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**FINAL REPORT**  
**CONTRACT AID 730-3589**  
**REPUBLIC OF VIETNAM**

**PREPARED FOR**

**Agency For International Development**  
**Washington, D.C. 20523**

**December 1975**

**DANIEL, MANN, JOHNSON, & MENDENHALL**  
**3250 WILSHIRE BOULEVARD, LOS ANGELES, CALIFORNIA 90010**

# DMJM

DANIEL, MANN, JOHNSON, & MENDENHALL

December 18, 1975

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Agency for International Development  
Washington, D.C. 20523

Attention: Mr. Leroy Purifoy

Gentlemen:

We are pleased to attach herewith our Final Report on Contract AID  
730-3589.

Unfortunately, this report has been delayed due to the present dispersal  
of our former DMJM project staff.

We have also endeavored to be as informative as possible, but the hasty  
evacuation of Vietnam will, no doubt, have caused certain oversights in  
the report content. Many of our project files and progress photos were  
lost.

Should there be any further specific information required, please contact  
the offices of our Overseas Group in Los Angeles.

Very truly yours,

DANIEL, MANN, JOHNSON, & MENDENHALL



Michael B. Austin  
Associate Vice President

MBA:mr

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SECTION I  
PROJECT DESCRIPTION

The project provided for the major repair and overlay of Highway QL-1 from Phan Rang to Bridge Number 215 north of Nha Trang, a total of 146 kilometers. Work consisted mainly of repairs to deteriorated pavement, improved shoulders, and provision of an asphalt-concrete leveling course for selected sections of the highway. Description of the Contractor's pay items are as follows:

- Furnish laboratory
- Excavation
- Scarify
- Crusher base rock
- Bituminous prime coat
- Bituminous tack coat
- Asphalt concrete
- Double bituminous surface treatment
- Single bituminous surface treatment
- Plain concrete
- Riprap
- 36-inch corrugated metal pipe
- 48-inch corrugated metal pipe
- Grouted riprap
- Seal coat.

Design and contract documents for this project were prepared by DMJM under Contract AID 730-3490.

SECTION II  
PROJECT HISTORY

A. NOTICE-TO-PROCEED ISSUED

March 22, 1973.

B. WORK START

April 20, 1973.

C. CONSTRUCTION CONTRACT PERIOD

445 days (at the time of termination the contract had been extended a total of 319 days due to the international petroleum crisis, typhoon damage, war hostilities, and related problems).

D. SIGNIFICANT EVENTS DURING THE CONTRACT

See Sections III, IV, V, and VI of this report for details regarding engineering activities, construction progress, financial history, personnel staffing, and general work conditions.

E. ARCHITECT-ENGINEER SUPERVISOR CONTRACTOR

A contract was awarded to the Architectural-Engineering firm of Daniel, Mann, Johnson, & Mendenhall effective April 14, 1973 to provide construction supervision services for the project.

SECTION III  
ENGINEERING ACTIVITIES

A. GENERAL

The A/E firm during this contract performed inspection and supervision of construction services on the major repair and overlay of route QL-1 from Phan Rang to Bridge Number 215. All construction has been performed in accordance with plans and specifications approved by USAID and the Vietnam Highway Administration (VHA).

Specifically, the A/E firm provided continuous onsite inspection of the Contractor's operations, and checked and verified conformity to drawings and specifications of all work performed. Daily diaries were kept containing a day-by-day record of significant items related to this project, i. e., weather, important discussions with the construction Contractor's personnel, equipment on the job, testing all materials, time of shutting down or resuming work and explanations, work accomplished by the Contractor during the day, length and cause of any delays, and unusual conditions. The A/E firm also established and maintained a system of records and calculations which clearly substantiate progress payment to the Contractor (see statement below).

B. TESTING

A complete materials testing laboratory was furnished and operated under the contract staffed by one U. S. Materials Engineer and five laboratory technicians.

C. SIGNIFICANT CHANGES

The major revisions to the construction contract primarily concerned worldwide inflation in petroleum products, e. g., asphalt. However, some additional work under the contract was required as a result of the damage from two major typhoons. This damage necessitated a detailed engineering survey and modification of the contract's scope to rectify the damage. Other engineering changes included a seal coat for revitalizing the asphaltic pavement in one area and miscellaneous drainage improvements that became apparent after the typhoon floods.

D. AS-BUILT DRAWINGS

On April 16, 1975 three sets of as-built drawings were furnished to Mr. Tibor Nagy, USAID/ETA, in Saigon by M. K. Van Zyl, DMJM Resident Engineer Contract AID 730-3589.

## E. A/E CONTRACTOR EVACUATION OF PROJECT SITE

The Contractor received notification to evacuate the Central Highway area on March 28, 1975. The initial communication method utilized was a handwritten message that was accidentally found on the desk of the secretary to the Contracting Officer to this project. The time the message was found was approximately 11:30 a. m. on March 28, 1975.

Clarification was sought but the Contracting Officer Representative could not be found. A telephone call was put through to Engineering Technical Assistance (USAID) Saigon where no explanation could be given as to why the message had been written.

A further telephone call to Chief, Highways Branch, Mr. Leroy Purifoy, to clarify the situation resulted in a direction to the Resident Engineer to request the order in writing from the Consul General. The order was received in handwritten form. At this stage a full afternoon had elapsed and evacuation plans were severely hampered.

On March 29, 1975, the DMJM Resident Engineer commenced coordinating evacuation plans with Saigon and the Dae Lim Industrial Co., Ltd. Arrangements were made through the Consul General with Air America. All DMJM and Dae Lim personnel were placed on an evacuation list. All office equipment and files pertaining to this project were boxed, labeled, and placed in the Air America warehouse for transshipment to Saigon as air cargo, and manifests were made out, a copy which is on record.

Events happened too quickly to accurately relate all that took place. But, basically, all the Dae Lim personnel departed, some by boat, others by aircraft. All DMJM expatriate personnel were relocated to Saigon except for 11 Vietnamese employees, some of whom had elected to remain in Nha Trang thinking that it would be safer there.

As can be seen, negotiations were still in progress to obtain asphalt and continue the project the very same day the word was given to evacuate. Clippings from newspapers were also not very informative. On the very day the evacuation notice was given in Nha Trang to the project staff, a meeting was held between the Deputy U.S. Ambassador in Saigon and a dozen U.S. businessmen. Indications from that meeting were that no imminent danger existed in Nha Trang. Conditions had deteriorated so rapidly that even the best communications appeared inadequate.

Mr. Tibor Nagy, Assistant Chief, Highway Branch, arrived in Nha Trang on the evening of March 29, 1975 to assist and coordinate evacuation of all Contractor personnel. Mr. Nagy did a very efficient job under very difficult circumstances. The notice to evacuate was extremely short and all pertinent files and drawings were boxed and manifested on Air America.

It is understood that all files stored for transshipment in the Nha Trang Air America warehouse pertaining to records of this project are permanently lost. There was also a huge loss in personal property on behalf of the expatriate employees working on AID 730-3589. This has been documented. Many departed with only the clothes on their back as did the Vietnamese employees.

On April 2, 1975, Air America's Saigon warehouse was checked for subject materials on which we have a TCMD. It had not arrived yet.

On April 4, 1975, we again went by Air America and learned that the subject materials had not yet arrived. Since Nha Trang was by then Communist-controlled, it was reasonable to assume that all the files, records, and personal effects were lost.

SECTION IV  
CONSTRUCTION PROGRESS

A. SUMMARY

The Construction Contractor, Dae Lim Industrial Co., Ltd., was given Notice-to-Proceed on the contract effective March 22, 1973 and a preconstruction conference was held at the project site in Nha Trang, South Vietnam, on April 14, 1973.

Contract AID 730-3552 was a unit price contract with a total bid for 14 bid items of \$1,998,600 and the time frame allocated was 450 calendar days (completion by July 8, 1974).

The scope of the project was basically a two-inch overlay with four reconstruction areas, namely at Ba Ngoi and Hoa Do (Cam Ranh Bay area), Route 421 Bypass (Nha Trang), and the Hon Mot Hill area. The total length of the project was 146 kilometers.

The Contractor did not make a successful start on the contract and as of November 10, 1973 had only completed 19.7 percent versus a scheduled completion of 60.8 percent. Most of this delay appears to have resulted from poor management, late arrival of personnel, inadequate planning, poor understanding of contract specifications, and some increases in the work required. Other problems included theft of a bulldozer and, perhaps more important, management of subcontractors. Dae Lim during the course of the contract was using the following subcontractors:

- VECCO – Located six km north of Nha Trang at Ru-Ry, this company supplies mineral products and asphaltic concrete and leases construction equipment to the Contractor
- Mai Ha Cong Ty – Operates a quarry/crusher complex formerly at Ru-Ry north of Nha Trang and relocated to the Southern Segment near Ba Ngoi; supplies base rock only purchased from quarriers using hand labor. Personnel consists of 19 Vietnamese.
- Minh Thanh (later Tran Hung) – Operates a quarry in the Southern Segment for base rock only. Rock supply is purchased from quarriers using hand labor. Personnel consists of 46 Vietnamese.
- Coty Coty – Formerly subcontractor for labor and equipment in the Southern Area. Contract has been discontinued since October 15, 1973.

- Ly Lap – Contract on riprap work has been discontinued since July 1974
- Nguyen-Van-A – Contractor for hauling base rock and hot mix asphalt concrete
- Mr. Muoi – Contractor for all the DBST work in the Central Segment
- Minh Thanh – Contractor for the concrete curbs and gutters in the Ba Ngoi reconstruction area. Contract now completed.

Lack of truck scales was another problem that hampered progress at this stage. Through lack of planning regarding procurement of the scales the Contractor put 48 personnel out of work in the Southern Area (subcontractor).

During the second six-month period of the contract little improvement was indicated by the Contractor. However, some measure of the fault was due to two typhoons which struck the project area, causing widespread floods and halting construction. But perhaps more important was the impact of worldwide cost increases in petroleum products, such as asphalt, which touched off a major inflationary period. This eventually resulted in renegotiation of contract work items affected by the abnormal materials cost increases. Contract renegotiations proved to be a continual delaying factor due to unusual circumstances. The project at this stage was badly behind the original schedule and was only 25 percent complete against 80 percent as scheduled.

The Contractor had more than sufficient time to identify problems that existed. He did not cope with them in an orderly manner. Haul volume consistent with production was lacking. At times there were only two units hauling in one day and at other times, through lack of communication and coordination, he had as many as 14 hauling units loaded with base material standing by at the jobsite 15 kilometers from the VECCO industrial site that could not be dumped because the shoulders were too wet due to rain the previous day.

During this period the Contractor did not react promptly to problems arising during construction. This was partly due to lack of leadership and absence of the Project Manager from this site. Project Managers were changed in September. However, the new man, Mr. Wan Ho Lee, only stayed one month before departing for Korea. The next Project Manager was absent from this site for over three weeks. Direct requests were ignored and it appeared at that stage that the Contractor did not want to complete the project, although he assured both the A/E and the COR that he would.

During early 1974 the A/E Supervisor, DMJM, furnished AID an independent analysis of the impact of the inflationary costs of asphaltic products on the job. These costs were a prime issue in the renegotiated contract, which at termination had been increased to \$3,409,517.000.

However, prior to the final renegotiation, the Contractor was requested to give cause why he should not be defaulted. Progress was lacking and, although extra work was required due to the two typhoons, the prime reason for the delays were firmly with the Contractor.

In April 1974 Dae Lim did show more evidence of completing the contract by increasing site staff from 93 to 147, signing new rock hauling contracts, concluding supply contracts with VECCO, and obtaining additional equipment. The decision was reached to allow the Contractor to continue.

In the first Monthly Progress Estimate for January 1975, the A/E made adjustments for the escalation of POL costs as instructed by the COR this site and as provided under Amendment Number 2 to AID 730-3552. This information was incorporated in a voucher prepared on February 4, 1975, the total being \$98,896.07.

On February 5, 1975 a meeting was held at 4 p.m. between Mr. Nagy (ETA), Mr. Gibson (CSD), and Mr. Van Zyl (DMJM). It was determined at this time that a contract amendment would be necessary before payments could be made to the Contractor for escalation in costs of POL products.

Another Monthly Progress Estimate was therefore prepared by the A/E on February 6, 1975 using only unit prices set forth by the contract or its amendments. The contractor's partial payment was reduced to \$85,205.80, a reduction of \$13,690.27.

Work progressed well during the months of May through September 1974, but very little work was accomplished after that period.

The status of contract AID 3552 on March 12, 1975 showed a 65.3 percent completion status with 34.7 percent remaining to be accomplished within a 72-calendar-day time frame or 2.4 months. To be more specific, the Contractor had to complete an average of 14.5 percent every 30 days from this point in time to satisfactorily complete the contract within the time frame allotted him by the sponsor. The following diagram will more accurately reflect what this percentage entailed:

### Monthly Percentage Completion

<u>Year</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
1973	-	-	-	0.25	0.92	5.54	8.09	4.70	0.20	0.30	0.40	
1974	2.0	3.10	0.90	4.10	6.20	8.70	10.78	9.72	3.20*	0.60	0.00*	0.20
1975	2.5*	4.40										

At this stage security of the entire country was severely compromised and no effective work on the project was being accomplished. Instructions were passed to the Contractor on March 29, 1975 to evacuate the project area and an official Notice of Termination was issued April 4, 1975 (see Appendix). At termination the project was approximately 69 percent complete.

On April 11, 1975 the Dae Lim Industrial Company, Ltd. applied for payment of their retention monies. A copy of the document as approved by DMJM is included in the Appendix.

Following are graphic summaries related to the progress of construction during the course of this contract.

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\* Indicates revision in total percent completion as per Amendment Number 4.





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CLIENT  
 CONTRACT NO.  
 PROJECT  
 LOCATION

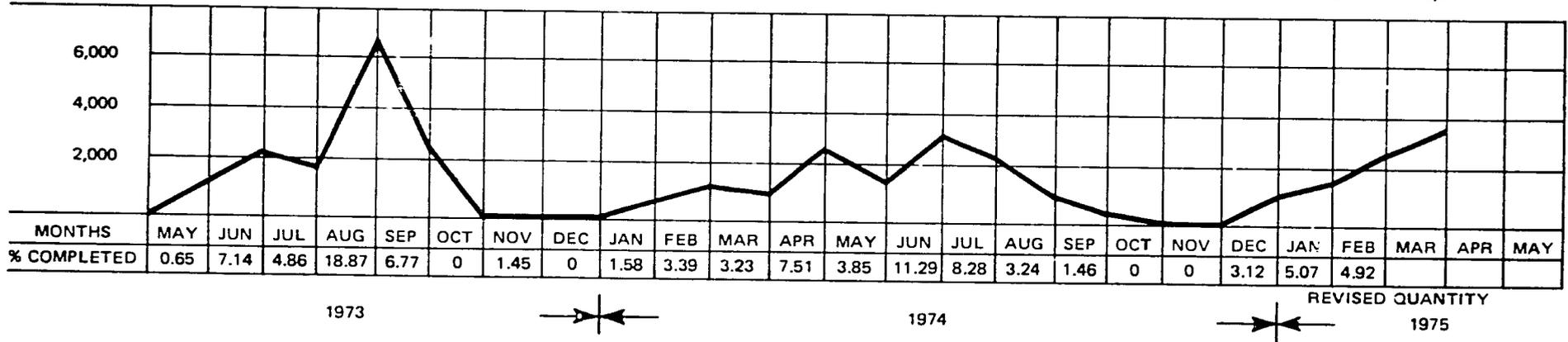
USAID - VIETNAM  
 AID 730-3552  
 REPAIR & OVERLAY QL-1  
 PHANRANG TO BRIDGE 215

SUMMARY OF MAJOR QUANTITIES

EXCAVATION - CUBIC METERS

TOTAL TO DATE: 36,202

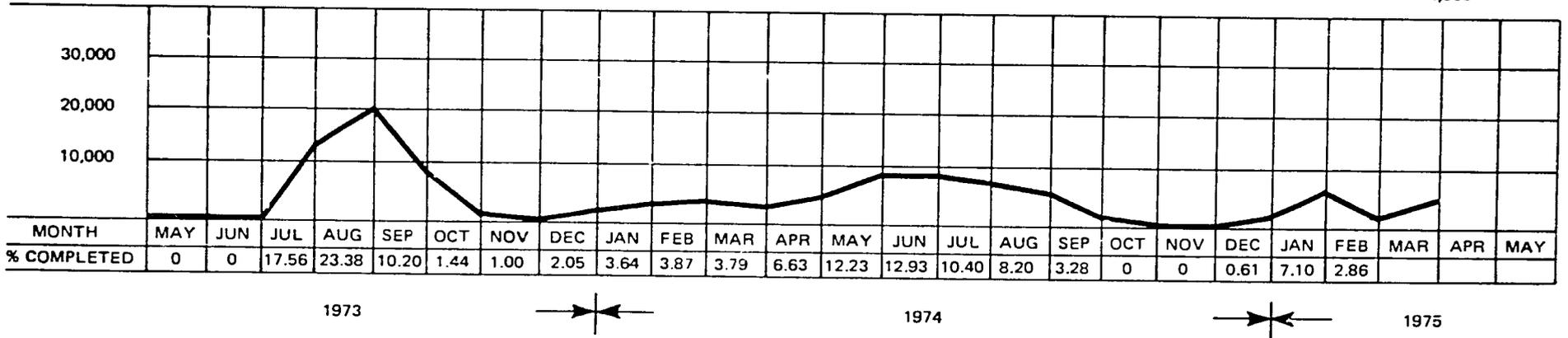
TOTAL THIS MONTH: 3,004



BASE ROCK - METRIC TONS

TOTAL TO DATE: 113,840

TOTAL THIS MONTH: 4,983





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CLIENT  
 CONTRACT NO.  
 PROJECT  
 LOCATION

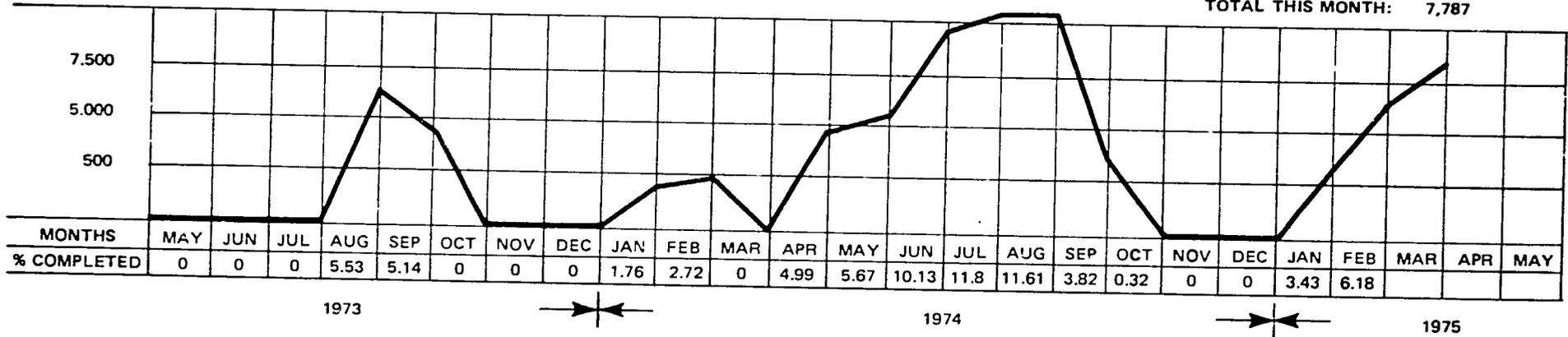
USAID - VIETNAM  
 AID 730-3552  
 REPAIR & OVERLAY QL-1  
 PHANRANG TO BRIDGE 215

