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VII-113F

39th Engr Bn

EGA-3 (24 May 66) 1st Ind
SUBJECT: Operational Report on Lessons Learned for the Period 1 January
thru 30 April 1966. (RCS CSGPO-28 (RI))

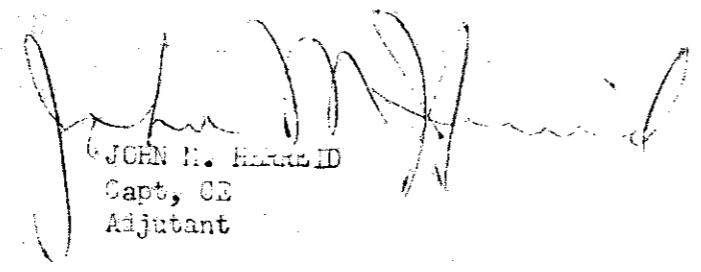
HEADQUARTERS, 35th Engineer Group (Construction), APO U. S. Forces 96312
24 May 1966

TO: Assistant Chief of Staff for Force Development, Department of the
Army (ACSFOR-DA), Washington, D. C. 20310

1. In accordance with Department of the Army Regulation 525-24, dated
29 October 1959 and USARV Circular 870-1, dated 11 November 1965, with
Change 1 dated 1 April 1966, Subject: Operational Report on Lessons
Learned (RCS CSGPO-28 (RI)), the subject report is forwarded for the 39th
Engineer Battalion (C)(A).

2. Concur in Commanders Observations.

FOR THE COMMANDER:


JOHN H. HEROLD
Capt, CE
Adjutant

OPS-05-009

HEADQUARTERS
39TH ENGINEER BATTALION (COMBAT)(ARMY)
APO US Forces 96312

OPERATIONAL REPORT ON LESSONS LEARNED
1 January thru 30 April 1966
(RCS CSGPO-28(RI))

SECTION I: Staff Section and Unit Activities

1. General Considerations:

a. The 39th Engineer Battalion arrived in the Republic of Viet Nam on 29 December 1965. The equipment was unloaded on 15 January 1966, and the 39th Engineer Battalion became operational on 22 January 1966.

b. The attachment of the 572d Engineer Company (LE) was effected on 15 January 1966, their equipment was unloaded on 17-20 January 1966, and they became operational on 21 January 1966.

c. During the report period of 1 January 1966, through 30 April 1966, the 39th Engineer Battalion carried out the mission of construction and combat support.

2. S-1:

a. Conducted normal personnel actions.

b. Processed and controlled the hiring of 220 indigenous labors at Tuy Hoa and 50 indigenous labors at Cam Ranh Bay.

3. S-2:

a. Normal intelligence activities occurred during the report period to include:

(1) Processing of security requests.

(2) Handling of classified documents.

(3) Establishment of a physical security system and implementation of monthly defense readiness tests to examine the security positions.

b. The following reconnaissance missions were conducted:

(1) Tuy Hoa, Viet Nam: During the period 28 March 1966 - 31 March 1966 the unit conducted a deliberate route recon-

naissance of existing and proposed roads in the vicinity of Tuy Hoa, Viet Nam. The purpose of the mission was to determine the effort required to construct a road net in the area that would support both tactical and logistically the combat units securing the Rice Rich Valley in the Tuy Hoa area.

(2) The reconnaissance team consisted of a platoon from Company A reinforced with the Battalion recon section. The team was airlifted from Cam Ranh Bay to Tuy Hoa on 28 March 1966. Security elements from the 1st Brigade, 101st Airborne Division, 1st ROK Marine Brigade and 47th ARVN regiment were provided. The major portion of the roads to be reconned were through VC infested areas. 80% of the roads were reconned on the ground while the remaining roads under VC control were reconned by air with the assistance of the 10th Aviation Battalion.

