313 between Phu Loi and Phu Cuong. (86th Engr Bn. 27 Feb 67 - 7 Mar 67.) Work consisted of filling and patching, with rock and asphalt cut-back, numerous pot-holes which had developed in the road between Phu Loi and Phu Cuong.

12. Engineer support of Operation ENTERPRISE, a 9th Infantry Division operation in Long An Province south of Saigon. (86th Engr Bn. Started 27 Feb 67; mission transferred to 34th Engr Gp 20 Apr 67.) The 86th Engineer Battalion supported the operation by preparing a fill area for a battalion base near Ben Lux (XS6276), began preparation of an artillery base near Ben Lux, and filled an extensive area near the Tan An airfield (XS5265) for a forward support base. A company area was prepared near the forward support area at the Tan An airfield and on 6 April 1967 Company D, 86th Engineer Battalion completed its move from Bien Hoa to Tan An. An access road to the company area, a 28-pad heliport, a small cantonment area, and an M8A1 parking area for PAC aircraft were completed. At the time of the transfer of responsibility to the 34th Engineer Group, work on a barge off-loading facility was underway at Ben Lux, M8A1 matting was being placed on the forward support area at Tan An, the Tan An runway was being re-surfaced with rock and a bituminous surface treatment, and fill was being placed for a battalion base near Dinh Phuc (XS6155).

13. Operation PORTSEA. (27th Engr Bn; 500th Engr Co. 21 Mar 67 - 16 Apr 67.) Operation PORTSEA consisted of a joint Australian/U.S. operation with the mission of repairing and opening Route LTL-23 from Dat Do (YS4659) eastward to Xuyen Moc (YS6568), and conducting a search and destroy operation in the same general area. Control of the operation was vested in the commander of the 1st Australian Task Force. A company task force, augmented with one grader, five dozers, and a 25-ton truck-mounted crane, moved out with the 500th Engineer Company from Long Giao on 20 March 1967 and joined with the Australian forces at the Krakshoe Base Camp (XS514813) where it was placed under the command of the Officer Commanding, 1st Field Squadron, Royal Australian Engineers. During the operation the task force repaired and upgraded Route LTL-23 from Dat Do to Xuyen Moc (installed 3 48-inch, 3 60-inch, and 8 72-inch culverts), constructed two panel bridges (see paragraph 5, basic report), cleared vegetation 100 motors back from the road between Dat Do and Xuyen Moc, constructed two Regional Force camps, and constructed a C-123 airfield at Xuyen Moc.
14. Upgrading of bridge on Route TL-15 (86th Engr Bn supported by 617th Engr Co (Panel Bridge). 30 Mar 67.) An old 5-ton bridge on Route TL-15 (S3890982) limited convoys between Tan Son Nhat and Cu Chi. The bridge was upgraded by building a 90-foot DS Bailey bridge over the existing structure. Width restrictions required the cutting of bridge transoms before placement.

15. Operation HARVEST MOON, the construction of a C-130 airfield at Diem Bien Phu to support a Special Forces camp under construction. (168th Engineer Battalion, Started 3 Apr 67.) An engineer company task force with equipment augmentation was flown from Bien Hoa and Phuoc Vinh to Nui Ba Ra airfield (YUXL07) on 3 - 4 April 1967 in an airlift coordinated by 79th Engineer Group through II FFORGE. On the first day of the lift 30 sorties of C-130 flew 4 dump trucks, 2 lowboy rigs, 1 scoop loader, 1 water distributor, 2 graders, 2 sheepfoot rollers, 1 13-ton roller, 2 20-ton vehicles, 1 3/4-ton truck, and 1 contact truck. On the second day, 3 sorties of C-124 aircraft (the first known tactical lift of engineer equipment to a forward area by Globemaster) flew 1 1500 gallon-per-hour Erdulator and 2 D-7E dozers. On 5 April 1967, with route security provided by an ARVN regiment, the task force moved in convoy through 36 kilometers of enemy jungle to Diem Bien Phu where airfield construction began. As of the end of the reporting period the airfield had been certified by the USAF for C-123 operation and construction continued.