SUMMARY OF MAJOR QUANTITIES

ASPHALT CONCRETE - METRIC TONS

TOTAL TO DATE: 76,540

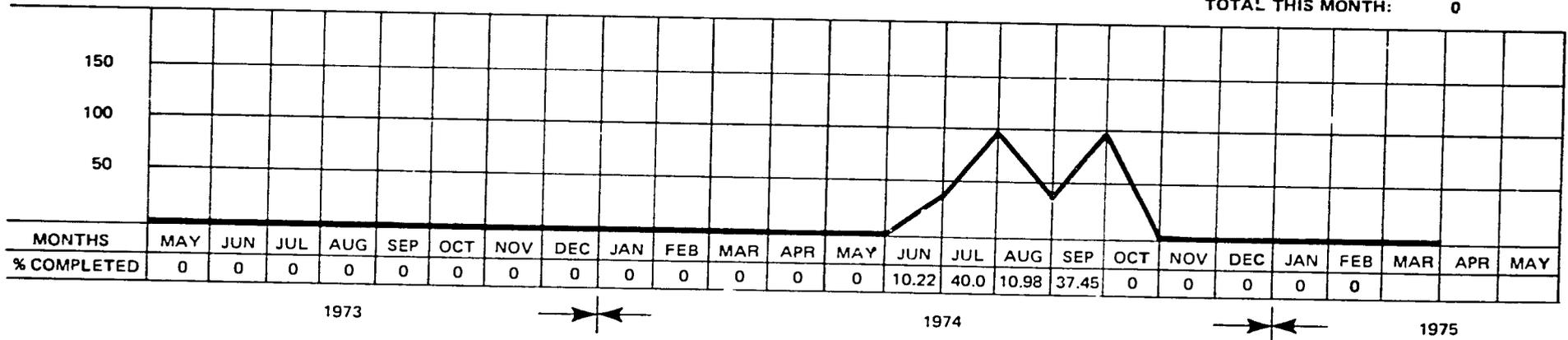
TOTAL THIS MONTH: 7,787



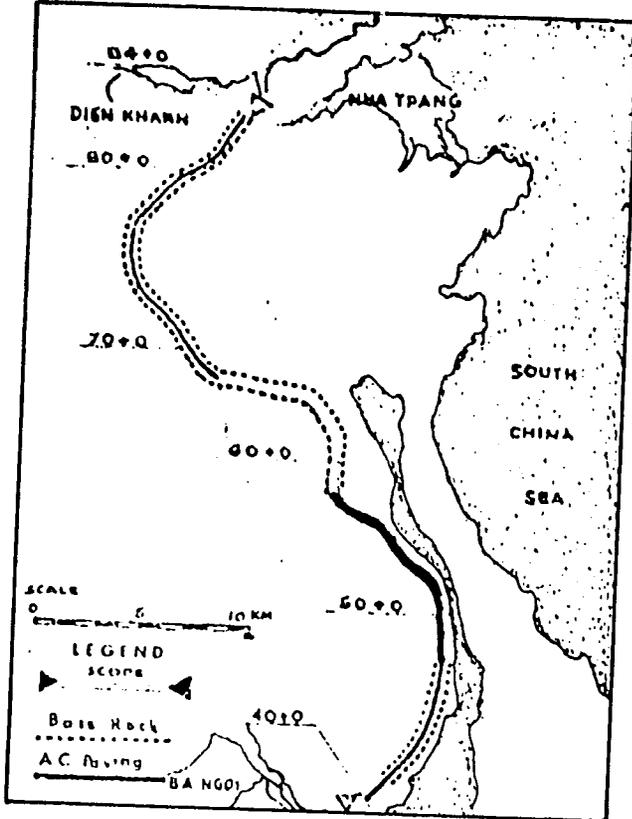
PLAIN CONCRETE - CUBIC METERS

TOTAL TO DATE: 246,645

TOTAL THIS MONTH: 0



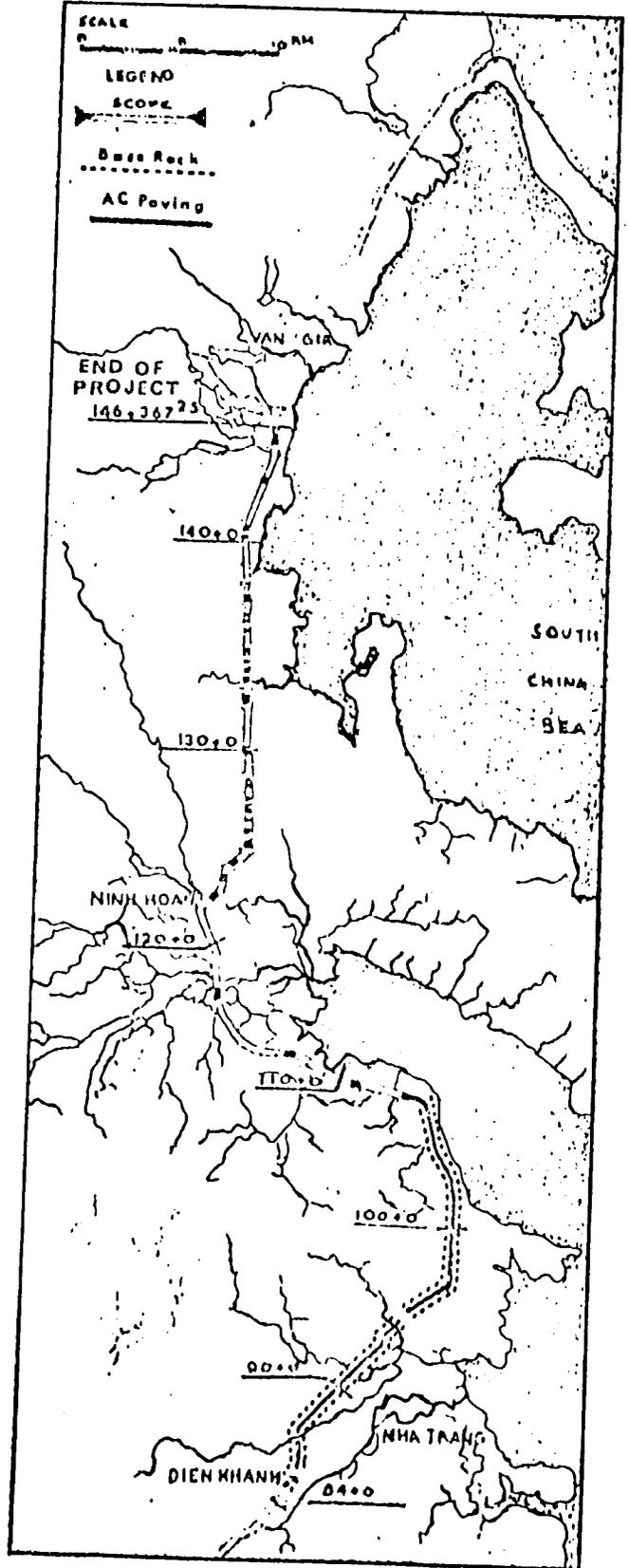
**CENTRAL SECTION**



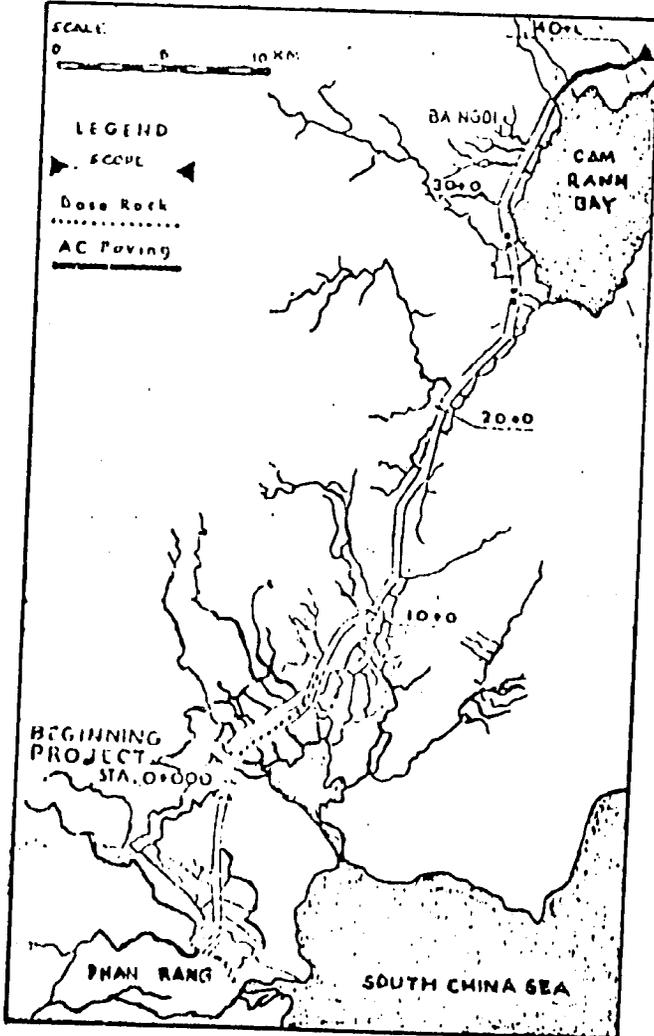
**CLIENT**  
**CONTRACT NO.**  
**PROJECT**  
**LOCATION**

**USAID - VIETNAM**  
**AID 730-3589**  
**REPAIR & OVERLAY QL.1**  
**PHAN RANG TO BRIDGE NO. 215**

**NORTHERN SECTION**



**SOUTHERN SECTION**



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## B. DETAILED CONSTRUCTION ACTIVITIES

The following summarizes the detailed construction progress during the contract period until work was terminated due to hostilities. This data has been derived from special reports requested by USAID starting June 1973.

WEEK ENDING JUNE 9, 1973

From June 1 through June 7 the Contractor continued to work on the Route 421 bypass.

Culvert construction progressed rapidly and with an increase in the quality of work performed during this period. Three culverts were worked on: Station 89+900, Station 90+150, and Station 90+630. The culvert at Station 89+900 was completed on June 6, 24 calendar days after the start of work. The culvert at Station 90+150 was begun on June 1 and completed on June 9, only eight calendar days later, a definite improvement. The culvert at Station 90+630 was laid out on June 9. The only foreseeable problem in culvert construction that may arise would be a lack of 48-inch culvert pipe for the culvert at Station 90+390. The Contractor has ordered pipe from Singapore and is still awaiting delivery.

Road work construction was done between Station 87+578 and Station 91+338 and approximations of work completed and accepted during this period are noted as follows:

<u>Description</u>	<u>Surface Area</u>	<u>Actual Pay Quantity</u>
Excavation	4,375 square meters	1,321 cubic meters
Scarification, regrade, and recompaction	2,633 square meters	2,633 square meters
Base rock	562 square meters	256 metric tons
Culvert, 36 inches	—	183 linear meters

It should be noticed from these figures that in terms of square footage base rock placement is lagging far behind scarification, regrade, and recompaction. The main reason for this was the fact that poor quality base rock forced the Contractor to stop hauling base rock on May 31. VECCO worked on their product and hauling was resumed on June 5. Additionally, it should be noted that a heavy rain on the evening of June 8 prevented any further placement of base rock during this period.

The quality of VECCO's base rock is presently the biggest unknown and could have the biggest effect on construction progress. On May 31 base rock delivered to Station 88+394 and Station 88+500 was tested but rejected. VECCO attempted to mix sand with the base rock already at the job site on June 4 and 5, but mixing was inadequate and the material has yet to be accepted. VECCO has expressed a desire to use this same method on their stockpiled base rock across the road from the VECCO compound. It is their belief that the plastic fines present in this base rock can be diluted enough by the addition of sand to come within specifications. Since their stockpiled base rock was of coarse gradation to begin with, the addition of sand would only enhance the gradation.

Also, during the period of June 5 to June 9, VECCO blended 10 percent sand with newly crushed base rock and samples were taken, tested, and found to be nonplastic with the following gradations:

<u>Sieve</u>	<u>Sample 1</u>	<u>Sample 2</u>	<u>Sample 3</u>	<u>Sample 4</u>	<u>Specification</u>
2 inches	100	100	100	100	100
1-1/2 inches	90.1	94	97	92	85/100
3/4 inch	83	71	73	70	45/85
#4	38	40	42	43	20/45
#40	12	13	15	15	8/30
#200	3.4	3.2	6.5	8.0	2/10

Presently, this is the only base rock VECCO is supplying to Dae Lim.

Overall job progress is shown below:

<u>Description</u>	<u>Completed to Date</u>	<u>Original Total Job Estimate</u>	<u>% Completed</u>
Excavation	1,539 cubic meters	33,100 cubic meters	4.6
Scarification, regrade, and recompaction	3,417 square meters	29,500 square meters	11.6
Base rock	556.5 metric tons	81,600 metric tons	0.68
Culvert, 36 inches	183 linear meters	274 linear meters	67

VECCO received their first shipment of AP3 from Shell Oil Company, amounting to 3,500 drums, on June 5. Dae Lim already had 700 drums of MC 70 and 1,800 drums of RC 800 located in the Shell Company yard.

On traffic and safety, daily military convoy traffic consisted of anywhere from 27 to 220 vehicles, but speeds were very acceptable, and, other than the interruption of road work, rated no criticism. However, the large buses traveling the bypass were a danger to everyone concerned. Flagmen, signs, 10-inch transitions in the surface levels of excavated areas, heavy equipment on the road, etc., do nothing to slow the buses. The buses represent the biggest safety hazard on the job site at present.

WEEK ENDING MARCH 16, 1973

During this time period, culvert construction at Station 90+630 consisted of the excavation, placement, and compaction of base rock for the foundation, and the placement of eight lengths of 36-inch CMP for the right side of the road only.

Other culvert construction was limited to the assembly of approximately 22 meters of 48-inch CMP for use in the culvert at Station 90+390. As of the end of this reporting period, Dae Lim was still awaiting receipt of their shipment of 48-inch CMP.

Road construction consisted of patchwork on the Route 421 bypass and the following amounts of work were completed and accepted during this period:

<u>Patchwork Operation Description</u>	<u>Surface Area Completed, Tested, and Accepted</u>	<u>Actual Pay Quantity Completed This Period</u>
Excavation	2,046 square meters	578.9 cubic meters
Scarification, regrade, and recompaction	621 square meters	621 square meters
Base rock	995 square meters	1,242 metric tons*

\*Represents total tonnage hauled this period - only a portion of this has been finally accepted - which was included in patches completely filled with base rock, tested, and accepted during this period.

Based upon information supplied by DMJM field inspectors, the actual tonnage of base rock placed in the 995 square meters of patchwork that had the base rock operation accepted was 529.8 metric tons. The theoretical value for base rock for the same area is 492.5 metric tons.

$$(995 \text{ M}^2 \times 0.225 \text{ M} \times 2.2 \text{ MT/M}^3 = 492.5 \text{ MT})$$

where 0.225 M = base rock thickness, compacted  
 2.2 MT/M<sup>3</sup> = base rock density, compacted)

Actual base rock tonnage placed this period was 7.53 percent over the theoretical value. It should be noted that the theoretical figure is just an approximation used as a cross-check and does not take into account variables such as working tolerances used in excavation, moisture content, and changes in the rock density itself.

Overall job progress is shown below:

<u>Description</u>	<u>Completed to Date</u>	<u>Original Total Job Estimate</u>	<u>% Completed</u>
Excavation	2,094 cubic meters	33,100 cubic meters	6.33
Scarification, regrade, and recompaction	4,140 square meters	29,500 square meters	14.03
Base rock	1,798 metric tons*	81,600 metric tons	2.2
Culvert, 36 inches	187 linear meters	274 linear meters	67

\*This does not include 239.2 metric tons of base rock placed on May 28 and May 29 and later rejected because of a high plastic index. No work has been performed this period to bring the material within specifications. Last work was on June 4 and 5 (see previous report).

Bituminous Products – VECCO received an additional 750 drums of AP3 from the Shell Oil Company on June 12, bringing their total on-hand quantity of AP3 to 4,250 drums.

Equipment – During this period, Dae Lim had downtime on a front-end loader for one half a day and a water truck for one day. Both were VECCO rental equipment.

Weather — Rain was not a factor for consideration during this period as it rained only once, the night of June 16.

Convoy Traffic — Daily military convoy traffic varied from 37 to 154 trucks per day and, based upon data collected to date, there is no correlation between the day of the week and amount of convoy traffic. This is to be expected for obvious security reasons.

#### WEEK ENDING JUNE 23, 1973

During this week, culvert construction progressed satisfactorily. At Station 90+630 the culvert for the right side of the road was completed. The left side was then excavated, base rock foundation placed and compacted, and eight sections of 36-inch CMP placed. At Station 90+390 the right side of the road has been excavated for the 48-inch culvert. Dae Lim received their shipment of 48-inch CMP on June 18 and they now have all the materials required for culvert construction.

Excavation was started for footings and headwalls for the culverts at Station 89+900 and 90+150 during this week, and placement of grouted riprap was begun at Station 89+900.

A change order was issued June 19 in which headwall thickness was changed from 0.30 meter to 0.60 meter. Also, additional work was ordered June 20 in the replacement of the headwall for the right side of culvert at Station 93+131. The headwall had failed and severe erosion was taking place.

Road construction consisted of patchwork on the Route 421 bypass and the following amounts of work were completed and accepted during this period:

<u>Patchwork Operation Description</u>	<u>Surface Area Completed, Tested, and Accepted</u>	<u>Actual Pay Quantity Completed This Period</u>
Excavation	962 square meters	265 cubic meters
Scarification, regrade, and recompaction	2,893 square meters	2,893 square meters
Base rock	2,612 square meters	1,579 metric tons

The overall job progress is shown below:

<u>Description</u>	<u>Completed to Date</u>	<u>Original Total Job Estimate</u>	<u>% Completed</u>
Excavation	2,359 cubic meters	33,100 cubic meters	7.13
Scarification, regrade, and recompaction	7,033 square meters	29,500 square meters	23.8
Base rock	3,377 metric tons	81,600 metric tons	4.14
Culvert, 36 inches	187 linear meters	274 linear meters	67

Equipment - Dae Lim experienced more downtime on their VECCO rental equipment this time period. They lost three hours on June 20 for a bulldozer, two hours and forty-five minutes on June 20 for a front-end loader, four hours on June 18 for a water truck, and four days between June 20 and 23 for a roller.

Weather - The rain on Saturday, June 16, did cause some patch areas to still be wet on Monday morning, June 18. But after the wet surface material was removed, work continued without problem. The weather for the rest of the week was hot and dry.

Convoy Traffic - The military convoy traffic was recorded for two days only this week: 73 trucks on June 21 and 117 trucks on June 22.

#### WEEK ENDING JUNE 30, 1973

Culvert construction has progressed smoothly this period and three of the four culverts are now completed and two of these are operational. The completed culvert at Station 89+900 has a mound of dirt blocking the inlet, rendering the culvert nonoperational.

Work is progressing, however, to remove restrictions to water flow at the inlets and outlets of all the culverts. The culvert at Station 90+336 has had a drainage canal cut. During the excavation for the canal, the bulldozer became stuck and it took over a day to free it.

The culvert at Station 90+630 had the left side completed on June 26 and now only the 48-inch-diameter culvert at Station 90+390 lacks completion. For this culvert, the right side has been completed and excavation for the left side was started on June 30.

The excavation for headwalls, wingwalls, and aprons continued at Station 90+150 in this period. Headwalls, wingwalls, and aprons have been completed for both sides for the culvert at Station 89+900 and the left side for the culvert at Station 90+150.

Road construction this period consisted of patchwork on the Route 421 by-pass, and the following amounts of work were completed and accepted during this period:

<u>Patchwork Operation Description</u>	<u>Surface Area Completed, Tested, and Accepted</u>	<u>Actual Pay Quantity Completed This Period</u>
Excavation	496 square meters	223 cubic meters
Scarification, regrade, and recompaction	2,005 square meters	2,005 square meters
Base Rock	2,242 square meters*	2,102 metric tons

\* Tested and accepted for gradation and plastic index only.

All the patches that had been excavated have now been completely filled with base rock. The Contractor is not going to prime coat the work areas at this time. Instead, Dae Lim intends to wait until they are in a position to lay asphalt concrete so that they can shape the road, get required compaction, prime coat, and lay asphalt concrete in one continuous operation. Since payment to the Contractor is made for base rock "in place and accepted," and since none of the base rock has been tested for density (nor has there been any requests for base rock density tests), none of the material hauled to date may be considered in payments to the Contractor as per Section 2.5.5. of the construction specifications.

Other construction completed this period:

<u>Description</u>	<u>Actual Pay Quantity Completed This Period</u>
Culvert, 36 inches	400 linear meters
Grouted riprap	44 cubic meters

Overall job progress is shown below:

<u>Description</u>	<u>Completed to Date</u>	<u>Original Total Job Estimate</u>	<u>% Completed</u>
Excavation	2,581 cubic meters	33,100 cubic meters	7.8
Scarification, regrade, and recompaction	8,610 square meters	29,500 square meters	29.2
Base rock	4,984 metric tons*	81,600 metric tons	6.1
Culvert, 36 inches	400 linear meters	400 linear meters	100
Grouted riprap	44 cubic meters	44 cubic meters	55.1

\* Not finally accepted— not considered for payment to Contractor.

Dae Lim — The Contractor has established a camp at Dong Ba Thin in the vicinity of Cam Ranh Bay from which he intends to prosecute work on road segment Number 2 from Station 40+000 to Route 421. The camp consists of two portable trailers, POL facilities, and a fenced-in compound with security lighting. This facility should be near completion toward the latter part of next week.

VECCO — The subcontractor has established his own quality control unit and is expected to be fully operational in the near future. Mr. Keefe (USAID) informed this office that he is presently screening all VECCO sites for the required equipment. He also mentioned that there would be no need for DMJM to purchase extra soils equipment from CONUS as there is sufficient equipment in country to equip the lab. DMJM will discontinue all testing for VECCO on July 1. It should be noted that from conversations with VECCO lab personnel, we understand that some technicians are up from Saigon on TDY.

Also during this period, VECCO started a screening operation on June 29 in which they are trying to screen off most of the plastic fines present in their large stockpile across the road from the VECCO compound. Sand will then be mixed with the remaining material. To date the material has not been tested since the sand mixing operation has not been started.

Bituminous Products — Test results from the Phu An Material Research Division, DGOH, were received on MC-70 and RC-800 samples that had been sent to Saigon. Test results indicated that for the MC-70, the viscosity, distillation, and penetration are out of specification and the RC-800 has penetration out of specification.

Also during this period, VECCO received 420 drums of AP3 bringing their total quantity of AP3 on hand to 4,670 drums.

#### Equipment Downtime

<u>Item</u>	<u>Owner</u>	<u>Downtime</u>	<u>Reason</u>
Roller	VECCO	2 days (25 and 26)	No spare parts
Front-end loader	VECCO	4 hours (26)	Flat tire
Grader	VECCO	1 day (26)	Fix scarifying teeth
Bulldozer	Dae Lim	6 hours (26)	Repair
		1-1/2 hours (27)	Stuck in mud
		1 day (28)	Stuck in mud
		1 day (29)	Repair

Safety — An accident occurred at 10 a.m. on June 29 involving a DMJM employee and a bus. A Mr. Nguyen Van Khiet was adjusting his transit at Station 83+581 on the road centerline when a bus started to approach him, also on the road centerline. A DMJM flagman was present and on the road motioning the bus driver to slow down, but the driver saw neither the flagman nor Mr. Khiet and struck both Mr. Khiet and his transit. Both Mr. Khiet and the flagman were wearing their red and white protective vests at the time of the accident. Mr. Khiet was struck on the hip by the bus and then hit his head on the pavement, knocking him unconscious. Mr. Khiet was taken to the hospital for X-rays and it was determined that he sustained only a few cuts and bruises.

Weather — The weather for this period caused no problems for construction work. There was a rain on the evening of June 24, Sunday, but the job site was only slightly damp in places Monday morning, June 25.

Convoy Traffic — The military convoy traffic was very light this week with traffic recorded only for Saturday, June 30. Thirteen trucks were in the convoy.

USAID Vehicles — On the evening of June 27, DMJM-Nha Trang received four of their five USAID vehicles (two International Scouts and two Ford Falcon sedans). The fifth vehicle, an International pickup truck, is expected in the near future.

#### WEEK ENDING JULY 7, 1973

Culvert construction progressed at a slower rate this period than in the previous periods and the weather accounted for part of the slowdown.

The 48-inch culvert at Station 90+390 had the base rock foundation laid and compacted, and eight sections of 48-inch CMP placed and connected. The culvert at Station 90+150 had the headwall and wingwalls for the right side completed on July 2. No other headwall construction had been started by the end of the reporting period.

Work began on the Route 421 construction area this period with scarification, cut, and fill to grade, and recompaction operations taking place from Station 90+000 to 90+175.

Patchwork continued, but at a slower rate with only 107 cubic meters excavated and 311 square meters scarified, regraded, and recompacted.

On July 3 the Contractor brought all the nonspecification base rock that had been placed on the roadway within construction specifications. This was accomplished by a through sand mixing operation. The following is a listing of test results after the mixing operation was completed.

<u>Station Number</u>	<u>Location</u>	<u>LL</u>	<u>PI</u>
88+010	Right lane	19.2	4.4
+070	Right lane	nonplastic	
+410	Left lane	nonplastic	
+450	Right lane	nonplastic	
+480	Left lane	nonplastic	
+485	Right lane	nonplastic	
+700	Right lane	19.9	3.9
+720	Right lane	20.1	3.8

Dae Lim informed this office by letter on July 6 that they intend to commence work on Section I (Station 0+000 to Station 40+000) and Section II (Station 40+000 to Station 84+000) on the 10th and 9th of July, respectively. Construction on Section I will begin at Bagnoi on ditches and the reconstruction area while work on Section II will start at Station 84+000 on patchwork.

Dae Lim has also informed us that their workday has been increased from eight to nine hours a day in an attempt to get back on schedule. The new hours are 7:30 a.m. to noon and 1 p.m. to 5:30 p.m. and will be effective as of July 9.

The weather this week had a direct effect on construction progress. There was a light rain on the afternoon of July 3 in the city of Nha Trang, but the Route 421 bypass area received no rain. However, on July 6 and 7 steady rains began in the early morning hours and turned to drizzles from noontime to the late afternoon hours.

## WEEK ENDING JULY 14, 1973

**Culverts** — 48-inch CMP culvert at Station 90+390 was completed on July 10. The left side was backfilled with base rock since rains left excavated material wet. All culverts have been installed and are operational.

**Headwalls** — Excavation for headwalls, wingwalls, and aprons was completed for the culvert at Station 90+630.

**Construction** — Work began on Section II as planned on July 9 but work was halted at midday on July 10 when the asphalt saw broke down. There was no more activity at the job site during this period, and the saw out of commission rest of period.

Work did not begin on Section I as planned. Revision has been made. Contractor intends to construct road structure prior to concrete ditch. Ditch elevation is higher than existing road profile.

Work continued on Section III, Route 421. During the week work consisted of cutting drainage ditches and drying out wet material. After the last rain on July 12 work progressed and base rock was placed, graded, and compacted in preparation for prime coat operation.

Dae Lim — Kim Tack Kon, a materials engineer, arrived on July 14 and has started work on a design mix formula for asphalt concrete.

Contractor spent time in which roadway was too wet to work in preparing a loading platform for MC-70 and RC-70 at his compound on Route 421.

**Weather** — The weather was very much a factor this period. The roadway was still wet on Monday morning from rains the previous week and it also rained on July 11 and 12.

**Convoy Traffic** — Only one military convoy was recorded for this period. It was on July 10 and consisted of 55 2-1/4-ton trucks and 15 tractor-trailer trucks.

**USAID Vehicles** — DMJM received its International pickup truck on the evening of July 13. The vehicle has been placed in the USAID Nha Trang motor-pool for correction of deficiencies. Also, during this period the use of a Ford van was obtained through the courtesy of Mr. Durand, USAID motor officer. This vehicle is being used by the survey crew.

WEEK ENDING JULY 21, 1973

Section I— No activity this period. Mobilization taking place. Subcontractor, Coty Coty.

Section II — Excavation started on July 16 on patchwork in the vicinity of Station 83+660. Patches in this area are type A4 (per plans) and excavated depth is 0.625 meters. Dae Lim has progressed on this segment with only a few problems. Large boulders and clay were encountered in some patches along with some soft spots, but these problems were remedied.