(3) On 31 March the team completed its assigned mission which included the reconnaissance of 65 miles of road, numerous bridges, and fords. On 5 April 1966 a detailed report of the reconnaissance was provided to Field Forces Viet Nam to provide them with the necessary information in assigning responsibility for the construction of the desired road net.

(4) Vung Ro Bay, Viet Nam: On 27 and 28 April 1966 reconnaissance parties from the 39th Engineer Battalion conducted a two phase reconnaissance in the area South West of Tuy Hoa. Security for the operation was provided by elements of the 2d Battalion, 327th Infantry (ABN) and the 2d ROK Marine Brigade, with heliborne operations being supported by the 11th AVN Gp.

(5) On 27 April 1966 an eight man reconnaissance team from the 39th Engineer Battalion was heli-lifted along with security elements from the 2d Battalion 327th Infantry to the vicinity of Dai Lanh where they conducted a thorough reconnaissance of both a highway bridge and a railroad bridge which through the use of explosives had been rendered useless by the Viet Cong. When this was completed the reconnaissance party loaded aboard the Vietnamese Junk Fleet along with their security force and sailed several miles north to their second objective of the day, a beach to be possibly used as an LST Landing Site. Here the reconnaissance party was joined by representatives of the 497th Port Construction Company who were present to make soundings along the shore. While these soundings were being taken, the reconnaissance party surveyed the area; shot a road in connecting the beach with the railroad; recorded valuable data on the soil, tides, waves and currents; and then climbed a rugged mountain trail in search of a possible way to build a road connecting the beach with Highway 1, several hundred yards up the mountain side. Upon completion of the reconnaissance of this area the party made a short survey of a second beach and then returned to Tuy Hoa South for the night.

(6) On 28 April 1966 elements of the 2d ROK Marine Brigade were heli-lifted into the southern end of the Tuy Hoa valley after it had been well prepared with artillery, mortars, naval gunfire, and Air Force napalm and strafing runs. Once the ROK Marines were in position to provide adequate security for the bridge sites, three separate reconnaissance parties from the 39th Engineer Battalion were lifted in to assess the damage to the bridges and to locate a possible by-pass at each site. Once this was accomplished the reconnaissance parties were heli-lifted back to Tuy Hoa South where they consolidated their notes and checked their reconnaissance forms. When all the information was assembled, the S-2 and S-3 Sections prepared a complete report to be sent forward.

(7) Nha Trang to Tuy Hoa, Viet Nam: Preliminary work has begun on a road and railway reconnaissance from Nha Trang to Tuy Hoa, Viet Nam. The major problem of providing security for the reconnaissance party will be resolved by use of air mobile tactics. This enables fewer security troops to be committed to the operation and decreases the time required to make such a reconnaissance.

4. S-3:

a. The operational structure of the 39th Engineer Battalion has been altered to enable the battalion to function in a construction role as well as that of a combat engineer battalion. The major change was that of moving the S-2 officer into the S-3 section as the Engineer with the primary duty of construction project coordinator.

b. Construction projects completed to date:

(1) My Ca Bridge: Assembled and emplaced a fifty-two (52) float MHT6 bridge at My Ca, Viet Nam, in conjunction with the ROK Marine Engineers, length 1150 ft.

(2) Cantonment Area: Constructed a 200 man cantonment area which included tent frames, showers, mess hall, and fortifications.

(3) Security Fortifications: Installed 1000 feet of triple concertina fence and six (6) defensive fortifications.

(4) Maintenance Pad: Placed a 37,500 SF T-17 membrane pad over M-8 PSP to provide a dust free maintenance area for the 510th Engineer Company (EM) at Cam Ranh, Viet Nam. The outside five (5) feet of the membrane were buried in the sand but the angle of the ditch was such that the membrane developed excess wrinkles. The actual work area was painted with non-skid paint. Continual observation of the condition of the pad has shown that it is capable of holding up in its planned function of a dust-free maintenance area.

(5) Parking Apron: Constructed an M-8 PSP aircraft parking apron using salvaged M-8 PSP on top of an asphalt and burlap dust palliation treatment.

