

PD-ARF-060
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AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET		1 TRANSACTION CODE <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete	Amendment Number <u>2</u>	DOCUMENT CODE <u>3</u>
2 COUNTRY/ENTITY Mozambique		3 PROJECT NUMBER <u>690-0247</u>		
4 BUREAU/OFFICE AFR <u>06</u>		5 PROJECT TITLE (maximum 40 characters) <u>Regional Rail Systems Support</u>		
6 PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY <u>1</u> <u>2</u> <u>3</u> <u>1</u> <u>9</u> <u>6</u>		7 ESTIMATED DATE OF OBLIGATION (Under B below enter 1, 2, 3 or 4) A. Initial FY <u>88</u> B. Quarter <u>4</u> C. Final FY <u>94</u>		

8 COSTS (\$000 OR EQUIVALENT \$1 =)

A. FUNDING SOURCE	FIRST FY <u>88</u>			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	27,530		27,530	86,932	12,000	98,932
(Grant)	(27,530)	()	(27,530)	(86,932)	(12,000)	(98,932)
(Loan)	()	()	()	()	()	()
Other U.S.						
Host Country	100	1,740	1,840	100	3,000	3,100
Other Donor(s)	1,660		1,660		1,660	1,660
TOTALS	29,290	1,740	31,030	87,032	16,660	103,692

9 SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1 Grant	2 Loan	1 Grant	2 Loan	1 Grant	2 Loan	1 Grant	2 Loan
(1) SADF	800	824		48,832				48,832	
(2) DFA	800	824		25,100		25,000		50,100	
(3)									
(4)									
TOTALS				73,932		25,000		98,932	

10 SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11 SECONDARY PURPOSE CODE

12 SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code

B. Amount

13 PROJECT PURPOSE (maximum 480 characters)

To strengthen and expand the capacity and operational efficiency of the SADCC Regional Railways System

14 SCHEDULED EVALUATIONS

Interim MM YY 1|0|9|1 Final MM YY 1|0|9|6

15 SOURCE ORIGIN OF GOODS AND SERVICES

000 941 Local Other (specify) 935

16 AMENDMENTS NATURE OF CHANGE PROPOSED (This is page 1 of a 71 page PP Amendment)

This amendment adds \$25 million for the redeployment of CFM assets and personnel, and extends the PACD to December 31, 1996

Clearance George Jenkins, Controller *J 9/30/92*

APPROVED BY: *[Signature]*
John Miller
Acting Mission Director

Date Signed: MM DD YY 09|30|92

18. DATE DOCUMENT RECEIVED IN AID W. OR FOR AID W. DOCUMENTS DATE OF DISTRIBUTION
MM, DD, YY

AID 1330-4 (3)

* Source selection information
- See FAR 3.104 Do not disclose sensitive cost information

PD-ABF-060

REGIONAL RAIL SYSTEMS SUPPORT (RRSS)
MOZAMBIQUE COMPONENT
PROJECT SUPPLEMENT NO 2

USAID/MOZAMBIQUE
September 30, 1992

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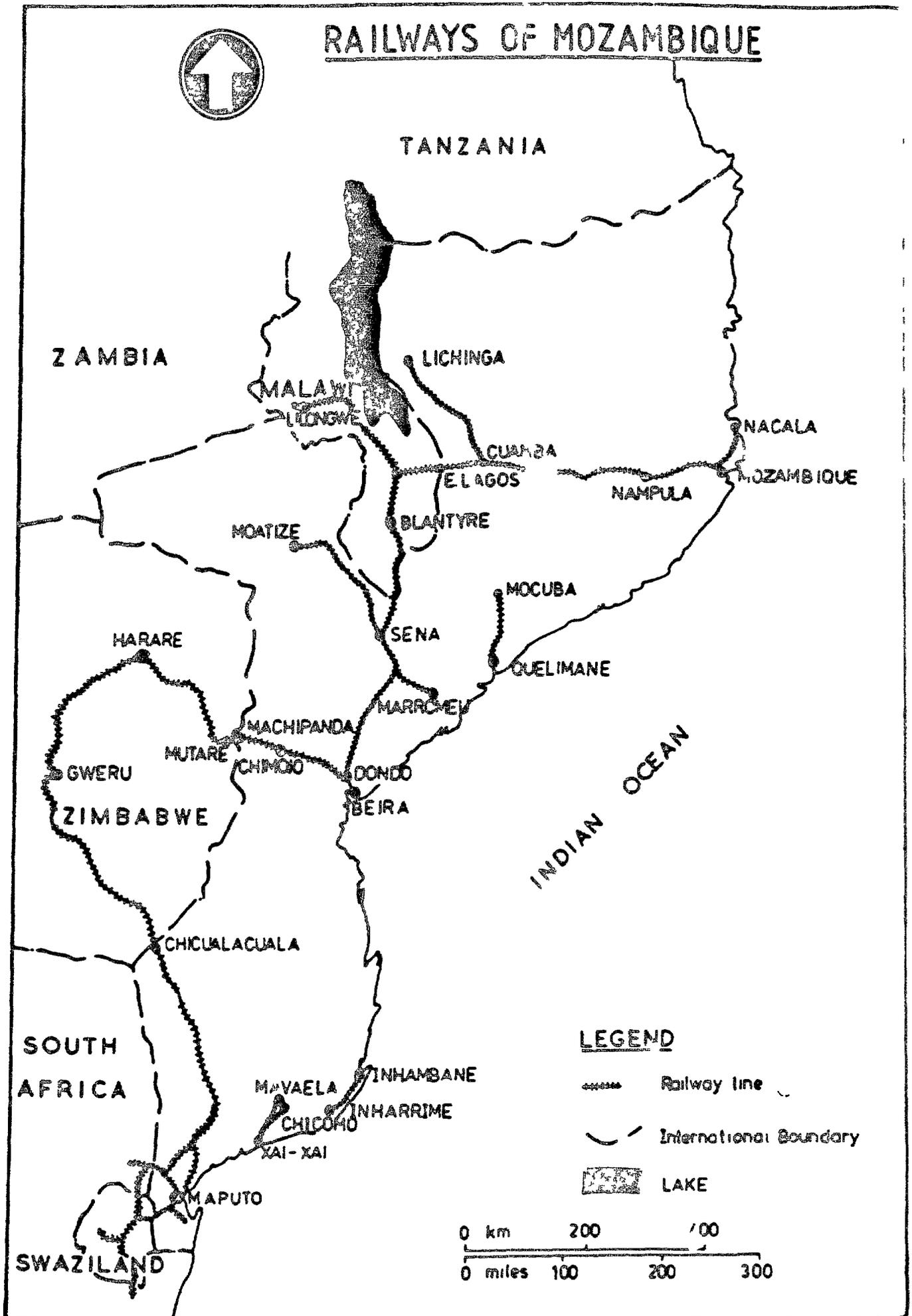
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C	AID/W Approval Cable
D	Initial Environment Examination
E	Railroad Operations
F	Analysis of CFM Short Line Railway
G	Options for Redeploying Labor
H	Economic and Financial Analysis
I	Relevant Institutions
J	Legal Implications of CFM Restructuring
K	Statutory Checklist

4

RAILWAYS OF MOZAMBIQUE



ACTION MEMORANDUM FOR THE ACTING MISSION DIRECTOR

FROM Timothy BORN,  RRSS Project Coordinator

SUBJECT Authorization of Amendment to the Mozambique Component of the Regional Rail Systems Support Project, 690-0247 56

Problem

You are requested to approve a Project Paper amendment to the Mozambique Component of the Regional Rail Systems Support Project (690-0247 56) to add \$25,000,000 and extend the PACD to December 31, 1996, and to amend the Project Authorization to include these changes. An initial obligation of \$15,000,000 is planned for FY 1992.

Background

The goal of the Regional Rail Systems Support Project is to support the development of a stronger economic foundation for growth in southern Africa. The purpose of the Mozambique component is to strengthen and expand the capacity and operational efficiency of Mozambique Railways (CFM). The project was authorized, at \$34,500,000 (Mozambique Component), on August 16, 1988. This authorization was increased by an additional \$21,000,000 on June 30, 1990.

The project as presently structured attempts to overcome three major constraints to the CFM's profitability and efficiency. The first of these, a shortage of tractive power, is presently the subject of a program to improve maintenance by increasing CFM's capacity to perform routine maintenance and by developing a system for the contracting out of major repairs to locomotive components. The second, the absence of a sound financial system, is being addressed through technical assistance and computerization. The third, the structural inefficiencies of CFM, was introduced as a project concern by the 1990 project paper amendment, which provided for a grant to the IBRD to examine with CFM its fundamental management problems and develop a strategy to overcome them. The 1991 initial evaluation of the project focused on this third problem as well, and found that CFM, as presently organized, is fundamentally unmanageable. At the same time, traffic levels on CFM(S) fell during the project, from a high of three million net tons in 1989, to two million in 1990 and to 1.4 million in 1991. This decline, contrary to all prior projections, and coupled with the possibility of major new investment in Republic of South Africa (RSA) ports, raised the issue of whether CFM can survive as a major regional transporter.

The striking deterioration in CFM's performance, the failure of locomotive availability to respond quickly to an infusion of spares and technical assistance, and the threat of new RSA investment, led USAID to consult with other donors on a joint

approach to the overall problems facing CFM. As a result of these consultations, the U S Ambassador and the Chiefs of Mission of the other major donor countries met jointly with the Minister of Transport, and individually with other senior government officials, in October and November, 1991. At these meetings, the donors put forward their view that investments in the CFM(S) infrastructure were a waste under the present circumstances, and that continued donor support would be dependent on the GRM's willingness to accept radical restructuring, which would result in a lead role for the private sector in the operations of the port and railroad. At the time, the government refused to entertain the sale of right of way or major infrastructure, but agreed in principle to the long-term leasing of the infrastructure to capable private sector companies.

In November 1991, the IBRD assumed the lead in developing a restructuring program for CFM(S), and since then has prepared the Maputo Corridor Revitalization Program. This program, which should be signed in November, will first assess the market for CFM's services and value its assets. Based on this potential, and with a view to maximizing Mozambique's return on CFM's assets, the program will then examine how three different institutional forms, differing in their degrees of private sector participation and operational control, might quickly exploit the market. The government, in consultation with the other donors, will then choose one of the three forms, which will be packaged for sale/lease/consideration by potential private operators.

The present project amendment is USAID's contribution to the process of restructuring CFM. It reduces the size of CFM's workforce and sheds unneeded assets in order to make efficiency improvements required to make CFM a potentially profitable company of interest to private investors.

Summary Project Description

This amendment contributes to the original project purpose. It will, in collaboration with other donors, prepare CFM for the comprehensive institutional reform necessary to achieve profitability and to provide efficient transport services.

Financial Summary

The LOP cost to A I D of the RRSS project over an eight and a half year period (FY 1988 - FY 1997) is \$98,932,000, and, of the Mozambique Component, \$80,500,000 over the same period. This PP amendment provides for \$25,000,000 to be added in FY 1992 and FY 1994 to the \$55,500,000 obligated in FYs 1988 through 1991. The host country contribution will continue at approximately the same annual level envisaged in the original PP through the new PACD. This amendment adds item c in the table below, as well as small additional amounts to items d and e.

1

Project Costs
(\$000)

a	Locomotives	\$32,000
b	Financial & Stores	\$12,280
c	Labor & Assets Redeployment	22,262
d	Project Management	3,436
e	Support to Senior Management	2,740
f	Operational Improvements	1,510
g	Commodities not included above	365
h	Audit and evaluation	665
	SUBTOTAL	\$75,258
	Contingency & Inflation	\$5,242
	GRAND TOTAL	\$80,500

Discussion

The AID/W Project Committee reviewed the proposed amendment on March 24, 1992, and raised the following issues in the summary cable (92 State 104102)

1 "The most serious concern expressed at the review was the feasibility of A I D 's planned program if, under any circumstances, the World Bank's program does not proceed as currently envisaged. For example, if the redundancy component depends on the proposed commercial leasing arrangement being implemented, will there be assurances that CFM(S) can be brought to a level that commercial operators will be interested [sic], or are there commercial firms that are likely to be interested? Alternatively, would the redundancy component be appropriate on its own, even if the leasing proposal never came to fruition? Is the Mission convinced of the Government's commitment to the program? What assurances, if any, should A I D require that World Bank project will proceed prior to obligating funds for the proposed amendment?"

USAID is confident that the World Bank's Program will proceed more or less as currently envisaged, at least to the point where the Government is called upon to select one of the three institutional "options" reviewed by the investment firm hired under the program. At that time, USAID and other donors will advise the Government on what options are acceptable, i e , might lead to continued donor assistance to CFM, and what options are not. If, as appears unlikely at this stage, the Government's selection is unacceptable to the donors, then the severance portion of the project will be terminated, and USAID will

probably also terminate any remaining ongoing activities with CFM(S)

There is also a small possibility that the World Bank program will fail for reasons beyond the control of CFM. In that case, USAID and other donors will review the circumstances and determine how to proceed. Some of the funds now reserved for use for severance could in this event be redirected to support a program leading to eventual private management of significant portions of CFM. Such a change in the project would require consultation with AID/W and the full support of the Government.

The question remains open whether CFM can ever be brought to a level at which commercial operators will take an interest. The main initial task of the IBRD's program "investment advisory firm" is to determine whether CFM is commercially viable. At this stage, it is virtually certain that the port can be run for a profit, and probably even support considerable new capital investment on a commercial basis. The rail line now loses money, and, according to the amendment's economic analysis, would have to be run at very considerably higher, though not impossible, levels of efficiency to break even. It is USAID's opinion, shared by the other donors and CFM, to be confirmed or denied by extensive study over the next year, that when the contribution of the rail to port profits is taken into account, and assuming modest increases in traffic, the rail is potentially profitable.

In early September 1992, USAID, the ODA, CIDA, and CCCE representatives met with senior officials of the Ministry of Transport and explained that all new projects for CFM, including this one, depend on the successful implementation of the Bank's project. At this meeting the group of donors was assured that the GRM intends to proceed with the Maputo Revitalization Program, and that any delays are entirely the fault of the IBRD. USAID is, by virtue of the conditions precedent to disbursement against this new obligation, protected from further investment in CFM should it prove to be commercially untenable. These conditions precedent require that the Government come to an agreement with the Bank and that CFM select an organizational option acceptable to USAID.

2 "Given Mission acknowledgement that security considerations have impeded achievement of project objectives thus far, the PC recommended that the Mission clarify in the amendment how security consideration could affect implementation of the activity. Specifically, are the security concerns such that they could be addressed by private sector management of the rail line or are they due to the political situation and likely to preclude effective and efficient management of the rail line by either a public or private sector entity? Committee members speculated that a private management company might be more likely to take a more proactive role re [sic] specific actions to secure

the line, and FHA/FFP pointed out that there were some practical management problems on the line that a private company would quickly address to reduce losses. If analysis determines that security problems are largely a reflection of the ongoing civil strife and uncertain political situation, then A I D should seek a judgement from State that the prognosis for an amelioration of the political situation is positive "

First, many and perhaps all of the security problems on the line are controllable. The reason CFM has lost its approximately 400,000 annual tons of suga. is that losses to petty theft were out of control. A private company responsible for its own security would quickly reduce the level of pilferage.

Second, only the Ressano Garcia line continues to suffer from severe disruption because of politically motivated destructive attacks, and all such attacks occur in a ten-kilometer section of the line near the RSA border. These attacks could be prevented or at least repulsed by a fairly small paramilitary security force, and a private company would either provide such protection or temporarily suspend operations until the situation improves.

Third, a peace accord between the Government and RENAMO is scheduled to be signed on October 1st, 1992. While this accord may not take effect immediately, and while it might not be the last required, it appears likely that the political situation will be a great deal more stable in two years, when the private company might take over, than it is now.

3 "Given the proposed development of Richards Bay and that Swazi Rail has tentatively agreed to a ten-year committment with the Swazi Sugar Board, is CFM(S) likely to be economic, irrespective of who manages it? It was pointed out that CFM(S) has an asset base that would make it productive and there is sufficient capacity to make it feasible. Given that South African ports may be overloaded with increased demands due to the serious drought situation, CFM(S) could become more important, especially if pilferage were reduced, and the Swazis and others might prefer using C M(S) if the risks were diminished. Questions were raised as to whether others, aside from South Africa, had expressed interest in taking over CFM(S).

"In preparing project documentation, Mission is requested to assume competition from Richards Bay and use freight projections beyond the current emergency situation (i.e., assume 'normal' demand growth for freight haulage) in its economic analysis. It must include a discussion of freight pricing issues, particularly those raised by private sector management of a 'natural' monopoly. Government oversight mechanisms and financial arrangements between the operator and CFM(S) should be included in the discussion. It must also lay out how it sees this

activity proceeding if others, aside from South Africa, are not willing to become the lessor "

The PP economic and financial analysis demonstrates that the project is sound, i e , that the savings to the railroad exceed the costs of the severance, and that modest increases in traffic are sufficient to justify the project from an economic standpoint

CFM(S) has not yet been relegated permanently to the status of a secondary transport corridor First, investment in Richards Bay has not yet occurred and probably will not occur if shippers are hopeful that Maputo's performance will improve Second, the Swazi ten-year agreement is not a binding prohibition on the use of Maputo The return of Swazi sugar is expected in the next few months and if pilferage can be controlled, it will all return and stay.

The remaining issues are to be addressed under the IBRD's \$7.1 million Maputo Corridor Revitalization Program, and cannot be properly resolved without an effort that goes well beyond this project amendment Past economic analyses for this and other projects have concluded that CFM(S) is potentially economically and financially sound, but the level of analysis has been shallow and the assumptions regarding traffic increases too optimistic USAID could not, given the time and funding constraints, perform properly the analysis requested by AID/W for this project amendment, which is not in itself a privatization of CFM, nor could we justify performing such an analysis when the IBRD is planning the same analysis in a few months time USAID has therefore left the determination of CFM's commercial viability and attractiveness to private investors to the Maputo Corridor Revitalization Project No significant disbursements will take place under this amendment until the Bank program finds that CFM can make a profit

4 "The PC recommended that the Mission weigh possible termination of locomotives contract [sic] in making decisions on the amendment's FY 92 obligation "

AID/W correctly summarizes USAID's plans regarding the obligation of funds for this \$25 million authorized by the current amendment although it is possible that another contract for locomotives would be financed in the future even though the original contract has already been terminated The Government reluctantly agreed to the termination of the contract with GE for ten new locomotives, but only after receiving a guarantee from USAID that the project would maintain funds in the project for locomotives, and proceed with a purchase of at least some locomotives if CFM can demonstrate in 1992 or 1993 that the locos are needed We have thus retained \$10 million in the locomotive budget If, as expected, CFM does not demonstrate the need for a purchase, then

11'

the second planned obligation for the labor and asset redeployment option will not take place. This obligation is now scheduled for FY 1994.

Other Actions/Concerns

1 IEE The Bureau Environmental Officer approved a negative determination/categorical exclusion for the project amendment on September 14, 1992.

2 611(a) The project paper amendment includes a good estimate of the costs of severance pay and of technical assistance. This estimate was based, for severance, on the standard legal practice prevailing in Mozambique, and, for technical assistance, on recent costs to USAID. There remain about \$4,000,000 of the \$25,000,000 planned for the new project component for contributions to other donor programs for support to departing CFM staff, and for conversion of CFM's capital assets to other uses. This funding is expected to be adequate for any such activities to be financed under the project. As stated in the Project Paper amendment, prior to committing funds for such purposes, the Mission will ensure that the funding and other assistance allocated is sufficient to achieve the purposes of the funding within the life of the project, and that the costs of each such activity are reasonable and reasonably firm.

With respect to FAA Section 611(a)(2), although it is possible that legislative or regulatory changes will be necessary for CFM restructuring, the Mission anticipates that any necessary legislative action will be completed in time to permit the orderly accomplishment of the purposes of this project. The conclusion is based on the analysis contained in Annex J to the Project Paper Amendment and the covenant included in the Project Grant Agreement Amendment in which the GRM has agreed to make such legislative changes promptly.

3 611(e) The only capital assistance planned under the project amendment is for minor rehabilitation of existing assets. The total cost of the new construction activities should be less than \$1,000,000 with no single activity exceeding \$100,000. The more substantial capital assistance components of the project were covered by previous authorizations and 611(e) certifications.

4 CN A CN for this amendment was submitted to Congress on September 8, 1992, and expired without objection on September 23, 1992 (State 311467).

5 PACD Extension The activities planned under this amendment will take place over a three-year period, beginning when the technical assistance arrives in Mozambique. While the TA could arrive as early as the second quarter of FY 1993, and depart in early CY 1996, it is more likely, particularly given the linkage

to the Maputo Corridor Revitalization Project, that the severance program will extend well into CY 1996

Clearances This Authorization Amendment was cleared by USAID/Harare by fax The Project Grant Agreement Amendment procurement plan was cleared by the Regional Contracting Officer

Authority State 104102, dated April 2, 1992 (Annex C of the Project Paper Amendment) delegated to you, as the Acting Mission Director of USAID/Mozambique, the authority to approve and authorize the proposed amendment to the Regional Rail Systems Support Project

Recommendation That you sign a) the attached PP amendment facesheet and b) the attached Project Authorization amendment This will approve the amendment to the Mozambique component of the Regional Rail Systems Support Project and authorize an increase in the life of project funding by \$25,000,000 to a total of \$80,500,000 and an extension of the PACD to December 31, 1996

Approve



Disapprove

John M Miller
Acting Director

Date

9/30/92

- Attachments 1 Project Authorization
- 2 Project Paper Amendment

- Clearances TRiedler, RLA, Draft, 9/29/92
- PArgo, ENG 9/2/92
- CNorth, PRM 9/2/92
- GJenkins, CONT 9/2/92
- BDodson, A/DD 9/2/92
- MKLoss, EMB Draft, 9/22/92

PROJECT AUTHORIZATION AMENDMENT NO 6

COUNTRY Southern Africa Regional
PROJECT TITLE Regional Rail Systems Support
PROJECT NUMBER 690-0247

1 Pursuant to the Foreign Assistance Act of 1961, as amended, the Foreign Operations, Export Financing and Related Programs Appropriations Act of 1988, Africa Bureau Delegation of Authority (DOA) 551, as amended, and the ad hoc authority delegated under 88 State 102126 and 90 State 206488, the Regional Rail Systems Support Project was authorized on August 16, 1988, and amended on July 4, 1989, June 30, 1990, December 6, 1991, September 25, 1992, and September 30, 1992 Pursuant to 92 State 104102, that authorization is hereby further amended as follows

a Section 1 is hereby deleted in its entirety and the following is substituted in lieu thereof

"1 Pursuant to the Foreign Assistance Act of 1961, as amended, the Foreign Operations, Export Financing and Related Programs Appropriations Act of 1988, Africa Bureau Delegation of Authority (DOA) 551, as amended, and the Ad Hoc Authority delegated under 88 State 102126, I hereby authorize the Regional Rail Systems Support Project (the "Project") for the Southern Africa Region involving planned obligations not to exceed Ninety-eight million nine hundred and thirty-two thousand dollars (\$98,932,000) in grant funds over a six-year period from the date of authorization, subject to the availability of funds in accordance with the A I D OYB/allotment process, to finance foreign exchange and local currency costs for the Project Except as A I D may otherwise agree in writing, the planned life of the Project is expected to be approximately eight years and four months from the date of initial obligation "

b Section 2 is hereby modified by deleting the phrase "assistance to Mozambique Railways primarily to rehabilitate and procure locomotives and increase its locomotive maintenance and financial management capacities" and substituting in lieu thereof the following phrase

"assistance to Mozambique Railways to rehabilitate and, if appropriate, procure locomotives, increase locomotive maintenance efficiency, improve financial

management capacities, and shed and redeploy redundant staff and assets "

- c Section 5 C , entitled "Mozambique Conditions Precedent," is hereby modified by adding the following new Sections 5 C (5) and 5 C (6)

"(5) Prior to any disbursement under the Grant for labor and asset redeployment technical assistance, except for technical assistance to USAID/Mozambique and CFM for project management, and prior to the issuance of any commitment documents for such activities, except as A I D may otherwise agree in writing, the Grantee shall furnish evidence that the Government has signed an Agreement with the International Bank for Reconstruction and Development, in form and substance satisfactory to A.I.D., for the Maputo Corridor Revitalization Project.

(6) Prior to any disbursement under the Grant for severance pay, the Grantee shall furnish, in form and substance satisfactory to A I D , evidence that the Grantee has begun the implementation of an institutional restructuring program that, in A I D 's opinion, will make the Maputo Corridor rail and port system profitable in the shortest reasonable time frame. In addition, prior to any disbursement for severance pay, pursuant to Section 7 2 or 7 3 of the Agreement, A I D and the Grantee will agree, through a Project Implementation Letter, on the procedures to be followed for acquiring and disbursing local currency."

- d. Section 5 D , entitled "Mozambique Covenants," is hereby modified by adding the following new Sections 5.D.(14) and 5 D (15)

"(14) The Grantee agrees to enact or promulgate all legislation or regulations, or amendments thereto, necessary to implement Project activities, in particular, labor and asset redeployment, and to do so promptly to ensure project activities are not delayed pending such legislative or regulatory changes.

(15) The Grantee will ensure that water, telephones, and access roads are provided for the houses constructed under the project "

15

x1

- 2 All other terms and conditions of the original authorization, as amended, remain in full force and effect

Signed



John M. Miller
Acting Mission Director
USAID/Mozambique

Date

9/30/92

Clearances

TRiedler, RLA Draft, 9/29/92
PArgo, Eng ^{PT}
CNorth, PRM ^{1/1} 9/30/92
GJenkins, CONT 9/30/92
BDodson, A/DD ¹⁵² 9/30/92
USAID/Harare Fax, 9/25/92

1 PROJECT BACKGROUND AND RATIONALE

1 1 Project Setting

1 1 1 Economic and Social Conditions

The Mozambican railway and port system (CFM) has historically been a mainstay of Mozambique's economy, employing more than 40,000 people as recently as 1981 (14 percent of the estimated 300,000 people employed in the formal sector), and generating significant foreign exchange earnings. The CFM system is organized into four regional Directorates: South (CFM(S)), Central (CFM(C)), North (CFM(N)), and Zambezia (CFM(Z)). The CFM system was built largely to handle traffic to and from Mozambique's landlocked neighbors, chiefly Zimbabwe and Zambia (formerly Southern and Northern Rhodesia) and Malawi (formerly Nyasaland), as well as eastern sections of South Africa.

The Southern region consists of three principal international lines: the Limpopo line linking the port of Maputo to Zimbabwe, the Goba line linking Maputo to Swaziland, and the Ressaou Garcia line linking Maputo to the Eastern Transvaal region of South Africa. In addition, the CFM(S) Directorate includes two short lines entirely within Mozambique, carrying purely domestic traffic: the line from Xai-Xai to Mauеле and Chicomo, and the line from the port of Inhambane to Inharrime. The Ports of Maputo and Inhambane are also under the CFM(S) Directorate.

The CFM(C) Directorate contains the main Beira Corridor line linking the Port of Beira to Zimbabwe. The Sena Line, linking Dondo on the Beira Corridor to the Malawian railway system, has been closed since 1975. CFM(C) also includes two branch lines, of which only a small section, carrying domestic traffic only, remains in operation. The Port of Beira is included in the CFM(C) Directorate. The CFM(N) Directorate contains the main line from the Port of Nacala to Lichinga near the Malawian border, as well as two smaller lines. The Ports of Nacala and Pemba are under the CFM(N) Directorate. CFM(Z) contains the domestic short line from the Port of Quelimane to the town of Mocuba, as well as the Port of Quelimane itself.

In 1973, the last year in which operation of the railways was not inhibited by political or security problems, the three main corridors carried 20 million tons of freight, of which nearly 80 percent was international traffic from Mozambique's landlocked neighbors, chiefly Zimbabwe (then Rhodesia) and Malawi, as well as South Africa. In that year the CFM system carried over 90 percent of Zimbabwe's external freight traffic, 80 percent of Zambia's copper, and nearly 100 percent of Malawi's trade. In the same year, CFM's foreign exchange revenues of US\$110 million financed most of the structural deficit in Mozambique's balance of trade. Some 75 percent of this amount came from operations of the Maputo Corridor, which in 1973 carried 14 million tons of

freight Even as recently as 1979, at which time Mozambique observed trade sanctions against Rhodesia, CFM carried nearly nine million tons of freight, of which 6.8 million were international traffic, chiefly from South Africa (4.2 million tons) and Swaziland (1.9 million tons). By contrast, in 1991 the total CFM system carried less than 1.4 million tons of international freight, and the Maputo Corridor less than 900,000¹. The CFM system as a whole in 1991 generated net losses of about US\$800 thousand on operating revenues of \$35 million. Most of these losses were accounted for by railway operations, which in 1991 showed operating losses of approximately US\$10 million. Taken alone, the Maputo Corridor's performance was even worse. While the operational, infrastructure and security assistance given to the Beira Corridor has enabled the Central region of CFM (CFM(C)) to show an operating profit, each of the Southern region (CFM(S)) lines, including the Xai-Xai and Inhambane short lines, continues to operate at a loss, as does CFM(S) as a whole.

Political changes in the Southern African region, including the advent of majority rule in Zimbabwe, the likelihood of majority rule in South Africa, and the end of trade sanctions against South Africa, make it unlikely that the CFM system will ever recapture as much of the Southern African market as it once had. Increasingly, as political considerations lose their importance as determinants of transport routes in the region, transporters choose the lowest-cost option, which inevitably means that some traffic that for political reasons once went through Mozambique can be shipped more economically through South Africa. There is little question, however, that improvements on a number of dimensions could yield significant increases in the traffic carried by CFM and, possibly, an eventual return to profitability, particularly on those routes where one of the Mozambican corridors offers the shortest distance to a port. Current efforts by many of the major donors, including USAID, the World Bank, ODA and others, are aimed at improving the management and structure of CFM to the point where it can compete effectively with South African ports for a significant portion of the traffic to and from Zimbabwe, Malawi, Swaziland, Zambia, and South Africa itself.

