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Dated_____
Copy _____ of_____

DEPARTAMENTO DE ESTRADAS DE RODAGEM DO ESTADO DE MINAS GERAIS

BELO HORIZONTE

BRASIL

PROJETO DE CONSERVAÇÃO DA REDE RODOVIÁRIA ESTADUAL

FINAL REPORT

USAID LOAN 512-G-043

PREPARED SEPTEMBER 1969

BROWN & ROOT OVERSEAS, INC.
BROWN & ROOT ULTRAMAR LTDA.
ENGENHEIROS - CONSULTORES
RIO DE JANEIRO - BRASIL

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DEPARTAMENTO DE ESTRADAS DE RODAGEM DO ESTADO DE MINAS GERAIS

FINAL REPORT

USAID LOAN 512-G-043

The Loan Agreement AID No. 512-G-043 in the amount of [illegible] billion cruzeiros was signed in Belo Horizonte, Minas Gerais, April 2, 1965. Those participating in the ceremony for their respective governments were as follows:

Government of Brazil

Dr. José de Magalhães Pinto	- Governor - State of Minas Gerais
Dr. Eliseu Resende	- Director General - DER/MG
Sr. Francisco de Assis Grieco	- Coordinator - Commission for AID to Brazil

Government of the U.S.A.

Mr. Stewart H. Van Dyke	- Minister-Director - USAID - Brazil
Mr. Lawrence Brailsford	- Capital Loan Officer
Mr. Michael Vogel	- Chief Engineer - USAID
Mr. Cecil L. Bower	- Chief Highway Division - USAID

On April 20, 1965 the Minas Gerais Highway Department received authority from USAID Brazil [illegible] Loan Funds.

[illegible] were limited to personnel engaged in the [illegible]. They provided DER/MG with advice and assistance in preparation of specific plans, equipment inspection and other details connected with the [illegible] program.

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During this period application for an additional loan was discussed with USAID officials. In these discussions the need for Consultant services became evident and DER/MG negotiated a ninety (90) day contract with [illegible] Ltda., for the period July 5, 1965 through October 5, 1965.

Prior to contracting of Consultant the DER/MG had instituted programs for training of personnel, highway maintenance and equipment [illegible]. These were reviewed by the Consultant and recommendations for improving the programs were presented to DER/MG.

Beginning in July 1965 the Consultant staffed the project with the following technicians: one Project Manager, one Maintenance Engineer, one Equipment Technician and one Training Technician.
The staff was increased during the second half of July with the addition of an additional equipment technician. This remained constant through August 1965. In the first half of September the staff was increased and consisted of the following:

1 - Project Manager
1 - Maintenance Engineer
1 - Equipment Engineer
1 - Training Technician
1 - Equipment Instructor
2 - [illegible]

[illegible]

[illegible]

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Accordingly all equipment and spare parts from Loan 512-G-043 were combined with the equipment and spare parts from the Loan 512-L-047 and in effect the two were integrated into one project and for proposals of training, planning and operation are considered as one project. Please refer to the Final Report for AID Loan 512-L-047 for more details concerning the operation of the integrated project.

On November 10, 1965 Brown & Root Ultramar [illegible], received an extension of their contract for consulting services to December 5, 1965.

The following sections provide a descriptive detail of activities.

1. Equipment purchased
2. Equipment allocation and utilization
3. Training
4. Additions to physical plant
5. Budgeting and accounting
6. Consultant participation

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DEPARTAMENTO DE ESTRADAS DE RODAGEM DO ESTADO DE MINAS GERAIS

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EQUIPMENT PURCHASED LOAN - 512 - G - 043