At the end of the reporting period, the following quantities of work had been completed:

<u>Description</u>	<u>Quantity Completed This Period</u>
Excavation	679.9 cubic meters
Scarification, regrade, and recompaction	965.7 square meters
Base rock	105.5 metric tons

For Section II, base rock was hauled on one day only this period, the 21st, and was supplied by the Mai Ha Company. This confirmed Dae Lim's announcement on July 20 at the weekly construction conference that they intended to purchase aggregate from more than one source.

Section III — On July 15 Dae Lim initiated their first prime coat operation. The two southernmost patches on the 421 bypass were prime coated. During the rest of the week, work progressed northward, and by the end of the week 3,626 square meters of patchwork had been prime coated with 5,734 liters of MC-70. This corresponds to 1.58 liters/square meter and is within construction specifications. Patchwork area still open is 7,126 square meters.

In filling patches already excavated and bringing all patches to fine grade before prime coating, 2,190 metric tons of base rock were used during this period.

Excavation for headwalls, wingwalls and aprons for 36-inch CMP at Station 90+630 was completed. Masonry work was started on July 17 and then stopped on July 19 due to a lack of cement. The Contractor is presently trying to locate additional cement in order to complete remaining headwall construction.

A loading ramp for bituminous products was completed during this period at Dae Lim's camp on Route 421. This will facilitate the loading of the asphalt distributor.

Total quantities to date are listed below:

<u>Description</u>	<u>Completed to Date</u>	<u>Original Total Job Estimate</u>	<u>% Completed</u>
Excavation	4,452 cubic meters	33,100 cubic meters	13.45
Scarification, regrade, and recompaction	12,069 square meters	29,500 square meters	40.91
Base rock	8,592 metric tons	81,600 metric tons	10.53
Prime coat	5,734 liters	1,019,000 liters	5.63
36-inch CMP	400 meters	400 meters	100
48-inch CMP	152 meters	152 meters	100
Grouted riprap	59 cubic meters	80 cubic meters	73.75

Traffic - There were only two military convoys this period of 11 and 40 trucks each. Counting of logging trucks was initiated July 21 and 11 trucks hauling logs were noted on that date.

Weather - The weather was good during this period and caused no delay in construction progress.

WEEK ENDING JULY 28, 1973

Section I - Work was started on Section I this period by Dae Lim's subcontractor, Coty Coty. Excavation commenced on July 27 in the general vicinity of Station 38+200. At the end of the reporting period, 44 cubic meters of excavation had been completed.

Manpower Expended - 104 hours.

Equipment Used - One motor grader.

Section II - The following amounts of work were completed this period:

Excavation	970 cubic meters
Scarification, regrade, and recompaction	200 square meters
Base rock	1,352 metric tons

As experienced in Section III on the 421 bypass, additional work has to be done. Based upon initial patchwork laid out versus patchwork shown on the 1972 survey, patchwork will run over estimates.

Manpower Expended - 1,476 hours.

Equipment - One motor grader, one front-end loader, one steel wheel roller, one D4 bulldozer, one lubrication truck, one water truck.

Section III - Grouted riprap headwall construction is still at a standstill due to nonavailability of cement.

Reconstruction work was performed (Station 89+500-90+700) on the 421 bypass this period. Two lifts of base rock have been placed from Station 89+500 to Station 89+750 and one lift has been placed from Station 89+775 to Station 90+025.

Work on the patch areas of the 421 bypass was centered around the prime coat operation this period. Base rock was laid for final grading and compaction accomplished, and all patches between Station 87+500 and Station 89+260 were primed with MC-70. This represented 5,830 square meters of patches sealed.

The following amounts of work were recorded this period for the 421 bypass:

	<u>Excavation</u>	<u>Scarification, regrade, and recompaction</u>	<u>Base rock</u>	<u>Prime coat</u>
Reconstruction Area	-0-	2,000 square meters	2,071 metric tons	-0-
Patch Areas	-0-	-0-	322 metric tons	7,646 liters
	-0-	2,000 square meters	2,393 metric tons	7,646 liters

Manpower Expended - 1,878 hours.

Equipment Used - Two motor graders, one steel roller, one vibratory roller, one front-end loader, one air compressor, one water truck, one lubrication truck, one power broom, one asphalt distributor.

Totals for all road sections are given below:

<u>Description</u>	<u>Completed to Date</u>	<u>Original Total Job Estimate</u>	<u>% Completed</u>
Excavation	5,466 cubic meters	33,100 cubic meters	16.51
Scarification, regrade, and recompaction	14,300 square meters	29,500 square meters	51.76
Base rock	12,014 metric tons*	81,600 metric tons	14.72
Prime coat	13,380 liters	1,019,000 liters	13.13
36-inch CMP	400 meters	400 meters	100
48-inch CMP	152 meters	152 meters	100
Grouted riprap	59 cubic meters	80 cubic meters	73.75

\* Total haul - only segments accepted.

Traffic - Military traffic seems to be declining with only one convoy (10 trucks) reported this period. The logging trucks now constitute the majority of heavy traffic with an average of approximately 10 trucks per day.

Safety - There was an accident on July 27 involving a Dae Lim rented dump truck. Truck Number HB-8763 was traveling south on the 421 bypass when it swerved to avoid a truck traveling in the opposite direction. The maneuver caused truck HB-8763 to overturn and the driver was seriously injured.

Weather - The weather for this period was good and caused no problems for construction work.

WEEK ENDING AUGUST 4, 1973

Section I - Patchwork progressed with excavation and scarification, regrade, and recompaction recorded between Station 36+800 and Station 38+253. No base rock was hauled but Minh Thanh will supply base rock for this road section.

Work began on the Ba Ngoi reconstruction area on July 31 with excavation beginning between Station 36+800 and Station 36+945.

Section II - Patchwork continued and the limits of the work area are now Station 82+370 to Station 83+774. Excavation, scarification, regrade, recompaction, and base rock operations were recorded.

Shoulder work was initiated on July 30 between Station 58+700 and Station 67+500. This is a nonoverlay area and type A DBST is to be applied.

Section III (Route 421 bypass) - Plans for the realignment of the curve between Station 92+874 and Station 93+264 were drawn up and approval given on July 31, 1973. Work began on fill operations for this realignment on July 30. Base rock excavated for patchwork in the vicinity of Station 94+000 was utilized as fill material.

Work continued on the reconstruction area with base rock being placed, graded, and compacted. Final grade being worked on from Station 89+500 to Station 89+750. Continuing to haul base rock from Station 89+775 to Station 90+700.

Headwall construction remained at a standstill due to a lack of cement.

Patchwork is continuing with excavation started up through Station 94+320.

Paving operations commenced on August 2 and continued through Saturday, August 4. Test results indicated that field density was low and that the 95 percent of laboratory density was not being obtained. Plans have been initiated to acquire a three-wheel steel roller to achieve required densities. At present a tandem roller is being used.

The following is the total quantity of work completed under each pay item to date.

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	5,037 cubic meters	15.2
Scarification, regrade, and recompaction	24,964 square meters	84.6
Base rock	17,761 metric tons	21.8
Prime coat	17,267 liters	1.7
Asphalt concrete	510 metric tons	0.51
36-inch CMP	400 linear meters	100
48-inch CMP	152 linear meters	100
Grouted riprap	59 cubic meters	73.75

Traffic — Logging trucks are being reported at the rate of 10 to 12 per day. This represents just a portion of the actual traffic though, since many trucks are traveling in the late afternoon after DMJM inspectors have left the job site.

Safety — There were no reported accidents this period.

Weather — The weather for this period was good and caused no delays in construction progress.

#### WEEK ENDING AUGUST 11, 1973

Section I — Base rock hauling commenced on August 6 from the Minh Thanh quarry. Initial lab test results show PI's and gradations to be with specifications. Minh Thanh supplied 816 metric tons of base rock for work on Section I during this period.

Additional excavation had been started this week but none was completed.

Grading and compacting operations continue on the reconstruction area between Station 36+800 and Station 37+100.

Section II — Scarification, compaction, and base rock hauling were accomplished during this period. No new excavation was completed.

Shoulder work continued between Station 58+700 and Station 67+500. Shoulders are being scarified, regraded, and recompacted in preparation for DBST.

Section III — Work on the reconstruction area progressed during this period. Final grade has been obtained between Station 89+500 and Station 89+750 and the left lane prime coated. The area between Station 89+775 to Station 90+200 is nearing final grade.

Headwall construction is still being delayed by a lack of cement.

The northern limit of construction is Station 94+320 and base rock is currently being placed there.

The following is the total quantity of work completed under each pay item to date:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	6,365 cubic meters	19.2
Scarification, regrade, and recompaction	27,610 square meters	93.6
Base rock	24,333 metric tons	29.8
Prime coat	20,560 liters	2.02
Asphalt concrete	876 metric tons	0.88
36-inch CMP	400 linear meters	100
48-inch CMP	152 linear meters	100
Grouted riprap	59 cubic meters	73.75

Traffic — The number of logging trucks traveling the Route 421 bypass averaged 16 per day. Military traffic increased also and three convoys ranging from 46 to 53 trucks were reported.

Safety — No accidents were reported during this period and no hazards were noted.

Weather — The weather has continued to be good and has not caused any delays in construction progress.

#### WEEK ENDING AUGUST 18, 1973

Section I — Work continued on the Ba Ngoi reconstruction area (Station 36+800 to Station 37+100) with excavation, scarification, regrading, and recompaction operations taking place for both roadway and shoulders.

Patchwork continued.

Base rock was not hauled from the Minh Thanh quarry site this period.

Section II — Patchwork continued. Dae Lim hauled 733 metric tons of base rock from Mai Ha this period.

Shoulder work continued and scarification, regrading, and recompaction has been completed for the right side from Station 58+700 to Station 67+500.

Section III — Work on the Route 421 reconstruction area continued. Both lanes have been prime coated between Station 89+500 and Station 58+750

and the left lane from Station 89+775 to Station 90+200. Grading and recompactment continue on the remaining portion.

Headwall construction was started again on August 17 by the original subcontractor. Cement supply problems and riprap quality problems have been solved.

For the realignment area empty drums were placed so that traffic would help compact fully the area in which fill material was placed. Removal of existing asphalt concrete began on August 18.

Patchwork continued. VECCO supplied 1,935 metric tons of base rock this period.

Overlay operations began on August 16 and 1,391 metric tons of asphalt concrete was placed through August 18.

The following is a listing of the total quantity of work completed under each pay item to date:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	6,733 cubic meters	20.34
Scarification, regrade, and recompactment	28,952 square meters	98.14
Base rock	27,001 metric tons	33.09
Prime coat	31,045 liters	3.05
Tack coat	3,603 liters	0.07
Asphalt concrete	2,185 metric tons	2.43
Grouted riprap	59 cubic meters	73.75
Furnish lab	1 each	100
36-inch CMP	400 linear meters	100
48-inch CMP	152 linear meters	100

Traffic - Logging trucks averaged 15 per day over the Route 421 bypass. Two convoys were reported this period, one consisting of 95 trucks and one of 10 trucks.

Safety - There was an accident reported during this period in which a truck loaded with asphalt concrete overturned while turning around on the roadway. There were no injuries and the vehicle was only slightly damaged.

**Weather — The weather was good and caused no delays in construction progress.**

**WEEK ENDING AUGUST 25, 1973**

**Section I — Work continued on the Ba Ngoi reconstruction area. Base rock placement began between Station 36+800 and Station 36+950 on August 23. Work began on the transition area between Station 37+075 and Station 37+100.**

Patchwork continued.

After a personal inspection on August 24, M. K. Van Zyl issued the second stop work order to date when it was found that Minh Thanh was mixing excessive amounts of sand in their base rock product. Hauling will resume as soon as the problem is rectified. Minh Thanh supplied rock for three days during this period totaling 1, 377 metric tons.

Section II — Patchwork continued. Shoulder work continued with base rock being hauled to work between Station 58+700 and Station 59+150.

Mai Ha supplied 853 metric tons of base rock this period.

Section III — Work continued on the Route 421 reconstruction area. The first asphalt concrete course has been placed between Station 89+500 and Station 89+750 for both sides. Prime coat has been placed for the left lane through Station 90+700.

Headwall construction continued. The headwall for the right side at Station 90+630 was completed on August 22. Headwall construction is under way for the left side at Station 90+390 and excavation is continuing for the right side.

Patchwork has continued this period and asphalt concrete has been placed in patchwork up through Station 92+360.

VECCO supplied 2, 332 metric tons of base rock and 1, 782 metric tons of asphalt concrete during this period.

The following is a listing of the total quantity of work completed under each pay item to date:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	6,768 cubic meters	20.4
Scarification, regrade, and recompaction	31,251 square meters	106
Base rock	31,564 metric tons	38.7
Prime coat	33,808 liters	3.3
Tack coat	4,909 liters	0.9
Asphalt concrete	3,967 metric tons	4.4
Grouted riprap	72 cubic meters	90
Furnish lab	1 each	100
36-inch CMP	400 linear meters	100
48-inch CMP	152 linear meters	100

Traffic - Logging trucks averaged 23 per day over the Route 421 bypass and one convoy of 15 trucks was reported during this period.

Safety - There were no accidents or injuries reported during this period.

Weather - The weather was good this period and caused no delays in construction progress.

#### WEEK ENDING SEPTEMBER 1, 1973

Section I - Work continued on the Ba Ngoi reconstruction area. The second lift of base rock is being laid between Station 36+800 and Station 36+950 for both sides of the roadway, including shoulders. From Station 36+950 to Station 37+100 the first lift is being laid for both sides, including shoulders.

Patchwork continued between Station 33+875 and Station 36+688.

Minh Thanh resumed supplying base rock on August 28 and 966 metric tons of base rock was supplied during this period.

Section II - Patchwork continued between Station 81+432 and Station 83+400.

Shoulder work continued between Station 49+800 and Station 59+550 on the left side, and Station 59+450 to 59+600 on the right side.

Mai Ha supplied 80.97 metric tons of base rock during this period.

Section III – Work on the Route 421 reconstruction area continued. The first course of asphalt concrete has been completed and the second course is nearly completed with only the area from Station 90+140 to Station 90+700, right lane, yet to be done.

All remaining headwalls for the four culverts were completed during this period. The volume for these headwalls was originally estimated at 80 cubic meters, but the increase in headwall thickness from .3 meter to .6 meter and the addition of wingwalls increased this figure to 138 cubic meters. The defective headwall at Station 93+131 will further increase this figure.

Patchwork continued with scarification, regrade, recompaction, and base rock hauling performed.

VECCO supplied 804.04 metric tons of base rock and 2,444.30 short tons of asphalt concrete during this period. VECCO supplied an average of 401 short tons AC per day of production during August.

The following is a listing of the total quantity of work completed under each pay item to date.

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	10,439 cubic meters	31.5
Scarification, regrade, and recompaction	41,576 square meters	140.9
Base rock	33,915 metric tons	41.6
Prime coat	34,633 liters	3.40
Tack coat	5,924 liters	1.13
Asphalt concrete	6,188 metric tons	6.87
Grouted riprap	138 cubic meters	173
Furnish lab	1 each	100
36-inch CMP	400 linear meters	100
48-inch CMP	160 linear meters	100

Traffic – Logging trucks averaged 13 per day this period. No military convoys were reported.

Safety – No accidents were reported during this period.

**Weather** – There was a very heavy rain on the afternoon of August 27 but it was brief in duration. The Route 421 area under construction received only a light rain for a few minutes and caused no delays.

**WEEK ENDING SEPTEMBER 8, 1973**

**Section I** – Work continued on patches and the Ba Ngoi reconstruction area this period. Excavation for patches has been completed down to Station 33+690.

Minh Thanh supplied 585 metric tons of base rock during this period.

**Section II** – Patchwork continued with excavation taking place down to Station 81+050.

Prime coat operations began on September 2 and 6, 113 liters of MC-70 was used during this period. Areas between Station 83+774 and Station 82+370 amounting to 4,503 square meters were prime coated. This corresponds to 1.36 liters per square meter which is within the construction specifications.

Shoulder work continued from Station 58+700 to Station 59+520 and Station 59+900.

Mai Ha supplied 1,573 metric tons of base rock during this period.

**Section III** – The Route 421 construction area had paving operations completed on September 3.

The realignment area from Station 92+818 to Station 93+088 had both lanes prime coated on September 6.

MC-70 used this period amounted to 2,650 liters and covered 2,538 square meters, an application rate of 1.04 liters per square meter which is within specifications.

Overlay has been completed for both lanes up to Station 92+400.

VECCO supplied 2,030 short tons of asphalt concrete during this period and 724 metric tons of base rock.

The following is a listing of the total quantity of work completed under each pay item to date:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	10,439 cubic meters	31.5
Scarification, regrade, and recompaction	41,576 square meters*	140.9
Base rock	36,299 metric tons	44.5
Prime coat	42,607 liters	4.2
Tack coat	7,516 liters	1.4
Asphalt concrete	8,030 metric tons	8.9
Grouted riprap	138 cubic meters	173
Furnish lab	1 each	100
36-inch CMP	400 linear meters	100
48-inch CMP	160 linear meters	100

It was first brought to our attention during this period that a misinterpretation of the construction specifications had taken place. Pay item scarification, regrade, and recompaction will have to be reevaluated and an adjustment made. The quantity of work completed to date will be greatly reduced if not entirely eliminated.

Traffic — Logging trucks averaged 22 per day during this period with no convoys reported.

Safety — No accidents were reported during this period.

Weather — The weather was good during the last week and caused no delays in construction progress.

WEEK ENDING SEPTEMBER 15, 1973

General — During this period, Mr. Van Zyl and Mr. Webb began laying out remaining patchwork on the three road sections. Changes were made as necessary to patchwork already laid out. Section I was tentatively finished for layout of patches and changes should occur only due to work completed by MPW forces and additional failures during the monsoon season. Sections II and III have more than adequate amounts of patchwork laid out to occupy the Contractor but have not been completely laid out yet.

Section I – Patchwork continued. Southern limit of excavation is Station 20+780.

Section II – Patchwork continued. Approximately 2,070 square meters of patches were prime coated (950 gallons) at an application rate of 1.74 liters per square meter.

Shoulder work was between Station 58+835 and Station 60+100.

Section III – On September 10 the Contractor prime coated some areas with MC-70 diluted with diesel. The tank was inadequately emptied after cleaning with diesel to remove RC-70. Subsequently the Contractor was ordered to rework same areas at his cost.

Culvert inlets and outlets were worked on to remove obstructions to flow but some work still remains to be done.

Mineral Products – The following quantities were hauled during this period:

Base rock:	VECCO	604.09 metric tons
	Mai Ha	383.73 metric tons
	Minh Thanh	945.92 metric tons

Asphalt concrete: no asphalt concrete produced during this period.

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	11,072 cubic meters	33.5
Scarification, regrade, and recompaction*	41,576 square meters*	140.9*
Base rock	38,233 metric tons	46.8
Prime coat	60,870 liters	6.0
Tack coat	7,516 liters	1.4
Asphalt concrete	8,030 metric tons	8.9
Grouted riprap	138 cubic meters	173
Furnish lab	1 each	100
36-inch CMP	400 linear meters	100
48-inch CMP	160 linear meters	100

\* Figure to be reevaluated.

Traffic — Logging trucks averaged 18 per day over the 421 bypass during this period. No convoys were reported.

Safety — A motor grader operator for Section I was injured on September 14 when he was trying to adjust a fan belt with the engine running. The fan struck the operator's fingers, injuring him. Lack of another operator dead-lined the motor grader the remainder of this period.

Weather — Small amounts of rain were recorded during this period but no major delays resulted.

#### WEEK ENDING SEPTEMBER 22, 1973

General — To date no decision has been reached between VECCO and Dae Lim regarding use of VECCO's scales by other subcontractors of Dae Lim.

A new job-mix formula for asphalt concrete was submitted by Dae Lim and approved on September 17, 1973.

No new excavation was started for any of the sections during this period. Work has been concentrated around efforts to close up work already opened.

As reported earlier, a misinterpretation of pay item 2.4.1 — scarification, regrade, and recompaction — resulted in erroneous figures being recorded. After a reevaluation, there has been no work completed under this pay item to date.

Also, for 36-inch and 48-inch CMP, an adjustment is being made this period. As-built differs from planned as shown below:

<u>36-Inch CMP</u>	<u>Planned Total Length</u>	<u>Actual Total Length</u>
89+900	128.00	122.40
90+150	136.00	123.52
90+630	136.00	126.96
<u>48-Inch CMP</u>		
90+390	160.00	145.84

Section I — One motor grader continued to be idle during this period due to lack of an operator (operator received hand injury last period).

The area around the railroad tracks at the traffic circle in Ba Ngoi has had base rock placed on the left lane and work is continuing on the right lane.

Section II – Asphalt concrete was first placed in this section during this period. Patches from Station 83+774 down to Station 81+909 were patched with asphalt concrete.

Shoulder work continued from Station 59+500 to Station 61+170.

Section III – Asphalt concrete has been placed in patches up through Station 94+360 and the overlay operation has gone up to Station 92+980.

Minute cracks were observed on the left shoulders of the culverts at Station 90+150 and Station 90+360. This was probably caused by inadequate compaction at the headwalls and was precipitated by the heavy rain on the evening of September 21. Dae Lim is presently rectifying the situation.

The culvert at Station 93+131 is in poor condition and may need to be completely replaced. In addition to the failure of the headwall on the downstream side, erosion underneath and around the pipes has occurred. No overlay will be placed over this culvert at the present time until a feasibility study and design has been completed.

Mineral Products – The following quantities were hauled during this period:

Base rock:	VECCO	2,531.96 metric tons
	Mai Ha	0.0 metric tons
	Minh Thanh	253.51 metric tons
Asphalt concrete:	VECCO	2,404.72 metric tons

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	11,072 cubic meters	33.5
Scarification, regrade, and recompaction*	0.0 square meters*	0*
Base rock	41,018 metric tons	50.3
Prime coat	64,655 liters	6.3
Tack coat	10,695 liters	2.0
Asphalt concrete	10,435 metric tons	10.5
Grouted riprap	138 cubic meters	173
Furnish lab	1 each	100
36-inch CMP*	372.88 linear meters*	100
48-inch CMP*	145.84 linear meters*	100

Traffic — During this period logging trucks averaged 19 per day, and one military convoy of 205 trucks was recorded for Section II.

Safety — No accidents were recorded during this period.

Weather — There was a very heavy rain on the Route 421 bypass area on the evening of September 21 and rain was recorded for three days during this period for Section I.

#### WEEK ENDING SEPTEMBER 29, 1973

General — VECCO's asphalt plant was in operation only one day during this period. Repair work on the pug mill began on the morning of September 25 and continued through the rest of the week.

Dae Lim returned 10 pieces of rental equipment between September 25 and 30 in preparation for the reduced scope of work during the rainy season. At the weekly construction conference, Dae Lim said that they did intend to keep equipment related to shoulder work and asphalt laydown.

On September 25 Mr. Van Zyl and Mr. Brown (DMJM) made an inspection of the road down to the bridge at the Phan Rang Air Base turnoff. It was noticed that many new failures had developed in the Section I area (the entire

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\* Reevaluated figures.

Section I area had been completely laid out just two weeks earlier). The exact reason for this has not been determined.

Mineral Products – The following quantities were hauled during this period.

Base rock:	VECCO	235.32 metric tons
	Mai Ha	0.0 metric tons
	Minh Thanh	0.0 metric tons
Asphalt concrete:	VECCO	434.00 short tons

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	12,680.26 cubic meters	38.3
Scarification, regrade, and recompaction	0.0 square meters	0
Base rock	41,747.10 metric tons	51.2
Prime coat	75,041.7 liters	7.4
Tack coat	9,655.4 liters	1.8
Asphalt concrete	10,828.71 metric tons	12.0
Grouted riprap	138.00 cubic meters	172.5
Furnish lab	1 each	100
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2

Traffic – An average of 25 logging trucks traveled the Route 421 bypass daily during this period and three army convoys totaling 103 trucks were recorded.