16. Engineer support of Operation MANHATTAN, a multi-division operation between the Michelin Plantation and the "Iron Triangle". (168th Engr Bn; 588th Engr Bn. Started 23 Apr 67.) The 168th Engineer Battalion, less elements on Operation HARVEST MOON) was placed in direct support of the 1st Infantry Division on 21 April 1967. The 588th Engineer Battalion was placed in direct support of the 25th Infantry Division on the same date. The 168th Engineer Battalion moved a reinforced company to a fire support base in the Michelin Plantation southeast of Dau Tieng and from there provided general engineer support. Jungle clearing equipment was placed under the control of the 1st Engineer Battalion and the company was engaged primarily in road maintenance. The 588th Engineer Battalion moved all elements to the operational area with an operating base established north of Trang Bang. One company moved to the field west of the Saigon River near Dau Tieng. They supported the operation by maintaining roads and clearing jungle. The operation was still in progress at the close of the reporting period.

SUBJECT: Construction Projects

I

CURRENT PROJECTS

1. Chu Chi (554th Engineer Battalion)
   a. 17,093 Man Cantonment
   b. 400 Bed Evacuation Hospital
   c. Helicopter Parking Aron for 16 G-47 and 52 UH-1 Helicopters
   d. 25th Infantry Division Headquarters
   e. Dial Control Building
   f. Communications Center Building
   g. Artillery Firing Pads
   h. Water Well Drill Points
   i. Laterite Pit Operation
   j. Open Storage Area (Added 20 March 1967)

2. Tay Nin (558th Engineer Battalion)
   a. 4,002 Man Cantonment
   b. 50 Bed MUST Hospital
   c. FOL Storage and Dispensing Facility
   d. Rock Quarry and Crusher Site Construction and Operation
   e. Laterite Pit Operation
   f. FALCAGW Base Camp (Added 13 January 1967)

3. Hoc Mon (554th Engineer Battalion)
   180 Man Cantonment
4. *Dau Toang* (588th Engineer Battalion)
   4,500 Man Cantonment

5. *Dà An* (168th Engineer Battalion)
   a. 7,700 Man Cantonment
   b. Cantonment Road Surfacing
   c. Dial Central Building
   d. Water Well Fill Points
   e. Water Storage Facility
   f. R & U Operations Center (Added 12 February 1967)

   a. 4,110 Man Cantonment
   b. C-130 Airfield
   c. C-130 Taxiway and Parking Ramp
   d. Artillery Firing Pads
   e. Water Well Fill Points
   f. Laterite Pit Operation

7. *Kon Tan - Frenchmen's Quarry* (168th Engineer Battalion)
   a. Rock Quarry and Crusher Site Construction and Operation
   b. Laterite Pit Operation

8. *Phu Loi* (554th Engineer Battalion)
   a. 8,100 Man Cantonment
   b. C-130 Airfield
   c. Airfield Maintenance Hangers
   d. Helicopter Maintenance Hangers
   e. Airfield Tower and Lighting

54
f. Airfield Repair Shop

g. Airfield Administration Building

h. Laterite Pit Operation

i. Water Wells and Fill Points (Added 26 February 1967)

9. 

Lei Khe (554th Engineer Battalion)

a. 3,804 Man Cantonment

b. C-130 Airfield

c. C-130 Taxiway and Parking Apron

d. Runway Rehabilitation

e. Heliport Construction for 30 UH-1 Helicopters

f. Artillery Firing Pads

g. Water Well Fill Points

h. Laterite Pit Operation

i. Aviation Support Facility (Added 19 April 1967)

10. Long Binh (168th Engineer Battalion)

Security Improvement for II FFORCEN (Added 24 April 1967)

11. Binh Phuoc (168th Engineer Battalion)

Revolutionary Development (Added 30 January 1967)

12. Cat Lei (168th Engineer Battalion)

1,272 Man Cantonment (Added 21 April 1967)

II

PROJECTS TRANSFERRED

1. Transferred to 159th Engineer Group on 10 March 1967.

All projects at Bien Hoa, (86th Engineer Battalion)
2. Transferred to 34th Engineer Group on 20 April 1967
   a. All projects at Khe Sanh/Long Giong (27th Engineer Battalion)
   b. Project at Gia Ray (27th Engineer Battalion)
   c. Project at Nui Chua Chan (27th Engineer Battalion)

III
PROJECTS REPORTED COMPLETE
DURING QUARTERLY REPORT PERIOD

1. **Cu Chi**
   60-bed Surgical Hospital (Incorporated in 400 bed hospital)

2. **Phu Loc**
   a. Heliport for 196 UH-1 Helicopters
   b. Airfield Operations Building
   c. Airfield Storage Warehouses
   d. Small Arms Range