(6) Pipeline: Construction of 3,000 LF of four (4)" pipeline to provide water to the 35th Engineer Group Headquarters.

(7) Storage Areas: Levelled and laterited a 90,000 SF storage area for the 53d Engineer Company Storage Area at Cam Ranh Bay, Viet Nam.

(8) PSP Storage Pads: Placed 67,400 SF of M-8 PSP to provide storage areas for intransit materials. Placed 25,000 SF of M-8 PSP to provide an LST beach storage area, tying in with old existing M-8 PSP by welding the pieces together.

(9) Storage Area: A 400,000 SF storage area was brought to grade for exterior depot supplies.

(10) LST Ramp: An attempt was made to construct a blast rock LST ramp on the South China Sea. The ramp extended about 45 feet into the surf and was formed by blast rock choked by smaller rock. The rough condition of the surf caused rapid destruction of the ramp, taking about 25 feet and spreading it out, causing an obstacle to the front of the ramp. Consequently the LST refused to attempt a landing at the site, but landed directly on the beach.

(11) A beach survey by the 497th Engineer Company (PC) recommended that the LST ramp site be located at Vung Ro Bay because of the surf action. Construction of the LST ramp ceased with the decision to leave the deadman anchor system in place to secure those ships that land on the beach.

(12) Quonset Erection in the 1st Logistics Depot Area of Cam Ranh Bay: After construction of twenty-four (24) 20'x40' Steel Arch rib quonsets had started the decision was made to tropicalize those yet to be constructed. This was done by simply extending the corrugated sheet metal siding out at about a 35° angle from the horizon thus increasing the usable space plus greatly increasing the ventilation. The roof corrugated metal was run perpendicular to the long axis of the building which increases the drainage of the roof. The ceiling vent was installed as in a normal roof rather than raised up 6 inches as is sometimes the practice.

(13) Combat Support (Tuy Hoa):

(a) Canal Bridge By-pass: A damaged one lane bridge across a canal approximately 10 feet deep and 43 feet wide was by-passed with a culvert and fill. This operation was done in conjunction with Company A, 326th Engineer Battalion, in order to advance the artillery some 8,000 meters. The operation took two (2) days due to constant VC probes at the site.

(b) Road Repairs: Heavy equipment and dump truck support did extensive road repairs to some 50 kilometers of provincial roads in support of the 101st Airborne Infantry Division, ROK Marines, 47th ARVN Regiment and the provincial rice harvesting operations. On numerous occasions hostile fire was encountered and on one occasion a VC kill was accredited to one of the Battalion's dump truck drivers.

(c) Causeway: A causeway road was built across a lake at Tuy Hoa North to link the refugee resettlement with the processing center and Route 1. The completed causeway had a 12 foot traveled way, was approximately 100 meters in length and averaged 4-5 feet in depth above the water line. Prior to the completion of the causeway, refugees had to make a circuitous journey of approximately 5 kilometers thru an unsecured area.

(d) Pioneer Roads: A 1,000 meter stretch of pioneer road by-pass was built in order to support the movement of the ROK Marines and US artillery.

(e) In support of the rice harvest, 30 cubic yards of crushed rock were delivered to the Phu Lam (1) resettlement to build a rice drying platform.

(f) Civic action support was given to the Tuy Hoa South refugee resettlement by filling, grading and shaping the compound streets.

(g) Airfield Extension and Maintenance: A major part of the construction effort was concentrated on the improvement of the Tuy Hoa South airfield, and depot area. A total of 103,500 SF of PSP runway extensions were laid along with a T-17 membrane aircraft parking apron.

(h) Assistance was rendered to the 117th Avn on the recovery of a downed HUH-1B helicopter. Aircraft recovery riggers and a 5-Ton tractor and trailer were utilized.

(i) Airfield extension: Under Oplan Arnold 1-66 elements of C Company 39th Engineer Battalion moved into Cung Son, Viet Nam, secured by elements of the 101st Airborne, 47th ARVN Regiment and CIDG forces. The road march into Cung Son lasted three (3) days with no enemy contact.