Safety – No accidents were recorded during this period.

Weather – Rain is beginning to cause delays to construction progress and indications are that the rainy season is here.

WEEK ENDING OCTOBER 6, 1973

General - A letter was forwarded to Dae Lim on October 1 informing them that no more base rock could be hauled from any supplier until scales were provided.

Problems exist between Dae Lim and VECCO with the end result being no more asphalt concrete for Dae Lim until the problems are resolved. This is supposedly being handled by the Saigon office of both parties. It is unfortunate, since closing operations were in progress and patches are waiting to be covered with asphalt concrete.

Dae Lim reported on the morning of October 8 that on Saturday, October 6, two armed men stole a bulldozer and kidnapped two security men from Dae Lim's compound on the Route 421 bypass.

Section I - Work consisted mainly of drainage activities as it rained every day during this period.

Existing patches are being marked with yellow paint and newly failed areas in red paint.

Section II - Shoulder work continued as did patch locating and painting.

Rain was recorded every day this period.

Section III - Work on the shoulder areas of culverts at Station 90+150 and Station 90+360 was done during this period.

Rain was recorded every day this period.

Mineral Products - No base rock or asphalt concrete was hauled this period.

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	12,680.26 cubic meters	38.3
Scarification, regrade, and recompaction	0 square meters	0
Base rock	41,747.10 metric tons	51.2
Prime coat	77,502 liters	7.6
Tack coat	9,655.4 liters	1.8
Asphalt concrete	10,828.71 metric tons	12.0
Grouted riprap	138.00 cubic meters	172.5
Furnish lab	1 each	100
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2

Traffic – An average of 26 logging trucks traveled the Route 421 bypass daily this period, and one army convoy of 52 trucks was recorded.

Safety – No accidents were recorded during this period.

Weather – Rain was recorded in all three sections every day during this period.

#### WEEK ENDING OCTOBER 13, 1973

During this period Dae Lim's activity was limited to shoulder work in the central area. Inclement weather prevented work in the other areas.

Dae Lim and VECCO have not yet reached an agreement in regard to asphalt concrete.

A survey of existing road conditions is in progress for all sections of the project.

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	12,680.26 cubic meters	38.3
Scarification, regrade, and recompaction	0 square meters	0
Base rock	41,747.10 metric tons	51.2
Prime coat	77,502 liters	7.6
Tack coat	9,655.4 liters	1.8
Asphalt concrete	10,828.71 metric tons	12.0
Grouted riprap	138.00 cubic meters	172.5
Furnish lab	1 each	100
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2

Traffic – The average logging truck traffic was 26 trucks per day and two military convoys were recorded totaling 137 trucks.

Safety – No accidents were reported during this period.

#### WEEK ENDING OCTOBER 20, 1973

Dae Lim was informed by Coty Coty on October 15, 1973 that they were ceasing operations and would no longer be working as Dae Lim's subcontractor. The reason given was Coty Coty's unwillingness to continue at the negotiated prices.

The weather improved during this period and no rain was recorded after October 15, 1973. Dae Lim continued shoulder work on October 18, 1973 for the central area.

It is expected through conversations with Dae Lim's construction manager that the problem with VECCO regarding unit process for mineral products will shortly be resolved.

It is this firm's opinion at this time that the Contractor (Dae Lim) will have difficulty in meeting their completion date of July 8, 1974 if they do not take advantage of the various breaks in the weather. For example, approximately 800 to 1,000 tons of asphalt may be laid down in one single working calendar day providing the weather remains favorable. This amounts to approximately one kilometer of work in place.

It is difficult to comprehend, less understand, the attitude of the Contractor at this late stage regarding negotiations on mineral products. The Contractor's overall percentage completion stands at 19.5 percent versus 60.82 percent scheduled for completion at the end of October 1973.

In order for the Contractor to complete his work in, say, six months would involve a tremendous construction effort by all his forces. This in turn will probably have a direct bearing on the quality of work produced. It should be brought to your attention at this time that the above is not impossible.

#### WEEK ENDING OCTOBER 27, 1973

Settlement is taking place at the 48-inch CMP culvert at Station 90+390 and the situation is being monitored closely. Dae Lim has been notified of the problem.

No settlement has been reached to date between VECCO and Dae Lim in regards to mineral product unit prices.

The weather continued to be reasonably good this period with the first rain occurring in the early morning hours on October 25, 1973.

Dae Lim continued with their shoulder work operations in Section II during this period and placed 936 metric tons of base rock.

DMJM completed the location survey of additional existing road failures and is presently doing a testing program to establish the soil characteristics of base and subbase materials of the additional failed areas. A total of 50 test pits have been sampled for laboratory analysis.

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	2,241.20 cubic meters	38.3
Scarification, regrade, and recompaction	0 square meters	0
Base rock	42,929.81 metric tons	52.6
Prime coat	89,187.4 liters	8.8
Tack coat	9,655.4 liters	16.4
Asphalt concrete	10,828.71 metric tons	10.7

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Grouted riprap	138.00 cubic meters	172.5
Furnish lab	1 each	100
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2

Traffic – Based on records to date, logging traffic may be considered a daily occurrence and consists of at least twenty trucks per day.

Safety – No accidents were reported during this period.

WEEK ENDING NOVEMBER 3, 1973

Dae Lim and Coty Coty, southern section subcontractor, have been negotiating but it is apparent from correspondence between the two that a difference of opinion exists over both the terms and the unit prices of the subcontract.

Settlement has now been recorded at each of the four Dae Lim constructed culverts. The depressions are rapidly becoming worse due to the impact loading condition that exists as heavily loaded trucks pass over at high speed. Dae Lim has been instructed to put down a leveling course immediately as temporary remedial action, but to date bad weather has prevented this from being done.

Due to inclement weather this period, Dae Lim placed only 135 metric tons of base rock in Section II on shoulder work.

DMJM is continuing laboratory tests of the additional failed areas.

Still, no settlement has been reached between Dae Lim and VECCO over mineral product unit prices.

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	2,241.20 cubic meters	38.3
Scarification, regrade, and recompaction	0 square meters	0
Base rock	42,929.81 metric tons	52.6
Prime coat	89,187.4 liters	8.8

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Tack coat	9,655.4 liters	16.4
Asphalt concrete	10,828.71 metric tons	10.7
Grouted riprap	138.00 cubic meters	172.5
Furnish lab	1 each	100
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2

WEEK ENDING NOVEMBER 10, 1973

Settlement around the four Dae Lim constructed culverts is now severe and inclement weather prevented the placing of a leveling course this period. However, it was established that the paving machine that was being utilized by Dae Lim has been turned back to VECCO. This is contrary to what the Contractor had led the A/E to believe, i.e., that the culverts would have a leveling course placed along with any other asphalt concrete work that could be accomplished during breaks in the weather.

This office was advised that an accident occurred south of Nha Trang near the village of Cay Cay. An inspection was made and it was determined that areas of the road under construction by Dae Lim were in reasonable condition. The Contractor is conforming to the specifications (paragraph 1.5.1 of General Specifications) in regards to maintenance of his work.

Percentage completion for each pay item remained the same as it was for last period. Total allocated funds expended is \$394,663.26 (19.7 percent).

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	12,680.26 cubic meters	38.3
Scarification, regrade, and recompaction	0 square meters	0
Base rock	42,929.81 metric tons	52.6
Prime coat	89,187.4 liters	8.8
Tack coat	9,655.4 liters	16.4
Asphalt concrete	10,828.71 metric tons	10.7

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Grouted riprap	138.00 cubic meters	172.5
Furnish lab	1 each	100
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2

Dae Lim and their subcontractors are still negotiating, but no agreements have been reached to date.

#### WEEK ENDING NOVEMBER 17, 1973

The main item of interest and concern this period was the weather. Two typhoons in the past week have caused widespread flooding and damage.

The first typhoon, Sarah, entered the Nha Trang area with high winds at approximately 11 p.m. on November 10, 1973 after more than a day of steady rain. Most damage resulted from the high winds, however.

VECCO Compound - Dae Lim's office had the sheet metal roof blown completely off and everything inside was water soaked.

DMJM's laboratory had about four inches of mud inside as a result of the culvert at VECCO's main gate silting up. Damage was also received by the lab's sheet metal roofing, but did not result in any water damage.

VECCO's welding shed/structure was also heavily damaged.

Electricity was restored to the majority of structures by noon on November 13. Work is continuing on Dae Lim's office building.

Roads - None of the project's roads were flooded in the Nha Trang area, but the water did rise to the edge of the pavement in a number of places along the Route 421 bypass.

Severe flooding was observed in the area of My-Ca and Hoa-Do.

The second typhoon, Thelma, had practically no winds in the Nha Trang area but rain was constant. Nha Trang was isolated as QL-1 was flooded both north and south of Nha Trang. The 421 bypass was impassable also, with water over the bypass from Station 90+600 southward.

Pictures were taken of the flood waters during a helicopter observation trip on Saturday, November 17, and were forwarded under a separate report.

**Estimated damage is considerable but cannot be accurately determined until a survey has been completed.**

WEEK ENDING NOVEMBER 24, 1973

A study was completed on the extent of damage incurred on the highway since the original survey was completed on October 10, 1973. This report in its entirety with enclosures was forwarded with information for approval to ETA. A detailed work plan has been requested of the Contractor who has informed this firm that when he receives all the quantities involved he will comply. As this study shows it will be necessary to secure asphaltic products which might become long lead items (availability of same is being investigated at present in Saigon through two major oil companies, i. e., Esso and Shell). The Contractor is gearing up for construction again and will be renting his equipment from VECCO on December 1, 1973. In view of this and the anticipated increase in tempo of construction, it is respectfully requested that USAID examine this report and provide this office with a change order as outlined in the report NTG 192 dated October 26, 1973.

A further study is now being conducted to determine the extent of damage from the two typhoons that passed through this area in the third week of November. The report will be forwarded to USAID in approximately two to three weeks time. The color coding utilized for marking damaged areas shall be as follows:

- Red - Original scope of work
- Yellow - Additional work from completion of original survey to October 10, 1973
- White - Additional damage after the two typhoons.

An extension of 45 calendar days has been requested for the study as submitted. A change order combining the 45 days extension along with the extra fiscal appropriation would be very much appreciated as soon as possible.

Coty Coty and Dae Lim officially concluded their contract and have complied with all requirements as listed under paragraph 1.7.7. of the General Specifications and paragraph 34 of the addendum. Correspondence to this effect is on file in this office.

It has been mentioned that Dae Lim shall perform this work itself. According to the contract, a minimum of 25 percent shall be subcontracted out to indigenous contracting firms. Dae Lim as yet has not concluded any agreements with VECCO that will entitle them to proceed under the 25 percent clause.

On Tuesday, November 20, an aerial reconnaissance was conducted by Mr. Jack Keefe (USAID) and Mr. Van Zyl north of Nha Trang along QL-1 to ascertain typhoon damage. Areas were found to be highly flooded and two bridges were washed out. This damage will be reported in the new study.

The culverts on the Route 421 bypass had asphalt concrete placed over them in a temporary repair at the Contractor's expense.

Mr. W. H. Lee, Project Manager, Mr. T. K. Kim, Materials Engineer, and Mr. J. Y. Lee, Section I Manager, are still in Korea and have not returned to this site.

This firm was approached by the Vinnell advisor to provide information with regards to monthly payments made to the prime Contractor, Dae Lim. The advisor was informed to work through the prime Contractor as the information from this office was privileged and the normal channel was through Dae Lim. A dispute exists per information of the advisor that Dae Lim owes VECCO \$VN7 million in arrears. This figure was later changed to \$VN3 million, but Dae Lim claims that the correct figure is \$VN1.4 million and the reason this has not been paid is that they have not been billed yet. This problem is brought to your attention for information purposes only and is a dispute entirely between the prime Contractor and his subcontractor/supplier.

DMJM's office was broken into and a report will be forwarded regarding this incident.

WEEK ENDING DECEMBER 1, 1973

Dae Lim resumed shoulder work this period and hauled 207 metric tons of base rock to Section II.

Repair work continued on two culverts on the Route 421 Bypass (Station 89+900 and Station 90+630) with excavation of soft areas.

Dae Lim has presented VECCO with a list of additional equipment that they wish to rent from December 1 in preparation for their increased work load now that the rainy season is nearly over.

Percentage completion now stands at 20.0 percent with \$399,397.67 of the allocated funds expended.

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Excavation	13,169.61 cubic meters	39.8
Scarification, regrade, and recompaction	0 square meters	0
Base rock	43,746.27 metric tons	53.6
Prime coat	89,187.4 liters	8.8
Tack coat	9,655.4 liters	16.4
Asphalt concrete	10,828.71 metric tons	10.7
Grouted riprap	138.00 cubic meters	172.5
Furnish lab	1 each	100
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2

WEEK ENDING DECEMBER 8, 1973

The major item of concern this period was in regards to POL products. On December 3 the tank farms at Nha Be near Saigon were attacked by Communist forces and heavy losses resulted. Before the end of the week both local suppliers and the USAID motor pool were operating under some form of rationing. This will directly affect both Dae Lim and DMJM operations.

Also during this period the DMJM survey team continued to locate and record additional failed areas caused by the typhoons.

Dae Lim's percentage completion remained 20.0 percent, the same as for the last period. The weather was a contributing factor to this with rain recorded on three days.

WEEK ENDING DECEMBER 15, 1973

Dae Lim has started their remobilization and rented four pieces of heavy equipment (one motor grader, one three-wheel roller, one asphalt distributor, and one pay loader) from VECCO between December 13 and 15. Additional equipment will be rented next week.

DMJM is continuing the survey of additional damage due to the typhoons and should finish the survey next week.

POL products continued to be rationed during this period but posed only minor problems since the tempo of work was very low.

Dae Lim's overall percentage completion (based on funds expended) remains at 20.0 percent.

#### WEEK ENDING DECEMBER 22, 1973

Dae Lim's remobilization is continuing with eight major and three minor items rented from VECCO this period.

Work resumed on Section I this period after discontinuation by Coty Coty, the former subcontractor. Regrading and recompaction on patchwork and the Ba Ngoi reconstruction area was started and two patches had prime coat placed.

Shoulder work continued in Section II between Station 63+200 and Station 65+500 with 337 metric tons of base rock hauled.

The culverts on Route 421 were worked on during this period, but showers during the week hampered progress.

#### WEEK ENDING DECEMBER 29, 1973

The rate of work increased this period even though Christmas was observed.

In Section I, 558,800 pounds of base rock were placed in patchwork and the Ba Ngoi reconstruction area, including the railroad transition area. The base rock for this area is having to come from Nha Trang quarries because of the scale requirement. Prime coat was placed on patched areas also.

Shoulder work and patchwork continued on Section II during this period with 868 and 99 metric tons being placed in each, respectively.

Work on Section III was limited to the repair of culverts on Route 421.

DMJM forwarded their estimate of increased quantities and cost necessary to complete the project on December 26, 1973.

Work completed to date for each pay item is as follows:

<u>Description</u>	<u>Quantity to Date</u>	<u>% Completed</u>
Furnish lab	1 each	100
Excavation	13,169.61 cubic meters	39.8
Scarification, regrade, and recompaction	0 square meters	0
Crushed base rock	45,412 metric tons	55.7
Bituminous prime coat	89,358 liters	8.8
Bituminous tack coat	9,655.4 liters	16.4
Asphalt concrete	10,828.71 metric tons	10.7
DBST	0 square meters	0
SBST	0 square meters	0
Plain concrete	0 cubic meters	0
Riprap	0 cubic meters	0
36-inch CMP	372.88 linear meters	93.2
48-inch CMP	145.84 linear meters	91.2
Grouted riprap	138.00 cubic meters	172.5

#### WEEK ENDING JANUARY 5, 1974

Work on Section I during this period consisted of fine grading and compaction of patches between Station 36+500 and Station 37+500. On Saturday, January 5, 1,200 square meters of patchwork were primed.

In Section II, shoulder work was between Station 65+500 and Station 66+500. Patchwork consisted of grading and compaction on patches between Station 80+500 and Station 81+650.

For Section III, work was limited to the cutting of asphalt concrete on the Route 421 bypass in preparation for excavation.

Dae Lim provided a schedule for VECCO on January 4 for a total of 2,400 short tons of asphalt concrete to be delivered from January 14 to 19. It has been reported that although negotiations with VECCO in regards to asphalt concrete are still in progress, Dae Lim is authorized to receive asphalt concrete from VECCO.

Dae Lim is experiencing difficulty in obtaining from VECCO the quantity of equipment necessary to fully mobilize their program. Your attention is directed to the list hereunder provided by the Contractor regarding equipment:

<u>L/I Number</u>	<u>Description</u>	<u>Size</u>	<u>Quantity Requested</u>	<u>On Hand</u>	<u>Require- ment</u>
1.	Motor grader	CAT 12	4	2	2
2.	Bulldozer	CAT D-4	2	1	1
3.	Bulldozer	CAT D-6	1	1	0
4.	Front-end loader	CAT 950	3	2	1
5.	Water Truck	3000 G/A	2	1	0
6.	Asphalt distributor	1700 G/A	2	1	1
7.	Air compressor	125 CFM	3	1	2
8.	Concrete breaker		2	1	1
9.	Asphalt finisher	100 T	2	1	0
10.	Pneumatic roller	10-15T	4	2	2
11.	3-Wheel roller	8-10T	6	2	4
12.	Tandem roller	4-5T	4	1	3
13.	Lub. Truck		1	1	0
14.	Tractor Trailer		1	1	0
15.	Broom self		1	1	0
16.	Flatbed Truck	2T	6	3	3
17.	Hand tamper		3	0	3
18.	Saw machine		1	0	1

VECCO's crusher is down due to lack of parts for their Iowa four-by-twelve-foot, three-deck vibrating screen.

The mineral aggregate stockpiles are being deleted at present due to a large order for cold mix from the MPW.

#### WEEK ENDING JANUARY 12, 1974

Work on Section I this period consisted of fine grading on patches between Station 33+690 and Station 36+940. Prime coat was placed between Station 36+648 and Station 37+910.

In Section II shoulder work continued with base rock being placed and worked between Station 65+050 and Station 67+500. Prime coat was placed on the left shoulder from Station 61+240 to Station 63+100 and the right shoulder from Station 61+240 to Station 62+055. Patchwork consisted of fine grading between Station 80+650 and Station 81+662, and prime coat was placed from Station 80+900 to Station 81+662, some of which will be at Contractor expense since it was necessary to rework areas that were not closed up before the rainy season.

In Section III work was in preparation for the continuation of asphalt concrete overlay on Route 421. The edge of the left lane overlay which was placed in September was rounded off and has been cut in order to form a good longitudinal joint.

Dae Lim increased the quantity of asphalt concrete requested from VECCO from January 14 to January 21, 1974 to 3,400 short tons.

Samples for riprap work in Section III were submitted and were found to meet specification requirements.

#### WEEK ENDING JANUARY 19, 1974

Work on Section I during this period consisted of fine grading on patches between Stations 33+690 and 36+688 and the application of prime coat from Station 33+690 to Station 36+688.

In Section II, work continued on the Type A shoulders. Only 35 metric tons of base rock was hauled to the shoulders as the Contractor concentrated on his prime coat operation. Prime coat was placed on the right side from Station 62+055 to Station 66+000 and the left side from Station 63+100 to Station 63+900. Patchwork continued with a small amount of excavation and prime coat operations taking place while 815 metric tons of base rock was placed. Asphalt concrete was placed in patches from Station 80+845 to Station 81+662, and 377 metric tons of asphalt concrete were utilized.

In Section III work was centered primarily around asphalt concrete work. Both lanes have now been overlaid between Station 93+082 and Station 94+522. Riprap work also commenced during this period.

Two accidents were reported during this period. It was reported that on January 15 a passenger bus lost its brakes while slowing for construction in the vicinity of Station 80+800. The driver subsequently lost control and the bus overturned. Another accident occurred on January 18 in which a tandem roller operated by Dae Lim (owned by VECCO) went off the road and down an embankment in the vicinity of Station 96+250.

#### WEEK ENDING FEBRUARY 2, 1974

The Contractor experienced no activity from January 20 through 26, 1974 due to the TET holidays.

The following work was accomplished during the week ending February 2, 1974:

- Section I had no roadwork activity although some preliminary site preparation took place for a new crusher and asphalt plant.
- In Section II, work continued but at a low tempo. Patches were located and the asphalt concrete surface cut with jackhammers. Base rock was hauled to one patch and one patch was excavated. No shoulder work was performed.
- Patches were located and cut in Section III also. One large, two-lane patch was excavated at Dien Khanh, south of Nha Trang, in which traffic had to utilize a bypass. Riprap work continued.
- Dae Lim submitted a new job-mix formula on January 31, 1974 (only asphalt content changed).

#### WEEK ENDING FEBRUARY 9, 1974

There was no roadwork done on Section I during this period.

In Section II, 312 metric tons of base rock were hauled to patchwork between Station 80+650 and Station 81+485. Shoulder work consisted only of compaction of base rock already placed between Station 65+000 and Station 67+050.

In Section III, work continued in the Dien Khanh area. Excavation has been completed on the patchwork between Station 85+110 and Station 85+260 and work is continuing. As in the past the Contractor still fails to plan his work in a professional manner. He does not have enough personnel, equipment, or hauling assets at this particular point in time to complete the project successfully and prior to the commencement of the next monsoon season. This office has, however, been advised by their Project Manager,

Mr. Y. M. Lim, that their intention is to rent additional hauling units from VECCO. It is understood that these pieces shall be from the Saigon and Da Nang areas. They are expected onsite, according to Mr. Lim, prior to the end of this month. This statement cannot be corroborated at this time.

An item of interest is a statement made to the effect that Dae Lim Industrial Co., Ltd. shall cease construction operations at the end of February. One of the reasons put forward was that the Vietnamese firms in the Saigon area would force them to discontinue work.

At the present time, taking the Contractor's previous accomplishments into consideration and his lack of production, it is thought that he might not be able to continue and complete this contract.

The above statement is the best evaluation that the A/E can make at the present time.

Work completed to date in each pay item is as follows:

<u>Item Number</u>	<u>Description of Items</u>	<u>Quantity</u>
2. 2(1)	Furnish lab	1
2. 3(1)	Excavation	13,692.42
2. 4(1)	Scarification, regrade, and recompaction	0
2. 5(1)	Crushed base rock	48,694.26
2. 6(1)	Bituminous prime coat	117,571.9
2. 7(1)	Bituminous tack coat	12,130.4
2. 8(1)	Asphalt concrete	12,416.17
2. 9(1)	DBST	0
2. 10(1)	SBST	0
2. 11(1)	Plain concrete	0
2. 12(1)	Riprap	344.42
2. 13(1)	36-inch CMP	372.88
2. 13(2)	48-inch CMP	145.84
2. 14(1)	Grouted riprap	138.00

Total funds expended to date amounts to 22.5 percent of the original contract amount.

## WEEK ENDING FEBRUARY 16, 1974

The Contractor worked three days (February 11, 12, and 13) during this period on Section I. Asphalt concrete was finally placed in patches that had been excavated as long ago as July 27, 1973. A total of 470.7 metric tons of asphalt concrete was hauled from VECCO Nha Trang and placed on patchwork in Section I. A general lack of planning was evident. This company is not performing the work in a professional manner. There are presently three patches having a total area of 359 square meters still remaining to have asphalt concrete placed in addition to the uncompleted Ba Ngoi reconstruction area. No other work was accomplished during this period.

In Section II, there was preparation of patchwork so that asphalt concrete could be placed on February 15 and 16. Approximately 519 metric tons were placed in patches and overlay. Shoulder work continued with prime coat placed between Stations 63+900 and 65+486 (left side), 65+540 and 65+877 (left side), 66+000 and 66+230 (right side), and 66+315 and 66+907 (right side).

For Section III, work continued in the Dien Khanh area with the hauling of base rock, grading, and compaction in lifts. Approximately 700 metric tons of base rock were placed in this period. Excavation was begun of the temporary leveling courses placed over the culverts on Route 421. This work is being done at the Contractor's expense. Riprap work is continuing and should be completed in the near future.