ITEM No.	EQUIPMENT DESCRIPTION	No OF UNITS	CONTRACT AWARDED MANUFACTURER	CONTRACT SIGNED	DATE RECEIVED	COST OF EQUIPMENT	COST OF SPARE PARTS	TOTAL COST OF EQUIPMENT DELIV	METHOD OF PURCHASE
1	MOTOR PATROL GRADER	70	Caterpillar do Brasil S.A.	17 May 1965	15 Aug.1965	3.596.586.000	367.502.022	3.964.088.022	Invitational Public Bidding
2	PICK-UP 3/4 TON 3 PASS.	60	General Motors do Brasil S.A	14 May 1965	13 Jul.1965	325.237.200	35.910.430	361.147.630	" "
3	DUMP TRUCK 6-7 TON	170	Ford Motor do Brasil S.A.	24 Jun.1965	22 Sept.1965	2.098.681.960	209.868.196	2,308.550.156	" "
4	WATER TRUCK - 8000 LITERS	30	Fábrica Nacional de Motores	13 Jul.1965	11 Oct.1965	711.000.000	72.757.580	783.757.580	" "
5	PNEUMATIC ROLLER-TOW TYPE	30	Internacional de Máquinas S.A.	7 Jul.1965	5 Oct.1965	100.815.000	No Parts Purchased	100.815.000	" "
6	ASPHALT DISTRIBUTOR 600 GAL	5	Máquinas para Estrada S.A.	8 Jul.1965	6 Oct.1965	37.750.000	3.753.395	41.503.395	" "
7	WHEEL TRACTOR 75 HP	30	Deutz Minas - S.A.	7 Jul.1965	5 Sept1965	274.038.300	16.930.525	290.968.825	" "
* 8	FRONT END LOADER 1 1/2 CU.YD	30	Equipamentos Clark S.A.	20 Jan.1966	20 Apr.1966	1.475.632.070	143.220.306	1.618.852.376	" "
					TOTALS	8.619.740.530	849.942.454	9.469.682.984	

SUMMARY

* BID RECEIVED - CONTRACT SIGNED JAN. 1966 - EQUIPMENT RECEIVED AND DISTRIBUTED APRIL & MAY 1966

NOTE: All equipment was purchased by Public Bidding with concurrence of USAID

TOTAL FUNDS OBLIGATED FOR EQUIPMENT PURCHASE	9.469.682.984
FUNDS AVAILABLE - AID LOAN - PLUS INTEREST	9.125.164.414
MINUS BALANCE	- 344.518.570
DER/MG CONTIBUTION FUNDS -	
EQUIPMENT - PLUS EXCISE TAX	584.825.184
CONSULTANTS FEE	250.538.583
TRAINING PROGRAM	80.275.420
TOTAL	915.639.187

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EQUIPMENT DISTRIBUTION BY RESIDENCY

EQUIPMENT	RES 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL
MOTOR PATROL	1	3	3	4	3	3	4	4	2	2	1	2	3	3	2	2	2	1	3	3	1	2	1	2	1	2	3	3	2	2	70
PICKUP 3/4 TON 3-PASSENGER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	60
DUMP TRUCK 6-7 TON	6	6	6	11	4	6	5	12	5	4	-	6	4	4	2	2	4	7	5	4	9	5	2	4	5	2	13	12	9	6	170
WATER TRUCK 3000 LITERS	-	3	2	2	2	-	2	-	2	2	1	1	-	2	1	2	-	2	-	3	-	-	-	2	1	-	-	-	-	-	30
PNEUMATIC ROLLER 7-9 TON	-	3	2	2	2	-	2	-	3	2	1	-	-	2	1	2	-	2	-	2	-	-	-	3	1	-	-	-	-	-	30
ASPHALT DIST. 600 GAL.	1	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	5
WHEEL TRACTORS 75 HP	-	3	2	2	2	-	2	-	3	2	1	-	-	2	1	2	-	2	-	2	-	-	-	3	1	-	-	-	-	-	30
FRONT END LOADER 1 1/2 C.Y.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30

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TRAINING PROGRAM 1965

NAME OF COURSE	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL TRAINED	COMMENT
OPERATOR I & II MOTOR-GRADER	20	50	59	6						135	
OPERATOR - APPRENTICE MOTOR-GRADER	15	30	40	19						104	
OPERATOR I & II FRONT END LOADER	10	10	15	10						45	
OPERATOR - APPRENTICE FRONT END LOADER	4	4	4	1						13	
OPERATOR I & II CRAWLER TRACTOR DOZER	17	20	40	3						80	
OPERATOR APPRENTICE CRAWLER TRACTOR DOZER	4	5	5	5						19	
OPERATOR I & II TANDEM ROLLER - 5-8 TON				14						14	
OPERATOR - APPRENTICE TANDEM ROLLER 5-8 TON				9						9	
TRUCK DRIVERS				2						2	
TIRE REPAIR MAN				1						1	
ELECTRICIAN				1						1	
TOOL ROOM MAN				1						1	
MECHANICS LIGHT EQUIPMENT					18	12	42	38	23	133	
MECHANICAL HELPERS				47	29					76	
LUBRICATION MAN				26						26	
LABORERS	5	8	8	8						29	
MECHANICS HEAVY DUTY EQUIPMENT					16	19				35	
TRANSPORTATION SUPERVISOR						23				23	
OPERATOR I & II WHEELED TRACTOR	10	7	10							27	
OPERATOR -APPRENTICE WHEELED TRACTOR	11	15	15							41	
CHAUFFEUR		8								8	
								TOTAL TRAINEES 1965		822	

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ADDENDUM TO ANNUAL REPORT

The Central Warehouse located in the Cidade Industrial section of Belo Horizonte was expanded in order to provide storage space for the control and care of spare parts.