(j) An existing pioneer runway was extended from 1340' to 2120', thus enabling loaded C-123 aircraft to use the field. Mechanical difficulties with the front loader brought about the construction of a PSP/timber loading chute used to load fill material into the dump trucks.

(k) Civic actions projects were also conducted to include: two (2) water points, road maintenance, vehicular mechanical work, medical treatment and culvert construction.

(lh) Signal Hill: Construction consisted of: leveling hill tops, building generator shacks, placing a concrete antenna base, and construction of an electronic equipment building. The existing seven (7) mile road to the site was laterited.

c. Current Projects Include:

(1) Road Maintenance: Maintenance of approximately twenty (20) miles of laterite roads.

(2) Road Construction: Construction of seven (7) miles of laterite roads to include internal road nets of local troop contentment areas.

(3) Quarry Operations: Operation of a rock and laterite quarry that has produced, since 1 April 1966, 3730 tons of rock and 20,315 tons of laterite.

(4) Cantonment Area: Construction of a 700 man cantonment area located at three (3) different sites (HQ, A and B Companies of 71 ADA). To date 570 CY of concrete have been placed and 10,016 SF of vertical construction completed out of a projected 34, 632 SF. Self help has been of great assistance in the progress of this project.

(5) Cholon Construction: Construction of twenty-two (22) Cholon prefabricated buildings, 20'x50', with some Cholons placed end to end. The longest building is five (5) Cholons for a total of 250' in length. Ease of construction is a definite asset but the manner of design of the building permits excess amounts of sand to blow into the building.

(6) Cantonment Area: Construction of an 800 man cantonment area for the 39th Engineer Battalion and 572d Engineer Company. All construction is standard 2 and designed such that it can be moved from its present temporary location to a permanent location.

(7) Convalescent Centers: The construction of an 1100 man Convalescent Center to include an 1140 man capacity mess hall. To date 955 yards of concrete have been placed out of a projected 1786 yards, 41,000 SF of vertical construction completed, and 413,000 yards of earth moved.

(3) Combat Support (Tuy Hoa):

(a) Dust Free Helipads: In order to provide dust free parking areas for Air mobile companies a T-17 membrane pad 200'x1000' has been designed and emplaced. The design calls for the sand adjacent to the T-17 to be shot with a dust palliative (RC-0). A total of 600,000 SF of T-17 is to be emplaced. A more shallow ditch has been designed for the anchorage system to eliminate excess wrinkling of the membrane.

(b) Road Construction: In order to provide for resupply of various tactically key terrain features an extensive road construction program is in progress at Tuy Hoa, Viet Nam. Approximately four (4) miles out of sixty-five (65) have been worked on to date. This will be a joint effort with the II Corps ARVN Engineers as well as some work provided by the ROK Marine Engineers.

(c) Laterite Pit and Quarry: On 5 February 1966 a laterite quarry was opened on the north-east slope of Chop Chai Mountain to supply fill material to repair Route 1 north from Tuy Hoa and other routes of communication. A 15,000 SF storage area was brought to grade and laterited to enable LSTs to unload their cargo more rapidly.

(d) Airstrip Maintenance: A continuing mission of the company was the repair of Tuy Hoa North airstrip. This strip had long been neglected and extensive repairs were done to include lateral anchorage by burying 1000 pieces of PSP. A safety hazard presented by the upturned PSP ends was eliminated by welding a cover strip over the juncture of the I-19 taxi-way/parking apron, (thus removing a rut that had broken many tail wheels); welding numerous breaks in the strip; and replacing broken end connectors.

(e) Mine Sweeping: On 6 February 1966 the company undertook the task of sweeping the principal routes of mines. This is a daily job requiring 14 men and covering 14 kilometers of road in an average day's operation. Five (5) mines were lifted and blown in place. VC sniper fire has been encountered on numerous occasions.