## WEEK ENDING FEBRUARY 22, 1974

During this period, Dae Lim closed out their Section I office and storage yard. It appears that the Contractor does not intend to proceed with work in this section for the time being. At present three patches and the Ba Ngoi reconstruction area remain open. The concrete curb and gutter work has not been started. Stored materials were removed to Sections' II and III storage yards with the exception of approximately 581 bags of cement. This material was disposed of without prior notification or inspection by DMJM's Materials Engineer. The price of cement has risen approximately 130 percent from March 1973 to February 1974.

In Section II, asphalt concrete was laid in 850 square meters of patchwork and the road was overlaid between Stations 83+518 and 82+555 for the right lane and Stations 83+315 and 82+555 for the left lane. Shoulder work continued with prime coat placed on the shoulders between Stations 65+500 and 67+500.

For Section III, the area in Dien Khanh is nearing completion and has been prime coated. Excavation of the temporary leveling courses placed over the

culverts on Route 421 was completed and a new leveling course was placed. The directions of the A/E were not followed, however, and the quality of the resulting work is lacking.

WEEK ENDING MARCH 2, 1974

The Contractor's work in Section II during this period consisted of the placement of 897 metric tons of base rock in patchwork between Station 80+443 and 80+593 and 1,155 metric tons of base rock in shoulder work between Stations 82+760 and 84+000. Asphalt concrete was placed on patchwork on February 28 and 43 metric tons were used.

In Section III, 185 metric tons of base rock were used in patchwork. Prime coat operations continued and 325 metric tons of asphalt concrete were placed on February 28.

Quantities completed to date are as follows:

<u>Description of Items</u>	<u>Unit</u>	<u>Quantity</u>
Furnish lab	L. S	1 each
Excavation	cubic meters	14,815.18
Scarification, regrade, and recompaction	square meters	0
Crushed base rock	metric tons	52,702.43
Bituminous prime coat	liters	139,383.2
Bituminous tack coat	liters	16,369.6
Asphalt concrete	metric tons	13,651.79
DBST	square meters	0
SBST	square meters	0
Plain concrete	cubic meters	0
Riprap	cubic meters	1,782.00
36-inch CMP	linear meters	372.88
48-inch CMP	linear meters	145.84
Grouted riprap	cubic meters	138.00

Total funds expended amounts to 25.7 percent of original total contract cost.

DMJM completed an estimate of materials cost increases for this project and forwarded it on Monday, February 25.

## WEEK ENDING MARCH 9, 1974

Sections I and III - No work this period.

The Contractor did continue work on Section II during this period with 1,043 metric tons of base rock placed. This was comprised of 282 metric tons to shoulder work from Station 82+600 to Station 83+550 and the remainder to patchwork from Station 80+378 to Station 80+443.

Dae Lim still is having trouble coordinating its work. After a steady rain on March 3, 1974, the Contractor had on March 4 14 trucks loaded with base rock that stood by at the job site unable to dump because of wet site conditions. The Contractor finally returned these trucks to his supplier at 4:15 p.m. An early morning site investigation and better communication would have prevented this problem and others of its nature.

This week the Contractor expressed plans to begin DBST work in Sections II and III next week.

## WEEK ENDING MARCH 16, 1974

Section I - No work, but improvements on safety were ordered.

Work in Section II consisted of grading and compaction of patches from Station 80+378 to Station 80+443 and shoulders between Station 82+700 and Station 83+555. Approximately 1,300 gallons of MC-70 was placed on patchwork and shoulders. Sixty-five metric tons of base rock was placed and excavation was started on patchwork between Station 80+323 and Station 80+378.

Shoulder work was performed this period in Section III with 50 metric tons of base rock placed and 525 gallons of MC-70 used.

Dae Lim informed this office on the afternoon of March 13, 1974 that they intended to relocate all materials in the two storage yards in Section II (Station 59+700 and Station 79+600) to their storage yard on Route 421 (Station 95+000). A complete inventory of all storage areas was taken the next day before any materials were moved.

## WEEK ENDING MARCH 23, 1974

In Section I, base rock was hauled to two patches bringing the level of the base rock up even with the surrounding asphalt. This is a temporary measure to make travel safer in these areas.

In Section II, excavation was completed between Station 80+273 and Station 80+378, the subbase graded and compacted, and 340 metric tons of base rock placed. Shoulders were graded and compacted between Station 82+537 and Station 82+921. Prime coat was placed on the left shoulder between Station 82+562 and Station 83+386.

In Section III, 38 metric tons of base rock were hauled to shoulders. DBST was placed this period with 3,100 square meters of the first course (3/4-inch aggregate) and 4,470 square meters of the second course (3/8-inch aggregate) placed. Note that DBST work had been done previously on October 24, 1973 with the placement of 3/4-inch aggregate.

A Mr. Meagher from IIS arrived at the job site on March 21, 1973 and departed March 25, 1974.

WEEK ENDING MARCH 30, 1974

Section I - No work.

Work continued in Section II, however. Approximately 730 metric tons of base rock was hauled to patchwork, 620 gallons of MC-70 was placed on the right shoulder between Station 82+555 and Station 83+410, excavation was started and completed between Station 79+547 and Station 80+132, and DBST operations were started in the Station 58+700 to Station 59+910 area with the placement of 3/4-inch aggregate on the right shoulder.

In Section III, DBST operations continued with 3,200 square meters of DBST completed this period.

Work in place is as follows:

<u>Description of Items</u>	<u>Unit</u>	<u>Quantity</u>
Furnish lab	L. S.	1 each
Excavation	cubic meters	15,885.41
Scarification, regrade, and recompaction	square meters	0
Crushed base rock	metric tons	54,963.46
Bituminous prime coat	liters	157,208.2
Bituminous tack coat	liters	16,369.6
Asphalt concrete	metric tons	13,651.79

<u>Description of Items</u>	<u>Unit</u>	<u>Quantity</u>
DBST	square meters	7,672.5
SBST	square meters	0
Plain concrete	cubic meters	0
Riprap	cubic meters	1,782.00
36-inch CMP	linear meters	372.88
48-inch CMP	linear meters	145.84
Grouted riprap	cubic meters	138.00

Total funds expended (including materials advance) is \$US 528,898.02 or 26.5 percent of the original contract amount. The advance on materials has been only for material for which valid receipts have been available.

Dae Lim turned in their three SSB SA-100 radios and related equipment this period as requested. Future plans for communication equipment are undecided at this time.

WEEK ENDING APRIL 6, 1974

Section I - No work.

In Section II, DBST operations continued between Stations 59+300 and 63+505. Excavation was begun on patchwork between Stations 79+580 and 79+775.

In Section III shoulders were compacted and prime coat was placed on the left side from Station 87+355 to Station 87+515. DBST operations took place between Stations 88+198 and 89+498. New patchwork between Stations 97+274 and 97+515 was excavated, graded, and compacted, and base rock was hauled to the site.

The Contractor was notified on April 6, 1974 that the present stockpiles of 3/8-inch minus aggregate contain excessive amounts of clay and dirt particles and that it is unsuitable for use in the work in its present condition.

A DMJM inspector was injured on April 4, 1974 when a passenger bus failed to reduce speed when entering the construction area. Safety signs and flagmen were present at the time of the accident. Fortunately, the inspector sustained only minor cuts, abrasions, and some large bruises.

WEEK ENDING APRIL 13, 1974

The Contractor continued his work in Sections II and III this period.

Patchwork in Section II consisted of grading and compacting of subbase and the hauling of base rock between Stations 79+547 and 80+132. The DBST operation has been hampered by nonavailability of clean 3/8-inch aggregate. The present 3/8-inch aggregate is coated with silt and clay and cannot be used in its present state. Screening operations were attempted but proved inadequate, and the Contractor initiated his own washing operation on April 12. Satisfactory aggregate is being produced but output is insufficient.

In Section III excavation has been performed for patchwork in areas between Stations 97+274 and 101+621. The subbase has been graded and compacted, and base rock is being hauled to these areas. Over 3,000 square meters of shoulders were primed in areas between Stations 91+080 and 93+550 and are ready for DBST, but this operation is being delayed for reasons stated above.

Esso delivered three truckloads of bulk AP-3 for Dae Lim on the evening of April 6, 1974. Approximately 20 metric tons were delivered and placed in one of VECCO's storage tanks. This is in preparation for 8,000 short tons of asphalt concrete work planned for placement during this month.

Dae Lim has obtained a truck scale and plans to install it at the Minh Thanh quarry site. At present, the scale is located at the Ba Ngoi railway station.

WEEK ENDING APRIL 20, 1974

Work progressed in Sections II and III during this period.

In Section II approximately 5,500 square meters of DBST were completed. The 3/8-inch aggregate washing operation initiated by the Contractor utilizes 40 laborers, a water truck, and a pickup truck.

Approximately 216 metric tons of base rock were placed in patchwork as hauling assets were concentrated on asphalt concrete.

Asphalt concrete work commenced April 15, 1974 and 1,800 short tons were placed in patchwork and overlay work between Station 79+450 and Station 82+175. Unseasonable showers forced paving operations to stop on two separate occasions during this week. Trucks which were already loaded with asphalt concrete were parked under cover and forced to wait until the showers stopped and the road dried. Paving operations then continued under illumination provided by Contractor equipment and vehicles. Work was completed at approximately 8:15 each night.

In Section III patchwork has been excavated up to the Hon Mot reconstruction area and work has started on the reconstruction area itself. Grading and rolling operations continued and 350 metric tons of base rock were placed.

Esso made two deliveries of AP-3 for the Contractor during this period (April 16 and 19) for a total of 53 metric tons. Certificates of compliance from Esso have been submitted by Dae Lim.

Work completed this month for each pay item is as follows:

Excavation	1,748	cubic meters
Base rock	4,136	metric tons
Prime coat	4,770	liters
Tack coat	4,552	liters
Asphalt concrete	1,627	metric tons
DBST	13,552	square meters

WEEK ENDING APRIL 27, 1974

Work continued to progress in Sections II and III during this period.

Over 8,000 square meters of DBST work was completed between Stations 60+650 and 63+200. Approximately 2,500 short tons of asphalt concrete was utilized in patches and overlay. Both lanes were overlaid between Stations 81+220 and 82+536, and then overlay work was started from Station 67+500 northward. More than a kilometer of two-lane overlay was completed in the new area. Other work in this Section consisted of hauling base rock, grading, and compaction of patchwork.

In Section III over 300 metric tons of base rock was hauled to patches between Stations 101+612 and 102+868. Work on the Hon Mot reconstruction area consisted of grading and drainage ditch work.

Work accomplished this month is as follows:

Excavation	2,486	cubic meters
Base rock	4,485	metric tons
Prime coat	21,512	liters
Tack coat	9,922	liters
Asphalt concrete	3,895	metric tons
DBST	21,654	square meters

The above amounts to 4.4 percent completion and the Contractor still has two work days with which to increase his monthly percentage completion.

It appears from correspondence forwarded this office and verbal assurances that Dae Lim is making progress in obtaining the necessary equipment and official approval necessary to set up their crusher-asphalt plant complex in the Cam Ranh area. Units of the asphalt plant have already arrived.

Dae Lim was advised by letter during this period to open up no more work past the Hon Mot reconstruction area, close all open patchwork in the northern area, and to concentrate their work forces on the central and southern segments.

Dae Lim was also advised to improve their communications and ensure that all trucks hauling asphalt concrete have tarpaulins. Unseasonable rains or mechanical difficulties may cause excessive amounts of material, namely asphalt concrete, to be rejected unless this advice is heeded.

Dae Lim is having to continue their washing operation of VECCO's coated 3/8-inch aggregate. Records are being kept of the costs incurred for this operation. The amount of coated 3/8-inch aggregate that is stockpiled cannot be determined since authorization for the DMJM survey crew to cross section the stockpile cannot be obtained from VECCO management for some unknown reason.

A temporary work stoppage was ordered on April 26, 1974 when conditions at the scalehouse became overcrowded and uncondusive to efficient work. Work was halted only once during this date and was of approximately 42 minutes duration. The problem had been brought to the Contractor's attention two days previously.

#### WEEK ENDING MAY 4, 1974

In Section II during this period over 8,200 square meters of DBST work was completed between Stations 624535 and 644850. Approximately 1,654 short tons of asphalt concrete were utilized in leveling courses and overlay. The left lane was overlaid from Stations 684916 to 694802 and from Stations 704062 to 704517. The left lane could not be overlaid between Stations 694802 and 704062 because of excessive amounts of bitumen on the existing surface that became soft when tacked. The right lane was overlaid from Stations 684500 to 704457. Additionally, over 2,284 metric tons of base rock were hauled to patchwork and shoulder work in Section II.

In Section III, 320 metric tons of base rock were hauled to patches. Work in this section consisted primarily of rolling and grading operations on patches and the Hon Mot reconstruction area.

Dae Lim was advised to use RC-800 in lieu of RC-70 as test results indicate the RC-70 is out of specifications and may be adulterated. Samples have been forwarded to Shell, Singapore; the Phu An Material Research Division; and the Asphalt Institute. Test results will be compared.

VECCO's asphalt plant was down for various mechanical reasons for a total of 7 hours and 17 minutes during 5 days of production of asphalt concrete for the Contractor. A major problem at present in regards to future asphalt production is the lack of Number 4 fines. At Dae Lim's present rate of placing asphalt concrete, it is predicted that VECCO will be out of Number 4 fines by the middle of the month.

VECCO began testing their asphalt concrete of April 29, 1974.

Dae Lim continued their 3/8-inch aggregate washing operation. A plasticity test was run on the residue of the Dae Lim washing operation and a plastic index of 9.8 was obtained, indicating that the aggregate has a silty clay coating.

Dae Lim is still in need of hauling units and has expressed a desire to rent from VECCO, Saigon, if available.

#### WEEK ENDING MAY 11, 1974

In Section II during this period approximately 7,750 square meters of DBST were completed between Stations 64+650 and 67+500. The overlay operation continued with the equivalent of 1.4 kilometers of two-lane overlay placed. Also, the left lane was overlaid between Stations 69+802 and 70+062 after corrective action was taken to remove the excessive amounts of bitumen on the existing surface. Approximately 2,670 metric tons of base rock were utilized in patch and shoulder work this period.

In Section III, approximately 1,900 metric tons of base rock were placed for patchwork and the reconstruction area. Prime coat was placed on patchwork between Stations 99+800 and 103+714, and on shoulder work from Station 102+800 to 104+510 on the right side. A total of 2,100 gallons of MC-70 was utilized on this work. Work is continuing on the Hon Mot reconstruction area.

Asphalt concrete production was limited to four days this period. Monday, the 6th, was a Vietnamese holiday and on Friday, the 10th, VECCO pulled maintenance on their asphalt plant. During the four days of production another three and a half hours of downtime were recorded for either the asphalt plant or its support equipment.

The existing stockpiles of both Number 4 fines and base rock are dwindling rapidly and will be exhausted shortly at the Contractor's present work rate.

Dae Lim lost six truckloads (78.05 short tons) of asphalt concrete on May 7 when their paving machine broke down. It went down at 3:30 p.m. and a replacement paver could not be transported to the job site in time because of slow communications and a series of flat tires on the paver's transport vehicle.

Dae Lim was again advised not to open up work north of the Hon Mot reconstruction area and to close up their work. A conference with the Contractor was held on the 7th in reference to some cracks on the Route 421 bypass caused by the typhoons last year. Also, Dae Lim was advised to reset their AP-3 scale on the asphalt plant to 179 pounds (from 172 pounds) in order to conform with the submitted job mix formula.

Dae Lim reported that total costs incurred for their 3/8-inch aggregate washing operation for May 1974 cost \$VN 579,900. A letter was forwarded to your office May 6 with information regarding the history of the 3/8-inch stockpile in question and some general comments.

Mr. Bender, a USAID auditor, departed Nha Trang on May 6 after looking into problems surrounding the completion of the project.

#### WEEK ENDING MAY 18, 1974

In Section II during this period excavation was started on patches between Station 79+081 and Station 79+300. Approximately 60 metric tons of base rock was placed on patchwork while over 2,500 metric tons were utilized for shoulder repair. The work was on portions of the left and right sides from Stations 67+500 to 69+850 and 81+065 to 82+530.

In Section III approximately 5,300 square meters of DBST were completed from Stations 89+200 to 89+500 and 90+700 to 91+370. Six patches (Station 97+114 to Station 97+295) were closed with the placement of asphalt concrete on May 13. Final grade is being worked on for the Hon Mot reconstruction area.

Work in Sections II and III was limited this period due to a shortage of mineral products. After approximately a half-day's production of asphalt concrete on Monday, May 13, VECCO was essentially out of Number 4 fines and no more asphalt concrete was produced this period. This causes concern because at present Dae Lim is already behind on their asphalt concrete hauling schedule by over 5,000 short tons and, at present, VECCO is not capable of producing the quantity of Number 4 fines required. Delays will result until substantial changes are effected.

The Contractor's hauling assets were then utilized to haul base rock and VECCO was also out of base rock by close of business on Wednesday, May 15.

A DAO Contractor has requested a large quantity of asphalt concrete for a taxiway on the Nha Trang air base. This firm directed the Contractor to VECCO.

Dae Lim forwarded correspondence this period in which they show VECCO's asphalt plant down for various reasons a total of 53 hours this month through May 16.

Although not this firm's responsibility, attempts are being initiated to locate a river sand source that would be suitable for blending with VECCO's Number 4 fines. This would enhance gradation characteristics and also effect an increase in production of Number 4 fines. To date, five areas have been tested with negative results.

On Friday, May 17, Dae Lim was advised that no further patches are to be excavated until they have secured adequate supplies of mineral products with which to close their work.

Mr. Tom Smith, Vinnell Corporation, arrived at this site on May 15 to inspect and ascertain the reason why VECCO could not keep up with the prime Contractor's scheduled production. He left the Nha Trang site on May 17.

Mr. Lim, Dae Lim Project Manager, left for Saigon on May 14 to confer with Mr. Purifoy, ETA, and Mr. Buu-Don, VECCO, on problems of price escalations and shortages of mineral products.

Four VECCO employees arrived from Da Nang during this period to work on the night shift at the VECCO-Nha Trang site.

Unseasonable rains have occurred in the early morning hours this week and caused some delays.

WEEK ENDING MAY 25, 1974

Excavation was continued on patchwork between Stations 79+081 and 79+300 during this period. Approximately 1,204 metric tons of base rock were hauled - 41 metric tons for patchwork and 1,163 metric tons for shoulder work. Correspondence was forwarded to the Contractor advising him that basis for payment is on work complete in place and accepted. Payment will be withheld on base rock not accepted since excessive amounts are involved. The left lane was primed on patchwork from Station 79+700 to 79+925 and

450 gallons of MC-70 were utilized. Asphalt concrete work continued on May 21. The railroad transition was completed and a two-lane overlay was completed from Station 71+724 to Station 73+641.

In Section III patches between Stations 97+274 and 103+714 were closed with asphalt concrete. New failures have developed since patches in this area were excavated (April 1974) and additional work will be necessary. Prime coat was placed on patchwork between Stations 103+880 and 104+900.

VECCO's asphalt plant was down 7.5 hours during the week due to asphalt plant and support equipment breakdowns.

It is estimated that work completed this month will be as follows:

Base rock	12,750	metric tons
Prime coat	15,600	liters
Tack coat	7,600	liters
Asphalt concrete	5,667	metric tons
DBST	23,800	square meters

The work above amounts to 7.1 percent of the original contract funds allocated. The base rock quantity may be significantly less for Dae Lim's pay quantities this month depending upon whether or not work is done to bring it into the required grade and density.

Cores were taken from the road centerline to determine if adequate bonding was being made. Results of the tests show that adequate bonding is being accomplished.

Dae Lim informs that they intend to start work on the curbs and gutters at Ba Ngoi by the end of the month. Also that negotiations with his subcontractor in regards to a crusher for use at Ba Ngoi are complete.

Mr. M. B. Austin, DMJM Vice President, arrived from Saigon during this period and meetings were held with VHA officials in regards to this project.

Night rains have continued during this period.

WEEK ENDING JUNE 1, 1974

Work continued on Section II this period. Over 800 metric tons of base rock were hauled for shoulder work between Stations 70+000 to 70+130 (right side) and 69+920 to 70+225 (left side). Grading and compaction operations on

shoulders were from Stations 67+506 to 69+750, 70+000 to 70+130, and 80+275 to 81+500 for the right side and from Station 69+920 to Station 70+225 for the left side. Approximately 3,000 gallons of MC-70 were utilized to prime coat the left shoulder from Stations 67+500 to 68+745, and 68+745 to 69+700, and the right shoulder from Station 67+500 to Station 68+425. Another 770 gallons of MC-70 were used to prime the right lane of patchwork from Station 79+700 to 80+175. Only a small amount of asphalt concrete was placed this period. Approximately 41 metric tons were utilized to close both lanes of the southern end of the bridge transition for bridge Number 149.

In Section III, excavation was begun on the new failures located between Station 97+559 and Station 103+176<sup>80</sup>. Prime coat (MC-70) for the Hon Mot Reconstruction area was completed and the first lift of asphalt concrete placed (approximately 530 metric tons of asphalt concrete were utilized). Another 134 metric tons were utilized for patchwork in areas immediately north and south of the Reconstruction area. Some shoulder work was performed with grading between Station 99+900 and Station 100+350 and the first course of DBST placed between Station 91+550 and Station 92+150, left side.

Work actually completed during May 1974 is as follows:

Excavation	1,274.08	cubic meters
Base rock	9,980.49	metric tons
Prime coat	26,447.0	liters
Tack coat	7,516.6	liters
Asphalt concrete	5,106.33	metric tons
DBST	21,406.2	square meters

The Contractor's fiscal completion for the month of May 1974 was 6.34 percent bringing the total percentage of allocated funds expended to 38.44 percent.

Payment was refused this period to the Contractor for 1,834.87 metric tons of base rock which had been placed on the shoulders on Section II. Density had not been attained (no tests had been requested) and since payment is made for materials "in place and accepted," no payment was made for the unaccepted base rock even though it was physically on the shoulders.

The Contractor also was penalized for a total of 160.06 metric tons of asphalt concrete during the month of May 1974. Pay factors and work rejected for various reasons accounted for the penalty.

The Contractor submitted during this period samples of cement, coarse aggregate, and sand for concrete work scheduled for the Ba Ngoi and Hoa Do reconstruction areas.

A meeting was held with Mr. Phuong and Mr. Khoi of VHA and Mr. Van Zyl of DMJM in regards to when Dae Lim intends to commence work on the Ba Ngoi reconstruction area. The area has been open approximately 10 months and concern has been expressed over this.

Results of tests by Cong-Ty of Shell, Vietnam, on samples taken from the Contractor's bituminous products show the RC-70 to be out of specifications. Results of tests by the Asphalt Institute on identical samples are still pending.

Correspondence has been forwarded to the Contractor requesting him to review his job mix formula in an effort to make further improvements on it.

The A/E is awaiting official notification with reference to its proposed contract extension. The present contract completion date is July 8, 1974.

#### WEEK ENDING JUNE 8, 1974

In Section II during this period excavation was started for patchwork from Stations 79+081 to 79+155, and 79+200 to 79+258 right lane. A total of 1,866 metric tons of base rock was hauled to Section II - 1,048 metric tons for shoulder work between Station 70+130 and Station 70+925 and 818 metric tons for patches between Station 79+081 and Station 79+300. The Contractor made some progress in closing up shoulder work by priming approximately 3-1/2 kilometers of shoulders this period. The work was between Station 68+425 and Station 69+700, right side, and areas on both sides between Station 80+290 and Station 82+533. Prime coat was also placed on patches between Station 79+200 and 79+500, left lane, and Stations 79+500 to 79+700, right lane. Asphalt concrete was placed for two days this period for a total of 660 metric tons. The large, two-lane patch from Station 79+700 to Station 80+175 was closed and 359 meters of one-lane overlay completed.