In order to rebuild CFM and improve its capacity to compete for regional freight traffic, donors since the mid 1980s have invested more than \$600 million to upgrade both the principal rail corridors and the ports of Beira, Maputo and Nacala. Starting in the late 1980s, these donor-funded projects began to contribute to improvements in CFM performance. Rail traffic through Beira increased from a 20-year low of 296,000 tons in 1984 to 632,000 in 1989. Traffic through Maputo increased from

¹ CFM 1991 Annual Report, Maputo, 1992

2.7 million tons in 1988 to 3.8 million in 1989. While the Beira Corridor has managed slight increases in traffic since 1989, on the CFM(S) system these improvements were not sustained. CFM(S) traffic, including domestic freight, dropped to 2.2 million tons in 1990, and again fell to 1.4 million tons in 1991.

Traffic on the CFM system is expected to increase significantly in 1992, however, this has little to do with any improvement in CFM's ability to compete. Instead, the worsening drought affecting all of Southern Africa has resulted in an increase in food shipments to Mozambique and other countries in the region, much of which is, and will continue to be, carried by CFM.

Since the mid-1980s, many changes have occurred in Mozambique which increase the likelihood that further assistance to CFM will be of significant benefit to the Mozambican economy as a whole. One of the key questions, of course, is the security situation, which has had repercussions throughout the economy and society. While it is difficult to predict when, and in what form, peace will come to Mozambique, some resolution of the conflict between the Government of Mozambique (GRM) and the Renamo rebels will be achieved, probably soon, bringing with it more widespread efforts to rebuild the country, and a greater likelihood that such efforts will succeed. The GRM has, in addition, taken major steps towards the creation of a market economy. In 1987, with World Bank and IMF support, the GRM began implementing a comprehensive Economic Rehabilitation Program (ERP). Exchange rate reform, improved allocation of foreign exchange, reduction of government subsidies to public enterprises and throughout the economy, have contributed to a reduction of Mozambique's fiscal deficit from over 13.5 percent of GDP in 1985/1986 to about 2.4 percent in 1991. The government has changed the status of government-owned enterprises from that of "state" enterprises, under the direct control of government, to that of "public", or parastatal, enterprises, which have greater autonomy in operational and management decisions. Going even further, government has begun to privatize state-owned companies in several industries (trucking, for example), through sale to citizens and non-citizens alike.

These measures have important implications for CFM. Successive devaluations of the metical (a depreciation of the real effective exchange rate of over 40 percent since 1987) have rendered CFM's tariff structure more competitive internationally, as well as increasing the competitiveness of Mozambican exports. While this has little effect where imported equipment or raw materials are concerned, it means that the real wage of Mozambican workers has declined substantially in US dollar terms. The reform of the foreign exchange allocation system means that CFM and other enterprises are now allowed to retain 40 percent of foreign exchange earnings, improving both their motivation and their ability to compete internationally.

Further restructuring of CFM, therefore, takes place in the context of an economy in which the potential exists for dramatic increases, not only in the volume and profitability of other countries' freight exported or imported via Mozambique, but also in the volume and profitability of imports and exports generated by domestic supply and demand. While further economic restructuring carries with it this potential, it also increases market pressures to run the railway more efficiently.

1 1 2 Relationship to USAID Strategy

USAID began to assist CFM in 1986 with a program providing \$5.5 million for the overhaul of nine steam and two diesel locomotives and the partial conversion of the Beira workshop to diesel. The Mozambique Regional Rail Systems Support (RRSS) Project, started in 1988, focused on problems of inadequately maintained locomotives and wagons, poorly equipped and inadequate maintenance workshops, and inadequate financial and operations management systems in CFM. Initial project funding provided \$34.5 million for locomotive maintenance, improvements in railway workshops, and technical assistance and training to CFM, particularly to improve CFM's financial management capacity. In addition to providing CFM with the resources to rehabilitate at least eight locomotives, maintain the fleet of 60 diesel locomotives, complete the Beira workshop, and reconstruct the Maputo diesel workshop and shed, the RRSS Project funded the provision of 25 technical advisors and trainers in the areas of financial management and locomotive repair. The original Project Paper was amended in 1990, when projected traffic increases indicated a need for additional locomotives, as well as a broader approach to CFM's continuing management problems. The amendment provided an additional \$21 million to purchase 10 new locomotives and to carry out an institutional assessment of CFM.

This Project Paper Amendment is consistent with the AID strategy already embodied in the RRSS Project, which is intended to contribute significantly to development not only in Mozambique, but in the Southern African region as a whole. AID's Regional Development Strategy for Southern Africa has as a strategic objective for the transport sector to "install capacity and efficiency in the transport systems that serve regional cooperation and provide access to regional and external markets." In addition, improved rail efficiency may, in the medium to long term, contribute to USAID/Mozambique's food security strategy by providing a reliable transport link between rural producers, urban consumers, and export outlets.

The overall rationale for this amendment, and its relationship to the existing RRSS Project, is made explicit in 1992 Maputo 00616, which states, "The overall donor program, particularly the combination of the [World] Bank's project to streamline and lease the operations and USAID's project amendment to redeploy assets,

is a logical extension of the present project, and will contribute to the original project's purpose and objectives more effectively than presently planned activities. What is proposed is a natural expansion of the present project to increase the overall performance of CFM, particularly CFM(S). Major reductions in staff and the conversion of uneconomic physical assets are critical to transform the railways and ports from permanent drains on the economy to profitable providers of efficient transport services to the national and regional economy."

1.2 Statement of the Problem

CFM suffers from most of the operational, management, and financial problems common to most African railways. For Mozambique, however, these problems are exacerbated, not only by the continuing civil war, but also by its close proximity to South Africa, whose railways and ports have more in common with those of other industrialized countries than with those in its Southern African neighbors. These problems include

Loss and damage of cargo While the war has destroyed locomotives, wagons, and cargo, Mozambican ports are also a serious source of loss. For goods shipped from Swaziland via the Maputo Corridor, for example, the average cost of loss and damage is \$33.33 per ton (on high value shipments with values greater than \$2222 per ton), representing 45 percent of the total cost of shipment of \$74.75 per ton, as compared to loss/damage of \$11.11 per ton for goods shipped via Durban, out of a total shipping cost of \$40.59. The problem is especially serious in CFM(S). Shipments from Zimbabwe through the Beira Corridor are only slightly more costly than through Durban, with loss/damage costs only slightly higher. This indicates that, in the case of the Beira Corridor, modest improvements in operating efficiency could generate significant increases in traffic. It also indicates that, while improvements in efficiency are essential in CFM(S) rail operations, port operations must also be drastically improved.²

- Overall port handling problems Port demurrage charges in the Mozambican ports of Beira, Maputo and Nacala are \$7.56 per ton, as compared to \$1.68 per ton in South African ports. The SADCC Transport Investment Priority Assessment (STIPA) in 1991 concluded that restructuring Mozambican ports was the single most important transport infrastructure investment project in the entire SADCC region. STIPA's

² SADCC Transport Investment Priority Assessment (STIPA),
USAID - Harare, De Leuw Cather International Ltd, August 1991

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assessment of the benefits from port restructuring indicated that as many as 90 percent of the 14,000 port workers were unnecessary to efficient port operations. A combination of reduced operating costs from releasing unnecessary workers and increased revenues from improved efficiency and the resulting increases in traffic, could bring net benefits of \$7 million per year. At the same time, however, restructuring of the ports alone is not sufficient to bring about the desired increases in traffic.

- Excessive labor costs resulting from overstaffing In 1991, on operating revenues of MT 15.35 billion, CFM rail operations had salary costs of MT 13.35 billion, or 37 percent of revenues. The performance of CFM(S) was largely offset by that of CFM(C), which showed operating revenues of MT 10 billion, against labor costs of only MT 4.7 billion. In CFM(S), labor costs of MT 6.0 billion actually exceeded revenues of MT 4.2 billion. The performance of CFM(N) and CFM(Z) (Zambezia) was even worse. These figures, moreover, do not take into account the salary costs incurred by the CFM Directorate General, a portion of which is allocable to the railways as overhead.

Widely divergent estimates of the magnitude of this problem have been made, some for the CFM system as a whole, and others that focus on rail or port operations alone or a single CFM region in isolation. The issue is further complicated by uncertainty as to future traffic increases.

Overstaffing in the ports, while certainly a problem, has not prevented CFM port operations from operating at a profit. Port staffing problems are less acute than those of the rail lines, largely because of the large numbers of temporary workers, who are maintained as part of an available labor pool, but are only hired and paid on a daily basis when there is work to be done. Of a current CFM port and rail work force of about 35,000, of which 19,930 are permanent staff, at least 13,100 of the permanent staff are surplus to current CFM rail and port requirements.³

³ Precise staffing numbers have been difficult to obtain. Numerous inconsistencies have been found, both in totals and in departmental and age/skill breakdowns. This is due to several factors including a lack of availability of detailed management information, non-standard methods of data collection and presentation, and differing dates of origin. These numbers, and those subsequently presented in this paper, represent the best possible synthesis of and estimate from the numbers available from various CFM and non-CFM sources.

- Weakness of CFM management In spite of the many capable people employed by CFM at all levels, there are many weaknesses undermining CFM's ability to operate the railways efficiently. These include

Lack of capability to generate usable data and to formulate operational and financial action plans based on those data

Lack of management accountability for operating results

The inclusion of assets and activities in CFM's portfolio that are not critical to efficient operation of a railway or ports, but which constitute a drain on management and financial resources These include housing, clinics, railway clubs, schools, factories for the manufacture of concrete and wooden sleepers, quarries, and a host of repair and maintenance functions. In many other countries, some of these products and services are procured from other companies through a variety of subcontracting or purchase mechanisms

These problems have had a devastating effect on overall performance of CFM, as evidenced by continued decline in freight tonnage and passenger transport as well as by continued increases in CFM's operating deficits. This decline is far more precipitous than earlier donor projections indicated, and requires more radical measures than the training, increases in locomotive and workshop capacity, and other assistance so far provided or envisaged by this, and other donor projects. The previous RRSS PP amendment acknowledged that this might be the case, stating, "At present RRSS and other donor projects do not have the scope necessary to correct the fundamental management deficiencies found everywhere: workshops, dispatching, materials management, upkeep of the buildings, and coordination of CFM's geographically separate and partially autonomous rail lines and ports."

While the 1990 PP amendment included a component to perform a systemic study and formulate a systemic approach to CFM's problems, Maputo 00616 concludes that, "this planned component has been overtaken by the events described. The development of a systemic study of CFM's management problems has become an unaffordable luxury in the face of severe traffic declines and the threat of new investments in infrastructure that could lead to the long-term diversion of traffic from Maputo to ports in South Africa (RSA). Furthermore, the study planned in 1990 would be little more than a distraction from the work of the investment advisory firm to be funded by the World Bank."

1.3 Other Donor Activities

The activities proposed by the current PP Amendment take place in the context of a major new donor initiative, coordinated by the World Bank and agreed to by the GRM in March 1992, which was formulated in consultation and cooperation with USAID, and to which A I D expects to contribute substantially

The centerpiece of the World Bank project is the engagement of an investment advisory firm to 1) analyze the market for CFM(S) services and formulate a business strategy for the CFM(S) system, including identification of the operating, management, personnel, investment and assets management strategies and actions required to achieve an appropriate cost structure and an acceptable financial rate of return on assets, 2) evaluate several possible options for restructuring and partial privatization of CFM(S) which will enable the objectives of the reformulated business strategy to be achieved, and, 3) assist in the implementation of the strategies and restructuring options as agreed by the World Bank and the GRM

The activities undertaken by the investment advisory firm are expected to encompass the following components

- Evaluating financial prospects for the CFM(S) system and identifying the related financial, operational, investment, and management strategies required to realize these prospects and, ultimately, return to profitability

Defining options available in restructuring CFM(S) and attracting private capital and technical expertise required for successful implementation of the identified strategies

Assisting the GRM and CFM to attract and negotiate private sector participation and investment in selected areas of the CFM(S) system and developing an implementation strategy for the management of those activities retained by CFM

- Assisting the GRM and CFM in structuring and negotiating private sector investment proposals
- For each of the options considered, assessing the implications on redundancy of personnel and assets, and recommending strategies for dealing with problems or opportunities that may arise from implementation of each option considered

One of the key aspects of the proposed World Bank project is the question of redundant personnel in the restructuring, not only of CFM(S), but of the entire CFM system. This is made explicit in the terms of reference for the investment advisory service, which state, "Due to the key role of manpower resources in this

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exercise, the investigations and analyses should cover all CFM and not only the CFM(S) system " The terms of reference call for the investment advisors to 1) determine the number of employees in the railway and port subsystems, classified by skills, function and length of service, 2) identify current industrial relations practices and pension regulations, determining whether they are mandated by law or are governed by evolved practices, 3) provide estimates of the manpower requirements by operational category and the degree of labor redundancy or skills shortage by occupational category, 4) formulate strategies for effecting reductions in manpower requirements, 5) develop new remuneration policies and service conditions necessary to ensure that CFM can compete effectively for personnel possessing the required skills, 6) assess existing training facilities and resources and identify strategies for strengthening training in critical skill areas, while ensuring cost recovery or funding for any training programs

While the terms of reference have called for the investment advisors to evaluate several options for CFM(S) restructuring, the World Bank, partly because of a perceived need to minimize the time spent on analysis and to move as rapidly as possible towards implementation of a restructuring plan, has decided, with the agreement of the GRM, to limit the number of options to three These are 1) a "master lease," under which CFM(S) railway operations would be leased to a single company, which in turn might subcontract or sublet certain components of CFM(S) operations to other private operators, 2) award of concessions to manage and operate specialized terminals at the port to users and private operators, i e , the status quo, 3) creation of a transport corridor corporation conglomerate with its subsidiaries making awards of operating concessions for selected activities to the private sector Whichever option is chosen, one possibility being to combine aspects of each of those under consideration, the Government has agreed to the principle that technical assistance itself is not enough to solve CFM's problems and that, at least for CFM(S), some form of private operation is essential if it is to survive

Questions do, however, remain as to exactly which parts of existing CFM(S) operations would be covered by a master lease or otherwise turned over to private management It will be an important responsibility of the investment advisory firm to determine the optimal structure for the more efficient and profitable management of CFM(S) One of the most critical issues still unresolved is the status of CFM(S) employees and whether they should be 1) dismissed en masse, with a lessee then deciding whom to rehire, 2) transferred as part of a lease or other private management arrangement, the new management then deciding whom to retain and whom to let go, or 3) the subject of CFM's own determination of staffing requirements, with CFM determining who is retained and who is made redundant

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The current PP amendment, while not concerning itself directly with these questions, is intended to deal with the problems that will arise from large scale reductions in the CFM workforce and the need to dispose of redundant assets, both from CFM(S) non-railway operations and from other CFM operations (e g , the short lines) that will be restructured or closed

Because the options for redeployment of redundant workers will to a large extent be contingent upon the restructuring of CFM and the degree to which certain CFM operations are privatized or otherwise divested, the activities covered by this PP amendment will have to take place in close collaboration with the investment advisory services to be provided under the World Bank project. These activities are, in fact, considered to be part of the overall World Bank project, for which USAID has accepted responsibility. Under the agreement between the World Bank and the GRM, "[A]ll labor-related issues, other than the refinement of the numbers of potentially redundant workers in CFM(S) should be addressed under this component. Given the likely importance of manpower issues in any future strategy for the CFM(S) system, the [World Bank] mission believes that negotiations should be subject to prior agreement between Government, CFM and USAID on terms of reference for this component."

The concern has been expressed in 1992 State 104102 that if the World Bank program for whatever reason fails to be implemented (for example, if a commercial lease of CFM(S) is not achieved), the redundancy component to be undertaken by USAID might then be inappropriate or unviable on its own. The planned reductions in personnel, however, are not restricted to CFM(S) but are intended to cover the entire CFM rail system, as well as the overall and regional Directorates General. Similarly, the redundant assets will come not only from a restructured CFM(S) but also from possible closing of the short lines, the restructuring and privatization of certain port operations under a British ODA-funded project, and restructuring and possible privatization of rail-related operations throughout the CFM system, including but not restricted to workshops and housing.

This failure of the World Bank program, however, would probably signal the government's unwillingness or inability to make the difficult decisions required to turn CFM(S) around. If this turns out to be the case, then USAID will almost certainly cancel the amendment, and possibly take further steps to terminate all assistance to CFM. This intention, and the dependence of the amendment on the success of the Maputo Corridor Revitalization Program, have been clearly spelled out in additional conditions precedent to the project.

In addition to the World Bank program, ODA is undertaking a major \$34 million port restructuring program, focusing on rehabilitation and partial privatization of Maputo port

operations The success of this program is important to the success of the current project, since without significant improvements in port operations restructuring of the railways alone may not be sufficient to bring the Maputo Corridor into a position where it is cost competitive with South African routes

As indicated in Section 1.2, significant numbers of port workers will also be covered by the redeployment programs developed under this project

2 PROJECT DESCRIPTION

2.1 Goal and Purpose

The Regional Rail Systems Support Project is a regional umbrella project which comprises three distinct country-specific activities in Mozambique, Swaziland and Malawi. The goal and purpose of the Mozambican component of the project parallel the two complementary components in Swaziland and Malawi. The goal is to support the development of a stronger economic foundation for growth in Southern Africa. The purpose is to strengthen and enhance the capacity and operational efficiency of regional rail transport systems.

This amendment adds a new project activity to address a fundamental problem facing CFM: it will contribute to the ability of the Mozambique railway system (CFM) to reduce its operating deficits in order to regain a portion of the share of the regional rail transport market it has lost in recent years to other countries.

The original RRSS project was aimed at increasing the tractive capacity of CFM and developing a more commercially-oriented system of financial management for the railway. The 1990 Project Paper amendment, by providing new locomotives to CFM, was intended to increase CFM's freight hauling capacity from 5.8 million tons to approximately 7.0 million tons, which in turn was expected to result in reduction of at least \$3.6 million in operating deficits by 1995. The amended project, in addition, was intended to provide a basis for necessary and fundamental changes in CFM by financing an in-depth institutional study of requirements for transforming CFM into an effective and commercially viable railroad. Unfortunately, before either of these changes was implemented, CFM experienced further and rapid declines in traffic, creating the necessity to undertake more radical and rapid steps to restructure CFM.

The project addresses three major constraints to CFM's profitability and efficiency. The first of these, a shortage of tractive power, is presently the subject of a program to improve maintenance by increasing CFM's capacity to perform routine maintenance and by developing a system for the contracting out of major repairs to locomotive components. The second, the absence of a sound financial system, is being addressed through technical assistance and computerization. The third, the structural inefficiencies of CFM, was introduced as a project concern by the 1990 Project Paper amendment, which provided for a grant to the IBRD to examine with CFM its fundamental management problems and develop a strategy to overcome them. The 1991 initial evaluation of the project focused on this third problem as well, and found that CFM, as presently organized, is fundamentally unmanageable. At the same time, traffic levels on CFM(S) fell during the

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project, from a high of three million net tons in 1989, to two million in 1990 and to 1.4 million in 1991. This decline, contrary to all prior projections, and coupled with the possibility of major new investment in Republic of South Africa (RSA) ports, raised the issue of whether CFM can survive as a major regional transporter.

The striking deterioration in CFM's performance, the failure of locomotive availability to respond quickly to an infusion of spares and technical assistance, and the threat of new RSA investment, led USAID to consult with other donors on a joint approach to the overall problems facing CFM. As a result of these consultations, the U.S. Ambassador and the Chiefs of Mission of the other major donor countries met jointly with the Minister of Transport, and individually with other senior government officials, in October and November, 1991. At these meetings, the donors put forward their view that investments in the CFM(S) infrastructure were a waste under the present circumstances, and that continued donor support would be dependent on the GRM's willingness to accept radical restructuring, which would result in a lead role for the private sector in the operations of the port and railroad. At the time, the government refused to entertain the sale of right of way or major infrastructure, but agreed in principle to the long-term leasing of the infrastructure to capable private sector companies.

In November 1991, the IBRD assumed the lead in developing a restructuring program for CFM(S), and since then has prepared the Maputo Corridor Revitalization Program. This program, which should be signed in November, 1992, will first assess the market for CFM's services and value its assets. Based on this potential, and with a view to maximizing Mozambique's return on CFM's assets, the program will then examine how three different institutional forms, differing in their degrees of private sector participation and operational control, might quickly exploit the market. The government, in consultation with the other donors, will then choose one of the three forms, which will be packaged for sale/lease/consideration by potential private operators.

The present project amendment is USAID's contribution to the process of restructuring CFM. It reduces the size of CFM's workforce and sheds unneeded assets in order to make efficiency improvements required to make CFM a potentially profitable company of interest to private investors.

Revitalization of CFM through some form of commercial lease or other private management arrangement will be impossible to achieve without the a major reduction in staff. This reduction will be difficult to achieve politically, and could have serious social effects if programs are not created to absorb the excess workers who will no longer be employed. In addition, the

commercial reorientation of CFM will require that many existing CFM operations be divested, through privatization or outright closure. A more efficient and profitable CFM will, however, be politically and economically problematic if one effect of restructuring is to release some 13,000 workers into the labor force with few prospects of productive employment elsewhere. Disposal of redundant assets therefore becomes a critical problem, both in the potential of those assets to generate new employment opportunities and in their ability, through sale, lease or other mechanisms, to generate revenues and reduce carrying costs for CFM and the GRM.

The proposed project amendment to develop redeployment schemes for redundant workers and assets will, therefore, contribute to the achievement of both the overall RRSS goal of supporting economic growth in Southern Africa and the component's purpose of strengthening and expanding the capacity and operational efficiency of CFM.

2.2 Project Strategy

The contribution of this new project activity to the goal and purpose has two principal components: 1) assistance to the GRM, CFM and the private sector to shed excess staff, to the extent possible by identifying and developing new, productive economic opportunities for workers made redundant by CFM restructuring, 2) the redeployment of excess CFM assets so as to create the maximum possible number of productive employment opportunities and to increase the operating efficiency of CFM. These components are fully consistent with the goal of supporting development of a stronger economic foundation for growth in Southern Africa, and with this component's purpose of strengthening and expanding the capacity and operational efficiency of Mozambican railways. Under this component, the project will assist CFM to reduce its operating deficit and to regain a portion of its previous share of the regional rail transport market.

Component 1, by helping the GRM, CFM and the private sector to identify and develop new opportunities for redundant railway and port workers, will contribute to development of a more vibrant private sector in Mozambique. It will also, by absorbing up to 4,500 excess CFM workers in a productive way, make the idea of CFM restructuring more acceptable to workers, unions, management national and provincial government, and other groups potentially affected by the restructuring. Furthermore, by reducing the overall workforce, Component 1 will result in significant reductions in operating costs.

Component 2, by redeploying excess CFM assets, will contribute directly to the generation of at least modest employment.

opportunities, since it is those assets that will form the basis of new and productive private enterprises to be created. Divestiture of these excess assets will also contribute to the purpose of reducing CFM's operating deficits and rendering it more competitive in the regional transport market.

The success of this project is contingent on CFM making substantial progress towards restructuring its organization in order to respond to the market for its services, this restructuring is being directly supported by the World Bank under its Maputo Corridor Revitalization Program (MCRP), which should eventually lead to a lease of CFM, or at least major portions of CFM's operations, to private companies. RR S will therefore collaborate closely with both the World Bank Investment Advisory team and with the eventual lessee(s) of CFM(S) rail operations, as well as with teams currently providing financial and operations management assistance to CFM. As the World Bank investment advisors identify and evaluate CFM restructuring options and refine the numbers of CFM employees to be made redundant, the USAID project team should have a major influence on choosing options that maximize productive employment opportunities for redundant workers. The USAID project will also work closely with the enterprises employing or run by former CFM employees or employing former CFM physical assets, in order to ensure that they remain competitive in the production of inputs for the new CFM. In the other CFM regions, the project will take a leading role in assisting the CFM regional directorates and Directorate General to calculate staffing requirements by location, skill category and skill level, and to identify those workers who should no longer be employed by CFM. In addition, because the problems of rail and port operations are so closely interrelated, and since the restructuring of rail and ports will both result in large-scale workforce reductions, close cooperation with the ODA Maputo port restructuring program is also envisaged.

As pointed out in Annex G, the losses and damages suffered by CFM will be considerably reduced by the combined reduction in staff and the concomitant reduction of the overall management burden. This in itself will improve CFM's competitive position considerably, but not enough to realize its potential without the more far reaching changes envisaged under the MCRP.

A four-year project component life is anticipated, from October, 1992 to December, 1996, with on-the-ground activities occurring over three years, beginning as early in 1993 as possible. Because it will be impossible to absorb the expected 3,300 early retirees and 9,500 to 10,000 redundant workers into other productive activities immediately, a phased reduction of staff is anticipated over a one and a half year period, in which as many as possible of each cohort of workers to be released will be employed productively before their severance payments cease.

Although it does not fall within the scope of the project, it should be noted that in order to maximize the efficiency of what remains of CFM, a substantial training exercise should be undertaken within CFM as part of its restructuring. It is expected that the private companies assuming responsibility for the operations will provide the bulk of such training and other donors will also provide assistance. With the scale of redundancies proposed, far greater demands will be placed on the productivity and efficiency of the workers who remain. This may require increases in general skill levels, changes in work organization and working practices, and profound changes in attitudes of CFM employees at all levels. It should be noted, however, that CFM has considerable competent staff at the artisan level. If the redundancy plan successfully retains most of these, then improved management will be the most important requirement for dramatically improved performance.

2.3 End of Project Status

The end of project status (EOPS) will be measured at some point after the expiration of the estimated two years of severance payments expected to be made to redundant workers. While a four-year project life is envisaged, results are unlikely to be fully measurable within that time. It is only after the project period, when the benefits to CFM of reducing its salary expenditures take full effect, that significant economic returns may be generated. Apart from measurement of economic returns, however, the EOPS should include the following:

The successful reorganization of CFM which may include, but not be limited to the lease, sublease, sale, or other divestiture of railway operations other than core traffic operations (e.g., workshops), throughout the CFM system, to the extent that such divestiture can be demonstrated to increase the operating efficiency and profit potential of CFM, and to provide significant benefits in generating alternative employment for redundant CFM staff.

Successful structuring and implementation of an early retirement program for approximately 3,310 workers reaching age 55 during the life of the project.

Productive employment of at least 40 percent of the workers made redundant by the CFM restructuring program, excluding those aged 55 or over who opt for early retirement (at least 4,000 out of a projected 9,500 to 10,000 redundant workers).

Successful identification of railway assets that are not essential to efficient rail operations, and their sale or conversion to other productive use.

- Successful closing of the short lines

Development of plans, in coordination with the redeployment of workers and assets, for programs to mitigate the effects of rail line closures on the areas formerly served by the short lines, if closed

2 4 Outputs/Project Activities

2 4 1 CFM(S) Restructuring

The numbers and kinds of CFM employees made redundant will depend, to a degree, on the form taken by the CFM(S) restructuring under the MCRP

The master lease concept proposed by the World Bank for the restructuring of CFM(S) provides scope for the leasing or subleasing of specialized operations such as workshops, factories, and quarries to private operators, whether Mozambican or foreign. Independently of the World Bank project, similar operations in other regions of CFM could similarly be divested, through leasing, management contracts, or outright sale and privatization. It is these operations, throughout the CFM system, that are likely to provide a large number of reemployment opportunities for redundant CFM workers. The means of disposing of them is therefore critical to the success of the project. While the master lease concept indicates that these specialized operations may be included in the master lease and then subleased as appropriate, other options should be considered by the amended RRSS project, which may provide for greater operating efficiency, greater participation by the Mozambican private sector, and the creation of greater numbers of employment opportunities.

One option that should not be considered is the retention of these specialized operations by some Government agency other than CFM, since there would be a high risk of a return to CFM of responsibility for their operation. It might be possible to maintain some operations within CFM for a short time, subject to an agreement between the GFM and USAID that would commit the Government to their operational and/or financial privatization. A variety of mechanisms could be used to achieve this objective, including outright sale, leasing on terms similar to the lease of rail and port operations, or management contracts with performance incentives built in. In any case, the rapid transfer of all assets unnecessary to CFM's core functions is critical to the success of the project and the railroad.

2 4 2 Short Lines

CFM currently operates three short lines Inhambane-Inharrime (90 kms), Quelimane-Mocuba (145 kms, CFM-Zambezia), and Xai-Xai-Mauele-Chicomo (140 kms). These lines, which are not connected to the main corridor lines in Mozambique, nor to the Southern African regional rail network, are at best peripheral to the main operations of CFM. While they may, in some ways, contribute to the economies of the areas they serve, as purely domestic lines they do not affect CFM's international competitiveness, except insofar as their continued operation may be a drain on CFM's overall management and financial resources. The Quelimane line in 1991 hauled only 8,500 tons, while the Inhambane line carried only 500 tons and the Xai-Xai line 300 tons representing in aggregate only 0.4 percent of the total freight carried by the CFM rail system. These three lines are slightly more important in terms of passenger traffic. The Inhambane line in 1991 carried 38,000 passengers, the Quelimane line 17,500, and the Xai-Xai line 5,900, amounting in total to slightly over three percent of the total passengers carried by CFM. These represent, however, significant declines from previous years. In 1989, for example, the Inhambane line carried 71,600 passengers and the Xai-Xai line 12,800. In 1990 the Quelimane line carried over 68,000 passengers. These drastic fluctuations in passenger traffic are attributable to changes in the security situation in the regions served by these lines as well as to the declining standard of services.

Each of these rail lines has generated losses in each of the past ten years that are high relative to the level of traffic they carry. Projections of future traffic indicate, moreover, that there is little chance that these lines will return to profitable operation. Consequently, it is hard to justify their continued operation on purely economic grounds. USAID has therefore proposed that these lines be shut down and the assets sold or otherwise redeployed. There is, however, some resistance to this idea because the lines do provide some local services and because of the employment generated.

It is also clear that the level of subsidy for all three lines is small, at least so long as no attempt is made to reverse the gradual deterioration of the lines and facilities. It is possible that even at current levels of traffic they can break even given adequate staff reductions (see Annex F).

The critical issue is not, however, whether these lines can limp along for a few more years with limited subsidies, it is rather whether CFM can continue to manage a vast empire of unproductive assets and at the same time reverse the dramatic deterioration of its main corridors, in order to prevent the imminent permanent relegation of Maputo to the status of a secondary port. The question of whether the lines remain open is also, to some extent, secondary. The important point is that these lines must be removed from CFM's management purview.