(f) Artillery Support: An operational immediate job of building a 50 meter causeway to open a new artillery battery site was accomplished in two days in spite of sniper fire, lack of a good borrow source and mass congestion, by refugees, of the one-lane haul road.

(g) Recovery of Navy cubes and floatation tanks were effected from the beach area south of Tuy Hoa. This mission consisted of an armed company task force as there had been no friendly troop operations within this area for approximately two weeks.

d. Training:

(1) Classes have been conducted in the following areas:

- (a) Command information with particular emphasis on Viet Nam.
- (b) Safety: Daily instruction at unit formations.
- (c) Engineer Reconnaissance to include both deliberate and hasty reconnaissance.

(d) Reorganization as Infantry to include battle drill, commands and fire and movement.

(2) The inclement weather training is scheduled on a company level to include:

- (a) Tactics
- (b) Minefield operations
- (c) Security
- (d) Construction techniques

(3) Training films are programed so as to utilize the nightly movie schedule.

5. S-4: Devising and operation of supply procedures:

a. Allocation of critical items-controlled by Cam Ranh Bay Depot and 35th Engineer Group (Construction), S-4.

b. Automatic Supply-no comment

c. Supply by status report and other supply reports: This unit has not received any reply in regard to the various reports sent forward. In particular, the periodic Logistics report has not been answered.

d. Supply by requisition: This unit has submitted 2346 requisitions during the report period, and has received 1443 (approx 51%). Of these requisitions submitted, 1303 were for construction supplies.

e. Operational Development Projects: This unit has one potable water supply point in operation and has produced 1,075,895 gallons during the report period.

f. Other special and emergency supply operations: None.

g. Exchange of Supply Information: This unit has made and received several visits to and from engineer units located in this area in regards to supply activities and problems. This has proved to be quite helpful.

6. Maintenance and equipment:

a. Repair Parts: ✓

(1) A total of 2,134 requisitions were submitted through normal supply channels, of these only 179 were filled, and the remaining

1,953 have yet to be filled.

(2) Redball: A total of seventy-five (75) requisitions were submitted of which twenty-six (26) were filled. A total of twenty (20) items of equipment were removed from deadline through the Redball System during this period.

b. Field Maintenance: A total of seventy-five (75) third echelon job orders were sent forward, of these fifty-two (52) were completed.

c. Equipment Exchange: Four (4) 5-Ton dump trucks have been exchanged through maintenance float and depot turn-in and issue.

d. Training: During this report period a Preventive Maintenance Program was initiated. It covers the following forms, records, and booklets:

(1) DA Pam 310-1; 310-2; 310-3; 310-4

(2) SF 91 and 46

(3) AI 33-750

(4) Log Book

(5) Forms: 2400; 2401; 2403-1; 2403-3

(6) 3013

(7) Preventive Maintenance

e. Inspections: Two (2) technical inspections of each company were conducted in the Battalion on Ordnance and Engineer Equipment during this period with the use of DA Form 2404.

7. Civic Actions: Beside the civic action work mentioned above at Tuy Hoa and Gang Son, a current program of road repair, well digging and land clearing is in progress at Ba Ngoi.

SECTION II: Commander's Comments and Recommendations:

1. General: 39th Engr Bn. (abt) 24 May 66.

a. The effective operation of the 39th Engineer Battalion has been limited to some degree by the following areas:

(1) Personnel:

(a) The current strength is 533 assigned out of an authorized 619.

(b) Item: Morale ✓

1 Discussion: The matter of maintaining troop morale in the Viet Nam Theater revolves primarily around several specific areas: First an adequate information program; secondly, close supervision of basic services, e.g. mail, food, post exchanges, laundry; etc., and finally, a well organized special services program.

2 The first item centers around the fact that personnel will take more interest in their work if they can justify their purpose in being in Viet Nam. Detailed indoctrination as to overall United States objectives and more specific details as to the operations of the particular unit and the individual within the unit, help considerably to relate personnel to their role in the overall picture. These facts should be stressed and this battalion is currently conducting a program of regularly scheduled in-briefings for newly arrived personnel to acquaint them with the unit, its traditions and its operations and also to familiarize them with the area in which they will be living and working.