In Section III excavation continued of the newly failed areas. Approximately 250 metric tons of base rock was hauled to patches between Stations 97+559 and 104+807. Patches between Stations 104+433 and 104+807 were primed. Asphalt concrete was placed during three days in this period and 1,260 metric tons were utilized. The intersection of Route 421 and QL-1 was completed and then both lanes were overlaid from Stations 96+950 to 97+868 and the right lane only from Stations 97+868 to 98+153. The second course (3/8-inch aggregate) was placed on the left shoulder from Stations 91+550 to 92+700 and the right shoulder from Stations 91+370 to 92+415.

**Additional overlay work will be necessary between Stations 97+850 and 101+400. This was originally a nonoverlay area but over two years have passed since the original survey and the work is now necessary to prevent widespread failures.**

Dae Lim's schedule for June 1974 calls for the placement of 10,000 short tons of asphalt concrete and 13,600 short tons of base rock.

In regards to Section I, Dae Lim informs us that:

- Payment has been made for the rental of the truck scales to be placed in the Minh Thanh quarry.
- The concrete foundation work is complete and the scales are ready to be installed at the Minh Thanh quarry.
- An additional set of scales is being procured for the crusher/asphalt plant complex being set up south of Ba Ngoi.
- Additional equipment has been requested from VECCO in order to expedite work in this section.

WEEK ENDING JUNE 15, 1974

Work in Section II continued. Excavation was started from Stations 74+150 to 75+371 and 78+928 to 79+081. Approximately 677 metric tons of base rock were hauled to patches between Stations 74+650 and 74+773, and 79+081 to 79+258. Another 1,183 metric tons were placed on shoulders from Station 70+840 to Station 71+748. Work continued on bringing base rock previously placed on the shoulders into density requirements and prime coat was placed on the left side from Stations 69+700 to 70+312. Scarification, regrade, and recompaction was completed on the Hoa Do reconstruction area, and approximately 360 metric tons of base rock were placed.

In Section III, excavation was started between Stations 99+993 and 100+171. Approximately 86 metric tons of base rock were hauled to patchwork. Asphalt concrete work continued with 2,230 metric tons placed in patchwork and overlay. The overlay was from Station 97+868 to Station 100+056, left lane, and Station 98+153 to Station 99+797, right lane.

The Contractor was advised not to place base rock on shoulders north of Station 71+755 as segments of this work are to be deleted.

Dae Lim also forwarded a revised work progress schedule on June 10, 1974. After review it is felt that present labor and equipment will be inadequate and marked increases will be necessary.

WEEK ENDING JUNE 22, 1974

In Section I this period work was continued on the Ba Ngoi reconstruction area. Forms were set on the southern right hand side and approximately 70 linear meters of curb and gutter placed as work progressed northward.

In Section II excavation was started on the remaining unopened patchwork in the segment of highway from Station 73+830 to Station 80+215. The highway has been overlaid both to the north and south of this segment and, when completed, the overlay will be continuous from Station 67+500 to Station 84+000. Approximately 290 metric tons of base rock were hauled to patchwork in this area and another 140 metric tons went to the Hoa Do reconstruction area. Approximately 650 gallons of MC-70 were used to prime patchwork from Station 78+900 to Station 79+500. The Contractor also continued to close his shoulder work and placed over 1,500 gallons of MC-70 on approximately 1.7 kilometers of shoulders. Only one truckload of asphalt concrete was placed during this period. The northern approach to bridge Number 149 (Station 73+962) was closed along with two small patches just north of the bridge.

In Section III, approximately 2,464 short tons of asphalt were utilized in overlay work. Two-lane overlay is complete up to Station 101+989. Patchwork continued to be completed in areas north of the paving spread and the Contractor has been advised to open up patchwork to Station 107+000.

As requested by AID, samples were taken of AP-3 stored at the VNRS Industrial Site at Binh Dinh (northwest of Qui Nhon) and forwarded to Phu An Materials Research Division for testing.

WEEK ENDING JUNE 29, 1974

Curb and gutter work continued at the Ba Ngoi reconstruction area this period and approximately 120 linear meters of work was completed. Curbs and gutters have now been completed from Station 36+900 to Station 37+118 for the right side.

In Section II excavation continued on the remaining patchwork between Station 73+830 and 80+215. Approximately 990 metric tons of base rock, 480 gallons of MC-70, and 570 metric tons of asphalt concrete were used in closing patchwork in this area during this period. Grading and recompaction was continued at the Hoa Do reconstruction area also.

In Section III approximately 2,275 metric tons of asphalt concrete were utilized in patchwork and overlay work. The overlay is complete up to Station 103+944 and patches have been closed with asphalt concrete up to Station 105+545. Approximately 1,380 metric tons of base rock and 700 gallons of MC-70 were

utilized in patchwork during this period. Patchwork remaining to be completed in this area lies between Stations 106+000 and 107+000.

Quantities completed during this period are listed below and they represent 8.70 percent of the original contract funds allocated for the project.

<u>Item Description</u>	<u>Quantity During June 1974</u>
Excavation	3,902.88 cubic meters
Scarification, regrade, and recompaction	4,260.0 square meters
Base rock	10,555.63 metric tons
Prime coat	47,573.5 liters
Tack coat	17,943.8 liters
Asphalt concrete	9,123.79 metric tons
DBST	4,106.00 square meters
Plain concrete	25.56 cubic meters

Dae Lim's sixth job mix formula for asphalt concrete has been approved. The change was minor and consisted of changing the percent passing the Number 8 sieve from 40 percent to 41 percent.

At present Dae Lim is experiencing supply problems with their AP-3 which is supplied from Saigon by Esso Eastern Inc. Increased enemy activity has caused halts to traffic flow along QL-1 and delays in shipments are resulting.

The Contractor's plain concrete job mix formula was also approved and test results indicated 1,485 PSI compressive strength at seven days (specifications require 1,000 PSI).

WEEK ENDING JULY 6, 1974

Construction began during this period on curbs and gutters for the left side of the Ba Ngoi reconstruction area. Work was completed from Station 36+900 to Station 37+025.

In Section II excavation continued between Stations 73+830 and 80+215. Approximately 433 metric tons of base rock, 312 gallons of MC-70, and 175 metric tons of asphalt concrete were utilized in closing patches in this area. Another 1,560 gallons of MC-70 were used to prime shoulders from Stations 70+650 to 71+400, right side, and 70+755 to 71+354, left side.

In Section III, 1,733 metric tons of asphalt concrete were placed in overlay work before the asphalt plant went down. Two-lane overlay is complete up to Station 105+263. Excavation for patchwork in this area was completed and nearly 2,250 metric tons of base rock placed.

The problem with VECCO's asphalt plant is the pug mill mixing shaft bearings are worn out and will have to be replaced. Downtime is expected to be minimal though.

Dae Lim's schedule calls for the placement of 14,350 short tons of asphalt concrete during the month of July 1974.

The Contractor is presently installing a radio communications system. It will consist of two stationary units and one mobile unit.

The A/E's contract officially ends July 8, 1974.

#### WEEK ENDING JULY 13, 1974

During this period, the concrete curb and gutter work for the Ba Ngoi reconstruction area were completed. The concrete ditch work for this area will be started after the Contractor's forces finish concrete work at the Hoa Do reconstruction area. The crusher plant set up by the Contractor south of Ba Ngoi is in its final stages of completion and should be operational shortly.

In Section II excavation and the hauling of base rock to patchwork between Stations 73+830 and 80+215 were completed. Most of the patches have been primed and are ready for the placement of asphalt concrete. Two-lane overlay was placed from Station 73+830 to Station 75+797 and the right lane was overlaid up to Station 76+423. This leaves approximately four kilometers of overlay remaining to be completed in this area. At the Hoa Do reconstruction area concrete curbs and gutters were placed from Station 46+200 to Station 46+435, right side. Excavation was started on patchwork to the north of the Hoa Do reconstruction area and approximately 185 metric tons of base rock were placed after the subgrade density was met.

The Contractor advised this office that they intend to haul asphalt concrete from VECCO, Nha Trang, for all work north of Station 35+800. The asphalt plant at the Mai-Ha site, Ba Ngoi, will be used for work south of Station 35+800.

VECCO's asphalt plant was repaired and back in operation on Monday, July 8, 1974.

Repair work was begun on failed areas on Route 421 this period.

## WEEK ENDING JULY 20, 1974

There was no work performed on the Ba Ngoi reconstruction area or any other part of Section I this period.

In Section II all remaining patchwork from Station 76+423 to Station 80+215 was closed with asphalt concrete and overlay progressed from Station 75+797 to Station 78+808. Approximately 1,350 metric tons of base rock were placed on shoulders from Station 71+750 to Station 73+950, and another 350 metric tons were placed in patchwork immediately north of the Hoa Do reconstruction area (Station 46+650 to Station 46+832). Nearly 11,650 square meters of DBST were completed between Station 67+500 and Station 70+900. Concrete work on the Hoa Do reconstruction area continued with 287 linear meters of concrete placed. Curbs and gutters were completed on the right side and 72 linear meters were finished on the left side.

Work in Section III continued. After adequate grading and rolling patch Number 179 (Station 106+016 to Station 107+000) was primed. Repair work continued on failed areas on Route 421. Most of the excavation work has been completed and the patchwork is being closed with asphalt concrete.

Two incidents occurred during this period in which trucks hauling asphalt concrete ran off the roadway. No damage or injuries were sustained and loss of asphalt concrete was limited to 1.5 short tons.

## WEEK ENDING JULY 27, 1974

During this period no work was performed in Section I.

In Section II the overlay was completed from Station 78+808 to Station 80+215. The overlay is now continuous from Station 67+500 to Station 84+000 (16.5 kilometers). Approximately 1,420 metric tons of base rock were utilized on shoulder work from Station 73+550 to Station 74+985, and nearly 800 metric tons of base rock were placed in patchwork north of Hoa Do. Concrete work continued with curb and gutter work completed from Stations 46+412 to 46+625, left side.

In Section III, remaining excavation was completed on Route 421 and all patches were closed with asphalt concrete. Patchwork from Station 106+016 to Station 107+000 was closed and the overlay was completed up to Station 107+000. This segment of overlay is complete and is a total of 10 kilometers in length (Station 97+000 to Station 107+000). Excavation work was then started on patchwork at the northern end of the project (Station 145+295 to Station 146+367) where the remaining overlay in Section III is to be placed.

The Contractor advises that the scales for the Minh Thanh quarry should be operable by the end of this month and that the new set of scales ordered for the Mai-Ha quarry was shipped from Japan on July 15, 1974.

The Mai-Ha crusher at Ba Ngoi is not producing base rock and there seems to be a dispute between the supplier and Dae Lim. No date can be given by the Contractor when the crusher will be in full production.

M. K. Van Zyl attended meetings in Saigon with AID regarding the extension of the A/E's contract.

On the morning of July 26, 1974 it was discovered that the hasp on the outside of DMJM's main entrance door was broken and the lock missing. Marks on the door indicated forced entry or attempted entry. VECCO security is investigating.

WEEK ENDING AUGUST 3, 1974

No activity in Section I this period.

In Section II work continued on the Hoa Do reconstruction area. Final grade was completed and prime coat (MC-70) placed on both lanes and the left shoulder. Patches to the north of Hoa Do have been excavated to Station 47+155 and south of Hoa Do to Station 43+295. Asphalt concrete is scheduled to be placed at Hoa Do next week. Approximately 750 metric tons of base rock was placed on shoulders between Stations 74+800 and 75+834. Shoulders were primed from Station 71+757 to Station 72+400, left side, and Station 71+765 to 72+400, right side, utilizing 930 gallons of MC-70. Approximately 7,200 square meters of DBST were placed on the left shoulder from Station 80+275 to Station 83+680.

In Section III, patchwork was closed with asphalt concrete and overlay completed from Station 145+138 to the end of the project, Station 146+367.

The Contractor's schedule calls for the placement of 14,800 short tons of asphalt concrete and 6,000 short tons of base rock during the month of August 1974.

It was pointed out to the Contractor that according to his previous work schedules, DBST work would first commence in July 1973 and was later revised to May 1974, but that at present large stretches of shoulders still remain to be protected with DBST and that the monsoon season is approaching.

The Contractor was again advised to take positive steps in correcting the situation that exists with the coarseness of the suppliers (VECCO's) Number 4 fines used in the production of asphalt concrete.

WEEK ENDING AUGUST 10, 1974

No activity in Section I this period.

In Section II excavation is continuing north of Hoa Do. Approximately 300 metric tons of base rock were placed in patches north of Hoa Do (Station 47+060 to Station 47+176) and 150 metric tons were used in patchwork south of Hoa Do (Station 43+295 to Station 44+020). Another 635 metric tons were placed on the right shoulder from Station 75+250 to Station 76+250. Patches were primed from Station 46+650 to 46+940, left lane, and the right shoulder was primed between Stations 72+400 and 73+150. Nearly 10,000 square meters of DBST were completed on the right shoulder from Station 80+279 to 84+000 and 71+756 to 72+397. Asphalt concrete was placed on six days during this period. The Hoa Do reconstruction area was completed and a two-lane overlay placed from Station 40+000 to Station 40+617. The overlay is now progressing southward from the Hoa Do area. Patchwork in the left lane was closed with asphalt concrete from Station 46+650 to Station 46+753.

In Section III shoulder work was performed with prime coat placed on the right shoulder from Stations 101+400 to 103+588 and 97+050 to 97+850 and the left shoulder from Station 101+400 to 102+600. Work proceeded on bridge transitions and asphalt concrete was placed on the approaches to seven bridges (Bridge Numbers 185, 186, 193, 194, 195, 198, and 200.1).

The Contractor forwarded correspondence to the supplier (VECCO) regarding the coarseness of their Number 4 fines and seven other letters dating from May 16, 1974 on the subject.

WEEK ENDING AUGUST 17, 1974

No activity in Section I this period, but Dae Lim says that asphalt concrete work is to start August 17, 1974 for the Ba Ngoi reconstruction area.

In Section II, patchwork continued north of Hoa Do. Excavation for the patchwork has progressed northward to Station 47+583 and base rock is being placed up to Station 47+387. A total of 385 metric tons of base rock were placed in the patchwork and another 155 metric tons used for shoulder work between Stations 76+000 and 77+000. Prime coat was placed with 346 gallons used on patchwork and 1,530 gallons used on shoulder work. Asphalt concrete overlay work continues with the equivalent of 2.3 kilometers of two-lane overlay completed this period.

Mr. M. B. Austin, DMJM Associate Vice President, arrived this site August 23, 1973 to review the operations and confer with personnel associated with the project.

Paving operations did not start until Wednesday, August 21, 1974, as their paving machine was down for repair on Monday and Tuesday.

Rain was not a hindrance to construction progress this period.

WEEK ENDING AUGUST 31, 1974

In Section I this period, work continued on the Ba Ngoi reconstruction area. Prime coat was placed and the first lift of asphalt concrete completed. Work on the concrete ditch progressed and approximately 28 cubic meters of plain concrete was placed.

In Section II, asphalt concrete was placed on four days this period. Approximately 890 meters of two-lane overlay was placed from Station 46+647 northward and patches between Station 46+697 to Station 47+607 were also closed with asphalt concrete. Patchwork to the north of Hoa Do has progressed past the entrance to the Cam Ranh Bay installation (Station 48+700) with excavation in progress up to Station 49+438. Base rock has been placed up to Station 48+975 and patches have been primed (MC-70) up to Station 47+607. Shoulder work continued with prime coat placed between Stations 74+825 and 76+130 and DBST completed from Station 73+900 to 74+814, right side.

There was no work recorded in Section III this period. Equipment and manpower have been transferred to the southern and central segments in order to expedite the work in the face of the oncoming monsoon season.

The third test of the scales at the Minh Thanh quarry was conducted on August 29, 1974 and results show the scales to be sensitive to the location of the load placed upon them. Correspondence has been forwarded to the Contractor advising him to adjust the scales so that they give uniform readings for a given load when placed at different locations on the scale's platform and arrange a test in which the scales' entire range may be checked and a calibration curve obtained if necessary.

Correspondence forwarded by the contractor this period shows that during September 1974, 7,200 short tons of asphalt concrete and 2,500 short tons of base rock are scheduled for placement.

Heavy rains were recorded two days during this period.

WEEK ENDING SEPTEMBER 7, 1974

Asphalt concrete work continued in Section I this period. Overlay operations commenced from Station 36+38980 (north end of bridge Number 122) and progressed northward through the Ba Ngoi reconstruction area up to Station 37+507. The intersection at Ba Ngoi was overlaid and the shoulders of the reconstruction area were also closed with asphalt concrete. Work on the concrete ditch continued with plain concrete poured on five days this period.

In Section II, asphalt concrete was placed on only one day this period. Both lanes of the patch at the intersection of QL-1 and the entrance road to the Cam Ranh Bay installation were closed with asphalt concrete. Excavation is in progress up to Station 49+860 and base rock has been placed up to Station 49+438. Base rock work is now complete for the shoulder north of Station 67+500 in Section II. DBST work is continuing and over 5,600 square meters were completed this period.

No work was recorded for Section III this period.

The scales ordered from Japan for the Mai-Ha quarry site south of Ba Ngoi arrived August 31, 1974. Dae Lim management informs that the scales will be set up and calibrated during the monsoon season.

There was no rain recorded during this period.

WEEK ENDING SEPTEMBER 14, 1974

No asphalt concrete work was performed by the Contractor during this period due to problems associated with the procurement of AP-3 and to problems with the asphalt plant.

Work performed in Section I consisted of

- Continued work on the concrete ditch at Ba Ngoi, but mechanical problems with the concrete mixer slowed the operation
- The excavation, grading, rolling and priming of two skin patches south of bridge Number 122 (Station 36+328)
- The preparation of the approaches to bridges Number 120 and 121.

In Section II, excavation has progressed to Station 51+823. Only three truckloads of base rock were hauled and they went to finish grade patchwork up to Station 49+860. Patches between 49+310 and 49+860 were then primed. Shoulder work continued with both left and right sides primed between Station

76+900 to 77+700 and approximately 6,000 square meters of DBST were completed between Stations 75+100 and 76+750.

There was no work recorded in Section III during this period.

The first AP-3 cube arrived from Qui Nhon on September 10, 1974, and a total of 15 cubes had been delivered by the end of the period.

The asphalt plant was started on September 12, 1974 and immediately stopped. The AP-3 was not being evenly mixed with the aggregate and non-uniform asphalt concrete was resulting. The problem was not solved during this period and work on it continues.

Dae Lim management has informed the A/E that they intend to set up the asphalt plant at the Mai-Ha quarry site Ba Ngoi during the rainy season. Installation has not begun on the truck scales delivered August 31, 1974 either.

On September 11, 1974 a meeting was held between Mr. Cole of USAID, Mr. Van Zyl of DMJM, and Mr. Huan and Mr. Phuong of VHA, in which ditch crossings for Ba Ngoi were discussed. Mr. Cole suggested that some of the steel previously acquired by the VHA be utilized for this work. Mr. Huan answered that it was under study and that a final decision would have to come from Saigon. A curb has already been planned for the ditch in lieu of posts to help alleviate the problem.

#### WEEK ENDING SEPTEMBER 21, 1974

In Section I this period, plain concrete work for the Ba Ngoi reconstruction area continued but mechanical problems with the mixer continued to slow the operation. Asphalt concrete work was started again and overlay was completed from Station 40+000 southwards to Station 39+334, two-lane, and from Station 39+334 to Station 39+116, left lane. The transitions to bridges Number 120 and 121 (immediately south of Ba Ngoi) were also completed.

Work in Section II continued and the Contractor is attempting to close his work prior to the rainy season. Base rock was hauled for patchwork between Stations 51+453 and 51+860 with grading and rolling operations continuing. Asphalt concrete was hauled two days this period and three patches totaling 1,264 square meters were closed. Both shoulders from Station 77+700 to Station 80+275 were primed with 4,680 gallons of MC-70. A seal coat was also placed from Station 67+500 to Station 73+500 on the right lane utilizing 2,613 gallons of RC-70.

In Section III work was limited to the placement of a seal coat from Station 86+981 to Station 94+520, right lane. Approximately 2,750 gallons of RC-70 were utilized.

Fifty-eight cubes of AP-3 were delivered from Qui Nhon this period, eliminating for the present the Contractor's procurement problem. Additionally, the problem with the asphalt plant was remedied (paddle configuration) thus allowing asphalt concrete to be produced this period.

Correspondence was forwarded by the Contractor on September 20, 1974 that his excavation and paving crews will remain mobilized during the monsoon season in order that work can continue when the weather permits.

The Contractor advised the A/E on September 18, 1974 that a "calibration expert" had arrived from Saigon and a test was arranged for September 19, 1974. The test failed to materialize when the "calibration expert" ran into difficulty removing the edge of a steel bracket which was causing interference. No equipment necessary to calibrate was noted and the sole instruments of the expert were a hammer and chisel. Correspondence has been forwarded to the Contractor previously explaining what calibration entails.

#### WEEK ENDING SEPTEMBER 28, 1974

In Section I, plain concrete work for the curbs and ditch at Ba Ngoi was finished, thus completing all work in this pay item for the project. The overlay operation continued with asphalt concrete placed two days this period. Two-lane overlay was placed down to approximately Station 38+900. Rain and threatening weather delayed the Contractor's work to some extent.

Work in Section II consisted of the scarifying and drying out of patches which rain had wetted. Base rock was then hauled to the area (Station 52+370 to Station 52+470) and grading and rolling operations commenced. Five small patches were primed from Station 51+453 to Station 51+823, and asphalt concrete was placed in two patches (63 square meters total) located between Stations 49+794 and 49+843. Also a seal coat was placed on the left lane from Station 67+500 to 73+500, completing the seal coat in this area.

There was no work in Section III.

Amendment Number 2 to Dae Lim's contract (AID 730-3552) was signed on September 20, 1974. The amendment adjusted the unit prices of nine pay items to compensate for the escalation in the prices of POL products. Total contract price for the original quantities rose to \$US 3,003,904 (from \$US 1,998,600) and the adjustment amounted to \$US 546,338.72 for work completed through August 1974.

A Mr. H. B. Wynn, USAID, arrived at this site on September 25, 1974 with questions regarding bituminous materials and materials advances. Information was provided verbally to Mr. Wynn and a written report will follow.

Nine additional cubes of AP-3 arrived from Qui Nhon and were stored at the VECCO site during this period.

#### WEEK ENDING OCTOBER 5, 1974

In Section I, asphalt concrete was placed only on one day despite good weather throughout the period. Approximately 286 metric tons of asphalt concrete was utilized in overlaying the right lane from Stations 38+310 to 38+911.

Work in Section II consisted primarily of DBST work with 3/4-inch aggregate placed on both left and right sides from Station 78+765 to Station 80+280 and 3/8-inch aggregate placed on the right side from Station 76+725 to Station 78+423. Grading and compaction of patchwork between Stations 52+370 and 52+470 continued.

In Section III, the seal coat operation of Route 421 was completed with 2,350 gallons of RC-70 placed on the left side of the pavement from Station 86+891 to Station 94+520.

Correspondence was forwarded to the Contractor during this period requesting him to accelerate his work in view of the continuing good weather and his previous stated desire to continue work, weather permitting.

A written report covering in detail the Contractor's bituminous inventories and materials advances throughout the job was prepared and sent to Mr. H. B. Wynn, USAID, as requested. A copy of the report was also forwarded to your office.

A comparison of the readouts of the Mai-Ha quarry scales and the Minh-Thanh (Tran-Hung) quarry scales was arranged by the Contractor on October 4, 1974. Again it was pointed out to the Contractor what "calibration" means and entails.

#### WEEK ENDING OCTOBER 12, 1974

During this period, rain and threatening weather prevented the Contractor from working in Sections I or III. Only minimal work was completed in Section II (3/8-inch aggregate for DBST work between Stations 76+749 and 78+428, left side) for the same reason, i. e., bad weather.

The Contractor has again expressed by correspondence his intentions of retaining a work force and performing construction work, weather permitting, during the rainy season. A request was also made by the Contractor to allow the use of his newly installed truck scales at the Mai-Ha quarry. Further correspondence was forwarded by the A/E to the Contractor in regards to calibration and subsequent scale acceptance.