Quelimane German assistance is rebuilding the port of Quelimane under the condition that CFM close the rail line. RRSS will provide additional encouragement, as necessary, for this closure. The port of Quelimane is a profitable operation, and should continue to be so.

Xai-Xai The Xai-Xai railway does not carry enough freight or passenger traffic to justify its continued operation on economic or administrative grounds. As a narrow-gauge steam locomotive line, however, it could have some tourist potential once the war ends and the tourist infrastructure is rebuilt. The current cost of operating the line is about \$120,000 per year, which could be reduced to about \$80,000 through staff reductions. Since the existing road does not go as far as Chicomo or Mauuele, closure of the railway without providing for alternative access would have some undesirable consequences for the small populations of those towns and the surrounding areas. The entire freight traffic of the Xai-Xai line could be handled easily by one all-terrain vehicle running on an existing dirt track, although the railway bridges might have to be modified to accommodate road vehicles. The project may assist CFM in trying to sell the line to a private company interested in its medium-term tourist potential. The project will work with local and national authorities to develop alternatives to the services presently provided by the line.

Inhambane Of the three short lines, Inhambane is the most indefensible economically. Because of frequent attacks on the line, and a parallel road that makes its services redundant, during the first six months of 1992 only 18 trains traveled on the line, carrying just over 1,100 tons of cargo and 107 passengers. The Inhambane line generated revenues of just MT 10.8 million, as against MT 112.5 million in expenses. In 1983 and 1984, rail revenues in Inhambane were MT 1.4 million and 4.5 million, respectively, and salary expenses alone were MT 30.8 million and 23.6 million. Its performance appears to have been no better in colonial times. Established in 1918, primarily to carry cotton produced at plantations along the line, traffic began to decline when the colonial administration outlawed forced labor on the plantations. Its decline became even more pronounced in the 1950s when the road linking Maputo to Inhambane was built, to the extent that in 1970 the colonial government closed the line entirely. It remained closed until 1980 when the provincial government requested that it be reopened. According to CFM sources, however, closure of the line had little, if any, adverse effect on the region. The port continues to make a profit, as it did when the rail line was not operating. The only conceivable justification for continuing to operate the line is the number of passengers it historically has carried (over 300 trains carrying 200 thousand passengers in 1984). This, however, is a level of demand that could be satisfied by fewer than 10

minibuses traveling the same route (See Annex H) Based on the calculations in Annex H, the project design team concluded that the Inhambane line should be closed immediately

2 4 3 Alternative Plans for Retrenchment of Personnel

The retrenchment options chosen, and the number of workers eligible for assistance under one or more of these options, will depend to a large extent on the overall restructuring package funded and assisted by the World Bank. While it appears that the "master lease" concept under which all "operationally useful" assets would be transferred to a single private sector lessee, which in turn would operate (with possible subleasing of some operations) the CFM(S) system, is the option preferred by the World Bank and USAID, no effort has been made to define precisely what is meant by "operationally useful" assets. The question therefore remains to what degree operations such as maintenance of way, workshops, quarries, and other important but not strictly railway functions would be included in the master lease. The transfer or non-transfer of these operations under a lease arrangement will, naturally, affect the numbers of people for whom redeployment alternatives must be arranged.

CFM itself, without donor assistance, has only managed to reduce its workforce from over 37,000 in 1990 to around 35,000, largely by implementing a compulsory early retirement scheme, reducing the standard retirement age from 65 to 60. A future reduction to 55, at least on a voluntary basis, is contemplated. According to the calculations summarized in Annex G, some 3,310 workers aged 55 or over, or who will reach age 55 by mid-1994, can be expected to be eligible for and to accept an early retirement package. CFM typically must pay 7 percent of a worker's annual salary into the Ministry of Finance pension fund. Any early retirement scheme, to be acceptable to the GRM, would require that CFM continue to make the pension fund contributions until the workers involved reach age 65.⁴

The current 35,000 or so workers in the CFM system may, by attrition and retirement, be further reduced to fewer than 31,000. Of these, some 10,000 are employed at the ports on a temporary contract basis, and about 4,000 are permanent and temporary employees of the North and South maintenance brigades, responsible for track maintenance and operation of the concrete

⁴ The early retirement scheme, while attractive in that it would probably be entirely voluntary, is considerably more expensive per worker (\$1,462) than the general severance plan contemplated at this project (\$607 per worker). For this reason, it will be subject to further intensive review and possible cancellation during Phase I of project component implementation.

sleeper factory and the quarries. These temporary workers can be let go without any provision for severance pay or future redeployment, while the permanent employees of the brigades are externally funded. This leaves approximately 16,500 rail and port workers potentially affected by workforce reductions resulting from CFM restructuring. As discussed in Annex G, the best estimate of future traffic and staffing needs indicates that the pool of workers to be assisted by the project is approximately 10,000, most of whom are unskilled or semi-skilled.

A number of possibilities are proposed to redeploy these remaining workers. They include

Privatization of non-railway operations In railway systems in other countries, many operations such as maintenance of way, workshops, and other infrastructure support functions, are contracted by the railway to private operators. Often these arrangements permit operations formerly owned by the railway and providing services only to the railway to develop other markets for their services. CFM, for example, currently operates two concrete sleeper factories, staffed by the maintenance brigades and employing more than 100 people each. If privatized or leased and encouraged to develop other markets and new products, these could become commercially viable enterprises employing more people than they do currently. These factories could, for example, produce concrete pipe, precast concrete slabs, and other products for which a large potential demand exists in road building, waterworks, and commercial, industrial, and residential construction. Quarries, currently producing ballast, could begin to provide aggregate for concrete, ballast for road construction, again potentially increasing employment. Railway workshops, if privatized, could perform a variety of machinery maintenance for which non-railway demand could be found as well as, with relatively modest investment, producing and marketing fabricated metal products.

These and other similar options will require detailed analysis, which short-term technical assistance will provide under the amended project. Consultants funded under the amended project will study these options in detail, analyzing potential railway and non-railway markets for the products and services to be offered by these enterprises, specifying the number of workers and the kinds of skills required, identifying potential private operators, structuring financial and managerial contract terms for privatization or lease, determining required levels and possible sources of new investment, determining training and technical assistance needs, and providing technical assistance and training as required.

The Maputo Port restructuring currently underway has already begun privatizing several port operations, including the coal and citrus terminals, through lease or management contract to private, commercial operators. In each case the proposed private operator has presented its estimated staffing requirement, and has been required under the terms of the agreement to employ at least 90 percent of this number from existing CFM employees. This, or a similar formula, could be applied in the privatization of railway assets and operations, but only to the extent that it does not interfere with the potential profitability of the privatized enterprise.

Agricultural assistance While it is probably not feasible to contemplate moving urban-based CFM workers to rural areas, whether through compulsion or inducements, considerable potential exists to enable many current maintenance-of-way workers, who are based in rural areas and already do subsistence farming, to become more efficient and productive farmers capable of supporting themselves entirely through agricultural work. A combination of the provision of better farm implements, extension services, and assistance in marketing of produce could be supported through existing programs funded by other donors, offering alternative employment for as many as 1,000 workers. The viability of such schemes may, however, be severely limited in many areas due to drought and war, and must be evaluated carefully. Furthermore, project assistance in these areas will be limited almost exclusively to the establishment of linkages between existing programs and CFM workers, with a possibility of some assistance being provided to other donors to expand existing programs to CFM staff.

Road building Several major road building projects are underway, or in planning stages, affecting most of the major transport routes in the country. These include projects funded by the United Nations Development Program (UNDP) and the World Bank. These projects have, however, been one of the main reemployment options for demobilized soldiers and for workers on the South African mines who have been repatriated due to employment cutbacks. As a result, the number of workers available for such projects exceeds the demand. While this may change, it is unlikely that road or other public works projects will provide reemployment for more than about 500 former CFM workers. These jobs are dependent on location, since they can employ only those ex-CFM workers who live close to the project site, and they are temporary, ending once the road is completed. However, as part of the proposed analysis of the economic, financial and social costs and benefits associated with closing the short lines or keeping them in operation, the project should undertake an analysis of the costs and benefits of building

new roads or rehabilitating existing ones to provide alternate transport routes, together with the numbers of former CFM workers who might be employed on road construction or rehabilitation in these areas. Also, to the extent that any new road-building or reconstruction projects are initiated in the context of a possible peace accord, particularly if funded by USAID or other donors, they could generate additional employment opportunities.

Other Private Sector Employment The project will also fund outplacement for ex-CFM employees to help them to find jobs with existing private sector firms. This component will also include assessing skills of individual workers and advising them on employment and training options.

- Small-Scale Mining Each Ministry operates a "Fundo de Fomento", a fund for support of small-scale activities in the area or industry with which it is concerned. While many of these funds are not very effective, the fund operated by the Ministry of Mines has granted concessions and provided funds and equipment to over 100 small-scale miners, mostly in Cabo Delgado and Manica Provinces. Significant potential exists for at least 100 ex-CFM employees, especially those who come from those provinces, to go into small-scale mining. The project will work with the Ministry of Mines Fund to assist those workers choosing such an option, and will provide technical assistance and training to the Fund's professional staff, and financial support, as required.

Road Transport Services and Other Small Enterprise Development In the areas served by the short lines, the scope may exist for former CFM employees to provide road transport services to replace freight and passenger services formerly provided by CFM trains. Passenger train service has almost completely been eliminated on the Beira Corridor, and private and cooperative bus, truck and minivan operators now offer cheaper, faster, and more profitable passenger service. Given the restructuring and privatization of the trucking industry currently being undertaken with USAID assistance, the scope exists for private operators to buy or lease trucks and to provide private trucking services. The amended RRSS project could supplement other donor programs, that presently provide loan guarantees or other financial support, in order to permit these programs to extend assistance to former CFM employees seeking to go into the private road transport business. The growth of private trucking could also provide opportunities for truck servicing and other support industries. The amended RRSS project, in the context of the closure of the short lines, will analyze potential employment and the requirements for financial and technical assistance associated with development of private trucking services in areas currently

served by the short lines, as well as with the development of road transport of passengers to replace passenger rail service on the main lines

In addition to road transport, such programs might be extended to any potentially viable enterprise proposed by retrenched CFM workers, subject to normal procedures in assessing and monitoring the progress of the proposed enterprise. As discussed in greater detail in Section 2.5.4, any possible credit schemes will be applied through existing donor programs with existing financial institutions, and only at competitive interest rates. The project may also provide assistance to other donors supporting training and management programs for the financial institutions selected, to improve their ability to monitor and assist these enterprises.

- Training In addition to initiatives to facilitate direct re-entry into the productive labor force there will be up to 1,500 in-country training scholarships available for redundant CFM employees aged below 50. Such scholarships will include training in vocational and trade skills as well as in general education in existing institutions.

While receiving training, employees will continue to be paid severance on a monthly basis until it is exhausted, and thereafter may receive a small allowance until the course is completed. Most of the funds provided for this training initiative will be in the form of institutional support to Mozambican training institutions, to help them to develop the curricula required, to recruit additional training staff as needed, and to purchase training materials.

2.4.4 Alternative Redeployment Plans for Capital Assets

The amended project is unlikely to involve extensive redeployment of assets independently of the personnel currently employed in use of those assets. The main assets likely to be divested by CFM are those, such as the workshops, which employ significant numbers of people in non-railway operations and which have significant potential for sale and operation as independent, private sector enterprises. Several such possibilities are described in Section 2.4.3, above. The value of most of the physical assets available for divestiture is less in the market value of machinery, plant and equipment, spare parts, and land and buildings, than in their potential value as functioning operations employing skilled or semi-skilled workers, and in their ability to produce products and services for which a significant market may exist, domestically and abroad.

If efforts are made to sell CFM's excess physical assets on a piecemeal basis, their value will be negligible. Much of the machinery in use in the workshops, for example, is at least 20 years old, and in many cases as much as 50 years old, and fully depreciated. The cost of transporting these machines to another location, and the cost of installation, would in many cases exceed the market value of the machines themselves. Their value will often depend on their integration into a functioning productive unit. For CFM to realize any value from their sale would require that the entire productive unit, including buildings and staff, be transferred to a private owner who would then need to invest additional funds to convert the unit to commercial production. Workshop buildings, and the land they occupy, may be significantly more valuable. Directly adjacent to the port, the Maputo and Beira workshop land and buildings could be the nucleus of a new industrial zone in which case their value could be substantial. Since private land ownership remains illegal in Mozambique, and only the most rudimentary real estate market exists, it is difficult to assess the value of CFM land and buildings. It is unlikely in the near term, even assuming that the law changes to permit broad private land ownership, that the land and buildings could be sold to private investors who would turn it to productive use immediately. Currently the only likely purchasers would be speculators, who would have no inclination to keep the workshops in operation and would thus release many hundreds of additional workers.

The likeliest scenario for disposal of these assets, and the one most likely to maintain productive employment for former CFM employees, is their lease or concession as part of an existing productive capacity. The project will provide for independent valuation of assets as part of the preparation of investment prospectuses. It is probable, however, that the value may be notional, and that they may be sold for a minimal amount to investors who commit themselves to providing the additional investment, as well as training, management and marketing assistance needed to keep the existing work force productively employed.

The disposal of other assets, such as housing owned by CFM, is equally problematic. Some 20 percent of permanent CFM employees live in houses owned and maintained by CFM. When they retire, workers receive from CFM sufficient building materials to build another house, the one they have occupied reverting to CFM. As part of its restructuring, CFM may no longer provide or maintain housing for its workers except in remote areas with no market alternatives, nor would it need to provide building materials to workers who retire. The amended project might design a program to sell CFM houses to the workers currently occupying them. This is likely to involve concessional payment terms, if not an outright giveaway, and may not generate a significant return to CFM. Since housing is currently an important part of some

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workers' compensation, any scheme to privatize housing may also need to study and revise existing salary structures to compensate workers for the loss of this important benefit

CFM also has valuable assets in its Railway Clubs, stadiums, dormitories, schools and clinics. Since, in some cases, these facilities are not critical to CFM's own operations, the solution will be the turn-over to the municipal government or sale to the private sector, if the asset has the potential to make a profit. If the turn-over is to be to the Government, e.g., for schools or medical facilities, USAID may allocate funds for minor repair and rehabilitation before they are transferred to their new owners.

CFM, furthermore, occupies a very valuable asset in its land holdings, especially in urban areas. At the Port of Maputo alone, CFM owns 400 to 500 hectares of unused land which, while it has no infrastructure such as roads, sewerage, electricity and water, is nonetheless potentially very valuable. Among other potential uses would be the creation of an industrial park, which could generate significant revenues through development and lease of land or industrial buildings, as well as contributing to the creation of thousands of jobs for unskilled and semi-skilled workers. British ODA, currently funding restructuring of the Port of Maputo, has recommended development of an EPZ on CFM land. While the time required to develop specifications, provide the infrastructure and attract the required private investment is likely to be more than the life of this project, the project will nonetheless follow closely any further analyses of industrial park or EPZ potential, and may possibly assist in implementation of related activities, if they fit closely the objective of reducing the size of CFM. (See Annex H for a calculation of potential returns from development of an industrial park, based on current construction costs and commercial/industrial rentals)

Given the ambiguities and frequent changes in the laws affecting use or transfer of land, CFM will have to submit proposals for all property transfers to the Interministerial Committee for the Restructuring of State Enterprises (CIRE), which in turn must obtain the Prime Minister's approval. The project, as well as analyzing the potential for redeployment of assets, will, where appropriate, assist CFM in preparing the necessary documentation required to obtain GRM approval.

2.5 Inputs

2.5.1 Severance and Other Payments

The project will provide for payment of early retirement incentives and severance pay for redundant employees equivalent to three months of salary for every two years of service. While several conduits for these payments could be used and will be examined, a likely option is for the Commercial Bank of

Mozambique (BCM), which coordinates all state pension payments and which has a widespread network of offices throughout the country, to be the channel through which severance and other payments are effected. The project may also use the People's Development Bank (BPD), which handles the payment of some pensions and which has branches throughout Mozambique. Before such payments are begun, however, further analysis of the BCM and BPD financial and management capacity to make the payments, as well as other possible options, will be required to confirm the PP team's finding that the present system is adequate.

2 5 2

Project Management

Institutional Identity Management of the amended project will be centered in a project management unit (PMU), to be located in, though not forming a direct part of, the Ministry of Transport. While the possibility of situating the PMU in CFM was carefully considered, it is believed that the potential for institutional conflicts of interest is greater there than in a GRM ministry.

Policy and Oversight The PMU will be overseen by a steering committee that will represent the different constituencies affected by CFM restructuring and retrenchment, and which will guide policy decisions and review progress of the project. At a minimum, the steering committee will consist of representatives of CFM, the CFM labor union, the Ministries of Finance, Transport, Labor, Commerce, and Construction and Water, USAID, the Chamber of Commerce, the Gabinete de Promocao de Investimento Estrangeiro (GPIE), the National Institute for the Development of Local Industry (IDIL), and the Technical Unit for the Restructuring of Enterprises (UTRE).

Personnel The PMU will consist of a Mozambican Project Director, a Mozambican Finance/Administration Manager, four field officers, one located in each of the four CFM administrative regions, a secretary and a driver, all of whom will be paid out of project funds during the project life. In addition, the project will provide four long-term advisors: 1) an enterprise development expert, 2) an employment/training specialist, 3) an employment and retrenchment specialist, and 4) a financial advisor.

Physical requirements While the Ministry of Transport will be requested to provide office space and telephone lines,⁵

⁵ The project has also budgeted for office space, in case it is found either that the MOT cannot provide the required space (particularly in light of upcoming demand from the IBRD's institution-building effort), or that for political reasons the

the project will provide funds for other needs, such as vehicles, a sufficient number of personal computers, printers and software, fax machine, photocopier, and office furniture. The project will also provide computer programming and management information system design as determined by the needs of the project.

2 5 3 Technical Assistance

Long-term Technical Assistance The project will provide one long-term expatriate advisor, skilled in enterprise development, credit, and investment/export development, to advise the project management unit for the four-year duration of the technical assistance component of the project. This advisor, who will work closely with the Mozambican Project Director, will coordinate the provision of USAID funds under the project, as well as technical assistance and training. This advisor will provide major technical input to the preparation of terms of reference for the studies, short-term technical assistance, and training to be provided under this project.

The project will also provide one long-term employment and retrenchment specialist to work closely with the CFM personnel department over the four years of the project technical assistance component, to identify workers to be retained and those to be dismissed, and to identify the best employment and training opportunities for the redundant workers.

The project will provide a third expatriate advisor, an employment and training specialist, who will work in the PMU and will coordinate the training and outplacement components of the project.

Finally, the project will provide a financial advisor primarily to ensure that the system of severance payments functions transparently and is audited regularly.

Each long-term advisor, together with his or her Mozambican counterpart, also to be hired by the project, will determine training needs for professional staff in local institutions and organizations, and will coordinate the design and delivery of such training, as required.

Short-term Technical Assistance The project will provide 40 person-months of short-term technical assistance for each of

project is better placed elsewhere

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the 3 years of the technical assistance phase of the project, divided into two principal components

- 1) enterprise development and investment feasibility studies, and the preparation of investment prospectuses
- 2) direct short-term technical assistance and training to
 - a) newly privatized enterprises, in the areas of marketing, production, personnel management and finance, and,
 - b) local institutions in the areas of project and credit evaluation, export and investment promotion, and training identification

2 5 4 Training

The project may fund training for workers and managers in newly privatized enterprises, as well as professional staff in local institutions that will play an important role in supporting new enterprises. Three major training components are envisaged

- 1) A "matching fund" for training in productive enterprises. This component is designed to provide workers with the training required to reorient them to productive commercial employment. Since it is expected that most such workers will continue to work in the same facilities in which they were employed by CFM, but under new, commercially-oriented ownership, it makes sense to provide them with on-the-job and other practical training in these new enterprises. It is also important that this not be a simple giveaway, but rather a means of reinforcing these enterprises' commitment to improving the skills of their workers. One way to ensure this is to provide training funds to match or supplement those funds allocated for training by the managers of these enterprises. The project may also provide assistance in determining training needs, designing appropriate training programs for implementation in these enterprises, and in identifying technicians or other experts most capable of providing the required training.
- 2) Training support to local institutions. A number of local institutions, including but not necessarily limited to GPIE, IDIL, the Banco Popular de Desenvolvimento, the Ministerial Development Funds, the Chamber of Commerce, and the Associação Industrial de Moçambique (AIMO), have an important role to play in providing credit and technical assistance, especially to small-scale enterprises. The project may, through

complementary grants to other donors' assistance programs, support these organizations, fund training for professional staff in these, and other appropriate organizations, in the areas of project evaluation, enterprise start-up assistance, bookkeeping, marketing, and other small business services for which the need is identified. This training may be conducted at universities and training institutions in Mozambique, other African countries, or the United States, as appropriate.

- 3) Direct vocational training The project may fund vocational training for ex-CFM employees who seek to develop skills that will help them eventually to find new jobs in the private sector. This training will take place in local, preferably private, training institutions and will be coordinated through the Direccao para a Formacao Profissional (DPFP), the national vocational training program.

2 5 5 Other Inputs

Small business credit While many of the productive enterprises will be funded by private domestic or foreign investors for whom access to financing is not a significant constraint, smaller enterprises employing smaller numbers of people will require loans for which they are unlikely to be able to provide sufficient collateral. Depending on the numbers of such enterprises identified, their financing needs, and the ability of the Mozambican financial infrastructure to meet those needs, the project may provide some additional funding to existing small business credit or credit guarantee schemes in cooperation with one or more domestic financial institutions and other donors, which will extend credit at competitive rates or credit guarantees to small, medium and micro-enterprises established as part of the CFM workforce retrenchment.

USAID has monitored the institutional capacity of the banking and credit systems over the past several years, and at present no financing in this area is warranted. Recent changes in the law, other donor activities in the sector, and possible changes following a peace accord, may lead to dramatic improvements over the next couple of years. The project will track the ability of local institutions to absorb and implement credit or credit guarantee programs, the cost to USAID of supporting such a program, and the likelihood that they will succeed. The project will pay special attention to existing credit or credit guarantee programs, one for small and medium-scale enterprises (SMEs) funded by the World Bank and operated through the commercial

banks, and one for micro-enterprises, also funded by the World Bank and operated through the Gabinete de Promocao do Emprego (GPE), as well as to existing programs operated by the BPD and the ministerial development funds. The project will not design or initiate a new credit program.

In addition, for those workers joining spun-off privatized enterprises, their severance package may be paid in a lump sum to purchase shares on a preferential basis in the new companies, as permitted by Mozambican law.

If a program appears feasible, the project will work with the relevant financial institutions to establish credit limits, operating procedures, evaluation criteria, and management controls aimed at maximizing the program's chances of success. The project will not, however, establish any independent programs.

3. IMPLEMENTATION PLAN

3.1 Institutional Arrangements

Project activities are to be implemented by a US institutional contractor under the supervision of the Ministry of Transport and in close collaboration with its Directorate of Finance and Investment. A semi-autonomous project management unit (PMU), staffed by local hire personnel and assisted by long-term advisors and short-term consultants, will be linked with the Ministry of Transport at both central and provincial levels, as well as with each of the CFM Directorates. This dual structure of project and ministerial personnel provides for both effective, responsive management of redeployment activities and ties to broader GRM sector and enterprise reform initiatives.

The project will provide technical assistance to CFM in support of downsizing and reorganization, it will also finance appropriate severance and pension-fund payments linked to the retrenchment of CFM staff. In addition, the PMU will administer, in close collaboration with the Ministry of Transportation, support for the reintegration of retrenched CFM personnel into alternative productive activities and the redeployment of ex-CFM capital assets for economically productive or publicly beneficial purposes. The PMU will arrange for external technical assistance and enter into local contracts for the implementation of these redeployment activities.

The contractor will hire local and expatriate personnel, establish a central office for the PMU within the Ministry of Transport in Maputo, and representation in the field for each of the lines undergoing downsizing and restructuring. Anticipated staffing for the PMU includes the following local hire personnel:

- a) 1 Project Director
- b) 1 Deputy Director for Finance and Administration
- c) 1 Deputy Director for Programs and Coordinator for CFM(S)
- d) 4 Field Coordinators (one each for CFM(C), CFM(N), CFM(Z) and one for Xa1-Xa1 and Inhambane)
- e) 3 Support staff (1 each secretary, bookkeeper, and driver)

At both central and provincial levels, PMU personnel will be twinned with Ministry of Transport personnel (directors and delegates), posted respectively to Maputo, Beira, Nampula, Quelimane, and Inhambane

The contractor will provide four long-term advisors to CFM and the PMU: one Personnel Analyst/Retrenchment Advisor, one Enterprise Development/Redeployment Advisor, one Employment Development and Training Advisor and one financial specialist. In addition, the contractor will provide short-term technical assistance as needed throughout project implementation in support of retrenchment, labor redeployment, establishment of spin-off enterprises, etc (see below)

The PMU will be governed by a Steering Committee which will establish policy, monitor implementation, and serve as a guiding and coordinating body at the level of central government. The Steering Committee will be the same as that for the MCRP, which includes representatives from the Ministries of Transport, Finance, and Labor, Planning, and Industry as well as representatives of CFM. In addition, it will coordinate the participation of other organizations such as the BCM, BPD (Peoples Development Bank), GPE (Bureau of Employment Promotion, Ministry of Labor), IDIL (National Institute for the Development of Local Industry, Ministry of Industry), DIFAP (Directorate of Vocational Training, Ministry of Labor), and the various sectoral small initiative promotion funds. Private sector representatives will also be consulted by the Steering Committee as reemployment and privatization activities warrant.

A significant aspect of PMU and technical assistance activities will be the facilitation of a process of project implementation which responds to the various, often contradictory, priorities and concerns of government, management, labor, employees, new investors, etc. Participation of these stakeholders in ongoing planning and implementation of CFM reorganization, retrenchment, and redeployment will increase the likelihood that the flexibility built into the project will be employed in the interest of responsive implementation.

The PMU will oversee and administer financial flows in support of redeployment assistance. The payment of severance to retrenched

workers will be monitored by PMU personnel. The PMU may recommend project support to specific programs financed by other donor programs, such as that for the People's Development Bank (PDB), for the support of a guarantee fund as well as for the establishment of targeted rolling funds for small enterprise finance, and for privatization of redeployed CFM functional units as appropriate.

The project and the PMU will avoid the creation of new programs, but will rather use project resources through existing channels to meet the needs of its target group. Training of retrenched workers, technical assistance in preparation of business plans and loan applications for micro-enterprises, vetting and approval of loans, delivery of agricultural assistance, management training etc will be implemented by existing programs such as DIFAP, IDIL/FFPI and CFE. The PMU will contract with them for the provision of specific services to retrenched CFM workers, it may consider assistance to increase the capacity of these local training and technical assistance institutions to meet the needs of ex-CFM personnel.

The PMU will also assist the government in negotiations with private sector investors regarding the terms of their purchases and leases of ex-CFM facilities. Project personnel will closely monitor the activities of investors, joint venture partners, etc., to ensure that the equity stakes of ex-railway personnel are protected, that commitments regarding employment by new enterprises of ex-CFM staff are kept, and that project-funded assistance is employed in the long-term interest of retrenched workers.

At the level of the provinces, Coordinating Commissions will be established on a similar basis to facilitate cross-sectoral collaboration in employment promotion and redeployment of capital assets. Local coordinating commissions will include provincial and district local government and grassroots organizations as well as the ministerial and sectoral representatives described above.

3.2 Implementation Workplan

This project component will be implemented over a four year period, with the TA team in Mozambique for three years, divided into the start-up period followed by two major phases, the preparation and testing over an 18-month period of a detailed plan for the reduction of staff and assets, followed by its implementation over a similar period. The project start-up to last about six months, will focus on the establishment of the PMU, development of guiding policies and implementation strategies, and fielding of long-term advisors. Detailed studies and analyses begun during this phase will provide the bases for CFM's downsizing and reorganization, assistance to retrenched

workers, and project activities in areas affected by line closures which will follow. Extensive consultation among stakeholders and policy-makers, as well as dialogue among coordinating institutions, will guide the decision-making which will be based on analytical studies.

Phase I, to last about 12 months, will focus on personnel retrenchment and support for ex-CFM workers to productively re-enter the workforce. During Phase I, a detailed program will be prepared for the redeployment of excess CFM staff. Aggressive early retirement, incentive packages for voluntary departure, and selective discretionary retrenchment will be employed to eliminate the least skilled and least productive members of the CFM workforce. During this phase, the extent and nature of training programs, credit programs, and asset/worker spin-offs will be defined.

The first phase will prepare a detailed program for actual downsizing based on detailed analyses of staffing requirements for each function and of the personnel currently employed by CFM. The programs may be tested on some workers on a voluntary basis.

Phase II, roughly from mid-1994 to the end of 1995, of project implementation will focus on shedding excess functions and facilities from CFM, in order to focus its structure and management on financially viable port and railway operations. Based on feasibility studies, plans will be developed and implemented for the spinning off, i.e. privatization to workers and/or other investors of auxiliary functions into the private sector. These spin-offs may produce some firms contracting wholly or mostly to provide services to CFM. They will also produce new enterprises which are engaged in production and service delivery for other markets, private and public, internal and export, as appropriate and feasible.

This second, shedding phase will also include the closure of CFM short lines. These short lines may be closed down, alternatively they may be privatized or spun-off in their own right, as joint ventures or autonomous enterprises operating in the private sector.

During Phase II, the PMU will provide technical assistance for such conversions and privatization, support for the redeployment of retrenched personnel, and for the conversion of unused capital assets for alternative public or private use. The privatization of auxiliary functions can be expected to further reduce the CFM workforce by between 500 and 1,500 people over the LOP.