3 The second item, although important in CONUS assignments, takes on added importance during the twelve (12) months a man is stationed in Viet Nam. The fact that so little else is available makes the smooth function of normally routine services highly desirable. Efficient mail service for example is one of the foremost morale factors in this battalion and the adverse effect of inconsistent service is readily observable. Additionally, another area which takes on magnified importance is the availability of items normally readily obtainable in CONUS. Such things as candy, sundry items, jewelry and cameras provide a considerable morale boost. In recognition of this fact the battalion is operating a unit post exchange in addition to making the base exchanges more accessible through adequate transportation. The operation of a local unit exchange is particularly important in organizations which are essentially isolated from main supply areas.

4 Third, and perhaps most important is the establishment of a special services program. Relieving boredom and breaking routine, while providing an outlet for all personnel in their off duty hours, is a major contributing factor to the maintenance of high morale. At the present time an officer is responsible for the coordination and implementation of a special services program which includes a battalion movie theater, canteen, athletics, and recreation schedule, tournaments of pinochle, horse shoes, checkers, and bingo, and a supervised swimming program.

5 Finally, the special services program is effectively supported by an R&R schedule which allows the majority of personnel who desire to do so, to leave the area for periods of five to seven days. R&R quotas have varied from 15 in February to 57 in May and the variety of locations available have allowed most individuals at least their first or second preference.

6 Observation: The importance of these items necessitates continued emphasis at all levels of command to insure their implementation. Personnel must continually be kept informed; they must receive the highest possible satisfaction in the field of routine services; and they must be provided with an effective, well organized special services program. As a result of observations on this latter point, the necessity of appointing proper function of such a program is a full time job.

b. Item: Welfare

(1) Discussion: The concern of personnel welfare falls into two major categories, physical and spiritual. Being in a geographical and ethnic area totally unrelated to anything which the majority of US Personnel are accustomed, places increased emphasis on the need for orientation as to the pit falls which exist in the field of personnel hygiene and health. Tropical diseases are not prevalent in this particular area but intestinal disorders, skin disorders, and venereal diseases are common. As part of the Battalion's information program, personnel are informed of the dangers that exist and the precautions necessary to avoid them.

(2) In the area of spiritual welfare, regularly scheduled religious services are conducted and the services of a chaplain are made readily available. An existing problem is the fact that the temporary nature of our location creates an atmosphere not highly conducive to worship; however every opportunity is given personnel who desire to attend.

(3) Observations: All personnel should be thoroughly familiarized with existing problems in the field of health and sanitation.

(4) In addition it is recommended that all units of battalion size which are substantially in garrison situations and are separated from major installations be given authority to construct semi-permanent Chapels in order to provide an atmosphere more conducive to worship.

c. Item: Personnel Management

(1) Discussion: Replacements arrived on nearly the same basis as programmed and it appears that this will continue in the future. A large part of the initial replacement problem was due to the fact that shortly after arrival in-country, personnel were being processed to return to CONUS for ETS. This battalion was under the criteria that an individual having 60 days remaining until ETS was considered deployable; this created problems, and should not be considered in future moves. These personnel were being sent home immediately upon arrival in-country. This created an unnecessary administrative workload.

(2) An additional fact that continues to pose a problem is the diversion of assigned personnel prior to arrival at the unit. This not only makes it difficult to plan future requests but also hinders programed assignment of these individuals, since these individuals were in many cases requested far in advance and their arrival planned to complete 2013 strength.

(3) Observations: It is recommended that personnel with less than at least 90 days remaining to ETS not be considered eligible for overseas deployment and also that personnel ordered to a specific unit from another theater not be diverted upon arrival in-country unless the individuals MCS is required in a combat unit.

d. Operations:

(1) An engineer combat battalion has some difficulty operating under an extensive construction program. Even with the transfer of the G-2 Officer to the Engineer slot, additional personnel are still required in the area of construction drafting, estimating, and construction supervision.