During August 1965 an inventory of the departmental yards, buildings and existing facilities was brought up to date.

Surveys were conducted, engineering data and plans were prepared showing location, size, types of building and other improvements. This data was analyzed and a program formulated for building and modernizing the installations.

During December 1965 the new Central Warehouse building two bay section was completed. The interior was 75% complete with the exception of bins which were 50% completed. Utilization of the finished portions began on 15, December.

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BUDGETING AND ACCOUNTING

A Cash Flow Statement for 1965 is not available as the accounting system as practiced by DER/MG during this period and prescribed by state law would necessitate many hours and days of audit to produce a cash flow statement in the form that is standard practice in U.S. accounting procedures.

The special account established to handle disbursement of funds from Loan 513-G-[illegible] is detailed in the following pages of this report.

The approved budget for 1965 is a part of this report.

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DEPARTAMENTO DE ESTRADAS DE RODAGEM DO ESTADO DE MINAS GERAIS

[illegible]

June

Prepared specifications for Highway Equipment and other [illegible] required for competitive bidding.

Reviewed [illegible], selected additional equipment against [illegible]. Assisted DER/MG engineers in preparation [illegible]; assisted [illegible] in preparation of documents necessary to [illegible] of AID 512-L-067.

July

Loan Agreement AID No. 512-L-067 signed July 22, 1965.

Preparation of equipment specifications continued; checked delivery of [illegible] units of Highway Maintenance Equipment to determine conformance with specifications.

Assisted DER/MG training division with training program.

August

Checked delivery of [illegible] units of Highway Maintenance Equipment to determine conformance with specifications.

[illegible]

September

[illegible] conditions [illegible] Agreement No. 512-L-067.

[illegible] Documents for Procurement of Equipment under Loan 512-L-067.

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Assisted in preparation of a Financial Plan and operating budget for the full highway program, including maintenance and equipment procurement.
Reviewed and revised shop equipment needs for maintenance program.
Assisted in planning and programming expansion of Equipment and Design Control Section.
Assisted in preparation of Training Program for all phases of training.
Assisted [illegible] in study of overall equipment needs.
The estimated delivery dates of new equipment were tabulated along with replacement needs of old equipment to determine the net increase of personnel and the time at which increases would occur.

October
Reviewed specifications for Highway Equipment. Revised same to make them more adaptable to Brazilian manufacturer's capacity.
Completed a financial plan and operating budget covering years through [illegible].
[illegible] with DER/MG's [illegible] program.
[illegible] schedule which was revised in [illegible].
Completed training program.
Completed [illegible]
[illegible]

November
[illegible] personnel. Completed documentation on data required to meet the

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"Conditions Precedent" for the initial financing of Loan 512-E-047.
Revised and prepared specifications for highway and shop equipment.
In company with DNR/MG highway maintenance engineers made field inspections of 15 of [illegible] State Highway Residencies. Inspection covered the following:

1. Methods employed in the maintenance [illegible] of the highway [illegible].
2. Condition and use of equipment purchased for project.
3. Capacity and condition of storage yards, shops and other Highway Department buildings.
4. Quantity and quality of shop equipment and tools.
5. Practice of preventive maintenance and care of equipment.
6. Qualifications of equipment operators and mechanics.

Assisted DNR/MG in Training Program.
Checked delivered equipment as [illegible] with specifications.

[illegible]

[illegible]

[illegible]

[illegible]

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DEPARTAMENTO DE ESTRADAS DE RODAGEM DO ESTADO DE MINAS GERAIS

FUNDS RECONCILIATION, USAID LOAN 512-G-013

August [illegible], 1966

[illegible]

1965 - June
to
1966 - [illegible] ..... [illegible]

Bank Balance at Banco
[illegible] Real de Minas Gerais
[illegible] as per Statement ..... [illegible]

TOTAL .... [illegible]

Loan [illegible] ..... [illegible]

Interested credited by Bank,
June and December 1965 and
June 1966 ..... [illegible]

[illegible] .. [illegible]

[illegible]

[illegible]

[illegible]

Note: This is the final reconciliation of funds. Previous reports were estimated as final invoices were not received until the first quarter of 1966.

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