3.3 Procurement Plan

This component, to begin in September, 1992, will include four major procurement elements (a) a direct A I D technical

assistance contract, (b) minor reconstruction of facilities, (c) the payment of severance pay, (d) enhancement of other donor programs in order to make such programs available to departing CFM employees

The technical assistance contract will follow A I D Handbook 14 competitive procedures under the direction of the Regional Contracting Officer based in Swaziland. USAID/Mozambique will prepare a PIO/T instructing the RCO to advertize the requirement. Interested companies will attend a pre-bid conference in Maputo and submit RFPs to the RCO. A USAID/Mozambique technical review panel will rank the technical proposals, and the RCO will negotiate with those in the competitive range. The contract will contain performance indicators specifying that the contractor will identify workers to be shed by CFM, prepare severance packages, and assist CFM to ensure that A I D funds for severance are properly disbursed. The firm, or joint venture of firms, selected will be required to have experience in workforce reduction, assets valuation and divestiture, business development, and credit schemes. At least 10 percent of the total technical assistance amount will be subcontracted to disadvantaged enterprises.

Minor reconstruction of facilities will include facelifts for existing buildings and repairs to some machinery, preparatory to spinning off. While the total value of these small projects will not exceed \$1,000,000, and no single project will be over \$100,000, USAID will consult the RCO and determine whether a contract with an A&E firm is advisable.

Payment of severance pay is the major cost element of the project, with at least \$10,000,000, and possibly more, to be used to pay workers' severance pay, through local cost financing. Project funds will not be used to pay pensions, annuities, retirement pay or adjusted service compensation for any person heretofore or hereafter serving in the armed forces. The contractor, in consultation with the USAID Controller, will develop a disbursement mechanism for these funds that meets A I D accountability requirements and is approved by the GRM and USAID.

With one exception, the commodity transactions planned for this component are estimated at under \$25,000. For these, USAID project management staff may arrange direct procurement by the USAID Executive Office through purchase orders or other A I D direct contracts, or, if the commodities are for CFM, procurement may take place following small value host country procurement rules. USAID may also request the assistance of the A I D /W commodities office for procurement actions that pose sourcing or specification difficulties to CFM. Finally, shelf items needed by the technical assistance team will be purchased directly by them.

Support to other donor programs While USAID will under no circumstances develop independent employment generation, credit, or training programs under this project, it is expected that the technical assistance team will forge linkages with existing programs in order to ensure access by departing CFM employees. In some cases, this may be furthered by an injection of A I D funds into such programs. Following Handbook 13 rules regarding Grants to Public International Organizations, USAID may provide grants to organizations such as UNDP, UNIDO, or the World Bank to achieve this.

Prior to committing funds for reconstruction, or in support of other donor programs, or even for severance pay, the Mission will ensure that the funding and other assistance allocated is sufficient to achieve the purposes of funding within the life of the project, and that cost estimates for such activities are reasonable, reasonably firm and supported by appropriate analysis and planning.

DFA Procurement Plan

Since this project is DFA-funded, Code 935 is the authorized procurement code. Therefore, no source/origin/nationality waivers will be required. However, as required by DOA 551, Section 5F, and the DFA Procurement Policy Recommendations and Africa Bureau Instructions dated April 4, 1988 (88 State 105351), the following procurement limitations apply to the project.

With respect to air transportation and travel, all such travel and transportation financed by A I D to and from the United States will be limited to U S flag carriers, subject to documented exceptions, which will be made sparingly. Because U S air carriers currently do not fly into southern Africa, non-U S carriers will be used for this leg of project-financed air travel and transportation.

With respect to ocean shipping, the Cargo Preference Act rules apply and at least 50% of the gross tonnage of all A I D - financed commodities shipped on ocean vessels will be shipped on U S flag commercial vessels if such are available at fair and reasonable rates.

With respect to motor vehicles, U S -manufactured vehicles cannot meet the needs of the project, because of required specifications (right-hand drive vehicles are required in Mozambique) and spare parts and maintenance are not available for the only U S vehicle manufactured in a right-hand drive model. If this situation should change, USAID will purchase U S vehicles under this project.

Participant training financed under the grant will be in accordance with Handbook .0, though third country participant training in Code 899 countries may be financed without the special approval of the Director, R&D/OIT

Long-term overseas training and long-term technical assistance will generally be U S -based

Finally, the procurement plan calls for U S procurement of goods and services to the maximum practicable extent

The technical assistance contractor will be required to maintain records, available to A I D , regarding the source and origin of commodities procured by the contractor under the A I D contract

A brief summary of this DFA procurement plan will be cabled to AFR/SA, and a copy of the cargo shipping plan sent to MS/OP/TRANS. These will be updated if significant changes occur during project implementation

The following is a chart showing source/origin/nationality and estimated values, in percentages and dollar amounts, of commodities, services and training to be financed under the project

Procurement Instrument	Responsible Agent	Estimated LOP Amount	% of LOP Total	Probable Source
Direct TA	RCO	6,150	28%	000
Contracts		882	4%	656
Grants to PVOs/PIOs	RCO/Mission	4,260	19%	899
Severance Payments	GRM/Mission	10,550	47%	656
Commodities	Mission/RCO	420	2%	935
TOTAL⁶		22,262	100%	

3 4 Audit, Monitoring and Evaluation Plan

The staff and asset redeployment component of RRSS will be included in the overall project evaluation plan, which is

⁶Excludes contingency

Source selection - see FAR 3 104 Do not disclose sensitive cost information

described in detail in the original project paper. All evaluations of the RRSS project, including the Malawi and Swaziland components, are being undertaken by a single contractor. In addition to those issues relating to other components and specified in the original project paper, first amendment, and contract for the evaluation services, the mid-term (end 1994) and final (1996) evaluations will examine the extent to which the CFM is being reduced to a manageable, potentially profitable, size. It will also examine the success of the project in assisting former CFM employees in finding new employment.

Annual audits will be undertaken of the GRM agency responsible for the disbursement of A I D funds for severance.

3.5 Conditions and Covenants

Funds authorized for this component are subject to the following additional conditions and covenants:

Condition Precedent to Disbursement for Technical Assistance Prior to any disbursement under the Grant for labor and asset redeployment technical assistance, except for technical assistance to USAID/Mozambique and CFM for project management, and prior to the issuance of any commitment documents for such activities, except as A I D may otherwise agree in writing, the Grantee shall furnish evidence that the Government has signed an Agreement with the International Bank for Reconstruction and Development, in form and substance satisfactory to A I D, for the Maputo Corridor Revitalization Project.

Condition Precedent to Disbursement for Severance Pay Prior to any disbursement under the Grant for severance pay, the Grantee shall furnish, in form and substance satisfactory to A I D, evidence that the Grantee has begun the implementation of an institutional restructuring program that, in A I D's opinion, will make the Maputo Corridor rail and port system profitable in the shortest reasonable time frame. In addition, prior to any disbursement for severance pay, pursuant to Section 7.2 or 7.3 of the Agreement, A I D and the Grantee will agree, through a Project Implementation Letter, on the procedures to be followed for acquiring and disbursing local currency.

Covenant The Grantee agrees to enact or promulgate all legislation or regulations, or amendments thereto, necessary to implement project activities, in particular, labor and

Source selection - see FAR 3.104 Do not disclose sensitive cost information

asset redeployment, and to do so promptly to ensure project activities are not delayed pending such legislative or regulatory changes

Covenant The Grantee will ensure that water, electricity, sewerage, telephones, and access roads are provided for the houses constructed under the project

4 COST ESTIMATE AND FINANCIAL PLAN

4.1 Project Costs

The following cost estimate is for the entire project. The \$25,000,000 added under this component will cover the line item "Labor and Assets Redeployment," a portion of "Project Management" and a portion of "Support to Senior Management."

Project Expenditures, \$000

	To end	CY	CY	Cys	Total
	CY1992	1993	1994	1995/96	
1 Locomotives					
a Technical Assistance	2 500	1 200	600		4 300
b Spare Parts Diesel CFM	4 800	750	750		6,300
c Spare Parts Steam	650				650
d Contract for Loco Rehab		3 000			3 000
e Contract for Component Rebuild		1 250	750		2 000
f Workshop tools & equipment	2 300	500	300		3 100
g New or Rebuilt Locomotives			10 000		10 000
h Maputo Diesel Shed Construction	300	1 000	1 000		2 300
i Beira Workshop Reconstruction	350				350
SUBTOTAL					32 000
2 Financial & Stores					
a Technical Assistance	3 000	3 500	2 300		8 800
b Support or TA	600	50	50		700
c Maputo House Construction	2 650				2 650
d Construction supervisor	85	45			130
SUBTOTAL					12 280
3 Labor & Assets Redeployment					
a LT Technical Assistance		1 250	250	1 250	3 750
b ST Technical Assistance		600	900	900	2 400
c Management office staff		250	250	250	750

	To end	CY	CY	CYs	Total
	CY1992	1993	1994	1995/96	
d Office costs (support staff)		20	20	20	60
e Office Rental		24	24	24	72
f Equipment		250	10	10	270
g Vehicles (10)		150			150
h Severance Pay			3,050	7,500	10,550
i Redeployment costs & support			1,580	2,680	4,260
SUBTOTAL					22,262
4 Project Management					
a Project Coordinator	530	145	150	160	985
b Project Mgr -- Redundancy	0	170	180	185	535
c Ass't Project Coordinator (2)	250	130	225	200	805
d Office Equipment Costs	140	40	40	30	250
e Office and security staff	150	53	55	58	316
f Air Transport (charter)	30	20	20	20	90
g Office Rent Rehab/Maintenance	115	35	35	35	220
h Communications other	50	25	25	25	125
i Pre-implementation Activities	110	0	0	0	110
SUBTOTAL					3,436
5 Support to Senior Management					
a Grant to IBRD	450	850	500		1,800
b U S LT Training			45	45	90
c U S ST Training	140	160	150	150	600
d Central Office Reconstruction		250			250
SUBTOTAL					2,740
6 Operational Improvements					
a Short-term TA	140	270	50		460
b Long-term TA	350	300	100		950
c Commodities		100			100
SUBTOTAL					1,510
7 Commodities not included above					
a Vehicles (for TA and office)	102	63	10	10	185
b Computers copier etc	100	40	40		180

Source selection - see FAR 3.104 Do not disclose sensitive cost information

	To end	CY	CY	CYs	Total
	CY1992	1993	1994	1995/96	
SUBTOTAL					365
8 Audit and evaluation					
a Evaluation (BN and Nathan)	100	50	100	50	300
b Technical Oversight	45	30	30	30	135
c Audit	30	50	75	75	230
SUBTOTAL					665
TOTAL	20 067	16 20	24 86	3 707	258
Contingency & Inflation					5 242
GRAND TOTAL					\$80 500

4 2 Methods of Implementation and Financing

4 2 1 Government of Mozambique

This project component requires the active support of several government entities other than CFM, including the Ministry of Transport, the Ministry of Labor, the Ministry of Finance, and possibly, the Council of Ministers. Its major thrust is the reduction of CFM to a manageable size directed at providing basic port and rail transport services. To this end, CFM will take all necessary legal and administrative steps to make the shedding of assets and staff possible. Physical plant will be transferred to other state agencies, sold to the private sector, or abandoned, staff will be paid severance in accordance with applicable labor law and will receive assistance in finding productive alternate employment through other GRM programs. While the project will provide technical assistance to prepare detailed plans, CFM's active support will be required in order to proceed with this component.

In addition, the financing of this project component is conditional on the successful implementation of the IBRD-financed Maputo Corridor Revitalization Program.

4 2 2 USAID

USAID/Mozambique has primary management responsibility for the entire project on behalf of A I D. Overall project

Source selection - see FAR 3 104. Do not disclose sensitive cost information.

USAID/Mozambique with the assistance of the Project Coordinator. In view of the size and complexity of the activities proposed and USAID's current and anticipated capacity to absorb additional implementation responsibilities, a four-person (three U S and one third country) PSC project management team will be funded under the project. One member of this team, the Project Manager for redundancy and redeployment, will be specifically responsible for the day-to-day management of the labor and assets redeployment component including inspections, monitoring of implementation progress, review of work plans, commodity procurement, and the preparation of various project reports. In addition, the two assistant project coordinators, one dealing with internal A I D matters and the other responsible for liaison with CFM, will cover the whole project. The third country national (TCN) Assistant Project Coordinator will be a civil/mechanical engineer, with a detailed understanding of the workings of CFM. The U S Assistant Project Coordinator will be responsible for much of the procurement under the project, and will be familiar with A I D procedures. USAID/Mozambique staff will be augmented from time to time as needed by A I D staff members and consultants based outside the country such as Legal Advisors, Controllers, Auditors, and Project, Commodity, and Program Officers.

4 3 Institutional Contractor

A contract with a U S firm will be executed in early 1993. The purpose of this contract is to reduce CFM staff to efficient levels, without increasing the ranks of the unemployed any more than is absolutely necessary, and to assist CFM to manage the payment of severance packages for up to 12,000 CFM employees. The main tasks of the team, which will provide four long-term personnel for three years each, will be to 1) define the workers to be released from CFM, 2) identify alternative employment for as many as possible (including credit, training, and possible CFM facilities that could be spun off), and 3) assist the GRM to implement the program of staff reduction.

The contract's performance indicators, on which substantial target payments will be based, will be stated in terms of workers removed from the CFM roles, workers reemployed in other productive areas, and assets successfully spun off.

5 TECHNICAL ANALYSES

5 1 Railroad Operations

5 1 1 Historical Trends in Performance

CFM, organized into three major regional directorates (CFM(N), CFM(C) and CFM(S)), has been experiencing continuous declines in its freight and passenger volumes. In 1973, prior to independence, CFM carried 20.7 million tons, which by 1991 had been reduced to one-third of its pre-independence traffic level. By 1991, the traffic had declined to 2.18 million tons.

The most dismal performance in the railroad sector was provided by CFM(S), whose traffic is in a descending spiral, from a 1981 level of 5.46 million tons to a low of 1.39 million tons in 1991. Unless prompt action is taken to reverse these trends, CFM(S) may no longer be financially viable.

While the insurgency in Mozambique has greatly contributed to the rapid decrease in traffic, it does not explain entirely the decline. The CFM railroads exhibit poor operating performances and compete with formidable rivals, such as the railroads of the Republic of South Africa. The loss and damage and pilferage on freight shipments through the CFM railroads is three to five times larger than in shipments through South Africa. In addition, shipments through the CFM ports have to bear high port demurrage costs and inventory costs because of port stays of 18 days and up, which greatly increase the distribution costs of shipping via Mozambique.

5 1 2 Labor Redundancy and Excess Capacity

Only a small proportion of the operating capacity of the CFM railroads is currently in use. Locomotive utilization rates, except at CFM(C), are extremely low when contrasted to neighboring countries. But the major excess capacity factor affecting financial viability is the redundancy in the CFM labor force.

CFM exhibits the largest labor force in sub-Saharan Africa in terms of railroad workers per track kilometer or workers per railroad traffic unit⁷. To analyze the degree of labor force redundancy at CFM, the railroad traffic activity for 1991 and projections for 1996 (or about three years after a possible peace prevails) and 2000 was used to estimate the labor force requirements of CFM under four manning standards, which in descending order of productivity are

- 1- the best labor productivity-related staffing standards by occupational category in sub-Saharan Africa, excepting TransNamib and Spoornet, the two most productive railroads,

⁷Traffic Units = Ton-Kilometers + Passenger Kilometers

- 2- a high standard of labor productivity corresponding to the second best staffing standard for a variety of occupational categories,
- 3- a medium labor productivity standard, corresponding to the median values of productivity by occupational category among the sub-Saharan Africa railroads, and
- 4- the worst labor productivity standards in the sub-Saharan African region, excepting the CFM railroads

The best standard is probably achievable only under the master lease privatization option. The high productivity standard may be achievable under the other restructuring options that CFM is considering. But achieving the high productivity standard by 1996 is going to require considerable investments in equipment and technology and a massive retraining program to raise the labor productivity of the CFM employees. In order to make a profit by the year 2000, CFM must reach the high productivity standard by 1994/95 and proceed to an even higher standard shortly thereafter. If CFM is unable to reach these performance goals, then the railroad will not turn a profit on operating costs alone for at least a decade.

Application of the best labor productivity standard results in a requirement for 1,816 CFM workers in 1991, 2,373 in 1996 and 2,855 workers in 2000. Corresponding figures for the high productivity standard are 3,467 CFM workers in 1991, 5,132 in 1996 and 6,640 workers in 2000. Annex E presents more detail on the application of the productivity standards to the CFM labor force.

5.1.3

Competition and Demand Projections

The analysis of the total distribution costs of shipping via CFM versus its rail competitors in each corridor revealed that, in spite of their high loss and damage and pilferage costs, and their long delays (18 days) at port, two CFM corridors are able to compete effectively for international freight traffic. CFM(N) is the least cost railroad for serving Malawi and CFM(C) is the least cost railroad for serving Zimbabwe and Zambia. However, that is not the case of CFM(S) which faces superior competition from the railroads of South Africa. While the rail tariffs of CFM(S) are lower than its competitors, because of its shorter distances to port, the long delays at port and the loss and damage and pilferage at both railroad and ports overcome the CFM's distance advantage, so that CFM is the highest total distribution cost competitor for rail shipments from Swaziland and South Africa. However, if port delays at Maputo could be reduced to 7-11 days and loss and damage and pilferage are controlled through a systematic cargo security program at both ports and railroad, then CFM(S) would emerge as the least cost

rail competitor in its hinterland and recover the traffic lost in competition to South Africa

The year 2000 traffic projections for the CFM railroads are estimated as 792 thousand tons for CFM(N), 2,957 thousand tons for CFM(C) and 4,904 thousand tons for CFM(S). The projections for the first two railroads are lower than the projections developed in other studies. The CFM(S) traffic projection is within the range of projections developed by other studies. The projections developed in this study assume that a cargo security program will be started by the CFM(S) railroad and by the port of Maputo. In addition, it is assumed that port delays at Maputo will be decreased from the current 18 days average to competitive levels (7-11 days).

5 1 4 CFM's Financial Viability

The analysis of financial viability presented in Annex E shows the precarious financial position of the CFM railroads. By 1996, CFM will need to shed 7,396 workers to avoid cash flow losses. But by year 2000, its financial position will change through cost containment and reductions in work force, so that its cash flow position will reverse to positive. CFM(S) will need a larger proportional staff reduction of at least 4,086 workers to avoid a serious cash flow deficit by 1996, but also by 2000 it should be enjoying a positive cash flow, through a combination of manpower reductions and cost containment.

5 1 5 Other Rail Operation Considerations

In addition to the manpower reduction program, several other important operational improvements should be considered to improve the competitive position of CFM. The most important is the cargo security program which is urgent. The cargo security systems should include both rail and port facilities and operations. Attempts to run express and unit/block trains in CFM(S) should be encouraged and track investments financed through donors. Rehabilitation of the freight car fleet is in order, bringing into the fleet more modern car design and technology to serve specialized cargo, such as sugar. Port investments will have to be coordinated with the introduction of new freight car technology to insure compatibility.

5 2 CFM Capital Assets

Reliability of Data There has never been a reliable financial accounting of CFM physical assets, nor even a detailed listing of those assets. In 1991 ACL Audit, a French affiliate of Coopers & Lybrand International, submitted to CFM their report developing a balance sheet as of January 1, 1989, for the purpose of establishing a starting balance for the installation of a new

accounting system with USAID assistance. ACL did not conduct any inventory of CFM physical assets, nor were their figures based on any such previous inventory. ACL's presentation stated clearly that their consolidated balances for each CFM Directorate were based solely on existing balances used by CFM, and were arrived at by adding and subtracting new capital acquisitions, debts and other payments that could reliably be identified. ACL further pointed out that although serious doubts persisted as to the reliability of their figures, they were the best that could be obtained under the circumstances.

The various port restructuring projects that have taken place with donor assistance have enabled CFM to develop a more or less reliable listing of port equipment. Similarly, the donor-funded rail projects have resulted in fairly accurate listings of tractive and rolling stock. Even in these cases, however, no reliable assessment of the value of these assets has ever been performed.

Methods of Assessing Value As to other physical assets, such as land, buildings, workshop machinery, and housing, even the vaguest physical inventory is unavailable. Louis Berger, currently developing the CFM accounting system with USAID funding, has estimated that it would require at least 40 person-months to conduct a rough physical inventory of CFM assets. The valuation of these assets, assuming a value could be determined, would take even longer.

Further difficulties in determining values result from ambiguities in existing property law, the relatively underdeveloped state of any property market in Mozambique, and the likelihood that only a few potential buyers could be found for any property to be sold. If, for example, a chartered surveyor were to value CFM's workshop machinery, there is no guarantee that the machinery could be sold for that amount, nor that such a sale, if possible, would represent the best possible use of the machinery, given the need to employ the workers currently operating those machines.

The ACL report showed the total consolidated assets of CFM at \$135 million, of which buildings represent \$34 million, equipment \$16 million, land \$357 thousand, current investments \$18 million, and other fixed assets about \$1 million. These are purely notional values, based on depreciated book value of assets, many of which were acquired several decades ago. The only reliable way, in fact, to establish any real value once a physical inventory has been conducted, will be in negotiations with potential buyers, and the value will be based on the potential returns from private commercial use rather than on purchase cost.

Also, given that CFM's and the GRM's principal objective in disposing of these assets is to ensure productive employment of

redundant CFM workers, negotiations for their sale are certain to include provisions for continued employment of a certain percentage of the workers currently employed, as well as undertakings by the purchaser to invest the amounts required to convert them to productive commercial use. It is therefore likely that many CFM assets, if sold subject to these provisions, will be sold for nominal amounts if not transferred virtually gratis.

Implications for Project Design While it is beyond the scope of this project amendment to conduct a comprehensive physical inventory and valuation of CFM assets, a necessary part of developing alternative redeployment schemes for excess workers and assets will be to develop project prospectuses for potential private investors. These prospectuses will naturally include a listing of the assets to be transferred, determination of additional investment required, and a proposed price to the investor of acquiring the assets involved.

The project amendment includes 40 person-months per year over a four-year period to study investment possibilities and to prepare investment prospectuses. It is likely that some 25 percent of this effort will involve physical asset inventory and valuation, at an estimated cost of \$150 thousand per year.

Housing Privatization In addition to its productive assets, CFM owns a large number of houses occupied by CFM employees. Any provision for privatization of CFM housing stock through transfer or sale to CFM workers will involve, at a minimum, identification of the houses currently belonging to CFM together with the workers now in occupation, and development of a pricing and financing scheme based on both market value and the ability of the houses' occupants to pay for them.

Some 60 percent of CFM's permanent employees at or above salary grade 7, live in CFM housing, meaning that CFM owns between 3,000 and 4,000 housing units. Housing is one of the major employment benefits offered by CFM. The average annual compensation of CFM workers in these grades is about \$1,000, which includes direct salary of \$700, fringe benefits, and overheads. Of this total amount, however, an estimated 20 percent, or \$200, is the imputed value of the housing provided. In addition, the market rental of comparable state-owned housing (excluding any key money paid) is about \$25 per year, indicating an average value per CFM house of about \$2200. CFM's housing stock is therefore worth somewhere between \$6.6 million and \$9 million. The portion of this amount that CFM can actually realize through sale of the houses to their occupants will depend on the programs developed for divestiture of housing. The project will analyze the various housing privatization options in detail, taking account of both CFM's interest in recouping this value as quickly as possible, and the

social issues involved in trying to ensure that as many current and former CFM workers as possible are able to buy their homes

Land CFM occupies extensive land holdings not only along the rights of way but in core urban areas where the demand for land is high. While Mozambican law virtually prohibits the sale of land, there are many possible arrangements under which land could be developed and used by the private sector. As an example, CFM owns nearly 500 hectares of unused land in Maputo Port, for which a wide range of industrial uses could be found. Various options for development of this land exist, including the establishment by CFM of a separate land development company, and lease, concession or management contracting to a private operator who would provide basic infrastructure (roads, water, electricity, sewerage) and construct industrial buildings which could then be rented, or developed on a turnkey basis for CFM, generating a significant return to CFM. For example, the cost to develop a 10-hectare industrial park, containing 20 to 30 warehouse/factory buildings would cost about \$8 million, the exact amount depending on site servicing requirements and building size and design. Rental of these buildings could bring some \$150,000 in monthly revenues, generating an annual real return of some 9.5 percent and contributing to industrial development in the country (See Annex H, Figure 1)

5.3 Investment Possibilities

5.3.1 Possibility of Private Operation of CFM Activities and Holdings

A Forms of Privatization

Several different types of private operation of CFM activities are possible, distinguished largely by the degree to which they are essential to CFM's core railway operations. Each of the principal activities is discussed in turn.

Privatization of Essential Railway Operations Apart from the core traffic operations, CFM performs many activities, including tractive and rolling stock maintenance and maintenance of way, that are essential to continued rail operations. To the extent that any such operations are turned over to commercially-oriented, private management, they will take with them workers that do not form part of the CFM labor surplus, as well as some that do.

For example, CFM currently employs 3,130 workshop engineers and technicians. This number includes entire workshop areas, such as carpentry, that CFM does not need, their main function being to maintain and build furniture for CFM houses and offices. Other services, such as locomotive and rolling stock repair and

maintenance, will be required by CFM, whether they are provided by CFM-owned operations or private contractors. The high standard labor requirements indicate that only 748 of this number are needed for CFM operations. If the workshops were to be privatized entirely, then this core number would continue to be employed under the private management, as well as an estimated 550 additional workers who would be required by expansion into non-CFM operations.

While it is unlikely that the entire workshop facilities would be privatized, certain components, while essential to CFM, also have significant commercial potential as well, and could be privatized, leased, or operated under a management contract by a private company possessing the ability to develop commercial production and markets. One example might be the wagon repair shop at Beira, which has some of the machinery and technical skills required to manufacture corrugated steel roofing, containers, and other fabricated metal products for domestic and export markets. Another such example might be the foundry, which currently produces castings for steam locomotives, but which could also manufacture valves, pump parts, plumbing fittings, manhole covers, and many other products. In each of these cases, these operations could end up employing more people than they do currently, as they develop the non-CFM side of their business.

Privatization could take several forms, including lease or concession⁸ of facilities by CFM to a private operator and joint ventures between CFM and a private operator. In each case, the terms of the agreement will ensure that existing CFM employees are employed in the reorganized operations. Financial incentives provided by the project will also ensure this, providing, on average, US\$700 in investment funds for each former CFM worker employed, consisting of the severance pay they are entitled to, but which will be used instead for the purchase of employee shares in the new enterprise. These funds, in addition to creating commitment to and ownership in the new ventures on the part of the employees, will also help ensure that the enterprises are adequately capitalized.

These newly-privatized enterprises will, in addition, receive training matching funds amounting to some \$500 per worker, which will be paid only up to the amount that the new employer pay for worker training. Such training could include classroom or vocational school training, as well as on-the-job, employer provided training or the cost of transport and lodging for

⁸ Portuguese and Mozambican law distinguishes between a lease and a concession, a concession retaining greater state control than a lease. To the extent possible, leaseholds of CFM assets as the basis for the productive enterprises is preferable, but a formula based on concessions can also prove feasible.

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employees to do training internships at a parent company in Mozambique or abroad

Privatization of non-essential Operations Facilities and operations such as carpentry shops have no place in CFM, particularly as privatization of CFM housing stock is contemplated. Privatized carpentry shops, while competing for CFM business, will develop other markets, both domestic and export. If successful, employment in such facilities could increase substantially above current levels.

B Privatization Costs, Benefits and Funding Sources

A general rule of thumb for the development of labor-intensive industries in developing countries is that investment of about \$2500 in fixed assets and working capital is required for each worker employed. While this figure varies somewhat by industry and level of automation, it is useful as a guide to the approximate costs involved. This figure assumes that the investor is leasing factory space rather than constructing his own factory building, in which case the cost is higher.

It is probable that most CFM facilities, if privatized, would require some renovation of basic infrastructure. Buildings, power and water supplies, lighting, and office space may all need improvements and repairs, the cost of which is difficult to calculate. At the same time, however, CFM facilities have a great deal of usable equipment, which may reduce the private operators' required investment in plant and equipment.

Employing the estimated 550 CFM employees likely to be qualified for employment in a newly-privatized company will therefore require new capital investment of about \$1.4 million. Of this amount, the project will contribute about \$660,000 in employees share purchase in lieu of severance, and in training matching funds.

As a result of this assistance, private operators of CFM facilities will be required to contribute a minimum of 25 percent of the total investment required, an amount sufficient to ensure the commitment of the new operator without imposing too onerous a financial burden.

Lease terms for use of CFM facilities will be negotiated, and will depend on the size and quality of the facility to be leased, the financial resources of the operator, and the number of people to be employed. While CFM will seek to obtain commercial rents where feasible, in certain cases it may accept significantly lower rates.

Apart from the obvious benefit this program will generate in the form of jobs for former CFM employees, it will attract at least

\$600,000, and quite possibly a significantly higher amount in new direct investment (See Annex H for an analysis of the costs, benefits and returns from the project)

5 3 2 Development of Industrial Parks

CFM is one of the largest land-owners in Mozambique, with nearly 500 hectares of unused space in the Port of Maputo alone. Possible uses of this land include the development of industrial parks by CFM by 1) contracting with a private land developer to provide infrastructure and services for industrial plots or to build warehouses and factory shells for rent, 2) leasing the land to a private developer who would service, build and lease, or 3) forming a joint venture with a private developer to carry out similar activities.

5 3 3 Implications of Divestiture on Master Lease Scenario

Divestiture of CFM holdings will affect the proposed master lease of CFM(S) rail operations only insofar as questions may arise as to what is to be included in the master lease and what will fall outside the scope of that lease. Under one possible scenario, all "productive" CFM(S) railway assets will be leased, with the lessee then possibly subleasing certain portions of the operations to other private companies. This need have no serious implications for the planned redeployment of assets or staff, except to the extent that sublessees be required to make the same undertakings with respect to employment, training, compensation and other issues as would be the case if CFM were to lease those facilities directly.

5 3 4 Market Potential of Divested Operations

It is difficult to determine the precise market potential of the operations divested. A great deal will depend on developments in the political and economic environment in Mozambique. Consequently, the projections made for the performance of divested enterprises are modest, and assume only that they are able to break even. Modest development of export revenues is projected, and domestic sales are simply expected to grow sufficiently to replace lost CFM revenues (calculated on the basis of direct labor and allocated overhead).