(2) Delays in project completion are encountered due to non-availability of construction supplies.

e. Supply:

(1) Movement and handling supplies:

(a) This unit during the report period, has been responsible for draging and moving approximately 95% of the supplies received from the depot area to the cantonment or project site. This has been accomplished with the organic equipment available, e.g. 20Ton truck mounted cranes, 5Ton dump trucks, and 25Ton semi-trailers. This method has been time consuming, as the cranes are slow, and difficulty is encountered in mobility of the crane, due to the sand.

(b) Recommend the HE equipment be augmented to parallel the EOL of units engaged in construction. This would greatly increase the operating efficiency of the battalion.

(2) Transportation: Air and Water

(a) Air transportation:

1 Air movement by this unit has been attempted on numerous occasions to support combat operations in the Tuy Hoa area. This movement is coordinated and controlled by the Area Transportation Office, Can Ranh Bay. To date this has been totally unsatisfactory, as it required from 5 to 25 days to receive the scheduled transportation, as such engineering effort has been wasted during the delays.

2 This unit has requested that a bi-weekly, scheduled CV-2 flight from Can Ranh Bay to Tuy Hoa and return be provided. This request has been submitted to the Area Transportation

Office, the 35th Engineer Group (Const), and the 18th Engineer Brigade. This unit has also requested two (2) each OH-10 helicopters be issued to this unit to alleviate this problem.

3 Recommend that units engaged in operations outside of their immediate locations, be provided with scheduled or organic airlift capabilities.

(b) Water Transportation:

1 This unit has been required to move material and equipment from Cam Ranh Bay to Tuy Hoa and return by water during combat support missions. This transportation is likewise handled by the Area Transportation Office, Cam Ranh Bay, in an equally unsatisfactory manner. Again 5 to 25 days are required for movements, with similar results in wasted engineer effort.

2 Recommend that sufficient cargo vessels, shallow draft, be provided to accomplish movement in an efficient and rapid manner. Improved communications and operating procedures in the transportation management area would also help to rectify the situation.

(c) Port traffic and landing operations: (See (b)2 above)

(d) Traffic control: None reportable

(e) Airhead Operations: Handled by the Cam Ranh Air Base, and no significant problems have been encountered by this unit, once the aircraft are scheduled by the Area Transportation Office, Cam Ranh Bay. (See comment (2)(a)2)

(f) Storage Operations:

1 Due to the large quantities of construction material requisitioned for the assigned projects, this unit has been required to establish an S-4 storage yard. This yard must be operated on a full time basis, and the TO&E does not provide for this, hence one enlisted man must be carried as excess on the personnel roster, even though it is an essential operation, and this is not a promotable slot.

2 Recommend that combat engineer units engaged in a full time construction mission be provided with a TO&E change to provide for this essential operation. Further recommended that the rank of individual concerned be Sgt 4-5.

(g) Conservation of supplies and equipment: This unit, upon completion of a project, returns to the S-4 yard or the 53d supply yard, all excess materials drawn for that project. This excess material is utilized on subsequent projects.

(a) Administration of Supply (supply control):
Supply control is accomplished with applicable regulations and no significant problems have been noted, except for slow delivery of items not in stock.

(3) Communications: This unit has the old family of radios V-C-10 and VRC-34. Not only are they old and worn out with parts being difficult to obtain, but they do not net satisfactorily with the new family of radios. On numerous combat support operations the effectiveness of the operation was hampered by poor communications, both to the battalion and to supporting infantry and artillery units.

(4) Unit Capability:

(a) Outstanding accomplishments have been achieved in the following areas:

1. Company C 39th Engineer Battalion moved through 50 kilometers of enemy territory to construct a 600 M runway extension while conducting an extensive program of civic works in the town of Cung Son.