The A/E remained active this period. While the survey crew was gathering alignment data of Route 421 for the VHA as requested, the lab crew continued with routine testing of suppliers' products, inspection of work previously completed by the Contractor, and updating laboratory files and records. The remainder of the work force was utilized in identifying and locating additional failed areas in the project. This information is necessary to properly plan where the Contractor's efforts can best be utilized after the rainy season ends.

#### WEEK ENDING OCTOBER 19, 1974

Rain and threatening weather prevented the Contractor from accomplishing any work during this period. It rained three and four days in Sections I and II respectively with cloudy and overcast weather for the remainder of the period.

The major incident of importance was an attack by persons unknown aimed at either destroying or immobilizing the Mai-Ha industrial complex located south of Ba Ngoi. Information made available to the A/E indicates that four mortar rounds and 43 plastic charges were utilized. Ten of the plastic charges failed to explode, four of which were located in the crusher lines, one in a D-8 bulldozer, one in the asphalt plant heater, and four others in less important pieces of equipment or areas. Actual losses to the crusher and asphalt plants were not too severe. A drive motor for the crusher and 60-kw generator were destroyed while light damage (estimated 10 percent) was done to conveyors, screens, and the asphalt plant dryer and heater. Extensive damage was inflicted to ancillary pieces of equipment. An investigation of the incident is in progress.

The A/E continued to gather alignment data of Route 421 and the Ninh Hoa bypass for the VHA. Other activities were the same as for last period.

#### WEEK ENDING OCTOBER 26, 1974

Heavy night rains on the 21st, 22nd, and 23rd in conjunction with rain last period did considerable damage to the highway from Stations 56+500 to 56+700. Shoulders were eroded and the pavement undermined. Large pieces of pavement have collapsed. Other areas are showing signs of additional failures also.

Work accomplished by the Contractor was limited to DBST work in Section II. The shoulders in Section II are now complete for base rock and DBST work from Station 58+700 to Station 84+000.

In Section III, the Contractor also performed a seal coat operation of small areas on Route 421.

Repair work is in progress on the equipment damaged in the incident on October 15 at the Mai-Ha quarry, Ba Ngoi. Total losses are estimated to be \$VN 12,569,100 which includes \$VN 400,000 for the security man who was killed. Mr. M. M. McDaniel, Provincial Representative, has been informed of the incident and an investigation is in progress.

WEEK ENDING NOVEMBER 2, 1974

Work by the Contractor on the project was limited to seal coat operation of small areas on Route 421 (Section III). Repairs on equipment damaged on October 15 at the Mai-Ha quarry, Ba Ngoi, continued. The investigation of the incident continues.

The Contractor was informed by correspondence that before payment is made for AP-3 cost increases (from May 1, 1974 to present) that are covered by the escalation clause of the contract, it is necessary for all the invoices involved to be reviewed. To date the only documentation presented is a letter from Esso Eastern Inc. in which purchase price per metric ton is quoted with no reference to the purchased quantity.

The Contractor was also advised that all scales to be utilized are to be calibrated prior to the end of the rainy season as construction will not be allowed to begin using uncalibrated scales.

The change order amounting to \$US 349,260 forwarded ETA on December 29, 1973 still has not been processed and a final decision on this is needed. The Contractor will resume work at the end of the rainy season and a decision of this change order is needed so that the Contractor may be directed accordingly.

Friday, November 1, was a Vietnamese holiday (Armed Forces Day) and the Contractor did not work.

PERIOD NOVEMBER 3 TO NOVEMBER 30, 1974

There was no work completed this month on any of the segments of the project.

The primary item of interest was the search for a location of a crusher/asphalt complex by the Contractor. A written request was made to the

Vietnamese authorities in Phan Rang for use of land but the plan was dropped in favor of using the old RMK-BRJ quarry site inside the military installation at Cam Ranh Bay. This plan had to be abandoned when the supplier refused to move his equipment onto the military installation fearing that he would not be allowed to take the equipment back out once the contract was completed. Tentative plans now call for all mineral products to be hauled from VECCO, Nha Trang.

In correspondence dated November 5, 1974, the Contractor agreed that the Minh-Thanh scales were not acceptable and their plan was to use the Mai-Ha scales to weigh the Minh-Thanh base rock.

A request was forwarded by the Contractor on November 12, 1974 regarding acceptance of the truck scales at the Mai-Ha quarry in Ba Ngoi. A letter of acceptance was returned to the Contractor on November 15, 1974. On November 28, 1974 the scales were disassembled and returned to Nha Trang.

In regards to AP-3 cost increases, correspondence was received from the Contractor on November 5, 1974 promising receipts for all AP-3 purchased, but none have been forwarded. Purchase orders have been proffered but no receipts as required for our checking.

The pay item, 2.15 (1). Seal Coat, still has not been clarified and monies are due the Contractor.

The Contractor returned their September 1974 voucher to the A/E. It had been rejected by AID because of an adjustment downwards in the unit price of asphalt concrete from \$19.60 to \$18.28 per metric ton. All work that was done in September, October, and November 1974 was paid for in the November 1974 voucher. Payment also included \$44,869.53 of retention money as per General Provisions "Payment to Contractor", Section 7(c).

On November 28, 1974 the Contractor was furnished with the scope of work to be accomplished after the monsoon season ends.

#### WEEK ENDING DECEMBER 7, 1974

The Contractor resumed work on a small scale on patches in Sections II and III this period. Two patches between Stations 52+370 and 52+470 were scarified, graded, and compacted while asphalt concrete was cut and removed on a skin patch in Section III (Station 143+300).

The Contractor submitted an asphalt concrete hauling schedule in which 8,750 short tons were to be placed starting December 11, 1974 but it had to be

revised due to bad weather. A revised hauling schedule submitted December 6, 1974 showed 5,800 short tons to be hauled starting December 17, 1974.

The Contractor submitted a request for the security of his present and future materials and equipment storage yards. A map showing the stationing of areas to be used, equipment and materials to be stored, etc., was forwarded with the request for security to the District Engineer.

Over 300 barrels of MC-70 and RC-800 were delivered by the Shell Oil Company this period and stored in Dae Lim's storage yards. At present the Contractor has three storage yards - Route 421 bypass; Hoa-Do Station 45+500, right side; and Muoi Storage Yard Station 58+500, right side.

WEEK ENDING DECEMBER 14, 1974

Patchwork in Section II continued this period and 17 patches are now open between Stations 52+370 and 60+010.

Approximately 165 metric tons of base rock was hauled to patches between Stations 55+140 and 53+440. The Contractor could not work on December 12, 1974 due to wet site conditions.

In Section III the Contractor continued work on two patches located between Stations 140+625 and 143+560. Repair of damaged riprap in the vicinity of Station 116+800 was also performed. Site conditions were too wet for construction on December 12 and 13, 1974.

Additional barrels of MC-70 and RC-800 were delivered by the Shell Oil Company this period. Present quantities of bituminous materials on-hand are:

MC-70	537 barrels
RC-70	372 barrels
RC-800	544 barrels.

The Contractor is not giving prior notice (as required by the specifications) of deliveries of bituminous materials to their storage yards. Requests by the A/E to inspect the material while still on the trucks have gone ignored. Shell delivery receipts are being presented however.

WEEK ENDING DECEMBER 21, 1974

The Contractor worked only two days this period (the 17th and 18th) due to inclement weather.

Work in Section II continued on patches previously opened and 240 metric tons of base rock were placed.

In Section III three additional patches were opened between Stations 126+210 and 127+660. Prime coat was also placed on a two-lane patch between Stations 143+330 and 143+560.

The Contractor forwarded correspondence during this period in which he requested to differentiate by unit price between asphalt concrete used in overlay and asphalt concrete used in patchwork. The Contractor also had balked at signing Amendment Number 4 in which adjustments were made in contract quantities. This subject was discussed at a meeting at ETA, Saigon, on December 19, 1974 and it was pointed out that:

- a. Under no circumstances could an increase in price for asphalt be entertained
- b. He had signed a contract and received unconditional escalation for POL
- c. Patching was part of overlay and had been bid in that manner
- d. Any increase in price was tied to POL
- e. Extra work was in the scope of the contract and that quantities were estimated only as shown on the Cover Sheet and spelled out in the Specifications
- f. AID would reject his right to complete only the quantities as stated on the plans and that the contract called for completion from Phan Rang to Bridge Number 215
- g. The ratio of patches had increased was a fact and this was partly due to the Contractor's inability to complete the work as scheduled.

The meeting ended with the recommendation to the Contractor that he return to Nha Trang and complete the project as soon as possible.

**PERIOD JANUARY 1 TO JANUARY 31, 1975**

Unfavorable weather conditions still persisted during this period, disrupting the schedule submitted by the Contractor. Follow-on operations for the early start in December could not be efficiently sustained. Asphaltic concrete laydown was considerably delayed and commenced on January 21, 1975.

Work commenced in the Southern Segment on January 18, starting from patch Number 130 at Station 0+150 proceeding northward to Station 2+142 opening up a total of 3,614 square meters in 20 patches. Base rock laid and compacted in 15 patches amounted to 1,590 metric tons.

The new truck scale installed at Tran-Hung Quarry in this segment is now operational and base rock deliveries from this source are now in progress.

In the central segment patchwork continued on patches previously opened up and new ones started between Station 51-453 and Station 59-940 with a total area of 1,856 square meters. Approximately 180 metric tons of base rock were laid and compacted. Nineteen patches totaling 1,518 square meters were completed with 206 metric tons of asphaltic concrete placed. Shoulder work was prosecuted the latter part of the month with 4,029 metric tons of base rock laid and compacted on both sides between Station 46-200 at the southern end of Hoa Do Reconstruction Area toward the south to Station 42-870.

Major item of construction accomplished in the northern segment is the completion of 13 skin patches on nonoverlay areas totaling 11,566 square meters between Station 133-475 and Station 143-560 with approximately 2,884 metric tons of asphaltic concrete placed. Eight other patches are in lesser stages of completion.

All the equipment in the storage yards at Station 143-150 and 140-350 were moved to a new storage yard at Station 127-500 on January 28, 1975.

Quantities of work performed in each pay item for the month of January 1975 are estimated below:

Excavation	1,317 cubic meters
Base rock	5,799 metric tons
Prime coat	15,635 liters
Tack coat	2,918 liters
<b>Asphaltic concrete</b>	<b>3,100 metric tons</b>

Percentage completion this month was approximately 2.5 percent for a total of 58.5 percent of the project quantities complete. Note that the percentage completion has decreased due to the increased quantities in Amendment Number 4.

#### WEEK ENDING FEBRUARY 8, 1975

In Section I work continued on 11 patches between Station 1-415 to Station 2-259. Approximately 375 metric tons of base rock were placed in eight patches with partial deliveries only in six patches.

Grading and compacting the shoulders in Segment 2 continued. Approximately 4,050 gallons of MC-70 were utilized in prime coating 8,300 square meters of shoulders between Station 43-500 and Station 46-200.

In Section 3 approximately 2,254 metric tons of asphaltic concrete were laid in 14 patches between Station 117-718 and Station 133-540. Over 1,800 gallons of MC-70 were utilized for prime coating.

Contractor forces layoff for the Tet Holidays were from February 6 to 14 for Segment 1, February 6 to 15 in Segment 2, and February 10 to 13 in Segment 3.

On February 8, 1975 a jeep of the Contractor ran off the left shoulder at Station 111-325. The Vietnamese driver and one laborer were injured and the jeep was damaged.

Correspondence was forwarded to the Contractor calling his attention to the repair and maintenance of shoulders along the patch areas that were adversely affected by construction operations. The areas were specifically identified and appropriate action was requested to correct the deficiencies.

#### WEEK ENDING FEBRUARY 15, 1975

Work resumed in Segment I on February 15, 1975. Cutting the asphalt concrete for transitions at Bridges Number 121 and 122 and longitudinal joints overlay from Station 37-400 to 37-463 was all the work that was done.

No activity in Segment 2.

Patchwork in QL-1 of Segment 3 was completed utilizing 154 metric tons of asphaltic concrete. Excavation and prime coating of four patches in the bypass between Station 88-375 and Station 93-538 were completed utilizing 50 gallons of MC-70.

The Contractor moved his paving equipment from Segment 3 to Segment 2.

No contract has as yet been signed by VECCO and Dae Lim to set up an asphalt and crusher complex at Cam Ranh Bay. VECCO advisory personnel has informed the A/E that it will take one calendar month to set up the plant from notice to proceed, barring unforeseen circumstances beyond their control.

The A/E is going to relocate the office to Ba Ngoi early next month when the paving in the central area is completed.

It is hopefully anticipated that a partial acceptance of the northern area of this project, now 99.9 percent complete, could be effected by the end of the month.

#### WEEK ENDING FEBRUARY 22, 1975

Work was performed on both ends of Section I this period. On the southern extremity excavation has proceeded northward to Station 3+468 and approximately 1,450 metric tons of base rock were utilized in patchwork between Stations 2+022 and 3+482. In the northern extremity of Section I, the Contractor placed over 1,400 metric tons of asphalt concrete in overlay between bridges Number 121 and 122, and from the traffic circle at Ba Ngoi north to approximately Station 40+000. The overlay is now complete from bridge Number 121 (Station 35+824) to Station 47+590.

Work resumed on Section II this period. Shoulder work was mostly performed. Approximately 460 metric tons of base rock were placed on the right shoulder between Stations 40+950 and 41+230, and 43+365 and 43+475, and on the left shoulder between Stations 43+050 and 43+400. Grading and compacting operations took place between Station 40+950 and Station 43+475.

Work in Section III consisted of approximately 42.6 metric tons of asphalt concrete placed in four patches on Route 421 and the utilization of seal coating to repair shoulders damaged by traffic when bypassing patches under construction.

During this period, difficulty with the asphalt plant's pug mill was encountered and a nonhomogeneous mix was being produced. The plant was down on the 18th and 19th but was back in operation on the 20th after repairs and adjustments had been made.

An agreement between Dae Lim and VECCO was finalized and a contract between them signed on February 18, 1975. Plans at present call for equipment to begin movement to the Cam Ranh Bay site on Monday, February 24, 1975.

Tran Hung, the Contractor's supplier in Section I, has only approximately 500 metric tons of base rock stockpiled at present. Production of new base rock was started on the last day of this period, but output is limited. The Contractor plans to haul base rock from Nha Trang suppliers when necessary.

The A/E has informed the Contracting Officer of the estimated cost of the escalation of POL prices based upon invoices made available to the A/E by the Contractor. The amount involved is estimated to be \$US 13,690.27.

WEEK ENDING MARCH 1, 1975

In Section I the Contractor has excavation in progress up to Station 4+800. Approximately 540 metric tons of base rock was placed in patchwork between Stations 3+468 and 4+316. Of this 192 metric tons was supplied from Nha Trang by Mai-Ha.

The Contractor utilized approximately 2,375 metric tons of asphalt concrete for his overlay operation in Section II during this period. Work was started at Station 47+590 and progressed northward to Station 51+255. A 587-meter section between Stations 49+013 and 49+600 was passed over for the time being because the repair of shoulders washed out during the rainy season has not been completed. No work was performed on February 24 and 25 because of rain.

There was no work in Section III during this period.

The Contractor has again been advised to accelerate his work. Only 82 days remain within the allocated time frame and work on the crusher/asphalt complex has only just begun.

Additional safety signs have been erected in the seal coat area in Section II but have had no observable effects. Speeds continue to be well in excess of the 35-kilometer-per-hour recommended maximum speed.

The A/E moved office equipment into the Ba Ngoi office and the power company is making the necessary changes to the wiring.

PERIOD MARCH 1 TO MARCH 29, 1975

Southern Segment - Excavation continued on this segment with 10 new patches opened up totaling 21,938 square meters between Station 4-394 and Station 6-350. Insufficient supply of base rock from Tran Hung Quarry necessitated the hauling of additional quantities from VECCO and Mai-Ha Quarries in Nha Trang with a total of approximately 4,504 metric tons placed in the patches this period. Fine grading of patches Numbers 130 to 119 inclusive

from Station 0-150 to Station 1-265 was completed. Approximately 10,144 liters of MC-70 were utilized in the prime coating of patches Numbers 130 to 119 inclusive.

Central Segment – Asphaltic concrete overlay in this segment was completed this period. Eight and one-half kilometers of two-lane highway from Station 49-200 to Station 58-700 (except for a one km-segment done in February) was paved utilizing 7,787 metric tons of asphalt concrete.

Shoulder work continued in various stages of completion from Station 40-750 to Station 481-650. Approximately 478 metric tons of base rock were placed on the right shoulder between Station 40-750 to Station 40-900, Station 45-075 to Station 46-200, and Station 47-870 to Station 48-650.

Prime coating on both shoulders between Station 41-000 and Station 48-275 for a total area of 10,100 square meters utilizing 15,215 liters of MC-70. First course of DBST was laid on approximately 13,361 square meters of shoulders on both sides at random from Station 41-000 to 48-275. Second course of DBST was completed on 13,361 square meters of shoulders.

Northern Segment – Repair of shoulders along patches Numbers 208 to 217 inclusive from Station 127-324 to Station 109-132 utilized 5,380 liters of bituminous materials.

Seal coat with sand blotter was applied over a two-kilometer segment of two-lane highway from Station 107-000 to Station 109-000 utilizing 6,422 liters of bituminous material.

Rainfall – A total of 26.4-millimeters of rainfall was recorded in Nha Trang this month. Heavy rains on the 8th and 24th precluded the production of asphaltic concrete due to wet aggregate.

Safety – On March 21, 1975 a flagman at the highway where overlay work was in progress was injured when the front wheel of a road roller ran over his right foot. He was taken to a hospital in Nha Trang after first-aid treatment in Ba Ngoi.

Downtime of Major Equipment – The asphalt plant was inoperative on March 3, 10, 11, and 19 due to mechanical and electrical trouble in the mixer paddles and dryer switch respectively. Other minor repairs and adjustments on various occasions accounted for an additional downtime totaling approximately two hours of intermittent stoppages.

At Tran Hung Quarry production was interrupted on different occasions due to breakdown of the front-end loader, the crusher, and other nonmechanical causes such as contractual differences between Contractor and subcontractors on payments due or agreed upon and lack of hauling facilities.

General Observations — Dae Lim has made the request for the extension of the contractual time for another 150 days after May 22, 1975 to October 19, 1975. Judging from previous performances it is apparent that completion by May 22, 1975 is highly improbable if not impossible. However, it is the opinion of the A/E that a reasonable time of completion would be September 15, 1975 which should be more than sufficient to close out this project including a reasonable allowance for delays and other contingencies. Percentage completion for this month is 5.30.

Inadequate and unreliable supply of base rock is a major deterrent in the construction progress. The Contractor would do well to coordinate his excavations and rock supply, or vice-versa, with better planning and scheduling at this late phase of the program.

The installation of the crusher and asphaltic concrete complex by VECCO in Cam Ranh Bay is completed but production may be further delayed due to lack of surge rock supply for the crusher. It appears that the Contractor, who is contractually bound to supply the material at the crusher, has not anticipated his need for a blasting permit and is attempting at present to acquire one. This should have been negotiated prior to moving into Cam Ranh Bay. The blasting operations should have been negotiated with an agency with a valid license to do blasting work. It is understood that VECCO has the facilities and permit to do this job.

Additionally, the application for the security passes to Cam Ranh Bay has not yet been approved and may take more time before they are issued to construction personnel and vehicles.

All these problems are indicative of the inadequacies and lack of drive in planning and prosecuting the work to a satisfactory completion. The present unsettled condition security-wise has begun to adversely affect the progress of the work. The Contractor's apprehension concerning security problems along the highway has limited the daily activities to 3:30 p.m. at the job sites. Reliable information, however, indicates that at present there is still no imminent danger in this area and evaluation of the situation will be made known according to further development. Some contingency plans are being considered just in case it may be necessary to ensure the safety of all personnel concerned.

The Contractor has furnished the information that their supplier of AP-3 Shell Company has advised them that in view of the disruption of traffic along QL-1 from Saigon to Nha Trang they have temporarily suspended their delivery of bituminous products to this contract. Arrangements are being made with military authorities in Cam Ranh Bay to provide asphalt (AP-3) and prime coat to be returned at a more convenient time.

Safety warning signs were installed on different occasions along the completed seal coat segment. Traffic checks conducted by DMJM personnel have shown that the vehicles involved were traveling at speeds much in excess of the specified safety limits. This is generally the case for public utility vehicles that go by their time tables to maintain their record in a highly competitive business. The whole problem involves not merely safety warning instructions but would require some more rigid law enforcement and regulations.

The COR and representatives from the VHA have completed their inspection from Station 58-200 to Station 146-367, and a partial acceptance form will be signed with minor deficiencies early next period.

NOTE: What comments on Dae Lim letter to stop work due to war risk.

When the war started in the Highlands the first week of this month and the refugees started arriving in Nha Trang, an atmosphere of tension and apprehension pervaded the whole construction program. Difficulties began to mount in logistical supply, hazardous working conditions along the highway due to heavy flow of traffic from evacuated areas, and uncertainties in the security of personnel in the work sites.

On March 27, 1975 the Resident Engineer entered into negotiations with the ARVN Engineers to provide bituminous products to the Contractor on material replaceable basis since the main highway had been cut in several segments by hostile forces and the supplier could not deliver AP-3.

On March 28 ETA called to advise the Resident Engineer that arrangements had been made in Saigon with the ARVN Engineers to provide the asphalt at Cam Ranh Bay.

The pervasive threat of imminent danger persisted until March 29, 1975 when word came from USAID, ETA/HB, to evacuate all personnel on USAID Highway contracts to Saigon. Shortly thereafter confirmation was received through a meeting with the Consul General in Nha Trang of the situation with regards to evacuation of all highway personnel which included Vinnell, Dae Lim Industrial, and DMJM companies.

The A/E started to formulate evacuation plans for personnel. All records and equipment were packaged and forwarded to the airport where they were duly manifested for shipment to Saigon. However, in the confused and chaotic situation prevailing then in Nha Trang the shipment was not accomplished in time before Air America flights out of Nha Trang were suspended.

Dae Lim Industrial Company was advised that March 29 was the last day of work on the contract. They were instructed to assemble all their equipment in the VECCO compound and to take photographic records thereof. An inventory was conducted by this office.

Mr. Tibor Nagy, USAID/HWY arrived in Nha Trang on the evening of March 29 and informed the construction firms to coordinate activities with regards to evacuation of all A/E.

All DMJM personnel who were evacuated to Saigon have reported at the main office where final processing is under way. A total of 11 DMJM personnel who worked on this AID contract were not able to be evacuated for various reasons.

SECTION V  
SUMMARY DATA - FINANCIAL

A. CONSTRUCTION CONTRACT NUMBER AID 730-3552

HISTORICAL BACKGROUND (As Furnished by Resident Engineer)

The original contract, with a value of \$1,998,600, was officially to commence on April 20, 1973, with a contract period of 445 calendar days. Sometime in September 1974, Amendment Number 2 was issued to cover POL price escalation, and the original contract amount was adjusted and increased to \$3,003,904 with a corresponding extension of time equivalent to 319 calendar days. This revised the contract completion date from July 8, 1974 to May 22, 1975, or a total of 764 calendar days. In November 1974 Amendment Number 3 was issued to reflect a decrease in total contract price brought about by the revised POL price, from \$3,003,904 to \$2,885,080 (a decrease of \$118,824). A further adjustment in contract price was effected in January 1975 with the issuance of Amendment Number 4 which further increased the total contract price to \$3,409,517 (an increase of \$524,437).

Subsequently, on the basis of the Contractor's periodic monthly accomplishment a request for another extension was applied for to bring the contract completion date to October 15, 1975 (or another increase of 146 calendar days, which, if granted, would bring it to an estimated total contract time of 910 calendar days).