The likely scenario, however, is that these enterprises will perform much better than projected. For even one or two of them to penetrate export markets could mean substantial revenues and the potential for employment of additional staff. Many of the operations likely to be oriented more towards domestic markets can produce an extremely wide range of basic products (building materials and furniture, for example) for which local demand is high given that these enterprises will have modest capital.

requirements, and will receive training, management and financial support, they should be able to produce products of a quality and at a price that will ensure their survival

Mozambique has several advantages that could translate into significant export market penetration. These include 1) membership of the Lomé Convention-ACP countries, granting it duty-free status or preferential tariffs, and quota-free access for its exports to the EEC, 2) membership in the Preferential Trade Area (PTA) and SADCC, granting it preferential access to several Southern African countries, 3) a coastal location, giving it an advantage in competing with landlocked countries for which inland transport is a significant constraint, and 4) cheaper labor than most other African countries, rendering it competitive even with low-cost Asian countries such as Sri Lanka, Bangladesh, Burma and Vietnam

Because of its privileged position with respect to the EEC, it is expected that most export development efforts will be targeted at European countries

5 3 5 Capital Requirements of Divested Operations

As it is difficult to estimate the market potential of the operations without conducting a full market study, so it is hard to quantify the capital requirements. Based on a very rough rule of thumb that labor-intensive manufacturing or processing operations in developing countries are likely to require approximately \$2,500 in capital investment in fixed assets and working capital per employee, then on the basis of an estimated 550 people to be employed in the divested operation the total capital requirement is about \$1.4 million. Of this, the new operators will be expected to contribute at least 25 percent, or \$350,000, the severance pay and training matching funds will contribute \$660,000, or 47 percent, and the remainder, \$390,000 or 28 percent, may come through grants to other donors for small business credits or other assistance. In addition, short-term technical assistance will be provided by the project to conduct feasibility and market studies, and to provide management, production, marketing and financial management advice to the new enterprises

5 3 6 Implications for Project Design

As discussed in detail in Annex G, the divested CFM railway operations are expected to generate employment for some 550 people, most of them skilled or semi-skilled. To the extent possible these enterprises will seek to develop export and domestic markets, and to generate employment opportunities for greater numbers than initially planned

5 4 Social Soundness

5 4 1 Introduction

The activities proposed under the RRSS Project Amendment focusing on workforce retrenchment and redeployment of capital assets have significant social and political implications. By drastically cutting the number of workers employed by one of Mozambique's largest employers, project-supported sector reform activities will not only cause hardship for the families of retrenched workers but may also exacerbate more general socio-economic tensions resulting from widespread, chronically low purchasing power and unemployment. By eliminating domestic rail lines in up to three Mozambican provinces, important transport links to rural areas will be lost. Loss of transport access and of traditionally important infrastructure can be expected, at least initially, to cause contraction of already fragile rural-regional economies.

In order to mitigate some of these social and economic hardships, a sizable proportion of project resources will be expended on activities to assist retrenched workers to reenter the workforce, to make productive use of redeployed CFM capital assets, and to support the development of alternative transport arrangements in areas where line closures are to take place.

5 4 2 Background

The policies which the project's activities reflect are a response to the changing conditions of transport in Southern Africa and to the changing role of the state in Mozambique's domestic economy. In order to understand the social and political consequences of dramatic changes in CFM staffing and organization, some background on the role of Mozambican railways in the wider society and economy is essential.

CFM has been one of the largest and most prominent employing organizations in Mozambique for almost one hundred years. It played a prominent role in the economic and social history of the country and in the southern Africa region, at present its importance as a symbol is at least as notable as its role as an employer. CFM, and its prominently placed civic facilities such as social clubs and stadiums, are considered a part of the *patrimonia nacional*, they are central to public life in most Mozambican cities. Thus railway reform in Mozambique has not only instrumental but political-cultural implications.

Changes in the role of CFM reflect broader changes in the economy of Mozambique and of the region. Since at least the 1960's, road transport has been competing with rail for internal traffic in many areas, regional development in the 70's reflected the expansion of Mozambique's road system and so dramatically

increased integration of areas beyond the railway's influence into the national economy. The domestic transport role of CFM has decreased in many regions as the road network has expanded.

While the SADCC transport strategy of diversification away from dependence on South African ports made Mozambican rail links politically important during the 1980's, regional developments are diminishing the reluctance of some shippers to use South African facilities. In addition, disruption of CFM traffic by RENAMO has reduced the reliability of all three international lines, a situation which remains serious only on the Ressano Garcia and, to a much lesser extent, Nacala lines. Finally, the construction of new port facilities in Richards Bay has significantly reduced South African reliance on Maputo and increased competition for regional traffic faced by the Maputo Corridor lines.

In addition to these changes in the demand for CFM's rail services, far-reaching policy change within Mozambique has drastically altered the institutional context in which transport is to be supplied. The severe fiscal constraint under which the GRM operates make the level of subsidies which CFM has required in recent years unsustainable. CFM, because of its prominence and the scale of its losses, has become an obvious target for the market-oriented reforms which are a linchpin of Mozambique's economic liberalization program.

The reduction of public subsidies and the withdrawal of state protection within the transport sector make CFM an increasingly unviable enterprise. The necessity of retrenchment, of reorganization, and of management and ownership restructuring in CFM are all a direct result of the change in the broader political economy of Mozambique. Structural adjustment and the withdrawal of the state from domination of the economy are the forces which drive cutbacks in CFM. The retrenchment of CFM employees, the closure of unviable CFM lines and services, and the prospective privatization of CFM auxiliary functions are therefore the consequences of economic liberalization processes which transcend the specifics of railway reform.

Project activities which facilitate the redeployment of workers and capital assets "liberated" by these retrenchments, closures and privatizations are in fact efforts to ameliorate the adverse social effects of the organizational transitions precipitated by sectoral adjustment. A large proportion of project resources will be employed for precisely this purpose, while the project goal is to increase the viability of the railway, its activities in large part reflect the recognition that significant hardship for affected individuals and communities may be caused in pursuit of that efficiency goal.

Thus the primary social aim of project intervention is the reduction in hardship caused by restructuring and reform in CFM. This objective is to be pursued by assisting ex-CFM workers in finding alternative employment during the project period. While it is hoped that a significant number of the workers leaving CFM will ultimately find employment in activities where their contribution is more valuable, and so better rewarded, than their work for the railway, the first order social goal is to leave retrenched workers no worse off than they have been as underpaid workers in an afflicted and struggling public enterprise.

The following sections will explore the social context and consequences of large-scale worker retrenchment, CFM reorganization and the privatization of auxiliary services, and the closure of CFM's domestic short lines.

5 4 3 Retrenchment of CFM Workers

The release of over 10,000 state-enterprise employees into the private workforce is unprecedented in Mozambique. At the same time, retrenchment of CFM employees is just one part of a widening process of state-industrial sector reorganization, privatization, and contraction which will undoubtedly result in ongoing retrenchments.

The impending entry of ex-CFM workers into the job market will come at a time of increasing competition in an extremely weak labor demand setting. While modest output growth, especially in urban and export oriented enterprise, has taken place in 1989-92, most of this has been based on increased utilization of existing productive capacity, leading to relatively little growth in employment. The exception to this pattern seems to be in construction, while specific data are not available this sector appears to be one of the few, alongside urban services and commerce, which are creating new jobs.

At the same time, ex-CFM workers will be facing competition from other newly unemployed groups. The return of thousands of Mozambican miners from South Africa has continued since the mid-1980's. Thousands of "guest workers" from the former German Democratic Republic have been repatriated over the last two years. Recent reports indicate that several thousand more Mozambicans may be repatriated from Cuba by the end of 1992.

Potentially dwarfing all these entries into the local labor market are the movements which will accompany the end of the war. Tens of thousands of military personnel are expected to be demobilized as the Mozambican peace process accelerates. Several million *deslocados* and refugees will be on the move, seeking a return to normal, productive life. No one can predict how many of these *retornados* will come to urban areas looking for formal sector jobs.

Each of these groups has expectations of employment, many also expect to be supported by donor-funded programs to assist their integration into productive private life. Retrenchment and redeployment of CFM workers, even with USAID project support, will take place in a challenging environment--a slow-growth, flooded, competitive low-wage labor market.

At the same time, the various roles which CFM employment plays in the lives of its employees must be considered. The loss of salary may in fact be one of the least significant impacts of retrenchment on CFM workers and their households. In the first place, non-salary benefits to CFM employment are significant. Housing is provided to higher level employees, family size allowances, access to preferential and subsidized health care, transport and training allowances, and social facilities are available to all. What has been until now lifetime job security and access to a civil service pension are additional rewards associated with CFM employment. These tangible non-salary benefits may in many cases be more valuable to workers than their pay packet.

In addition, the intangible value of CFM employment appears quite important to railway workers. The long tradition of CFM's centrality in the development of Mozambique has historically made it a prestigious place to work. Although this prestige may have eroded during recent years as CFM has faced well-known operational and financial problems, nevertheless, the sense of identification with CFM's nation-building mission is evident among long-term personnel. Many railway families go back several generations, loss of employment will constitute a loss of identity for many workers. Another intangible benefit of CFM employment may be the linking of individuals and households to the complex systems of reciprocities, often organized along kinship and ethnic lines, which are known to be important coping mechanisms across Africa. These general benefits above and beyond remuneration which workers link to being employed, add value to the specific sentiments associated with working for CFM.

While it is impossible to compare these intangible benefits of CFM employment to the wages received by workers, and difficult to quantify tangible non-salary benefits alongside direct payments, the impacts of their loss on retrenched CFM workers must be considered when discussing the social impacts of retrenchment. It may otherwise be difficult to explain the reluctance of workers to leave low-paying railway jobs.

This having been said, it is also true the salaries being paid to CFM workers, especially the lower skilled and less educated who will comprise the majority of retrenched personnel, are extremely low. Based on recent research on the subsistence costs of life in Maputo, monthly expenditure of 20,000-30,000 Mt per capita places a household in the category "absolutely poor but not

destitute"⁹ The same study shows an average household size of seven. Thus approximately MT 150,000-200,000 income per month is required to move the average household beyond poverty, i.e., to supply its basic needs for food, housing and medical care.

Grade III CFM workers, the bulk of whom are low skill way maintenance and operations staff, are currently paid MT 68,000 per month--which amounts to poverty wages for a household of only three persons. The households of these workers are clearly relying on other sources of income for an important part of their monthly expenditures. The role of the (usually male) family member who works for CFM may be important more in terms of the ancillary benefits derived from CFM employment (discussed above) than the salary he or she receives.

This fact has several implications. First, because CFM wages are only a part of household income, and perhaps not the largest part, retrenched workers may in fact be in a position to invest time in training and to undertake risky ventures which will provide no or little short term income for subsistence. If other household income and coping mechanisms remain intact after retrenchment, longer term income building options may be accessible and viable for retrenched workers.

Second, the extremely low purchasing power of most CFM salaries may make the project's severance and training or available credit packages attractive to a significant number of low-level workers. In large part the appeal of departure benefits depends not only on present trade-offs but on the expectation of workers that CFM salaries will improve and the important benefits such as pensions will be available in the future, to the extent that the overall viability of CFM remains in doubt, the retrenchment package may provide a powerful incentive for voluntary early departure by railway workers.

Finally, CFM worker households may already be engaged in small-scale private sector activities which could provide the basis for livelihood after retrenchment. As it is typically the woman household-head who is engaged in activities such as petty trade, food preparation, etc., which supplement wage income¹⁰, the project will consider opening up some post-retrenchment assistance components to female members of retrenched worker households. In this way project assistance might be seen as a

⁹ B. Schubert (1992) Increasing the Food Security of Destitute Households in the Cities of Mozambique Report prepared for GAPVU by Team Consult Berlin

¹⁰ P. Little and I. B. Lundin de Coloane (1992) Petty Trade and Household Survival Strategies in the Peri-Urban Area of Maputo, Mozambique, Report prepared for USAID/Mozambique

way of strengthening the household's income security rather than simply finding employment for CFM workers

All this having been said, the possibility that workers will actively resist any large-scale retrenchment program certainly exists. Port and railway workers have a long tradition of activism, stretching back to turn of the century strikes by stevedores against the Portuguese. While union leadership is in close touch with CFM management, and seems to be in a position to participate in the formulation and implementation of retrenchment policies which are least detrimental to the interests of its members, it is unclear how influential leadership will be if faced with an angry rank-and-file committed to resisting retrenchment and reorganization. The possibility of sabotage and even violence in response to threatened retrenchment is real.

Although GRM and USAID efforts to develop adequate pension, severance, and redeployment assistance packages are good faith efforts to ease the impact of retrenchment on workers, the fragile political environment in which retrenchment will take place, coupled with the possibility of a politically controversial lease of CFM(S) to a foreign (possibly South African or Portuguese) firm guided by World Bank assistance, may result in public contention or even conflict. The role of USAID as a supporter of retrenchment and reorganization could involve US assistance policy in these controversies.

In this respect, the importance of Mozambican "ownership" of the CFM reorganization and retrenchment program may be crucial. Governmental commitment, from the highest level, will likely be necessary in order to ensure that these difficult changes take place. Project implementation, especially sequencing and timing, will have to be sensitive to the changing political moment in Mozambique, otherwise the ability of project staff to proceed with the retrenchment program may be jeopardized and the revitalization of CFM threatened.

5 4 4 Women in Development (WID) Considerations

The direct beneficiaries of project out-placement and severance will be CFM employees, the vast majority of whom are men. Their families, however, will be immediately affected by changes in their employment status, particularly given that in many cases the households of employees already must supplement CFM wages with other activities. The Scope of Work for the technical assistance contract will require that the team take into consideration the effects of project activities, particularly in the area of redeployment assistance, on the wives and children of the workers. To the extent possible, activities in support of redeployment that take the family into consideration will be favored over those that do not.

5 4 5 Short-Line Closures

The contemplated closures of the Zambezia, Inhambane and Xai-Xai lines would have significant impact on the economic and social conditions of the provinces in which they are located. Some of these impacts are discussed in more detail in Annex F, which is concerned entirely with issues related to short-line closures. Below, the general concerns relating to the social impact of short line closures are discussed.

Firstly, the loss of direct employment brought on by short-line closure will have analogous consequences on the households of ex-CFM workers to those discussed above in reference to widespread CFM retrenchments. However, employment options in these secondary urban centers will be less diverse and less numerous than those in Mozambique's major cities.

Second, these closures may in the short run cause a shrinking of regional consumption-based economies in affected provinces. CFM provides a notable proportion of formal sector (salary and wage) employment in each of the short-line areas, it can be expected that these wages have significant local multipliers tied to consumption of food and local services. Since lines have not, in recent years, been financially self-sufficient, CFM has been a vehicle for central-local resource transfers (via salaries and operating subsidies). The withdrawal of this income from the regional economy is likely to cause a measurable contraction in demand for local produce and services, further exacerbating unemployment and under-employment.

Another impact of short-line closures would be the possible loss of community facilities currently associated with CFM. In each town where CFM has sizable operations, it operates a Clube Ferroviaria which is an important center for social activities. In many towns and cities, the local stadium is also a CFM facility. There are clinics and dormitories for schoolchildren from rural areas which, while officially for CFM workers and their families, offer benefits to other segments of the population as well.

The final impact of short-line closures is the loss of capacity within the transport sector itself. If the existing road transport system does not have the capacity to substitute for rail, in the short run but more importantly in the medium term when rural reconstruction and production growth are expected to increase traffic by at least an order of magnitude in most rural areas, then the loss of rail facilities could become a factor limiting post-war regional economic growth.

The importance of the railway in passenger transport is greatest in Xai-Xai, it appears that its loss would leave several rural areas without links to their provincial seat where essential.

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health, education and other public services as well as markets are located. In situations where adequate roads are not available, loss of CFM service seems likely to cause significant hardship.

- For these reasons, and for the broader political motive of defending a prominent element of local infrastructure, it can be expected that local government officials will resist the closure of short lines. Whether the general populace in Xai-Xai, Inhambane and Zambezia will mobilize to oppose closures is unknown.

Project activities which support the rehabilitation of railway buildings and other infrastructure before turning them over to appropriate local authorities for redeployment as public facilities may mitigate some of this resistance. But the long-standing centrality of the railways in rural Mozambican life will be difficult to replace in the minds of residents, they can be expected to perceive a significant loss to their community from short-line closures, notwithstanding any compensatory efforts.



ANNEX A

SOUTHERN AFRICAN DEVELOPMENT
COORDINATION CONFERENCE

Miller, A.D.P.
COPY

SOUTHERN AFRICA TRANSPORT AND
COMMUNICATIONS COMMISSION (SATCC)

CP 2677 MAPUTO
MOZAMBIQUE

TELEPHONE 420214/420246
FAX 420213
TELEX 6606/6597 SATCC MO

Maputo, 16 9 92
TU/L/819/92

Mr John M Miller, Acting Director
United States Agency for
International Development
Rua Faria de Sousa
Maputo

21 SEP 1992

RASS

MOZAMBIQUE

Dear Sir,

The proposed USAID assistance to Mozambique Railways to implement portions of their restructuring efforts, including technical assistance, financing of staff reductions and redeployment of redundant capital assets is now included in the SATCC programme as Project No AAA.0.02(3)(111) Technical Assistance for Railways Restructuring.

Please note that in the course of implementation, adjustments to the project can be made based on more detailed information

Your support of SATCC is highly appreciated.

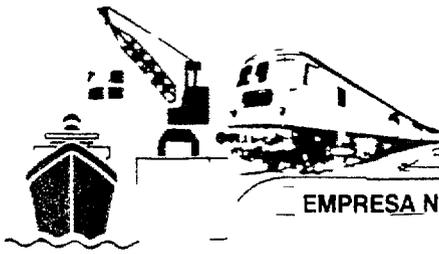
**SOUTHERN AFRICA TRANSPORT
AND COMMUNICATIONS COMMISSION**
[Signature]
SMAR Kaombwe
For Director
SATCC/TU

SK/C-01/Rev.1/16-9-92

Member States Angola Lesotho Mozambique Swaziland Zambia
 Botswana Malawi Namibia Tanzania Zimbabwe

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21 SEP 1992



MOZAMBIQUE PORTS AND RAILWAYS

EMPRESA NACIONAL DE PORTOS E CAMINHOS DE FERRO DE MOÇAMBIQUE E E

RRSS

Mr John Milller

Acting Director, USAID/Mozambique

Rua Faria de Sousa, 107

Maputo



Date 18/09/92

Ref ⁴²³/DG-CFM/92

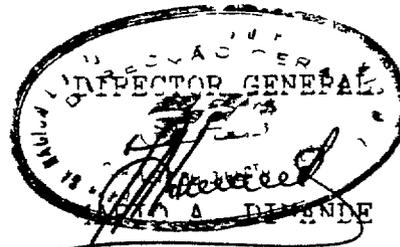
Subject Request for Financial Assistance

Over the past two years, I have had the pleasure of discussing frankly with USAID the problems of overstaffing of CFM. As a result of these, and subsequent to the draft report prepared by a team of consultants funded by USAID in July 1992, I hereby request USAID financing for a project aimed at reducing significantly the number of CFM personnel. The project would also spin off unproductive CFM assets to private companies, some of which would serve to employ former CFM workers.

I understand that USAID's program is in support of CFM's longer term restructuring effort, which is also supported by the World Bank.

I appreciate your assistance and I shall request you to send as soon as possible the draft project documentation and the draft project agreement.

Yours sincerely



RRSS, ASSETS & LABOR REDEPLOYMENT
LOGICAL FRAMEWORK
USAID/MOZAMBIQUE

July 1992

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS/RESPONSIBILITY	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>Activity Goal</u></p> <p>To support the development of a stronger economic foundation for growth in Southern Africa</p>	<p><u>Measures of Goal Achievement</u></p> <p>SADCC countries face lower total transport costs</p> <p>Less FX spent for transport</p> <p>Proportion of SADCC external trade using SADCC ports increases</p> <p>Savings in FX and LC from lower transport costs are available for other priority investments</p>	<p>National and regional statistics</p> <p>National accounts</p> <p>FX and other cost savings stimulate economic growth</p>	<p><u>Affecting purpose-to-goal link</u></p> <p>Continued regional cooperation</p> <p>Investments maintained by other SADCC countries</p> <p>Investments not destroyed by hostile action</p> <p>Current trade volumes maintained or increased</p>
<p><u>Activity Purpose</u></p> <p>To strengthen and expand the capacity and operational efficiency of Mozambique Railways (CFM)</p>	<p><u>Conditions that will indicate purpose has been achieved (EOPS)</u></p> <p>Reduce labor cost</p> <p>Early retirement of 3300 CFM employees over 55</p> <p>Productive employment of at least 4500 other redundant workers</p> <p>Reduction in economic cost of freight transport in the 3 short line areas</p>	<p>CFM reports</p> <p>Project evaluation</p> <p>TA reports</p> <p>National and regional statistics</p>	<p><u>Affecting output-to-purpose link</u></p> <p>Security situation in Mozambique improves.</p> <p>CFM loss and pilferage reduced</p> <p>Wage rates remain stable</p> <p>Remaining CFM managed and staffed effectively, through training and use of expatriates</p> <p>World Bank supported Maputo Corridor Revitalization Program is successful</p>

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS/RESPONSIBILITY	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>Outputs</u></p> <p>CFM personnel reductions of about 13,100 workers</p> <p>Redeployment package for redundant CFM workers that supports their reintegration into the productive economy</p> <p>c Redeployment of CFM/S assets</p>	<p><u>Magnitude of Outputs necessary and sufficient to achieve purpose</u></p> <p>Early retirement package applied to 3300 workers</p> <p>Severance payments to 9,500 to 10,000 permanent CFM employees</p> <p>Development of new employment and training for at least 4000 to 5000 redundant CFM workers</p> <p>Detailed comparative analysis of short lines with alternative transport possibilities, recommendations and strategies for closure or continued operation</p> <p>Spin-off of CFM operations into private enterprises employing at least 500-600 redundant CFM workers</p> <p>Development of feasibility studies for housing privatization and development of industrial estates on CFM property</p>	<p>CFM reports</p> <p>TA reports</p> <p>Project evaluation</p> <p>CFM records</p> <p>Records of local financial and training institutions</p> <p>TA reports and feasibility studies</p> <p>CFM reports</p>	<p><u>Affecting input-to-output link</u></p> <p>CFM agrees to pursue retrenchment</p> <p>Workers eligible for early retirement accept incentive package</p> <p>Local institutions and the private sector have the ability to absorb training and financial support and accept project goal and purpose</p> <p>Domestic and foreign private sector capital investment can be mobilized for new and spin-off businesses</p>
	<p>Divest non-operating CFM assets (clubs, schools, clinics, stadiums) by rehabilitating and transferring them to local or provincial governments or through other arrangements with private operators</p>		

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS/RESPONSIBILITY	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<u>Inputs</u> <u>(Activities and Types of Resources)</u>	<u>Level of Effort/Expenditure for each activity</u> <u>(\$ thousand)</u>		<u>Conditions precedent to activity implementation</u>
Severance and early retirement payments	10,550		The signature by the Government of an Agreement with the World Bank for the Maputo Corridor Revitalization Project <u>Disbursement for Severance Pay.</u> The selection by CFM of an option for restructuring acceptable to USAID.
144 person-months of long-term technical assistance	3,750	Evaluation reports	
160 person-months of short-term technical assistance	2,400	TA reports	
Local salaries	750	CFM records	
Commodities	420	Records of local financial and training institutions	
Operating costs	132	Disbursement documents	
Redeployment Support	4,260		
Audit/Evaluation	100		
Inflation and contingency	2,638		
Total	\$25,000		
		*	

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UNCL. SIFIED

ANNEX C

VZCZCTOI *
OO RUEHC RUEHSB
DE RUEHTO #0616/01 043 **
ZNR UUUUU ZZH
O 121125Z FEB 92
FM AMEMBASSY MAPUTO
TO RUEHC / SECSTATE WASHDC IMMEDIATE 5842
RUEHSB / AMEMBASSY HARARE IMMEDIATE 6907
BT
UNCLAS SECTION 01 OF * MAPUTO 00616

CLASS: UNCLASSIFIED
CHRG: AID 02/11/92
APPRV: CDA:CDELL
DRFTD: PC/RRSS:TBORN.FJ
CLEAR: L.DIR
2.DD
3.ENG
4.PDO
5.PRM
DISTR: AID4 AMB DCM

AIDAC

E.O.12356: N/A
SUBJECT: MOZAMBIQUE RAIL (CFM) REFORM, PROPOSAL TO AMEND
PRESENT PROJECT

12 FEB 1992

REF: 91 MAPUTO 4750

RRSS

1. SUMMARY.
THIS CABLE IS THE RESULT OF RECENT DISCUSSIONS HELD IN
MAPUTO WITH MR. CAP DEAN, DIRECTOR AFR/SA, REGARDING THE
MOZAMBIQUE RAIL REFORM PROJECT DESCRIBED IN REFTTEL. OUR
JOINT CONCLUSION IS THAT THE ACTIVITIES PRESENTED AS AN
NPD IN REFTTEL SHOULD BE INCORPORATED AS AN AMENDMENT OF
THE PRESENT REGIONAL RAIL SYSTEMS SUPPORT PROJECT (RRSS,
690-0247.56). THERE ARE SEVERAL REASONS FOR THIS. (A)
THE NEW ACTIVITIES FALL UNDER THE ORIGINAL PROJECT'S
PURPOSE -- TO IMPROVE THE CAPACITY AND OPERATIONAL
EFFICIENCY OF MOZAMBIQUE RAILWAYS; (B) THE RRSS OUTPUTS
HAVE ALREADY TO SOME EXTENT BEEN SHIFTED TO SUPPORTING
OVERALL REFORM -- INTEGRATING THE NEW ACTIVITIES WITH
THE PRESENT PROJECT WILL ALLOW GREATER IMPLEMENTATION
FLEXIBILITY AND ENSURE BETTER COORDINATION OF USAID
FINANCING; (C) AN AMENDMENT CAN BE DESIGNED TO PERMIT
TIMELY IMPLEMENTATION OF PROPOSED ACTIVITIES. END
SUMMARY.

2. THE FOLLOWING PARAGRAPHS BRIEFLY GIVE THE PRESENT
STATUS OF THE RRSS PROJECT, DESCRIBE RECENT PROGRESS ON
THE DONOR REFORM INITIATIVE, AND RELATE THE REFORM
ACTIVITIES PROPOSED REFTTEL TO RRSS.

A. PRESENT STATUS OF CFM REFORM

3. DURING THE SADCC CONFERENCE (JANUARY 29 TO 31), THE
WORLD BANK ELICITED FROM THE GOVERNMENT ACCEPTANCE OF A
PLAN TO LEASE ALL OF CFM'S SOUTHERN SYSTEM (MAPUTO PORT
AND THE GOBA, PESSANO GARCIA AND LIMPOPO RAIL LINES) TO
AN INTERNATIONAL COMMERCIAL ENTERPRISE. THE BASIC
ELEMENTS OF THE LATEST BANK PROPOSAL ARE

- THE LEASING OF THE LAND SIDE ASSETS AS AN
INTEGRATED WHOLE TO ONE GROUP OF OPERATORS AND/OR

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INVESTORS.

- THE IMMEDIATE CONTRACTING OF AN ADVISORY FIRM TO:
 (A) DETERMINE THE CURRENT ASSET AND PRODUCTIVE CAPACITY OF THE SYSTEM; (B) ANALYZE THE MARKET PROSPECTS FOR THE SYSTEM; (C) STRUCTURE A LEASING AGREEMENT; (D) DEVELOP SELECTION CRITERIA FOR THE LESSEE; (E) PREPARE AN INVESTMENT MEMORANDUM (IN EFFECT A SOLICITATION DOCUMENT); AND (F) ASSIST THE GOVERNMENT IN NEGOTIATIONS WITH PROSPECTIVE LESSEES.

THE PROPOSAL ALSO INCLUDES A STUDY OF WHAT TO DO WITH THE MANPOWER AND MATERIAL RESOURCES NOT NEEDED TO OPERATE THE LEASED COMPANY.

4. SENIOR GOVERNMENT OFFICIALS LAST WEEK AGREED IN PRINCIPLE TO THE ABOVE, ALTHOUGH THEY INITIALLY REQUESTED THE BANK TO INVESTIGATE ALTERNATIVES TO THE SINGLE LEASE (SPECIFICALLY THE USE OF TECHNICAL ASSISTANCE AND MULTIPLE LEASE ARRANGEMENTS) AND TO CONSIDER THE WHOLE OF CFM RATHER THAN JUST CFM(S). ACCORDING TO SENIOR BANK STAFF, BY THE END OF THE WEEK THE GPM HAD ACCEPTED THE REJECTION OF A TA-DRIVEN SOLUTION TO CFM'S MANAGEMENT PROBLEMS, AND AGREED THAT CFM(S) WOULD BE TREATED AS A SEPARATE UNIT.

5. WITHIN THE NEXT FEW WEEKS, WE EXPECT THE GOVERNMENT AND BANK TO SIGN AN AGREEMENT TO ALLOW THE CONTRACTING OF AN ADVISORY FIRM. THE TERMS OF THAT AGREEMENT WILL CLARIFY THE EXTENT TO WHICH THE GOVERNMENT HAS TRULY ACCEPTED THE BANK'S LATEST PROPOSAL. IN ANY CASE, LAST WEEK'S EVENTS REPRESENT AN IMPORTANT STEP TOWARDS MAJOR REFORM OF CFM.

6. THE DONORS AS A GROUP HAVE MADE CLEAR THAT BOTH ONGOING AND FUTURE PROJECTS ARE THREATENED BY THE CONTINUING DETERIORATION IN CFM'S PERFORMANCE, AND THAT COMMERCIAL OPERATION OF THE SYSTEM IS THE ONLY TENABLE SOLUTION. IT IS THIS UNITED AND UNCOMPROMISING POSITION THAT HAS BROUGHT ABOUT THE GOVERNMENT'S ACCEPTANCE OF THE BANK'S PROPOSAL DESPITE OPPOSITION FROM CFM MANAGEMENT AND LEGITIMATE FEARS ABOUT POSSIBLE POLITICAL REPERCUSSIONS. NEITHER USAID NOR THE OTHERS INVOLVED WISH, HOWEVER, TO ACHIEVE AN EFFICIENT RAILROAD AT THE COST OF A NEGATIVE POLITICAL REACTION. IT IS THEREFORE
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IMPERATIVE THAT THE DONORS QUICKLY ADJUST ONGOING AND UPCOMING PROJECTS TO CONTRIBUTE TO THE SMOOTH TRANSITION FROM A PARASTATAL TO A PRIVATE RAILROAD. THE MOST IMPORTANT STEP NOW IS THE DESIGN AND IMPLEMENTATION OF A MAJOR STAFF REDUCTION SCHEME.