2. Company B 39th Engineer Battalion conducted extensive combat support missions in Tuy Hoa, Viet Nam, during the period 15 January 1966 through 15 March 1966. Through ingenuity, incentive, aggressive leadership, and hard work, accomplishments were made that ranged from laying PSP, to construction of causeway, to mine-sweeping operations.

3. Company A 39th Engineer Battalion not only constructed the longest tactical bridge in Viet Nam (MTO) at Cam Thanh Bay, they also conducted the extensive road reconnaissance of 65 miles of roads in the Tuy Hoa area.

(b) The 39th Engineer Battalion, with 572d Engineer Company (LI) attached, has averaged a monthly construction effort of 105,000 man hours. The 39th Engineer Battalion has a total capacity of 115,000 MH/Battalion month but, when deductions are made for overhead, physical security, and absences, this capacity is reduced to 85,000 MH/Battalion month. Actual capacity of the battalion averages about 78,000 MH/Battalion month.

(5) Recommendations:

(a) It is recommended that the 39th Engineer Battalion be reorganized under TOE 5-35E. Under that TOE the Battalion would be better equipped to accomplish missions and would have another line company. This recommendation has been presented in several letters

during the past without any results.

(b) The actual performance of the 39th Engineer Battalion would be greatly increased with the issue of a HU-1D Helicopter for transportation, communication and coordination with elements of the Battalion on missions great distance from the Battalion Base Camp. This Battalion has had elements in Tuy Hoa since January 1966 and has experienced continual difficulty in maintaining communication and resupply. There have been numerous operations during which an assigned aircraft would have greatly improved the efficiency of the operation.

(c) Personnel shortages in the specialized areas of cooks (MOS 24E20), radio operators (MOS 05B20), are in short supply. Not only does this reduce the efficiency of these fields but it requires us to take personnel from other areas to fill these needed positions.

(d) The following items of equipment could be well utilized on current and projected projects:

- 1 Drafting and duplicating set, small
- 2 Generator, 10KW
- 3 Helicopter, HU-1D
- 4 DeWalt saw, trailer mounted
- 5 Concrete vibrators
- 6 CLAW 2900, Heavy Duty Prime Movers for 572d Light Equipment Company
- 7 Fork lift, cross country RFL, 6,000 lbs capacity
- 8 Soils test set

(e) The following equipment is required to supplement that currently authorized:

- 1 Survey set, GP
- 2 Water distribution unit 1200 gal
- 3 Mixer, concrete
- 4 Welding shop, truck mounted
- 5 Shop, contact maintenance, truck mounted
- 6 Lubricating and servicing unit, truck mounted

g. Mine Sweeping:

(1) Discussion: During all combat support operations involving road movement of vehicles, minesweeping teams were required to search for mines employed by the VC. The majority of mines found were homemade and of a non-standard design.

(2) Observation: Due to their nature, the located mines were blown in place rather than attempting to lift. The damage done to the road is highly unassurable, but one attempt by another engineer unit to lift a mine resulted in personnel injury.

h. M-3 PSP:

(1) Discussion: In the placing of over 300,000 of M-3 PSP several factors concerning the use of M-3 PSP should be noted:

a) The M-3 PSP was produced by three (3) manufacturers causing a great deal of difficulty in the locking of the PSP in place.


(b) Attempts to lay PSP across an airfield crown resulted in difficulty of locking the pieces together.

(2) Observations: Coordination should be made to provide standardized PSP of one design. The close tolerance of the locking lugs does not allow for any irregularity of fit.

i. Water Distributors:

(1) Discussion: The large amount of laterite road maintenance combined with the dry climate requires a great deal of water to keep the dust free road.

(2) Observations: In order to supplement the one water distributor authorized, levy cubes (10'x10' steel tanks) have been salvaged from the My Hoa area. By mounting a levy cube on the back of a M2 tractor the water haul capability can be varied from road watering to providing water for concrete work. Currently a system of four (4) cubes on a M108 semi-trailer is being field tested. This will allow the use of less personnel to operate the water trucks while increasing the amount of water applied to the roads.


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