FACTUAL SUMMARY OF WORK ACCOMPLISHMENT

Original contract period:

from April 20, 1973 through July 8, 1974 = 445 days

First extension (Amendment Number 2 - POL escalation)

from July 8, 1974 through May 22, 1975 = 319 days

Total contract time (including extension) = 764 days

Percentage increase in contract time (319/445) = 72%

Second extension (requested)

from May 22, 1975 to October 15, 1975	=	146 days
estimated total contract time (if granted)	=	<u>910 days</u>
Contract time elapsed:		
from April 20, 1973 to March 31, 1975	=	<u>712 days</u>
Percentage of time elapsed vs. total contract period	=	<u>93.19%</u>
Total percentage of work accomplished up to March 31, 1975	=	69.10%
Balance of uncompleted work	=	30.90%
Balance of contract time (percentage)	=	6.81%
(calendar days)	=	52
Revised total contract amount (Include Admendment Number 2, 3, and 4)		\$3,409,517
Less: Progress payments made (Up to March 31, 1975) Including 10% Retention		\$2,219,571
Balance unbilled for uncompleted work		\$1,189,946

Payments to Dae Lim Industrial Co., Ltd.

<u>Date</u>	<u>Voucher Amount</u>	<u>(United States)</u>	<u>(Vietnamese)</u>	<u>Payments to Date</u>
August 15, 1973	\$120,619.36	(66,340.64 and 54,278.72)		\$ 120,619.36
September 5, 1973	157,050.94	(86,382.48 and 70,668.46)		277,670.30
October 2, 1973	72,200.95			349,871.25
January 5, 1974	16,498.16			366,369.41
February 6, 1974	37,393.73			403,763.14
March 7, 1974	54,492.29			458,255.43
April 3, 1974	17,752.79			476,008.22
May 3, 1974	101,471.91			577,480.13
June 3, 1974	114,025.55			691,505.68
July 3, 1974	154,417.22			845,922.90
August 3, 1974	201,628.34			1,047,551.24
September 3, 1974	162,855.73			1,210,406.97
September 23, 1974	491,704.85			1,702,111.82
October 2, 1974*	78,431.59	Voucher rejected		—
November 5, 1974*	8,077.39	Voucher not submitted		—
November 30, 1974	74,038.83	Voucher for September, October, and November 1974		1,776,150.65
January 3, 1975	27,996.67			1,804,147.32
February 3, 1975	85,205.80			1,889,353.12
March 3, 1975	144,362.43			2,033,715.55
April 3, 1975	185,555.60			2,219,271.15

\* Not until the middle of November 1974 did the A/E learn that the voucher dated October 2, 1974 was rejected by USAID due to a reduction in the unit price of asphalt concrete from \$19.60 per metric ton to \$18.2812 per metric ton. Subsequently, voucher dated November 5, 1974 could not be submitted.

\* Includes voucher for month of March and the retention monies owed Dae Lim (final payment). See the monthly progress estimate on the next page.

CONTRACT AID NO. 730-3552

A/E Daniel, Mann, Johnson, & Mendenhall

PROJECT: REPAIR & OVERLAY QL-1 PEAN RANG TO BRIDGE 215.

SHEET: 1 of 2

CONTRACTOR: DAE - LIM INDUSTRIAL CO., LTD.

PERIOD NO. \_\_\_\_\_

MONTHLY PROGRESS ESTIMATE

END OF PERIOD DATE: \_\_\_\_\_

29 MARCH 1975

ITEM NO.	DESCRIPTION OF ITEM	UNIT	CONTRACT QUANTITY	CONTRACT UNIT PRICE	CONTRACT AMOUNT	PREVIOUS PERIOD		THIS PERIOD		TO DATE	
						QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
2.2	Furnish Lab	L.S	1	55,150.00	5,150.00	1	5,150.00	-0-	0.00	-	5,150.00
2.3	Preparation	C.M	54,000	2.23	120,420.00	33,343.53	74,367.22	3,003.69	6,693.23	36,347.22	81,060.45
2.4	Scarify, 2,R	S.M	29,500	0.07	2,065.00	4,250.00	298.20	-0-	0.00	4,250.00	298.20
2.5	Crusher Base Rock	H.T	102,000	4.95	505,920.00	102,000.00	505,920.00	-0-	0.00	102,000.00	505,920.00
2.6	Bit. Prime Coat	Ltr	22,000	5.00	110,000.00	6,859.55	34,341.75	4,953.15	24,915.65	11,812.70	59,257.40
2.7	Bit. Tack Coat	Ltr	1,150,000	0.19	218,500.00	459,367.90	87,293.70	25,358.49	4,818.11	484,746.39	92,114.81
2.8	Asphalt Concrete	H.T	530,000	0.21	111,300.00	118,762.50	24,940.13	17,128.60	3,597.01	155,891.10	28,537.14
2.9	D.B.S.T.	S.M	102,000	18.2512	1,864,632.00	68,205.55	1,246,897.58	7,766.87	142,353.33	75,972.42	1,369,250.91
2.10	S.B.S.T.	S.M	459,500	0.84	369,180.00	148,715.16	124,920.73	13,360.36	11,222.70	162,075.52	155,143.43
2.11	Plain Concrete	C.M	127,500	0.23	35,700.00	-0-	0.00	-0-	0.00	-0-	0.00
2.12	Plain Concrete	C.M	250	30.40	7,600.00	262.35	7,975.44	-0-	0.00	262.35	7,975.44
2.13	35" C.M.P.	L.M	1,800	19.50	17,250.00	1,877.00	18,019.20	-0-	0.00	1,877.00	18,019.20
2.14	48" C.M.P.	L.M	400	30.00	12,000.00	372.88	11,186.40	-0-	0.00	372.88	11,186.40
2.15	Grouted Rip Exp Seal Coat	C.M	160	35.00	5,600.00	145.84	5,104.40	-0-	0.00	145.84	5,104.40
		Ltr	260	12.00	3,120.00	138.00	1,656.00	-0-	0.00	138.00	1,656.00
			105,000	.20	21,000.00	53,367.10	10,673.42	12,112.00	2,422.40	65,479.10	13,095.82
<b>TOTAL OF CONTRACT ITEMS</b>					<b>\$3,409,517.00</b>		<b>2,158,734.17</b>		<b>196,027.43</b>		<b>2,354,761.60</b>

COMPUTATION OF PAYMENT DUE

CONTRACT ITEMS TO DATE= 2,354,761.60  
 75% OF MATERIALS ON-HAND= + 34,985.40  
 TOTAL WORK & MATERIALS = 2,389,747.00  
 LESS 10% RETENTION = - 170,475.85  
 SUB-TOTAL = 2,219,271.15  
 LESS PREVIOUS PAYMENTS = 2,033,715.55  
 PAYMENT DUE CONTRACTOR = 185,555.60

RESIDENT ENGINEER

*W. K. Van Dyke*

DATE

3 APRIL 1975

CONTRACTOR REPRESENTATIVE

*M. J. Lim*

DATE

03 APR 1975



**B. ARCHITECT-ENGINEER CONTRACT NUMBER AID 730-3589**

The following summarizes DMJM dollar and Vietnamese piaster vouchers issued under the above contract to date:

<u>Voucher number</u>	<u>United States dollars</u>		<u>Voucher number</u>	<u>Vietnamese piasters</u>	<u>Paid amount</u>	
1	4,755.57		1	381,916	381,916	
2	10,495.80		2	1,489,049	1,489,049	
3	13,348.95		3	3,378,714	2,300,021	
4	11,736.37		4	2,867,189	2,867,189	
5	12,788.51		5	3,093,262	3,083,762	
6	12,155.15		6	211,572	209,812	
7	15,027.23		7	2,497,383	2,497,383	
8	13,697.57		8	3,079,690	3,075,360	
9	11,820.56		9	4,096,778	4,096,378	
10	11,235.89		10	2,552,543	2,546,043	
11	13,507.80		11	2,315,211	2,291,973	
12	12,474.11		12	2,769,083	2,769,083	
13	14,480.41		13	2,608,694	2,608,694	
14	14,145.00		14	3,497,388	3,414,940	
15	13,802.21		15	2,905,989	2,905,989	
16	14,181.36		16	3,341,895	3,340,055	
17	14,206.99		17	3,223,868	3,213,868	
18	12,536.15		18	4,291,267	4,061,973	
19	12,205.67		19	3,831,699	3,831,259	
20	12,347.39		20	3,589,309	3,589,309	
21	12,540.28		21	3,807,903	3,807,903	
22	12,282.11		22	3,584,812	3,584,812	
23	12,860.--		23	3,807,545	3,807,545	
24	14,511.42		24	3,205,484	3,205,024	
25	18,236.88	June 30, 1975	25	3,448,966	3,448,966	
26	917.51		26	5,638,965	5,638,965	
27	2,948.48	April 7, 1975	27	2,389,629	2,389,629	
	<u>325,245.37</u>	June 30, 1975		<u>81,905,803</u>	<u>80,456,900</u>	(1,448,903)
	Total United States dollars:	<u>325,245.37</u>				
	Total Vietnamese piasters:	<u>80,456,900.--</u>				

PROJECT COST SUMMARY - March 1975

Country - Republic of Vietnam

Client - U. S. Agency for International Development

Contract Title - Supervision QI-1 Repair & Overlay

Phan-Rang Air Base to Bridge No. 215

Contractor - Daniel, Mann, Johnson, & Mendenhall

Contract No. - AID 730-3589

Item	Allotted Funds		Expended to Date		Balance		% Expended	
	U. S. \$	VN \$	U. S. \$	VN \$	U. S. \$	VN \$	U. S. \$	VN \$
Salaries	322,393.00	75,533,659	293,191.35	63,012,555	29,201.65	12,521,104	90.9%	83.4%
Per Diem	NA	1,840,500	NA	2,572,577	NA	732,077	NA	139.8
Transportation	14,800.00	7,462,500	323.16	4,047,331	14,476.84	3,415,169	2.2	54.2
Test Equipment	12,000.00	4,500,000	10,894.46	2,565,353	1,105.54	1,934,647	90.8	57.0
Field Office Rent	NA	4,137,500	NA	2,420,949	NA	1,716,551	NA	58.5
<b>TOTAL</b>	<b>349,193.00</b>	<b>93,474,159</b>	<b>304,408.97</b>	<b>74,618,765</b>	<b>44,784.03</b>	<b>18,855,394</b>	<b>87.2%</b>	<b>79.8%</b>

	U. S. \$	VN \$
Billing to Date	304,408.97	74,618,765
Payments Received	289,897.55	68,979,800
Outstanding	14,511.42	5,638,965

SECTION VI  
PERSONNEL

A. KEY PERSONNEL

1. USAID

- |    |                      |                     |
|----|----------------------|---------------------|
| a. | Mr. John P. Robinson | Director, USAID     |
| b. | Mr. Dan Miller       | USAID/ADCCA         |
| c. | Mr. Glenwood Roane   | USAID/CSD           |
| d. | Mr. Robert Gibson    | Contracting Officer |
| e. | Mr. Leroy Purifoy    | USAID/ETA           |
| f. | Mr. James Cole       | CO Representative   |
| g. | Mr. Allen Strom      | CO Representative   |

2. Dae Lim Industrial Co., Ltd. (Construction Contractor)

- |    |                        |                    |
|----|------------------------|--------------------|
| a. | Mr. Joon Won Lee       | Vice President     |
| b. | Mr. W. H. Lee          | Project Manager    |
| c. | Mr. T. K. Kim          | Materials Engineer |
| d. | Mr. J. Y. Lee          | Section I Manager  |
| e. | (Others not available) |                    |

3. Daniel, Mann, Johnson, & Mendenhall (A/E Supervisor)

- |    |                         |                       |
|----|-------------------------|-----------------------|
| a. | Mr. M. B. Austin        | Resident Manager      |
| b. | Mr. M. K. Van Zyl       | Resident Engineer     |
| c. | Mr. Gary Webb           | Materials Engineer    |
| d. | Mr. Michael Brown       | Office Engineer       |
| e. | Mr. Marino De Gorostiza | Office/Field Engineer |

B. STATUS OF SITE CONSTRUCTION PERSONNEL

(A historical summary of Dae Lim staffing during the contract is not available due to loss of records in Vietnam.)

C. STATUS OF SITE A/E PERSONNEL

The following DMJM personnel were assigned to the project on its termination:

<u>Position</u>	<u>Name</u>	<u>Date of Hire</u>
Resident Engineer	M. K. Van Zyl	April 14, 1973
Materials Engineer	Gary N. Webb	April 14, 1973
Office/Field Engineer	Michael L. Brown	May 11, 1973
Office/Field Engineer	M. B. De Gorostiza	July 15, 1974
Clerk Typist	Nguyen T. Minh Tam	November 8, 1973
Chief Inspector	Jean Carizey	April 16, 1973
Survey Chief	Vu Van Toan	April 16, 1973
Survey Chief	Nguyen Van Khiet	April 27, 1973
Inspector Batch	Truong Quang Phuong	May 1, 1973
Inspector Batch	Le Thanh Liem	September 15, 1973
Inspector Paving	Luong Hoan	November 7, 1973
Inspector Paving	Ngo Tai Van	July 12, 1973
Inspector Paving	Pham Sy Linh	May 21, 1973
Inspector Paving	Nguyen Van Thuan	May 29, 1974
Scale Man	Cao Van Tho	July 30, 1973
Scale Man	Truong Van An	July 5, 1974
Driver	Pham Ky Nhi	May 10, 1973
Driver	Nguyen The Phi	December 14, 1974
Driver	Nguyen Van Binh	August 7, 1973
Rod/Chairman	Dang Ton	April 27, 1973
Rod/Chairman	Le Pho	April 27, 1973
Rod/Chairman	Tran Thi Hong Dao	July 24, 1973
Rod Chairman	Luong Van The	May 2, 1974
Lab Technician	Nguyen Ngoc The	April 23, 1973
Lab Technician	Bach Nam Trong	April 23, 1973
Lab Technician	Vong Chay Ham	June 11, 1973
Lab Technician	Nguyen Dieu	August 6, 1973
Lab Technician	Vi Chi Phuc	February 25, 1974

APPENDIX A



EMBASSY  
OF THE  
UNITED STATES OF AMERICA

U.S. AID MISSION TO VIETNAM

APR 4 1975

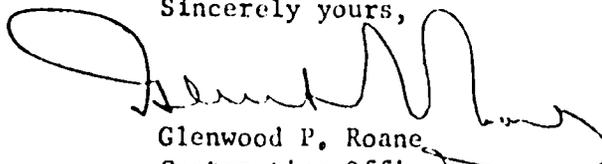
Dae Lim Industrial Co.  
482 Hong Thap Tu  
Saigon

Subject: Contract No. AID-730-3552,  
Highway Improvement - Route  
QL-1 from Phan Rang to Bridge  
No. 215.

Gentlemen:

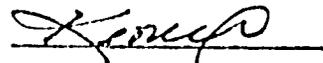
Pursuant to the provisions of the clause of subject contract entitled "Termination for Convenience of the Government", this contract is hereby terminated in whole effective this date.

Sincerely yours,

  
Glenwood P. Roane  
Contracting Officer

Received by:

DAE LIM INDUSTRIAL Co.

By 

Title BUSINESS MANAGER

Date 4<sup>TH</sup> APRIL 1975

CONTRACT AID NO. 730-3552

A/E Daniel, Mann, Johnson, & Mendenhall

PROJECT: REPAIR & OVERLAY (L-1) PHAN RANG TO BRIDGE 215.

SHEET: 1 of 2

CONTRACTOR: DAE - LIM INDUSTRIAL CO., LTD.

PERIOD NO. \_\_\_\_\_

MONTHLY PROGRESS ESTIMATE

END OF PERIOD DATE: 29 MARCH 1975

ITEM NO.	DESCRIPTION OF ITEM	UNIT	CONTRACT QUANTITY	CONTRACT UNIT PRICE	CONTRACT AMOUNT	PREVIOUS PERIOD		THIS PERIOD		TO DATE	
						QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
2.2	Furnish Lab	L.S	1	55,150.00	5,150.00						
2.3	Excavation	C.M	54,000	2.23	120,420.00	1	5,150.00	-0-	0.00	1	5,150.00
2.4	Scarify, 2,R	S.M	29,500	0.07	2,065.00	33,349.53	74,367.22	3,003.69	6,698.23	36,352.22	81,055.45
2.5	Crusher Base Rock	K.T	102,000	4.96	505,920.00	4,260.00	253.20	-0-	0.00	4,260.00	253.20
	"	"	22,000	5.00	110,000.00	102,000.00	505,920.00	-0-	0.00	102,000.00	505,920.00
2.6	Bit. Prime Coat	Ltr	1,150,000	0.19	218,500.00	6,869.35	34,341.75	4,983.13	24,915.65	11,851.48	59,257.43
2.7	Bit. Tack Coat	Ltr	530,000	0.21	111,300.00	459,587.90	87,283.70	25,358.49	4,818.11	484,746.39	92,101.81
2.8	Asphalt Concrete	K.T	102,000	18.2812	1,864,682.00	118,762.50	24,940.13	17,128.60	3,597.01	135,891.10	28,537.14
2.9	D.B.S.T.	S.M	439,500	0.84	369,180.00	68,205.55	1,246,897.58	7,786.87	142,353.33	75,993.42	1,389,250.91
2.10	S.B.S.T.	S.M	127,500	0.28	35,700.00	148,715.16	124,920.73	13,360.36	11,222.70	162,075.52	156,143.43
2.11	Plain Concrete	C.M	250	30.40	7,600.00	-0-	0.00	-0-	0.00	-0-	0.00
2.12	Rip Rip	C.M	1,800	19.60	17,280.00	262.35	7,975.44	-0-	0.00	262.35	7,975.44
2.13	36" C.H.P.	L.M	400	30.00	12,000.00	1,877.00	18,019.20	-0-	0.00	1,877.00	18,019.20
2.13	48" C.H.P.	L.M	160	35.00	5,600.00	372.88	11,186.40	-0-	0.00	372.88	11,186.40
2.14	Grouted Rip Rip	C.M	260	12.00	3,120.00	145.84	5,104.40	-0-	0.00	145.84	5,104.40
2.15	Seal Coat	Ltr	105,000	.20	21,000.00	138.00	1,655.00	-0-	0.00	138.00	1,556.00
TOTAL OF CONTRACT ITEMS					3,333,409,517.00		2,158,734.17		196,027.43		2,354,761.60

APPENDIX B

RESIDENT ENGINEER h k 17-211 DATE 3 APRIL 1975

CONTRACTOR REPRESENTATIVE [Signature] DATE 02 APR 1975

COMPUTATION OF PAYMENT DUE

CONTRACT ITEMS TO DATE=	<u>2,354,761.60</u>
75% OF MATERIALS ON-HAND= +	<u>34,935.40</u>
TOTAL WORK & MATERIALS =	<u>2,389,747.00</u>
LESS 10% RETENTION =	<u>- 170,475.85</u>
SUB-TOTAL =	<u>2,219,271.15</u>
LESS PREVIOUS PAYMENTS =	<u>2,033,715.55</u>
PAYMENT DUE CONTRACTOR =	<u>185,555.60</u>



APPENDIX C

A/E SUMMARY STATUS OF CONTRACTOR EQUIPMENT

As of March 31, 1975

A. Southern Segment

<u>L/I</u> <u>Number</u>	<u>Description</u>	<u>Rent From</u>	<u>Date</u>	<u>Remark</u>
1.	Asphalt paver	VKX-40377	27-12-73	
2.	Three-wheel roller	VKX-10534	9- 2-74	Turned 22-2-75
3.	Three-wheel roller	VKX-10392	22- 2-75	
4.	Lube truck	VKX-30978	5- 7-74	
5.	Motor grader patrol	VKX-40296	13-12-73	Turned 3-2-75
6.	Asphalt distributor	VKX-10358	14- 7-73	
7.	Air compressor 125 CFM	VKX-10334	12- 7-74	
8.	Sweeper broom	VKX-10397	26-12-73	
9.	Truck tractor	VKX-10332	19-12-73	Turned 1-2-75
10.	Truck tractor	VKX-10277	1- 2-75	
11.	Trailer	VKX-10363	19-12-73	
12.	Air hammer	VKX-41560	3- 4-74	
13.	Water truck	VKX-10255	26- 7-73	
14.	Pay loader 2-1/2 CY	Dae Lim	11- 2-74	
15.	Welding machine	Dae Lim	1-11-73	
16.	Asphalt distributor	Dae Lim	1-12-73	
17.	Motor grader	Dae Lim	7- 1-74	
18.	Pneumatic tire roller	Dae Lim	28- 1-74	
19.	Tandem roller	Dae Lim	28- 1-74	
20.	Pickup truck	Dae Lim	20-12-73	
21.	Jeep	Dae Lim	1- 6-73	
22.	Jeep	Dae Lim	1- 6-74	
23.	Sedan	Dae Lim	3- 1-75	
24.	Pickup	Dae Lim	1- 5-74	
25.	Jeep	Others	12-12-73	
26.	Three-wheel roller	Others	17- 1-75	
27.	Radio pickup	VKX-50056	2- 1-75	

B. Central Segment

28.	Asphalt paver	Dae Lim	1- 5-74	
29.	Three-wheel roller	VKX-10531	7-12-74	
30.	Pneumatic tire roller	VKX-40257	20- 1-75	
31.	Pickup truck	Dae Lim	1- 1-73	
32.	Motor grader patrol	Others	6- 1-74	
33.	Three-wheel roller	Others	6- 1-74	

<u>L/I</u> <u>Number</u>	<u>Description</u>	<u>Rent From</u>	<u>Date</u>	<u>Remark</u>
34.	Water truck	Others	6- 1-74	
35.	Asphalt paver	Others	6- 1-74	
36.	Motor grader patrol	Others	30- 1-75	
37.	Aggregate spreader	Dae Lim	26-12-73	

C. Southern Segment

38.	Motor grader	VKX-10219	20- 7-74	
39.	Pay loader 2-1/2 CY	VKX-40215	4- 7-74	
40.	Three-wheel roller	VKX-40271	9- 2-74	
41.	Air compressor 125 CFM	VKX-10305	8- 2-74	
42.	Roller vibrator	VKX-10214	17- 1-75	
43.	Water truck	VKX-10252	26- 1-74	
44.	Lube truck	VKX-10362	27-12-73	
45.	Truck tractor	Others	30- 1-75	
46.	Trailer	Others	30- 1-75	
47.	Van Truck	Dae Lim	1- 8-73	
48.	Jeep	Dae Lim	1- 7-73	
49.	Jeep	Dae Lim	1- 7-74	
50.	Pickup	Others	1- 5-74	
51.	Radio pickup	VKX-50047	20- 7-74	

NOTE: Dae Lim Industrial Co., Ltd., was advised that March 29 was the last day of work on the contract. They were instructed by the Resident Engineer to assemble all their equipment in the VECCO compound and to take photographic evidence or records thereof. An inventory was conducted by the A/E but was lost in the evacuation program.

- (a) VKX                      VECCO rental equipment
- (b) Others                 Belonging to Vietnamese subcontractors
- (c) Dae Lim                Belonging to the Contractor

## APPENDIX D

### A/E COMMENTS - CONSTRUCTION CONTRACTOR CLAIM

The construction Contractor, Dae Lim Industrial Co., Ltd., submitted a "request for release of retention payment" and "claim for damages by sudden evacuation" to AID by letter dated June 14, 1975. This claim, under Contract AID 730-3552, amounted to \$U.S. 824,030.82. Of this claim amount \$598,905.55 was allocated to equipment losses. Their "list and cost of equipment" identified 29 items.

The A/E, on a routine basis during the course of the contract (once a month), reported construction equipment working on the construction project. This data was furnished by Dae Lim to the A/E and generally included both Dae Lim-owned equipment, VECCO-rented equipment, and subcontractor equipment (others). The last list available to the A/E has been enclosed in Appendix C.

Comparison of the last A/E list and the construction Contractor's claim indicates some differences that require further explanation by Dae Lim. It would appear that the Contractor's claim may include some VECCO- or subcontractor-owned equipment and it would seem that the bulldozer (CAT D7E) identified as lost in the evacuation may be the one reported stolen in 1974. It is regretted that we cannot be more specific in review of the equipment losses than provision of the last list of job equipment available to us.