B. USAID'S ROLE

7. USAID HAS MET WITH BANK STAFF SEVERAL TIMES TO DISCUSS THE SHARING AND SCHEDULING OF INPUTS, AND IT HAS AGREED THAT THE PROJECT DESCRIBED IN REFTEL -- TO IDENTIFY AND SHED, WHERE POSSIBLE THROUGH PRODUCTIVE REDEPLOYMENT, EXCESS ASSETS AND STAFF -- SHOULD PROCEED AS QUICKLY AS POSSIBLE WITH USAID FINANCING. THE GOVERNMENT'S ACCEPTANCE OF THE INVESTMENT MEMORANDUM, TO BE PREPARED WITH BANK ASSISTANCE OVER THE NEXT 15 MONTHS, MAY WELL BE CONTINGENT ON A PRIOR SUCCESSFUL START-UP OF THIS ACTIVITY.

8. AS DISCUSSED WITH MR. DEAN, USAID PROPOSES TO ADD REFORM TO THE PRESENT PROJECT THROUGH A MAJOR AMENDMENT. IF AID/W AGREES, THE DESIGN OF THE AMENDMENT WOULD BEGIN IN LATE MARCH AND THE FIRST OBLIGATION OF ADDITIONAL FUNDS COULD TAKE PLACE IN JUNE. MR. DEAN WAS CONFIDENT THAT AFR/SA WOULD RESPOND TO THIS CABLED REQUEST WITHIN THREE WEEKS.

C. RRSS IMPLEMENTATION STATUS AND CONFORMANCE OF PROPOSED ACTIVITY TO RRSS

9. THE RRSS PROJECT WAS ORIGINALLY AUTHORIZED IN FY 1983 WITH AN APPROVED LOP FOR THE MOZAMBIQUE COMPONENT OF DOLS 34.5 MILLION. THE PROJECT GOAL IS TO SUPPORT THE DEVELOPMENT OF A STRONGER ECONOMIC FOUNDATION FOR GROWTH IN THE SOUTHERN AFRICA REGION. THE PURPOSE IS TO STRENGTHEN AND EXPAND THE CAPACITY AND OPERATIONAL EFFICIENCY OF MOZAMBIQUE RAILWAYS. THE ORIGINAL PROJECT FOCUSES PRIMARILY ON IMPROVING TECHNICAL AND FINANCIAL MANAGEMENT CAPACITY IN CFM BY (1) INCREASING CFM'S TRACTIVE CAPACITY AND (2) RESTRUCTURING ITS ACCOUNTING, FINANCIAL MANAGEMENT, AND PLANNING SYSTEMS.

10. PROJECT IMPLEMENTATION WAS SLOW IN STARTING BECAUSE TWO OF THE CONDITIONS PRECEDENT WERE UNREALISTIC, AND THE INITIAL TA AND COMMODITIES ARRIVED ONLY IN MID-1990. NONETHELESS, IN 1989 CFM(S) ENJOYED A CONSIDERABLE INCREASE IN TRAFFIC VOLUMES, REACHING THREE MILLION NET TONS FOR THE FIRST TIME SINCE 1984. ON THE STRENGTH OF THIS PERFORMANCE, CFM REQUESTED USAID (AND OTHER DONORS) TO PROVIDE ADDITIONAL LOCOMOTIVES. ON THE BASIS OF A THOROUGH ANALYSIS, WHICH PREDICTED AN INCREASE IN TRAFFIC TO 4.9 MILLION TONS IN 1995, THE RRSS PROJECT WAS AMENDED IN FY 90 TO PROVIDE TEN NEW LOCOMOTIVES AT A COST OF DOLS 17 MILLION. THIS AMENDMENT, WHICH ALSO

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ADDED FUNDS FOR ADDITIONAL TA, INCREASED LOP FUNDING BY A TOTAL OF DOLS 21 MILLION TO ITS PRESENT LEVEL OF DOLS 55.5 MILLION.

11. WHILE TRAFFIC WAS INCREASING, HOWEVER, USAID, THROUGH DISCUSSIONS WITH OTHER DONORS AND OUR OWN EXPERIENCE IN THE WORKSHOP AND FINANCIAL SECTION, WAS REASSESSING THE ORIGINAL PROJECT APPROACH, WHICH ASSUMED THAT CFM'S PROBLEM COULD BE OVERCOME BY TRAINING. THE 1990 PROJECT PAPER AMENDMENT, WHICH ADDED FUNDS FOR THE PURCHASE OF NEW LOCOMOTIVES, STATED THAT QUOTE AT PRESENT RRS AND OTHER DONOR PROJECTS DO NOT HAVE THE SCOPE NECESSARY TO CORRECT THE FUNDAMENTAL MANAGEMENT DEFICIENCIES FOUND EVERYWHERE: WORKSHOPS, DISPATCHING, MATERIALS MANAGEMENT, MAINTENANCE OF THE BUILDINGS, AND COORDINATION OF THE ACTIVITIES OF CFM'S GEOGRAPHICALLY SEPARATE AND PARTIALLY AUTONOMOUS RAIL LINES AND PORTS. END QUOTE. TO ADDRESS THESE MORE FUNDAMENTAL PROBLEMS, THE PP AMENDMENT INCLUDED A COMPONENT TO FORMULATE A SYSTEMIC APPROACH TO CFM'S PROBLEMS.

12. THIS PLANNED COMPONENT HAS BEEN OVERTAKEN BY THE EVENTS DESCRIBED ABOVE AND IN PREVIOUS MESSAGES; THE DEVELOPMENT OF A SYSTEMIC STUDY OF CFM'S MANAGEMENT PROBLEMS HAS BECOME AN UNAFFORDABLE LUXURY IN THE FACE OF SEVERE TRAFFIC DECLINES AND THE THREAT OF NEW
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INVESTMENTS IN INFRASTRUCTURE THAT COULD LEAD TO THE LONG-TERM DIVERSION OF TRAFFIC FROM MAPUTO TO RSA PORTS. FURTHERMORE, THE STUDY PLANNED IN 1993 WOULD BE LITTLE MORE THAN A DISTRACTION FROM THE WORK OF THE INVESTMENT ADVISORY FIRM TO BE FUNDED BY THE BANK.

13. USAID NOW PROPOSES TO FOCUS THE PRESENT PROJECT RESOURCES ON THE REDEPLOYMENT OF CFM'S ASSETS WHILE DEEMPHASIZING THE TRADITIONAL APPROACH ORIGINALLY ENVISAGED. THE OVERALL DONOP PROGRAM, PARTICULARLY THE COMBINATION OF THE BANK'S PROJECT TO STREAMLINE AND LEASE THE OPERATIONS AND USAID'S PROJECT AMENDMENT TO REDEPLOY ASSETS, IS A LOGICAL EXTENSION OF THE PRESENT PROJECT, AND WILL CONTRIBUTE TO THE ORIGINAL PROJECT'S PURPOSE AND OBJECTIVES MORE EFFECTIVELY THAN PRESENTLY PLANNED ACTIVITIES.

14. USAID HAS, WITHIN THE FRAMEWORK OF THE PRESENT PP, ALREADY MADE ADJUSTMENTS IN IMPLEMENTATION TO FURTHER THE NEW OVERALL APPROACH TO CFM. IN THE WORKSHOP, FOR EXAMPLE, THE PP ORIGINALLY ENVISAGED THE RECONSTRUCTION AND EQUIPPING OF THE SHOP TO PERFORM ALL LEVELS OF MAINTENANCE AND REPAIR, INCLUDING COMPLETE REHABILITATION. USAID AND THE IA TEAM ARE NOW DEVELOPING A PROGRAM BASED ON COMPONENT CHANGEOUT (REPLACEMENT RATHER THAN REPAIR) AND CONTRACTING OUT OF MAJOR REPAIR. AT THE SAME TIME, A SMALL TEAM OF CFM AND TA STAFF WILL COMPLETE THE REHABILITATION OF THE LOCOMOTIVES FOR WHICH THE PROJECT HAS ALREADY FINANCED PARTS. WE ARE ALSO REVIEWING THE NEED TO PURCHASE TEN GE LOCOMOTIVES IN THE LIGHT OF THE REDUCED LEVELS OF TRAFFIC (1.3 IN TONS IN 1991 FOR CFM(S)). SEPTEL WILL COVER THIS ISSUE IN MORE DETAIL. FINALLY, THE FINANCE TEAM IS CONCENTRATING ON THE FORMATION OF A CORE TEAM OF COMPUTER LITERATE EMPLOYEES AND THE INSTALLATION IN CFM(S) OF A MODERN COMMERCIAL SYSTEM OF COST-BASED ACCOUNTS. THE NUMBER OF PERSONNEL REQUIRED TO MAINTAIN THIS SYSTEM WILL BE SHARPLY REDUCED (FROM HUNDREDS TO A HANDFUL).

15. WHAT IS PROPOSED IN REFTFL IS A NATURAL EXPANSION OF THE PRESENT PROJECT TO INCREASE THE OVERALL PERFORMANCE OF CFM, PARTICULARLY CFM(S). MAJOR REDUCTIONS IN STAFF AND THE CONVERSION OF UNECONOMIC PHYSICAL ASSETS ARE CRITICAL TO TRANSFORM THE RAILWAYS AND PORTS FROM PERMANENT DRAINS ON THE ECONOMY TO PROFITABLE PROVIDERS OF EFFICIENT TRANSPORT SERVICES TO THE NATIONAL AND REGIONAL ECONOMY.

16. FINANCING. CURRENT AND PLANNED COMMITMENTS FOR TA, COMMODITIES (EXCLUDING LOCOMOTIVES), AND CONSTRUCTION WILL MORE OR LESS EXHAUST THE FUNDS AVAILABLE FOR THOSE LINE ITEMS, AND SOME OVERRUNS WILL OCCUR IF, AS SEEMS LIKELY, THE TA REMAINS IN PLACE UNTIL A LEASE IS IN PLACE (ESTIMATED COST: DOLS 5 MILLION). AS NOTED EARLIER, THE MISSION IS REVIEWING THE LOCOMOTIVE PURCHASE AND WILL SEND RECOMMENDATIONS LATER. AS THIS ISSUE IS PENDING, AND SINCE THE GOVERNMENT AND USAID AGREE THAT TRAFFIC INCREASES MAY WELL JUSTIFY THEIR PROCUREMENT IN THE

FUTURE, WE WOULD NOT PROPOSE AMENDING THE PROJECT TO ELIMINATE THE LOCOMOTIVES AT THIS POINT. INSTEAD WE PURPOSE TO INCREASE THE PROJECT AUTHORIZATION BY THE FULL ESTIMATED COST OF THE ADDITIONAL COMPONENTS, DOLS 25 MILLION. OF THIS, 15 MILLION WILL BE OBLIGATED IN FY 1992 WITH THE REMAINING DOLS 10 MILLION OBLIGATED IN FY 1993 ONLY IF THE PURCHASE OF THE LOCOMOTIVES PROCEEDS.

D. DESIGN AND OBLIGATION SCHEDULE

17. REQUEST AFR/SA REVIEW THE APPROACH PROPOSED IN THIS CABLE AND PROVIDE COMMENTS AND AUTHORIZATION DELEGATION TO MISSION BY THE END OF FEBRUARY. THE PP AMENDMENT DESIGN WILL THEN BEGIN IN MARCH OR EARLY APRIL AND TAKE ABOUT TWO MONTHS. THE TEAM WILL INCLUDE A LABOR REDUNDANCY SPECIALIST, RAILWAY MANAGEMENT SPECIALISTS, ECONOMIST, AND CIVIL ENGINEERS. THE AMENDMENT WILL IDENTIFY REDUNDANT PHYSICAL ASSETS, SUGGEST POSSIBLE PRODUCTIVE USES FOR THEM, AND GIVE A GENERAL ESTIMATE OF THE CONVERSION COSTS. FOR EXCESS LABOR, THE DESIGN TEAM WILL PROPOSE OPTIONS FOR THE REDEPLOYMENT OR SEVERANCE OF RETRENCHED WORKERS. THE FIRST OBLIGATION OF 15 MILLION DOLLARS IS SCHEDULED FOR JUNE, 1992. THE DESIGN (APPROXIMATELY DOLS 400,000) WILL BE FUNDED FROM SARP PD
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AND S.

18. FOR HARARE: PLEASE PROVIDE FUND CITES AND DELEGATION OF AUTHORITY TO DIRECTOR, USAID/MOZAMBIQUE, TO EARMARK AND COMMIT SARP PD AND S. DELL

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UNCLAS SECTION 04 OF 04 MAPUTO 0616

COMMERCIALIZATION OF CFM(S) DOES NOT OCCUR. WHAT ASSURANCES, IF ANY, SHOULD A.I.D REQUIRE THAT WORLD BANK PROJECT WILL PROCEED PRIOR TO OBLIGATING FUNDS FOR THE PROPOSED AMENDMENT.

3. SECURITY SITUATION. GIVEN MISSION ACKNOWLEDGEMENT THAT SECURITY CONSIDERATIONS HAVE IMPEDED ACHIEVEMENT OF PROJECT OBJECTIVES THUS FAR, THE PC RECOMMENDED THAT THE MISSION CLARIFY IN THE AMENDMENT HOW SECURITY CONSIDERATIONS COULD AFFECT IMPLEMENTATION OF THE ACTIVITY. SPECIFICALLY, ARE THE SECURITY CONCERNS SUCH THAT THEY COULD BE ADDRESSED BY PRIVATE SECTOR MANAGEMENT OF THE RAIL LINE OR ARE THEY DUE TO THE POLITICAL SITUATION AND LIKELY TO PRECLUDE EFFECTIVE AND EFFICIENT MANAGEMENT OF THE RAIL LINE BY EITHER A PUBLIC OR PRIVATE SECTOR ENTITY? COMMITTEE MEMBERS SPECULATED THAT PRIVATE MANAGEMENT COMPANY MIGHT BE MORE LIKELY TO TAKE A MORE PROACTIVE ROLE RE SPECIFIC ACTIONS TO SECURE THE LINE, AND FHA/FEP POINTED OUT THAT THERE WERE SOME PRACTICAL MANAGEMENT PROBLEMS ON THE LINE THAT A PRIVATE COMPANY WOULD QUICKLY ADDRESS TO REDUCE LOSSES. IF ANALYSIS DETERMINES THAT SECURITY PROBLEMS ARE LARGELY A REFLECTION OF THE ONGOING CIVIL STRIFE AND UNCERTAIN POLITICAL SITUATION, THEN A.I.D. SHOULD SEEK A JUDGEMENT FROM STATE THAT THE PROGNOSIS FOR AN AMELIORATION OF THE POLITICAL SITUATION IS POSITIVE.

4. ECONOMIC VIABILITY OF CFM(S). GIVEN THE PROPOSED DEVELOPMENT OF RICHARDS BAY AND THAT SWAZI RAIL HAS TENTATIVELY AGREED TO A TEN-YEAR COMMITMENT WITH THE SWAZI SUGAR BOARD, IS CFM(S) LIVELY TO BE ECONOMIC, IRRESPECTIVE OF WHO MANAGES IT? IT WAS POINTED OUT THAT CFM(S) HAS AN ASSET BASE THAT WOULD MAKE IT PRODUCTIVE AND THERE IS

SUFFICIENT CAPACITY TO MAKE IT FEASIBLE. GIVEN THAT SOUTH AFRICAN PORTS MAY BE OVERLOADED WITH INCREASED DEMANDS DUE TO THE SERIOUS DROUGHT SITUATION, CFM(S) COULD BECOME MORE IMPORTANT, ESPECIALLY IF PILFERAGE WERE REDUCED, AND THE SWAZIS AND OTHERS MIGHT PREFER USING CFM(S) IF THE RISKS WERE DIMINISHED. QUESTIONS WERE RAISED AS TO WHETHER OTHERS, ASIDE FROM SOUTH AFRICA, HAD EXPRESSED INTEREST IN TAKING OVER CFM(S).

IN PREPARING PROJECT DOCUMENTATION, MISSION IS REQUESTED TO ASSUME COMPETITION FROM RICHARDS BAY AND USE FREIGHT PROJECTIONS BEYOND THE CURRENT EMERGENCY SITUATION (I.E., ASSUME 'NORMAL' DEMAND GROWTH FOR FREIGHT HAULAGE) IN ITS ECONOMIC ANALYSIS. IT MUST INCLUDE A DISCUSSION OF FREIGHT PRICING ISSUES, PARTICULARLY THOSE RAISED BY

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PRIVATE SECTOR MANAGEMENT OF A 'NATURAL' MONOPOLY.
GOVERNMENT OVERSIGHT MECHANISMS AND FINANCIAL ARRANGEMENTS
BETWEEN THE OPERATOR AND CFM(S) SHOULD BE INCLUDED IN THE
DISCUSSION. IT MUST ALSO LAY OUT HOW IT SEES THIS
ACTIVITY PROCEEDING IF OTHERS, ASIDE FROM SOUTH AFRICA,
ARE NOT WILLING TO BECOME THE LESSOR.

5. PROJECT BUDGET. PER REF C, MISSION INTENDS TO
OBLIGATE DOLS 15 MILLIONS IN FY 92 AND DOLS 10 MILLION IN
FY 93. AID/W UNDERSTANDING IS THAT FY 93 OBLIGATION WILL
BE REQUIRED ONLY IF THE LOCOMOTIVES CONTRACT IS NOT RPT
NOT TERMINATED SINCE IF THE CONTRACT IS TERMINATED, THE
FUNDS ORIGINALLY BUDGETED FOR THE PURCHASE OF THE
LOCOMOTIVES COULD BE REPROGRAMMED IN SUPPORT OF ACTIVITIES
BEING UNDERTAKEN UNDER THE PROPOSED AMENDMENT. SINCE
LATEST OYB REPORTING CABLE PROVIDES FY 92 PROPOSED
OBLIGATION OF DOLS 20.11 MILLION AND A LEVEL OF DOLS 19.1
MILLION WAS DISCUSSED AT THE SARP MISSION DIRECTORS
MEETING, PLEASE CLARIFY LOP AND PLANNED OBLIGATIONS FOR FY
92 AND FY 93. DOES IMPLEMENTATION OF THE AMENDMENT
REQUIRE OBLIGATION OF DOLS 20 MILLION IN FY 92? IT WAS
NOTED THAT IF MISSION OBLIGATES DOLS 20 MILLION IN FY 92
AND THE LOCOMOTIVE CONTRACT IS SUBSEQUENTLY TERMINATED,
FREEING UP FUNDS FOR RE-PROGRAMMING, MORE FUNDS MIGHT BE
AVAILABLE THAN NEEDED FOR IMPLEMENTATION OF THE AMENDMENT.
THE PC RECOMMENDED THAT THE MISSION WEIGH POSSIBLE
TERMINATION OF LOCOMOTIVES CONTRACT IN MAKING DECISIONS ON
THE AMENDMENT'S FY 92 OBLIGATION.

6. CN. AS NOTED IN MISSION'S MOST RECENT OYB CABLE, CN
WILL BE REQUIRED FOR THIS ACTIVITY. ONCE AMENDMENT IS
COMPLETE, PLEASE PROVIDE DESK WITH APPROPRIATE LANGUAGE
FOR CN IN SUFFICIENT TIME FOR AUGUST 1992 OBLIGATION.

7. THE ACTING ASSISTANT ADMINISTRATOR FOR AFRICA HEREBY
DELEGATES AUTHORITY TO THE MISSION DIRECTOR,
USAID/MOZAMBIQUE, OR TO THE PERSON ACTING IN THAT
CAPACITY, TO APPROVE AND AUTHORIZE AN AMENDMENT TO THE
MOZAMBIQUE REGIONAL RAIL SYSTEMS SUPPORT PROJECT (690-
0247.56) IN THE AMOUNT OF DOLS. U.S. TWENTY-FIVE (25)
MILLION FOR A NEW AUTHORIZED LIFE-OF-PROJECT OF DOLS.
EIGHTY MILLION, FIVE HUNDRED THOUSAND (DOLS. 80.5
MILLION). THIS AD HOC DELEGATION OF AUTHORITY SHALL BE
EXERCISED UNDER THE TERMS AND CONDITIONS OF DOA 551,
EXCEPT FOR THE DOLLAR AMOUNT LIMITATION, AND IN ACCORDANCE
WITH THE MISSION'S PROPOSAL IN REF C AND THE GUIDANCE
CONTAINED HEREIN. BAKER

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Initial Environmental Examination

Program Data

Program Location

Mozambique

Program Title

Regional Rail Systems Support
Project, Mozambique Component
Component Amendment 690-0247 56

Funding

\$25 Million, Amendment
\$80 5 Million, Total Mozambique
Component

Life of Project:

Approximately 9 Years

IEE Prepared by.

Peter S. Argo

Environmental Action
Recommended.

Negative Determination
Categorical Exclusion

Approval


John M. Miller
Acting Director,
USAID/Mozambique

Date

9/30/92

Concurrence

Attached
John Gaudet, BEA

Clearances

PArgo, ENG
TBorn, PC
BDodson, A/DD
TRiedler, RLA
BRose, REDSO
GC/AFR



9/30/92
(Draft)
Attached
Attached

I. Summary

A categorical exclusion is recommended for technical assistance to develop training plans and severance pay schemes, under CFR 216 2(C)(2)(i),

and, based on the discussions that follow, a negative determination is recommended for the payment of severance benefits and the divestiture and conversion of capital assets into other uses.

II Background

The Mozambique Regional Rail Systems Support Project, started in 1988, focused on the problems of inadequately maintained locomotives and wagons, poorly equipped and inadequate maintenance workshops, and inadequate financial and operations management systems for Mozambique Railways (CFM). Initial project funding provided \$34.5 million for locomotive maintenance, improvements in railway workshops, and technical assistance and training to CFM, particularly to improve CFM's financial management capacity. The original Project Paper was amended in 1990, when projected traffic increases indicated a need for additional locomotives, as well as a broader approach to CFM's continuing management problems. The amendment provided an additional \$21 million to purchase 10 new locomotives and to carry out an institutional assessment of CFM. This amendment is a natural expansion of the present project to increase the overall performance of CFM, particularly CFM (South). Major reductions in staff and the divestiture and conversion of uneconomic physical assets are critical to transform the railways and ports from permanent drains on the economy to profitable providers of efficient transport services to the national and regional economy.

III Project Description

The project amendment consists of the following components:

- a) To assist the Government of Mozambique, CFM and the private sector to identify and develop new, productive economic opportunities for workers made redundant by CFM restructuring,
- b) To redeploy excess CFM assets so as to create the maximum possible number of productive employment opportunities and to increase the operating efficiency of CFM.

The end of project status (EOPS) for the project amendment components will be:

- 1) Reduce labor cost and improve efficiency of the work force by reducing CFM staff to levels consistent with

efficient operation, including the contracting out of services better handled externally Number to be retired early, 3,300, number to be terminated, up to 12,000

2) Redeployment package prepared and offered to redundant workers, package supports reintegration into the national economy

3) To the extent possible, and using existing programs available through the Government and other donors, workers placed in productive jobs

4) Several of CFM's operations spun off, with staff and assets into private sector profit-making enterprises

5) Xai-Xai, Inhambane, and Quelimane rail lines (three short domestic lines) closed, and, to the extent possible, their assets and staff redeployed to other profitable use

IV Expected Impacts

The components to the amendment that address the severance pay and training of redundant staff will have no effects on the natural or physical environment

The components addressing the redeployment of physical assets may involve minor reconstruction activities and facial repairs to existing CFM buildings and structures No major renovations are anticipated, construction will be limited to the minimum required to make a facility attractive for another use Only existing building and sites will be involved in such reconstruction and restructured facilities are not expected to increase significantly the demand placed on local water or sanitation systems or other infrastructure with effects on the environment

V Monitoring

Under the technical assistance component to the project, experts will be provided to identify, design, and implement the redeployment of physical assets This TA will monitor all construction activities including potential environmental effects of such activities, and report progress and conclusions on a quarterly basis

VI Evaluation Program

The project has in place an evaluation contract whereby scheduled evaluations are conducted on approximately two year cycles Additional time is provided for intermediate evaluations to address specific areas of concern Elements included under this amendment will be included to the scope of work under this valuation contract

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Initial Environmental Examination

Program Data

Program Location Mozambique

Program Title: Regional Rail Systems Support Project, Mozambique Component Component Amendment 890-0247 56

Funding \$25 Million, Amendment \$80 5 Million, Total Mozambique Component

Life of Project: 9 Years

IEE Prepared by: Peter S. Argo

Environmental Action Recommended Negative Determination Categorical Exclusion

Approval

John M. Miller
Acting Director,
USAID/Mozambique

Date:

Concurrence

John Gaudet 9/14/92
John Gaudet, SEA

Clearances.

PArgo, ENG
TBorn, PC
BDodson, A/DD
TRiedler, RLA
BRoss, REDSO
GC7AFR(AID/W)

(DRAFT)

(DRAFT)

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Initial Environmental Examination

Program Data

Program Location Mozambique

Program Title: Regional Rail Systems Support Project, Mozambique Component Component Amendment 890-0247.56

Funding \$25 Million, Amendment \$80.5 Million, Total Mozambique Component

Life of Project 8 Years

EE Prepared by Peter S Argo

Environmental Action Recommended Negative Determination Categorical Exclusion

Approval John M. Miller
Acting Director,
USAID/Mozambique

Date _____

Concurrence John Gaudet, BEA

Clearances PArgo, ENG
TBorn, PC (DRAFT)
BDodson, A/DD (DRAFT)
TRiedler, RLA
BRose, REDSO

ANNEX E RAILROAD OPERATIONS

1. The CFM Railroad and Trends in its Performance

This section presents a brief description of the CFM Railroads, followed by a short analysis of historical trends in performance

1 1 An Overview of the CFM Railroads

CFM is the parastatal organization managing the railroads and ports of Mozambique. It is organized into several divisions (called Directorates) along geographical corridors, namely CFM(N), CFM(C), CFM(S) and the smaller CFM Zambezia. All these Directorates include both railroad and port operations, however this overview discusses only the railroad operations, whose track, (unless otherwise specified) is single track of 1 067 meters

1 1 1 CFM(N)

The Northern transportation corridor links the port of Nacala to a hinterland covering Malawi and portions of Northern Mozambique, particularly Niassa Province. A main line of 615 kilometers of single track connects the port of Nacala to Entrelagos (on the Malawi border). A small branch line of 42 kilometers connects the Rio Monapo station to Lumbo. A branch line of 262 kilometers goes from Cuamba to Lichinga serving prime agricultural land in Niassa Province. Several major gradients and curves along the main and branch lines limit operations to 40-freight car trains on the main line with either one or double locomotive headings, and to 28-car trains on the branch lines.

1 1 2 CFM(C)

The Central transportation corridor links the port of Beira to Zimbabwe and a central Mozambique hinterland. A main rail line of 317 kilometers of single track connects Beira to Machipanda (on the border with Zimbabwe), with trains operated under the protection of the armed forces of Zimbabwe and Mozambique. Grades on the Machipanda line limit operations to trains carrying at maximum 28 freight cars. A second main line of 335 kilometers links the Dondo rail station to Sena/Villa Nova de Fronteira at the border.

In addition, there are two branch lines in this corridor. One branch line goes from D Ana to Moatize in Tete Province (Mozambique), a distance of 254 kilometers. A second branch line, very much affected by the insurgency links Inhamitanga to Marromeu, a distance of 88 kilometers.

1 1 3 CFM(S)

The Southern transportation corridor consists of three main lines each serving a different international cargo market. The Limpopo line goes 522 kilometers through Mozambique to Chicualacual, carrying exports from Zimbabwe to the port of Maputo, and food aid imports to Zimbabwe on the backhaul. This line is under the protection of the Zimbabwe and Mozambique armed forces, and is increasing in traffic.

A second main line, referred to as the Goba line, links the port of Maputo to Swaziland, a distance of 63.5 kilometers. Normal speeds of 30 kilometers per hour are achieved on this rail line.

The R Garcia main line has a length of 88 kilometers linking the port of Maputo to a South Africa hinterland at R Garcia. Speeds of 40 kilometers per hour are achieved on this line.

1.1.4 The CFM Short Lines

CFM operates three short rail lines, consisting of CFM-Zambezia, the Xai-Xai line, and the Inhambane line. The Zambezia line connects the port of Quelimane to Mocuba with 145 kilometers of single track. The Inhambane line links the port of Inhambane to Inharrine, a distance of 90 kilometers of single track. The Xai-Xai line has two spurs: a 0.762 meter single track runs from Xai-Xai to Chicomo, a distance of 90 kilometers, a second spur links Manjacaze to Mauele, a distance of 50 kilometers with another single track of 0.762 meters. The CFM is considering the possibility of abandoning these short lines.

1.2 Historical Trends in Performance

In 1973, previous to independence, CFM carried 20.67 million tons and the trends since have been downwards. By 1981, the traffic was almost 1/3 of the pre-independence level and stood at 7.767 million tons. The traffic since 1981 is presented in Table E.1.1, which shows a continued rapid decline up to 1988, with a slight increase in 1989, only to descend steeply in 1990 and more so in 1991.

The traffic on CFM(N) bottomed out in 1986 at 32.3 thousand tons and has remained stable at levels of around 90 thousand tons in the last four years. The traffic on the CFM(C) declined continuously since pre-independence levels to its lowest level of 296 thousand tons in 1984, but has been growing since and stood at close to 700 thousand tons in 1991. As will be shown later, the CFM(C) railroad enjoys a competitive edge in its competition with its rivals.

The most dismal performance in the railroad sector is provided by CFM(S), whose traffic is in a descending spiral with no end in sight. Traffic levels for this railroad are dangerously close to

Table E.1 CFM Historical Traffic Trend
(1981 -1991)

YEARS	NET TONS TRANSPORTED (MILLIONS)				TON - KMS (MILLIONS)			
	CFM/S	CFM/C	CFM/N	CFM	CFM/S	CFM/C	CFM/N	CFM
1981	5.46	1.82	0.43	7.77	794.8	573.9	207.8	1583.0
1982	4.88	1.30	0.42	6.74	648.3	408.4	197.8	1260.9
1983	3.46	0.48	0.39	4.37	457.5	130.5	175.8	767.0
1984	3.17	0.30	0.21	3.70	375.2	69.7	90.4	537.9
1985	2.52	0.31	0.05	2.99	188.4	88.3	10.5	289.6
1986	2.54	0.37	0.03	2.94	194.4	98.7	7.7	301.2
1987	2.33	0.48	0.39	3.20	159.5	135.4	57.0	352.3
1988	2.12	0.49	0.10	2.71	145.3	142.7	16.9	305.9
1989	3.04	0.63	0.07	3.74	213.2	175.1	14.2	402.5
1990	2.12	0.85	0.09	3.06	150.2	225.6	45.6	421.4
1991	1.39	0.70	0.08	2.18	102.5	170.5	77.4	350.4

SOURCE: CFM INFORMACAO ESTADISTICA. SELECTED YEARS.

affecting its economic viability Unless prompt action is taken to reverse these trends its international traffic will disappear

These downward trends in performance are the consequence of several factors Certainly the insurgency and war conditions facing Mozambique have affected CFM 's traffic decline, but the adverse effects of the insurgency do not provide the whole story for the traffic decline Increasingly, the CFM railroads and ports exhibit a poor quality of service when contrasted with its competitors CFM's loss and damage rates and pilferage are the highest in the region when contrasted with their competitors Days at ports at Maputo, Beira and Nacala are at least four times that of South African and Namibian ports All these factors combine to negate the natural advantages of shorter distances to ports enjoyed by Mozambican railroads and result in placing some railroad corridors, like the Southern corridor, in jeopardy

2 Railroad Productivity and Excess Resources

The analysis of the issue of labor redundancy is discussed within the larger context of resource productivity, both equipment and labor.

2 1 Productivity of Locomotives and Freight Cars

Table E 2 1 presents trends in locomotive productivity since 1981 for the three CFM railroads Only the CFM(C) railroad is showing adequate locomotive productivity rates, in terms of net ton-kilometers per locomotive in the fleet In fact this railroad's productivity has climbed back to levels comparable to those of the late seventies and early eighties, aided by its traffic increase The other two CFM railroads show low rates of locomotive productivity and appear to have excess capacity with respect to their current traffic levels The freight car fleet stands at 8,606 cars, but a high percentage of them appear to be in disrepair As a consequence neither the South Africa railroads, nor the Swaziland railroads allow the CFM freight cars to transit on their lines The end result of this practice is that the poor quality of the freight cars results in increased transfer costs and times in transit for shipments via the CFM railroads

2 2 Productivity of and Redundancy of the Railroad Labor Force

The CFM labor force is presented in Table E 2 2, which displays trends in the use of labor resources since 1979 At the start of the decade of the eighties the CFM labor force, including railroad and port operations, was 40,499 workers Some labor force reductions took place from 1984 to 1988, when it reached

Table E.21 CFM LOCOMOTIVE PRODUCTIVITY 1981 - 1991

YEARS	NO OF MAIN LINE LOCOMOTIVES				TON - KILOMETERS PER LOCOMOTIVE (MILLIONS)				
	CFM/S	CFM/C	CFM/N	CFM	TON-KM/LOCO CFM/S	TON-KM/LOCO CFM/C	TON-KM/LOCO CFM/N	TON-KM/LOCO CFM	
1981	64	26	11	101	12.4	22.0	18.9	15.7	
1982	62	26	11	99	10.5	15.7	18.0	12.7	
1983	62	26	11	99	7.4	5.0	16.0	7.7	
1984	62	26	11	99	6.1	2.7	8.2	5.4	
1985	62	26	11	99	3.0	3.4	1.0	2.9	
1986	58	8	13	77	3.5	12.3	0.6	3.9	
1987	48	8	13	67	3.5	16.9	4.4	5.3	
1988	48	8	13	67	3.2	17.8	1.3	4.6	
1989	42	7	11	60	5.1	25.0	1.3	6.7	
1990	38	11	11	60	4.0	20.5	4.1	7.0	
1991	37	11	11	59	2.8	15.5	7.0	6.0	

SOURCE CFM INFORMACAO ESTADISTICA. SELECTED YEARS.

its lowest level of 26,376 workers. However it has inexplicably increased since then, in spite of the traffic declines CFM has experienced. As of March 1992, the CFM labor force stood at 34,355 workers.

Table E 2 2 also presents the trends in CFM(S) labor force, showing employment increases up to 1983 and declines since then. The lowest labor force levels were experienced in 1985, when CFM(S) employed 13,708 workers. By the end of 1989 the labor force had increased to 14,501 employees in spite the railroad experiencing significant traffic declines.

In terms of both workers per track kilometer and workers per ton-kilometer, the CFM railroads exhibit the worst manning standards for railroad operations in Sub-Saharan Africa. To assess the degree of labor force redundancy in the CFM railroads an analysis was conducted applying the labor productivity standards of a sample of ten Sub-Saharan Africa countries (excluding South Africa) to the CFM railroad activity units. Four Sub-Saharan Africa manning standards are presented in Table E 2 3, namely

- 1- the best labor productivity standard, which refers to the railroad showing the lowest manning standard for each respective staffing category (whether mechanics, managers, maintenance of way labor, etc),
- 2- a high labor productivity standard, which refers to the second lowest manning rate for each staffing category,
- 3- a medium labor productivity standard, which corresponds to the median staffing requirements per traffic unit, and
- 4- the worst manning standard, which is presented solely for comparison purposes to characterize the degree of labor redundancy in CFM.

In addition, at the request of USAID, a developed country standard corresponding to the U S Class I railroad average is also presented. The U S standard is not applicable, since it responds to capital labor ratios (factor proportions), and capital costs/labor costs ratios very different from the conditions of Mozambique.

The traffic projections used as inputs in the estimation of the manning requirements of CFM are presented in Table E 2 4. The source for these traffic estimates are explained in Section E 5. Application of the manning standards to the traffic projections result in the estimates of labor requirements presented in Tables E.2.5 to E 2 8. At current traffic levels, 5,124 workers would have to be displaced even under the worst manning standards in Sub-Saharan Africa. While the medium manning standard can be easily

TABLE E 2.4 Data Input For the Estimation of Labor Requirements

	1991	1996	2000
TRAFFIC UNITS (MILLIONS)			
CFM/N	82.1	177.2	254.0
CFM/C	177.5	648.1	1068.4
CFM/S	149.4	472.4	672.8
CFM	412.1*	1297.7	1995.2
TRACK KILOMETERS			
CFM/N	919	919	919
CFM/C	884	884	884
CFM/S	705	705	705
CFM	2508	2508	2508
FREIGHT PASSENGER CAR KILOMETERS (THOUSANDS)			
CFM/N	888.5	1,918	2,749
CFM/C	5,224.5	19,076	31,447
CFM/S	6,435.6	20,349	28,982
CFM	12,845.2*	41,343	63,178
LOCOMOTIVE KILOMETERS (THOUSANDS)**			
CFM/N	268.28	479	686
CFM/C	648.28	1,935	3,189
CFM/S	1,101.69	1,277	1,818
CFM	2,059.83*	3,691	5,693

NOTES

- * INCLUDES OPERATIONS ON ZAMBEZIA LINE
- ** ASSUMES 370 TRAFFIC UNITS PER LOCOMOTIVE - KILOMETER FOR CFM/S AND CFM/N FOR 1996 AND 2000. THE EQUIVALENT FIGURE FOR CFM/C IS ASSUMED TO BE 335 FOR THE SAME YEARS

SOURCE SEE TEXT

Table E 2 5 Labor Requirement of CFM*

Class of Labor	Current Level**	1991		1992		1993	
		Required	Surplus	Required	Surplus	Required	Surplus
Maintenance of Ways & Structures	4 248						
Best Sub-Sahara Africa Railroad		1 354	2 894	1 354	2 894	1 354	2 894
High Standard		2 132	2 116	2 132	2 116	2 132	2 116
Medium Standard		2 809	1 439	2 809	1 439	2 809	1 439
Low Standard		3 486	762	3 486	762	3 486	762
US Class I Railroad Average		577	3 671	577	3 671	577	3 671
Workshop Engineers & Technicians	3 273						
Best Sub-Sahara Africa Railroad		158	3 115	341	2 932	523	2 750
High Standard		748	2 525	1 629	1 644	2 503	770
Medium Standard		1 421	1 852	3 109	164	4 777	(1 504)
Low Standard		2 135	1 136	5 270	(1 997)	6 061	(4 808)
US Class I Railroad Average		58	3 215	128	3 147	193	3 060
Traffic Operations	4 007						
Best Sub-Sahara Africa Railroad		153	3 854	482	3 525	742	3 265
High Standard		301	3 706	947	3 060	1 456	2 551
Medium Standard		394	3 613	1 242	2 765	1 909	2 098
Low Standard		501	3 506	1 579	2 428	2 427	1 580
US Class I Railroad Average		25	3 982	79	3 928	122	3 885
Management & Support Services	2 247						
Best Sub-Sahara Africa Railroad		150	2 097	196	2 051	236	2 011
High Standard		286	1 961	424	1 823	548	1 699
Medium Standard		684	1 553	1 074	1 173	1 424	823
Low Standard		1 775	472	2 997	(750)	4 058	(1 811)
US Class I Railroad Average		152	2 085	180	2 057	205	2 042
All Railroad Employees	13 775						
Best Sub-Sahara Africa Railroad		1 816	11 959	2 373	11 402	2 855	10 920
High Standard		3 457	10 308	5 132	8 643	6 540	7 135
Medium Standard		5 318	8 457	8 234	5 541	10 920	2 855
Low Standard		7 897	5 878	13 331	444	18 053	(4 278)
US Class I Railroad Average		812	12 963	951	12 814	1 097	12 678

* Estimated by applying the labor standards presented in Table E 2 3 to the summary traffic projections presented in Table E 5 1

** Current Levels - All permanent employees excluding foreigners and brigadas de melhoramentos

SOURCE CFM Human Resources Director 7/17/92

Table E.2.6 Labor Requirement of CFMN

Class of Labor	Current Level	1991		1996		2000	
		Required	Surplus	Required	Surplus	Required	Surplus
Maintenance of Ways & Structures	962						
Best Sub-Saharan Africa Railroad		496	466	496	466	496	466
High Standard		781	181	781	181	781	181
Medium Standard		1,029	(67)	1,029	(67)	1,029	(67)
Low Standard		1,277	(315)	1,277	(315)	1,277	(315)
US Class I Railroad Average		211	751	211	751	211	751
Workshop Engineers & Technicians	571						
Best Sub-Saharan Africa Railroad		18	553	33	538	48	523
High Standard		85	486	157	414	225	348
Medium Standard		181	410	287	274	426	145
Low Standard		216	355	412	159	590	(19)
US Class I Railroad Average		7	564	12	559	18	553
Traffic Operations	731						
Best Sub-Saharan Africa Railroad		31	700	66	665	94	637
High Standard		60	671	129	602	185	548
Medium Standard		79	652	170	561	243	488
Low Standard		100	631	216	515	309	422
US Class I Railroad Average		5	726	11	720	15	716
Management & Support Services	474						
Best Sub-Saharan Africa Railroad		49	425	54	420	57	417
High Standard		83	391	96	378	107	367
Medium Standard		190	284	224	250	255	219
Low Standard		462	12	552	(78)	631	(157)
US Class I Railroad Average		51	423	54	420	56	418
All Railroad Employees	2,738						
Best Sub-Saharan Africa Railroad		594	2,144	649	2,089	698	2,042
High Standard		1,010	1,728	1,164	1,574	1,289	1,439
Medium Standard		1,459	1,279	1,721	1,017	1,953	785
Low Standard		2,056	682	2,458	280	2,808	(70)
US Class I Railroad Average		274	2,464	288	2,450	301	2,437

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Table E.2.7 Labor Requirement of CFM/C

Class of Labor	Current Level	1991		1996		2000	
		Required	Surplus	Required	Surplus	Required	Surplus
Maintenance of Ways & Structures	1,908						
Best Sub-Saharan Africa Railroad		477	1,431	477	1,431	477	1,431
High Standard		751	1,157	751	1,157	751	1,157
Medium Standard		990	918	990	918	990	918
Low Standard		1,229	679	1,229	679	1,229	679
US Class I Railroad Average		203	1,705	203	1,705	203	1,705
Workshop Engineers & Technicians	1,485						
Best Sub-Saharan Africa Railroad		53	1,432	170	1,315	281	1,204
High Standard		254	1,231	813	672	1,340	145
Medium Standard		483	1,002	1,550	(65)	2,555	(1,070)
Low Standard		765	720	2,558	(1 073)	4,216	(2 731)
US Class I Railroad Average		20	1,465	83	1 422	104	1,381
Traffic Operations	1,459						
Best Sub-Saharan Africa Railroad		66	1,393	241	1,218	397	1,062
High Standard		130	1,329	473	986	780	679
Medium Standard		170	1,289	620	839	1,022	437
Low Standard		216	1,243	788	671	1,300	159
US Class I Railroad Average		11	1,448	39	1,420	65	1,384
Management & Support Services	512						
Best Sub-Saharan Africa Railroad		54	458	80	432	104	408
High Standard		102	410	183	329	258	254
Medium Standard		247	265	474	38	685	(173)
Low Standard		641	(129)	1,327	(815)	1,956	(1 444)
US Class I Railroad Average		54	458	70	442	86	426
All Railroad Employees	5,364						
Best Sub-Saharan Africa Railroad		651	4,713	969	4 395	1,259	4,105
High Standard		1,237	4,127	2,221	3,143	3 130	2 234
Medium Standard		1,890	3,474	3,634	1 730	5 252	112
Low Standard		2,850	2,514	5,902	(538)	8 700	(3 336)
US Class I Railroad Average		288	5,076	376	4,988	458	4 906

Table E.2.8 Labor Requirement of CFMS

Class of Labor	Current Level*	1991		1996		2000	
		Required	Surplus	Required	Surplus	Required	Surplus
Maintenance of Ways & Structures	1,027						
Best Sub-Sahara Africa Railroad		381	646	381	646	381	646
High Standard		599	428	599	428	599	428
Medium Standard		790	237	790	237	790	237
Low Standard		980	47	980	47	980	47
US Class I Railroad Average		162	865	162	865	162	865
Workshop Engineers & Technicians	1,207						
Best Sub-Sahara Africa Railroad		83	1,124	137	1,070	195	1 012
High Standard		393	814	659	548	938	269
Medium Standard		746	461	1,261	(54)	1 796	(589)
Low Standard		1,107	100	2,300	(1,093)	3,275	(2 068)
US Class I Railroad Average		31	1,176	50	1,157	72	1 135
Traffic Operations	1,650						
Best Sub-Sahara Africa Railroad		56	1,594	176	1,474	250	1,400
High Standard		109	1,541	345	1 305	491	1 159
Medium Standard		143	1 507	452	1,198	644	1 006
Low Standard		182	1,468	575	1,075	818	832
US Class I Railroad Average		9	1,641	29	1,621	41	1 609
Management & Support Services	683						
Best Sub-Sahara Africa Railroad		47	636	62	621	74	609
High Standard		99	584	144	539	183	500
Medium Standard		252	431	375	308	484	199
Low Standard		658	25	1,118	(435)	1,471	(788)
US Class I Railroad Average		46	637	56	627	63	620
All Railroad Employees	4,567						
Best Sub-Sahara Africa Railroad		566	4,001	755	3,812	900	3 667
High Standard		1,201	3,366	1,747	2,820	2 211	2,356
Medium Standard		1,931	2,636	2 679	1,888	3,714	853
Low Standard		2,927	1,640	4,972	(405)	6,545	(1,978)
US Class I Railroad Average		248	4,319	297	4,270	338	4,229

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achieved by CFM, this standard is not high enough to put the CFM railroads in a sound financial position. The only possible choices are the best standard, which would probably be achieved only under the master lease privatization option, and the high (or second best) standard, which is within the realm of achievement possibilities in the privatization scenarios other than the master lease.

But even the high standard may not be achieved without significant capital investments and new technology to raise the productivity of the CFM workforce to the productivity level implicit in the standard. It will be difficult to reach the high standard by 1996 even with the major investment in training required, in which case the median standard could be adopted as an interim standard for 1996, with the high standard applicable to year 2000. Under the high standard 5,132 workers would be needed by 1996 and 6,640 workers by year 2000. Tables E 2 6 to E 2 8 present estimates of labor redundancy for the three CFM railroads. At CFM(S) only 2,879 workers will be needed by 1996 under the high manning standard, with 3,714 workers needed by year 2,000. More detail on the projection of labor requirements by skill and railroad operation functions is presented in Section analyzing the options for redeploying the excess labor.

3 Railroad and Ports Operating Capacities

The operating capacities of the CFM railroad lines are presented in Table E 3 1. As shown there the line capacities are many multiples of the current traffic carried in 1991, however of particular interest for competition purposes are the maximum train length (in terms of the number of freight cars) that can transit on each line. In the CFM(C) lines, trains of length not longer than 28 freight cars can be accommodated, while in CFM(N) 40-car trains can be transported. In the intensively competitive CFM(S) markets, 50-car trains can use the Goba line to Swaziland, and 35-car trains can use the Limpopo line. The train length that can use the CFM(S) lines is lower than the 80-100 car unit trains (or block trains) that are typical for the movement of coal, grain, ores and other bulk commodities in developed countries. This capacity limit worsens the competitive position of the CFM(S) in competing against South African railroads for transporting bulk commodities.

Because of the importance that ports play in the railroad competition faced by the CFM railroads, a brief description of their capacities and qualities is in order. The maximum ship sizes handled by the Mozambique ports are 30,000/50,000 tons at Maputo, 50,000/60,000 tons at Matola, 20,000 tons at Beira, and 30,000 tons at Nacala. The port of Durban, the chief competitor to the CFM(S) ports, can handle ships of 60,000 tons. Quay length for bulk sugar are, at 180 meters, identical at Maputo and

TABLE E.3 1 CFM Railroad Line Capacity

LINE AND SECTION	MAXIMUM AXLE LOADS (TONS)	MAXIMUM TRAIN SPEEDS (KM/HR.)	MAXIMUM TRAIN LENGTH (NO. OF FREIGHT CARS)	CAPACITY (MILLIONS OF TONS)
CFMN (NACALA - NAYUCI)	16 - 20	80 - 100	40	9
CFMC (SENA LINE)	16	60	28	6
CFMC (BEIRA - MACHIPANDA)	18 - 20	60 - 80	35	9
CFMS (LIMPOPO LINE)	20	60 - 80	35	8
CFMS (GOBA LINE)	18 - 20	50 - 70	50	8

SOURCE: WORLD BANK, SOUTHERN AFRICA DEPARTMENT
 INFRASTRUCTURE OPERATIONS DIVISION, SADC TRANSPORT
 CORRIDORS STUDY OF FINANCIAL STRATEGY, NOVEMBER 1990
 ANNEX A-2, PAGE 1.

Durban But for handling bulk ores and coal shipments, the quay length of 1,400 meters at Durban is eight times greater than the 180 meters quay length at Maputo In addition, the days in port at all the Mozambique ports are 18 days, which compares unfavorably with the four days at port in Durban Loss and damage and pilferage at Maputo is three times as large as the rate at Durban ¹ Exhibit E 3 1 presents a description of the specialized port facilities at Maputo and at the South African ports of Durban and Richards Bay

4 Competition and Transport Flows

The CFM railroads operate within very competitive international transportation markets. The CFM(N) railroad competes with the CFM(C) railroad and with the Tanzanian railroad for shipments from Malawi. The CFM(C) railroad competes with the CFM(N) railroad for shipments from Malawi, with Tanzanian railroads for shipments from Zambia, and with South African railroads and CFM(S) for shipments from Zimbabwe The CFM(S) railroad competes with CFM(C) and the South African railroads for shipments from Zimbabwe, and with the South African railroads for shipments from Swaziland and South Africa

In 1988, CFM(C) carried two percent of all the imports from Malawi (but no exports) due to the insurgency in Mozambique, while carrying 13 percent of the imports and six percent of the exports from Zimbabwe CFM(S) carried 53 percent of the exports from Swaziland (but none of the imports), and nine percent of the imports and 12 percent of the exports from Zimbabwe.² In 1991, a deterioration in the service provided by CFM(S), characterized by large costs of loss and damage and pilferage and long periods of stay at the port of Maputo, contributed to CFM(S) losing 180,00 tons of Swaziland sugar diverted to Durban (South Africa), 90,000 tons of ferroalloys from Zimbabwe shifted to Port of Elizabeth (South Africa), and 100,000 tons of Zimbabwe steel shifted to Durban (South Africa)

The De Leuw, Cather International Limited report quoted earlier researched the least cost routes and degree of competition in each transportation corridor by focusing on the total distribution costs of shipments via alternative transport modes The total distribution costs examined included transportation

¹See De Leuw, Cather International Limited SADCC Transportation Investment Priority Assessment (STIPA) Vol II Prepared for USAID-Harare August 1991, page D-3

²See De Leuw, Cather International Limited SADCC Transportation Investment Priority Assessment (STIPA) August 1991, page F-3

tariffs, inventory costs while in transit, transfer costs, loss and damage costs and port demurrage costs. While their simulation of total distribution costs focused on high commodity values (i.e. \$1,000-\$2,222 values per ton) and did not use actual rail tariffs, but instead used broad rail cost averages per ton-kilometer for each competing railroad, some significant conclusions emerged. Even for high value commodities, high rates of loss and damage, and long periods of stay of 18 days at CFM ports, the CFM(N) railroad appeared to be the least cost mode for transporting commodities from Malawi, while CFM(C) emerged as the least cost mode for shipments from Zimbabwe and Zambia. However, the total distribution costs of shipments via the CFM(S) railroad were the largest of all the competitors for products to/from Swaziland and Zimbabwe. This led the De Leuw, Cather researchers to project very low traffic for CFM(S) for years 1995 and 2000. Their CFM(S) traffic projections of 1.39-2.146 million tons for 1996 and 2000 are lower than the projections presented in Section E.5.³

Because of the reservations noted above regarding the use of high value commodities and the absence of rail tariff data in the total distribution cost comparisons, it was decided to simulate different competing scenarios of CFM(S) versus the South Africa railroads. Table E.4.1 presents rail tariff information on shipments of several key commodities via the ports of Maputo and Durban, showing a rail transportation cost differential favorable to CFM(S) which ranged from \$11 to \$19 per ton depending on the commodity shipment in question.

Table E.4.2 presents the distribution costs for commodity shipments whose value are \$1,000 per ton (towards the top values of the commodities shipped through Maputo) assuming several port delay scenarios at the port of Maputo. At the current level of delays at the port of Maputo (18 days), the distribution cost differential of \$21.63 per ton favorable to Durban is larger than the rail tariff cost advantage enjoyed by Maputo (\$11-\$19 per ton). Thus, there is no surprise that traffic has been diverted to Durban. However, if port delays at Maputo are reduced to 15 days (with their concomitant proportional reduction in loss and damage), then CFM(S) becomes the least cost mode for the shipments of asbestos and iron/steel, since in these cases the transportation cost differential (\$17-\$19) in favor of Maputo is larger than the \$16.94 distribution cost differential favorable to Durban. By the time the delays at Maputo are reduced to 11 days, the transportation cost differential favorable to CFM(S) overwhelms the distribution cost advantages of Durban, and CFM(S) shipments via Maputo emerge convincingly as the least cost mode.

4.1 CFM(S) Competition in Specific Commodities

³De Leuw, Cather International Limited Op cit page 77

TABLE E 4 1
 FREIGHT RATE DIFFERENTIALS BETWEEN CFM/S
 AND SOUTH AFRICAN RAILROADS ON SELECTED
 COMMODITY SHIPMENTS - 1990

COMMODITY	FROM	TO	KMS	RAIL RATE PER TON-KM (US\$)	RAIL RATE PER TON (US\$)	RATE DIFFERENTIAL
ASBESTOS, BREAK BULK	ZVISTTAVANE	MAPUTO	1071	\$0 039	\$42	\$17
	ZVISTTAVANE	DURBAN	1683	0 035	59	
FERRO CHROME, BREAK BULK	KWEKWE	MAPUTO	1233	\$0 027	\$34	\$15
	KWEKWE	DURBAN	1831	0 027	49	
IRON/STEEL CRUDE, BREAK BULK	REDCLIFF	MAPUTO	1234	\$0 036	\$44	\$19
	REDCLIFF	DURBAN	1832	0 034	\$63	
RAW SUGAR FOR EXPORT, BREAK BULK	CHIREDRJ	MAPUTO	981	\$0 032	\$31	\$13
	CHIREDRJ	DURBAN	1603	\$0 027	44	
WHEAT IMPORTS	MAPUTO	LUSAKA	2178	\$0 029	\$62	\$11
	DURBAN	LUSAKA	2776	\$0 026	73	

SOURCE. WORLD BANK SOUTHERN AFRICA DEPARTMENT INFRASTRUCTURE OPERATIONS DIVISION
 SADC TRANSPORT CORRIDORS: A STUDY OF FINANCIAL STRATEGY, VOL II NOVEMBER 1990,
 ANNEX A-4, PAGE 3.

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TABLE E 4.2
 DISTRIBUTION COSTS PER TON (EXCLUDING RAIL TARIFFS) FOR SELECTED SHIPMENTS FROM SWAZILAND
 (IN U.S. 1990 DOLLARS)

VALUE PER TON	VIA PORT OF	DAYS IN PORT	RAIL TRANSIT DAYS	NO OF TRANSFERS	DISTRIBUTION COSTS a)					TOTAL	DIFFERENTIAL
					INVENTORY COSTS b)	TRANSFER COSTS	LOSS AND DAMAGE COSTS c)	PORT DEMURAGE COSTS c)			
\$1,000	DURBAN	4	3	1	\$2.88	\$2.22	\$5.00	\$1.68	\$11.78		
	MAPUTO	18	3	1	8.63	2.22	15.00	7.56	33.41	\$21.63	
	MAPUTO	15	3	1	7.40	2.22	12.80	6.30	28.72	16.94	
	MAPUTO	11	3	1	5.75	2.22	9.40	4.62	21.99	10.21	
	MAPUTO	7	3	1	4.11	2.22	6.00	2.92	15.25	3.47	

NOTES

- a) FOR ESTIMATING THE TOTAL DISTRIBUTION COSTS, THE RAIL TARIFF COST DIFFERENTIAL NEEDS TO BE ADDED (SEE TABLE E 4.1)
- b) ESTIMATED USING 15% AS THE RATE OF INTEREST
- c) ESTIMATED FROM DE LEUW, CATHER INTERNATIONAL LIMITED SADC TRANSPORTATION INVESTMENT PRIORITY ASSESSMENT (STIPA) AUGUST 1991, PAGE E-5, AS PROPORTIONAL TO DAYS IN PORT

TO DA
 SOURCE SEE TEXT

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TABLE E 4.3
TOTAL DISTRIBUTION COST PER TON OF SELECTED SHIPMENTS JULY 1992
(U.S. 1992 DOLLARS)

COMMODITY SHIPMENTS	PORT	RAIL TARIFF	PORT TARIFF AND AD VALOREU	INTEREST* IN TRANSIT	LOSS AND DAMAGE	TRANSFER COSTS	TOTAL DISTRIBUTION COSTS
ASBESTOS (BARBERTON S.A)	MAPUTO	21 44	\$6 50	\$4 32	\$0	\$2 22	\$34 48
	DURBAN	43 51	8 74	1 03	0	0	\$53 28
CITRUS (NELSPRUIT, S.A)	MAPUTO	30 80	24 15	11 10	54 00	2 22	\$122 07
	DURBAN	61 57	20 44	8 66	18 00	0	\$106 67
MOLASSES (MALWULA, SWAZ)	MAPUTO	16 14	1 60	8 84	0	2 22	\$28 80
	DURBAN	64 19	2 57	4 52	0	2 22	\$73 50
COAL (MPAKA, SWAZ)	MAPUTO	7 55	3 73	4 47	0	2 22	17 97
	RICHARDS BAY	11 89	4 19	4 37	0	2 22	22 67
COAL (MIDDLEBURG, S.A)	MAPUTO	17 70	3 73	4 57	0	2 22	28 22
	RICHARDS BAY	24 95	4 19	4 41	0	0	33 55
SUGAR (PHOZOMOYO, SWAZ)	MAPUTO	17 20	4 00	4 42	125	2 22	40 34
	DURBAN	18 74	4 00	2 98	125	2 22	28 19
STEEL (MIDDLEBURG S.A)	MAPUTO	40 57	8 40	27 43	0	2 22	78 62
	DURBAN	84 89	10 58	26 82	0	0	122 09

* ESTIMATED AT 15 PERCENT INTEREST RATES

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This section analyzes the competition faced by CFM(S) in its principal freight markets. The total distribution costs of rail shipments via Maputo and the South African ports are presented in Table E 4 3, which is based on data collected by Austral Consultoria E Projectos in July 1992.

Asbestos. In spite of the significant advantage in total distribution costs enjoyed by CFM(S) in this market, Durban has been capturing an increasing share of the tonnage moved. This has occurred because with ships for the Far East serving Maputo every 21 days, there are more shipping opportunities through Durban, which has weekly service. Thus, the tendency to ship via Durban.

Citrus. While considerable amounts of citrus are handled by Maputo, the total distribution costs of shipping through Durban are already 20 percent smaller. Shipments to the Far East via charters use Durban because of Japanese food quality regulations that are not met at the port of Maputo.

Molasses. CFM/s enjoys a significant advantage in total distribution costs in this market, and has been able to hold off the South African competition.

Coal. While CFM/s is still the least cost competitor in the competition with Richards Bay, it is so by a small margin. The South African railroad and port are offering 20 percent discounts in this market, thereby eliminating the Maputo advantage. Coal is shipped in larger shipments at Richards Bay, turning the balance against CFM(S). Higher costs at Maputo relate to times in port, and fewer shipping opportunities. This is a CFM(S) market under competitive pressure.

Sugar. Longer times in port and huge loss and damage and pilferage costs have eliminated the distance advantage enjoyed by CFM(S). It is now cheaper to ship sugar through Durban and the freight traffic figures reflect this.

Steel. While Maputo enjoys a cost advantage in steel shipments, South African steel uses Durban primarily because ocean shipping costs are cheaper there. The only steel shipments currently using Maputo originate in Zimbabwe.

Considering that shipments through Maputo are characterized by bulk commodities with lower values per ton than \$1,000 (sugar, for example, is less than \$250 per ton in the London futures market), there is still hope that CFM(S) can recuperate some of the traffic diverted to the South African ports if port delays at Maputo are reduced to 11 days, that is, almost cut in half from current levels, and if loss and damage and pilferage can be controlled through a systematic program of cargo security at both the CFM(S) railroad and ports. The traffic projections for CFM(S) presented in the next section assume that port delays at Maputo

and loss and damage will be reduced to the competitive levels presented in Table E 4 2, consequently these projections are larger than those developed in the De Leuw, Cather report

5 Railroad Demand Projections

Projections of the net tonnage and net ton-kilometers were developed for the three transportation corridors following several assumptions regarding the prevalence of peace in the area, as well as much needed improvements in cargo security at both rails and ports, and improvements in waiting times for loading and unloading at Mozambique's ports

The projections assume peace conditions in the transportation corridors with no armed assaults on the railroads or their property. The first projection year corresponds to three years after peace prevails. The first projection year has been assumed to correspond to 1996, that is three years after peace is assumed to occur at the end of 1992. A second projection year is 2000, which was selected to permit comparisons with projections of traffic flows conducted by other researchers.

The assumptions regarding time in transit and loss and damage rates are as follows. Railroad transit days from Swaziland to the port of Maputo are assumed to be reduced to two days, lower from the 1990 level of three days, by assuming non-stop express trains, which considerably reduce the loss and damage experience on this rail corridor. Similarly the time in transit from Zimbabwe to the port of Beira is assumed to be reduced from the 16 days experience of 1988-89, while time in transit from Malawi to the ports of Nacala and Beira are assumed to be reduced from the 15-16 days experienced in 1988-89. Port days at the Mozambican ports are assumed to be reduced from the current level of 18 days at port to 7-11 days, that is, improved yet still above the South African port experience. In addition, improvements in cargo security at CFM rail and ports are assumed to be made, so that the loss and damage rate on the transportation corridors of Mozambique are reduced from the current rates of 1.2-1.5 percent to 0.6 percent. The improvement in cargo security will require both the running of non-stop international cargo trains, as well as investments in security systems at railroad yards, stations and port terminals.

5.1 Domestic Cargo Projections

Domestic cargo tonnage was projected on a product by product basis for CFM(S) for 1996 (or three years after peace). The following products were projected at their peak levels of the early eighties.

Limestone	42,000 tons
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Cement	36,000 tons
Fuel	58,000 tons
Stone	56,000 tons
Food Supplies	199,000 tons
Other unspecified	562,000 tons

The resulting 1996 traffic is close to the 1982 traffic level. A slight growth is projected for year 2000.

The domestic cargo traffic of CFM(C) is projected at levels comparable to 1983 for both projection years. Similarly, the traffic on CFM(N) is projected close to the 1982-83 traffic levels for years 1996 and 2000. The projections are presented in Table E 5 1.

5 2 International Cargo Projections

International cargo projections were developed on a corridor basis as follows:

5 2 1 Northern Corridor

The 1996 projection for CFM(N) assumes that the peak traffic of 1981-82 in tea, tobacco and minerals from Malawi will be recovered three years after peace arrives in the corridor. The year 2000 projection comes from De Leuw, Cather International Limited⁴. The international projections on this corridor are below those in the recent TRANSMARK study (January 1992) of this corridor. The resulting international cargo projection for the Northern corridor is presented in Table E 5 1.

5 2 2 Central Corridor

Shipments from Zambia were projected as 84,000 tons for years 1996 and 2000, comparable to 1987 levels. The tonnages from Malawi were projected at 1981 levels for 1996. Zimbabwe shipments were projected to grow at 9.5 percent annual rates to year 1996. This is the rate of growth experienced by the tonnage from Zimbabwe in the high growth period 1982-1988. The year 2000 projections for the Central corridor were taken from the DeLeuw, Cather study referred to earlier⁵.

5.2 3 Southern Corridor

Flows from Zimbabwe, Swaziland and South Africa using the CFM(S)

⁴De Leuw, Cather International Limited. SADCC Transportation Investment Priority Assessment (STIPA) Vol I, page 77. Prepared for USAID-Harare August 1977.

⁵De Leuw, Cather International Limited. Op Cit page 77.

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railroad were projected on a product by product basis for 1996. This projection is presented in Table E 5 2 and shows the tonnage transported from each country projected at their peak traffic during the eighties, with the exceptions of mineral shipments from South Africa and sugar shipments from Swaziland. In the case of the Swaziland sugar, traffic which has already been lost by CFM(S), it was assumed that improvements in port sugar handling technology by the port of Maputo, use of specialized rail freight cars for transporting sugar and reduction in loss and damage rates in this corridor would enable CFM(S) to recuperate all the sugar traffic lost by year 2000. All the other non-sugar traffic on this corridor is assumed to grow at the moderate rate of six percent from year 1996 to 2000. The resulting projections, presented in Table E.5.2, are smaller than the projections presented in the De Leuw, Cather study cited earlier, study which assumed still high rates of loss and damage, times in transit and long periods of stay at the port of Maputo and for CFM(S). It should be obvious that the recovery of lost traffic on CFM(S) will require investments in logistics, cargo security systems and port technology necessary to compete effectively with shipments via the South African ports of Durban and Richards Bay. Table E 5 3 compares projections from the main corridor studies conducted recently.

5 3 Passenger Traffic Projections

Passenger traffic on the three corridors were projected at their peak levels during the eighties, after adjustments for the degree of competition from road traffic. In the Central corridor, where CFM(C) competes with a good paved road, it was assumed that only 25 percent of the previous peak traffic would be retained. The other two corridors experience less road traffic competition, since they compete with poor quality roads. As a consequence, it was assumed that only 50 percent of the peak passenger traffic would be retained in the competition with busses and pick-up trucks in the Northern and Southern Corridors. The passenger traffic projections are presented in Table E 5 1.

6. Railroad Operational Improvements Needed

Previous sections have focused on the competitive markets in which CFM operates, particularly the intensive competition from the South African railroads faced by CFM(S). This section briefly discusses the operational improvement needed to make CFM an effective competitor. The discussion starts by focusing on the interdependence of rail and port operating strategies. As discussed in Section E 4, the high levels of delay (18 days) at the CFM ports are very adversely affecting the competitiveness of CFM(S) in its struggle to compete with the South African railroads. The first order of business should be to concentrate

TABLE E 5 1
TRAFFIC PROJECTIONS SUMMARY

	1991	1996	2000
TONS TRANSPORTED (THOUSANDS)			
CFM/N	89 0	360 1	712 0
NATIONAL	50 8	116 0	196 0
INTERNATIONAL	38 2	244 1	516 0
CFM/C	699 0	1,775 5	2,957 0
NATIONAL	226 0	315 5	435 0
INTERNATIONAL	473 0	1,460 0	2,522 0
MALAWI	17 9	458 0	N.A
ZAMBIA	8 7	84 0	N.A
ZIMBABWE	446 4	918 0	N.A
CFM/S	1,385 1	3,311 0	4,904 0
NATIONAL	520 3	933 0	1,153 0
INTERNATIONAL	864 8	2,378 0	3,751 0
ZIMBABWE	110 0	627 0	792 0
SOUTH AFRICA	599 6	1,272 0	1,606 0
SWAZILANDIA	155.2	479 0	1,353.0
CFM	2,181.6	5,446 6	8,573.0
NATIONAL	805.6 *	1,364 5	1,784 0
INTERNATIONAL	1,376.0	4,082.1	6,789.0

* INCLUDES THE ZAMBESIA LINE AS WELL

SOURCE. SEE TEXT

TABLE E 2.2 CFM PERSONNEL - SELECTED YEARS 1979 - 1992

CFM	1979	1980	1981	1982	1983	1984	1985	JUNE 1986	1987	1988	1989	1990	1991	MARCH 1992
DIRECT RAIL			19,913	19,933		18,368	17,251	17,196	14,427	14,067		15,738		
DIRECT PORT			18,178	18,183		13,920	11,733	9,923	10,858	10,166		18,926		
UNALLOCATED			2,408	2,141		2,051	1,734	1,719	1,553	2,153		2,481		
TOTAL	N.A.	N.A.	40,499	40,257	N.A.	34,339	30,718	28,738	26,838	26,376	N.A.	37,145	N.A.	34,355
CFMS														
DIRECT RAIL			7,264	7,271		6,138	5,492	6,238	5,639	5,517		5,226		
DIRECT PORT			8,876	8,876		9,124	7,616	6,003	7,563	6,971		8,420		
UNALLOCATED			681	682		799	600	575	534	1,167		855		
TOTAL	13,294	13,567	16,821	16,829	17,045	16,061	13,708	12,816	13,736	13,655	N.A.	14,501	N.A.	N.A.

SOURCE. CFM. INFORMACAO ESTADISTICA. SELECTED YEARS.

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Table E 2.3 Labor Productivity Standards

LABOR REQUIREMENTS FOR	DEFINITION OF STANDARD	BEST SUB-SAHARAN AFRICAN RAILROAD	HIGH STANDARD	MEDIUM STANDARD	LOW STANDARD	US CLASS 1 RAILROAD AVERAGE *
I - MAINTENANCE OF WAY AND STRUCTURES	EMPLOYEES PER TRACK - KM	0.54	0.85	1.12	1.30	0.23
II - LOCOMOTIVE REPAIRS	LOCOMOTIVES - KM PER MECHANIC	17,451	3,774	2,008	1,836	47,120
III - FREIGHT AND PASSENGER CAR REPAIRS	CAR - KMS PER MECHANIC	320,392	63,504	32,535	12,685	871,107
IV - TRAFFIC OPERATIONS	MILLIONS OF TRAFFIC UNITS PER EMPLOYEE	2.69	1.37	1.046	0.822	16.42
V - MANAGEMENT AND OVERHEAD FUNCTIONS	AS PERCENT OF ALL OTHER PERSONNEL	9.0%	9.0%	15.0%	20.0%	23.0%

SOURCE: ESTIMATED FROM THE RECORDS OF TEN RAILROAD COMPANIES IN SUB-SAHARAN AFRICA (EXCLUDES SOUTH AFRICA)

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TABLE E 5 1 - CONTINUATION
TRAFFIC PROTECTIONS SUMMARY

	1991	1996	2000
TONS KILOMETERS TRANSPORTED (MILLIONS)			
CFM/N	77.4	77.2	146.0
NATIONAL	33.6	40.6	68.6
INTERNATIONAL	43.8	36.6	77.4
CFM/C	170.5	615.1	1031.4
NATIONAL	24.9	89.5	123.5
INTERNATIONAL	145.6	525.6	907.9
CFM/S	102.5	336.4	487.8
NATIONAL	16.9	65.3	80.7
INTERNATIONAL	85.6	271.1	407.1
CFM	351.2	1028.7	1665.2
NATIONAL	76.2	195.4	272.8
INTERNATIONAL	275.0	833.3	1392.4
PASSENGER KILOMETERS TRANSPORTED (MILLIONS)			
CFM	60.0	269.0	330.0
CFM/N	4.7	100.0	108.0
CFM/C	7.0	33.0	37.0
CFM/S	46.9	136.0	185.0
CFM/Z	2.3	N.A	N.A

SOURCE. SEE TEXT

TABLE E 5.2
INTERNATIONAL TRAFFIC PROJECTIONS
CFM/S
(THOUSANDS OF TONS)

	1996	2000
FROM ZIMBABWE		
FERROALLOYS	70	
STEEL	177	
ASBESTOS	68	
MAIZE	75	
SUGAR	199	
ALL OTHERS	38	
	627	792 *
FROM SOUTH AFRICA		
COAL	779	
STEEL	64	
CITRICS	130	
ASBESTOS	75	
MINERAL PRODUCTS	50	
ALL OTHERS	174	
	1272	1606 *
FROM SWAZILAND		
SUGAR **	95	380
COAL	130	
MOLASSES	126	709 *
MAIZE	18	
ALL OTHERS	110	264
	479	1353

* PROJECTED AT 6 % ANNUAL GROWTH FROM 1996 TO 2000

** ASSUMES 25 % OF SUGAR TRAFFIC RECUPERATED BY 1996 AND 100 % RECUPERATED BY 2000.

SOURCE. SEE TEXT

TABLE E 5 3
COMPARISONS OF TRAFFIC PROJECTIONS OF SEVERAL STUDIES
(THOUSANDS OF TONS AND MILLIONS OF TON KMS)

STUDY	THIS STUDY	DE LEUW, CATHER INTERNATIONAL	TRANSMARK	HAMBURG PORT CONSULTING GROUP	
YEAR	JULY, 1992	AUGUST, 1991	JANUARY, 1992	1981	
CFMN	1995/96				
	TONS	360 1	484	N.A.	658-940
	TON-KMS	77.2	N.A.	277-287	332-475
	2000				
	TONS	712 0	518	N.A.	808-1,154
	TON-KMS	148 0	N.A.	N.A.	306-565
CFWC	1996/96				
	TONS	1,775	2,522-3,416	N.A.	N.A.
	TON-KMS	615 1	N.A.	N.A.	N.A.
	2000				
	TONS	2,957	2,522-3,416	N.A.	N.A.
	TON-KMS	1,031.4	N.A.	N.A.	N.A.
CFMS	1996/96				
	TONS	3,311	982-1,294	N.A.	4,517-6453
	TON-KMS	336.4	N.A.	N.A.	495-708
	2000				
	TONS	4,904	1,392-2,146	N.A.	5,373-7,676
	TON-KMS	487 8	N.A.	N.A.	568-810

SOURCES

DE LEUW, CATHER INTERNATIONAL LIMITED SADCC TRANSPORTATION INVESTMENT
PRIORITY ASSESSMENT (STIPA) AUGUST 1991 PREPARED FOR USAID - HARARE,
AUGUST 1991 PAGE 61

HPC (HAMBURG PORT CONSULTING GMBH). CFM TECHNICAL ASSISTANCE AND TRAINING NEEDS
FINAL REPORT HAMBURG/MAPUTO 1991, PAGES 1 11 - 1 14

TRANSMARK. STUDY OF THE CFMN CORRIDOR. JANUARY 1992, PAGE 6 14

on reducing the delays at the port of Maputo and its high rate of loss and damage and pilferage. The following paragraphs pertain to railroad improvements.

6 1 Railroad Cargo Security

The CFM railroads, particularly CFM(S), are not immune to the problem of cargo security. This problem includes the assaults on CFM trains and loss of locomotives on the CFM(S) line, as well as the pilferage that occurs to shipments at stations and railroad yards. Since most of the assaults on CFM(S) trains occurs in a 10-kilometer section, solution of this problem is possible, indeed the CFM(C) railroad has already managed to overcome this problem. The problem of pilferage could be minimized by running non-stop trains to/from Maputo to the borders, that is by minimizing the opportunities for pilferage by railroad employees and the local populations. In addition, a comprehensive program of cargo security should be implemented. This program would include a shipper information system to trace the location of rail shipments at all times.

In addition, cargo security at rail stations and yards needs to be improved in a systematic fashion through security measures, such as employment screening, employee identification tags, proper fencing and guarded entry gates, controlled and exclusion areas, outside and protective lighting, locks, padlocks and high security seals for the freight cars, alarms and patrol guards. These same techniques should be used for port cargo security.

6 2 Use of Unit/Block Trains for Bulk Commodities

Competition for coal cargo, and other bulk commodities (such as grain) in the Southern corridor will require improvements in train length, since the South African competitors can be expected to increasingly use unit trains (80-100 freight cars) for their train movements. The problem with matching the South African railroads is that the CFM lines have their capacity limited to 28-50 car trains. A start should be made to commence operating 40-50 car trains in the Southern corridor, with the view of eventually improving the line to accommodate 80-car trains and compete more effectively on coal markets.

6 3 Improvements in the Freight Car Fleet

The current freight car fleet has two problems. First, it is in such a state of disrepair that the CFM cars are not allowed to transit in the rail lines of the surrounding countries, which creates the need for extra transfers and increases rail transit times and the total distribution costs of shipments in highly competitive cargo markets, such as Swaziland, Zimbabwe and South Africa.

A second problem is the need for more specialized cars. For example, the freight cars used for transporting bulk sugar in South Africa are unavailable in the CFM fleet. There is an urgent need to modernize and update the freight car fleet used to serve the international traffic.

6.4 Reducing Rail Transit Times and Improving Locomotive Productivity

It currently takes three days of transit for shipments from Swaziland to reach the port of Maputo, thereby negating the advantage of shorter distances to the CFM ports. An effort should be made to reduce transit times through a combination of policy options like: running unit trains, running non-stop trains to the borders, improving the wagon fleet so that the CFM freight cars can transit on other railroads in the region, and negotiating agreements with the neighboring countries to expedite cargo handling at the borders (like paying for customs at the port on the exports from the neighboring countries). Locomotive productivity is at an all time low in the Northern and Southern corridors, which need to be raised to the productivity levels of CFM(C).

7 Prospects for CFM Financial Viability

This section presents an analysis of the current financial position of CFM's railroad operations and its future prospects. A separate analysis is provided for CFM(S) rail operations.

7.1 CFM Current Financial Status

The profit and loss statements of CFM are presented in Table E 7.1. These figures show that CFM had a positive cash flow in 1987 and 1988, but that the cash flow turned negative in 1989 and has been growing in negative terms since then. The negative cash flow of CFM in 1991 rose to MT 1,510.6 million. A closer look at Table E.7.1 reveals that the revenues from the railroad operations of CFM did not cover their direct salary expenses from 1988 to 1990, and then only showed a positive balance of revenues over salary expenses in 1991 as a consequence of a major increase in the rail tariffs. In contrast, the revenues from CFM port operations have always shown a healthy surplus over the direct salary expenses at the ports. The conclusion is that port operations have been consistently contributing positive cash flows to CFM, while the railroad operations have been a consistent drain on the finances of CFM.

In view of the fact that the railroad accounting system does not permit a thorough allocation of costs between railroad and port

TABLE E 7 1
CFM PROFIT AND LOSS STATEMENT
(MILLIONS OF METICALS) *

	1991	1990	1989	1988	1987
RAILROAD SECTOR					
REVENUES	15 358.3	8001.9	5990.4	4 366.3	2 548.2
LESS DIRECT SALARY EXPENSES	13 350.1	10 165.7	8 888.3	4 771.1	2 244.7
	2 008.2	(4 163.8)	(2 897.9)	(404.8)	300.5
PORT SECTOR					
REVENUES	42,962.5	29 137.6	24 491.7	14,251.5	6 863.9
LESS DIRECT SALARY EXPENSES	9 465.7	6 465.5	5 898.7	3 195.0	1 635.2
	33 496.8	22 672.1	18 593.0	11 056.5	5,228.7
OTHER REVENUES					
OTHER REVENUES	13,634.4	10,158.7	3 119.4	1 342.1	963.6
LESS UNALLOCATED GENERAL EXPENSES	50 650.0	28 814.3	18 857.4	10 064.9	4 841.0
NET INCOME (EXCLUDING DEPRECIATION)	(1510.6)	(147.3)	(42.9)	1908.9	1 651.8

* USD 1 = 2,900 MTS

SOURCE CFM INFORMACAO ESTADISTICA. SELECTED YEARS

TABLE E 7 2
 ALLOCATION RULES
 FOR ASSIGNMENT OF COSTS
 TO CFM RAILROAD
 AND PORT OPERATIONS IN 1981

EXPENSE ACCOUNT	ALLOCATION RULE	PERCENT ASSIGNED TO	
		RAILROAD	PORT
DIRECT RAILROAD SALARIES	DIRECTLY ASSIGNABLE	100%	0%
DIRECT PORT SALARIES	DIRECTLY ASSIGNABLE	0%	100%
DIRECT SALARIES PROTECTION FORCE	PROPORTIONAL TO DIRECT RAILROAD SALARIES OF THE PORT PROTECTION FORCE **	50%	50%
PENSIONS	PROPORTIONAL TO DIRECT RAILROAD & PORT SALARIES (VARIES BY RAILROAD)	58 5%	41 5%
REVENUE DISCOUNTS	ASSIGNED TO RAILROADS	100%	0%
FUEL PURCHASES	ASSIGNED PROPORTIONAL TO FUEL USE *** AT RAILROADS AND PORTS (VARIES BY RAILROAD)	70 6%	29 4%
AUTO FINANCIAMIENTO	ASSIGNED TO RAILROADS	100%	0%
TRAINING OF BRIGADAS DE MEJORAMIENTO	ASSIGNED TO RAILROADS	100%	0%
EXPENSES OF CLUB FERROVIARIOS	ASSIGNED TO RAILROADS	100%	0%
EXPENSES OF PROTECTION FORCE	PROPORTIONAL TO RAILROAD/PORT PROTECTION FORCE DIRECT SALARIES **	60%	60%
OTHER EXPENSES			
SALES TAX ON PURCHASES			
GENERAL SUPPLIES			
ELECTRICITY AND WATER			
EMPLOYEE TRAVEL EXPENSES	} ASSIGNED IN PROPORTION TO ALL OTHER ASSIGNABLE COSTS (VARIES BY RAILROAD) (0 77 METICAIS PER ASSIGNED COSTS TO RAIL AND PORTS) *		
TELEPHONE AND TELEX			
OTHER PURCHASES NON SPECIFIED			

NOTES

- * THE EQUIVALENT FIGURE FOR CFM/S IS 1 15 METICAIS PER ASSIGNED COST TO RAILROADS AND PORTS
- ** ASSUMED TO BE EQUAL IN THIS EXERCISE
- *** THE FUEL USE PROPORTIONS FOR CFM/S ARE 70 6 % FOR THE RAILROAD AND 29 4 % FOR THE PORT

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TABLE E 7.3
CFM PROFIT AND LOSS STATEMENT
(RAILROAD OPERATIONS ONLY)
SELECTED YEARS 1988 AND 1991
AND 1996 AND 2000 PROJECTIONS
(MILLIONS OF METICALS) *

	1988 (AT CURRENT PRICES)	1991 (AT CURRENT PRICES)	1996 (AT CONSTANT 1991 PRICES)	2000 (AT CONSTANT 1991 PRICES)
REVENUES	4 368 3	15 358.3	44 986 c]	72 821 c]
DIRECT SALARY	4 771 1	13 350 0	13 350	13 350
FUEL	908 3 d]	4 289.4 d]	7 650 b]	12 800 b]
OTHER GENERAL EXPENSES	6,935 0 e]	35 080.8 e]	36 080 6	36 080 6
NET INCOME (EXCLUDING DEPRECIATION)	(8,248 1)	(37 341 7)	(11 084 6)	11,590 4
REQUIRED LABOR FORCE REDUCTION TO BREAKEVEN (1 5 MILLION MT PER PERSON - YEAR IN 1991)			7 398	0

* 1982 Exchange Rate 1USD=2,900 MTS

NOTES a ESTIMATED ON THE BASIS OF THE STUDY WORLD BANK SOUTHERN AFRICA DEPARTMENT SADC
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- b FUEL USE WAS PROJECTED PROPORTIONAL TO THE GROWTH IN LOCOMOTIVE - KILOMETERS
- c REVENUES WERE PROJECTED ASSUMING CONSTANT 1991 REVENUES FOR NET TON KILOMETER TRANSPORTED
- d ALLOCATED TO THE RAILROAD PROPORTIONAL TO ITS DIESEL AND GASOLINE USE
- e ALLOCATED ACCORDING TO THE ALLOCATION RULES PRESENTED IN TABLE E.8 2

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operations⁶, an attempt was made to allocate rail and port costs on the basis of information external to CFM. To that effect a World Bank 1990 study⁷ was used to separate the railroad portion of the unallocated other general expenses of Table E 7 1 from the rail portion for the Central and Southern corridors in year 1988. The World Bank study allocated 73 percent of unallocated other general expenses to rail in the Southern corridor, and 83.8 percent in the Central corridor (no estimate was provided for the Northern corridor). Adding the costs of the two corridors resulted in the assignment of 77.6 percent of the CFM unallocated other general expenses to the rail operations. This rail cost proportion, albeit large, was used to assess the net cash flow from CFM railroad operations in 1988. A set of allocation rules, presented in Table E 7 2, was designed for assigning the unallocated general expenses for 1991. The resulting cost allocations are presented in Table E 7 3. These figures show the CFM railroads experiencing cash flow losses of MT 8,246 million in 1988 and MT 37,342 million in 1991.

7 2 CFM Future Financial Prospects

CFM revenues and expenses are projected for years 1996 (three years after the breakout of peace) and 2000. The projections, presented in Table E 7 3, use constant 1991 price levels, and assume that the 1991 expense levels for direct salary and other general expenses allocated to the railroad will remain constant in real terms (after adjustment for inflation), that is, that direct salaries and other general expenses will grow at the rate of inflation. Assuming that the revenue per net ton kilometer transported remains constant in 1991 prices, the railroad revenues are projected in accordance with the traffic projections presented in Section E 5. On the basis of the traffic projections presented earlier, CFM will still experience a negative cash flow in 1996, as shown in Table E 7 3, even if they hold the line on wages and general expenses. Breaking even (on a cash flow basis) under these conditions will require reducing the CFM railroad staff by as much as 7,396 workers. However, by the year 2000 CFM railroad operations will show a profit, profit to be increased to MT 22,684 million (1991) if the 1996 labor force reduction of

⁶The CFM profit and loss statement does not include depreciation expenses, which are unavailable due to the fact that the railroad and port assets have not been valued. In addition, interviews with CFM accounting and finance officials, and their consultants, indicate that the current accounting system is unable to provide costs of commodity shipments or even to allow an allocation of rail/port costs.

⁷World Bank Southern Africa Department Infrastructure Operations Division SADCC Transport Corridors Study of Financial Strategy Vol 2 Annex C-1 November 1990, pages 5 and 6

TABLE E 7 4
CFM/S PROFIT AND LOSS STATEMENT

(MILLIONS OF METICAIS) *

	1991	1990	1989	1988	1987
RAILROAD SECTOR					
REVENUES	4,152 7	3,440 5	4,392 7	3,451 5	1,891 6
LESS DIRECT SALARY EXPENSES	5,968 3	4,922 4	4,512 5	2,519 3	1,065 0
	(1,815 6)	(1,481 9)	(119 8)	932.2	826 6
PORT SECTOR					
REVENUES	21,557 6	14,858 7	12,017 5	6,844 0	3,631 1
LESS DIRECT SALARY EXPENSES	4,849 6	3,129 8	2,828 7	1,687 1	904 9
	16,708 0	11,728 9	9,188 8	5,156 9	2,726.2
OTHER REVENUES	1,364 4	2,378 6	2,148 4	427 6	373 8
LESS UNALLOCATED GENERAL EXPENSES	21,242 3	10,179 0	9,771 3	5,322 3	2,490 4
NET INCOME (EXCLUDING DEPRECIATION)	(4,885 5)	2,446.6	1,446.1	1,184.4	1,436.2

* 1 USD = 2,800 MTS

SOURCE. CFM INFORMACAO ESTADISTICA. SELECTED YEARS

12/81

TABLE E 7.5
 CFMS PROFIT AND LOSS STATEMENT
 (RAILROAD OPERATIONS ONLY)
 SELECTED YEARS 1988 AND 1991
 AND 1996 AND 2000 PROJECTIONS
 (MILLIONS OF METICAIS) *

	1988 (AT CURRENT PRICES)	1991 (AT CURRENT PRICES)	1996 (AT CONSTANT 1991 PRICES)	2000 (AT CONSTANT 1991 PRICES)
REVENUES	3 461 5	4 162 7	13,629 0 d]	19 783 0 d]
DIRECT SALARY	2,519 3	5 968 3	5 968 3	5 968 3
FUEL	805 8 d]	822 2 d]	721 2 b]	1 026 7 b]
OTHER GENERAL EXPENSES	3,349 1 a]	13 068 8 e]	13 068 8	13 068 8
NET INCOME (EXCLUDING DEPRECIATION)	(3 022 5)	(15 506 6)	(6,129 3)	300 8
REQUIRED LABOR FORCE REDUCTION TO BREAKEVEN (@ 1.5 MILLION MT PER PERSON - YEAR IN 1991)			4 066	0

* 1 USD = 2 900 MTS

NOTES a ESTIMATED ON THE BASIS OF THE STUDY WORLD BANK SOUTHERN AFRICA DEPARTMENT SADC TRANSPORT CORRIDORS A STUDY OF FINANCIAL STRATEGY VOL II ANNEX C - 1 PAGE 6

b FUEL USE WAS PROJECTED PROPORTIONAL TO THE GROWTH IN LOCOMOTIVE - KILOMETERS

c REVENUES WERE PROJECTED ASSUMING CONSTANT 1991 REVENUES PER NET TON - KILOMETERS TRANSPORTED

d ALLOCATED TO THE RAILROAD PROPORTIONAL TO ITS DIESEL AND GASOLINE USE

e ALLOCATED ACCORDING TO THE ALLOCATION RULES PRESENTED IN TABLE E 8 2

7,396 workers goes in effect

7 3 CFM(S) Current Financial Position

The rail and port operations of CFM(S) showed a negative cash flow in 1991, after running positive cash balances during the earlier period presented in Table E 7 4. The railroad operations of CFM(S) have not generated enough revenues to cover the direct salary expenses of the rail workers since 1989, a situation which worsened in 1991 in spite of the tariff increases.

Allocating the other general expenses in accordance with the proportions used in the World Bank study referred to earlier for 1988 and the allocation rules presented in Table E.7.2 for 1991, results in a negative cash flow of MT 15,507 million for the rail operations in 1991, a large increase when contrasted to the 1988 losses presented in Table E.7 5.

7 4 CFM(S) Future Financial Prospects

The revenues and costs of CFM(S) were projected to 1996 and 2000 using the same identical methodology used in the analysis presented in Section 7 2. These projections use the CFM(S) traffic projections presented in Section E 5. Table E.7 5 presents the financial projections of CFM(S), which exhibit a large cash flow deficit of MT 6,129 million (1991) in 1996. However this deficit is significantly reduced by year 2000, when the cash flow becomes positive. CFM(S) will continue to show a cash flow deficit by 1996 and will require a major labor force reduction of 4,086 workers in order to avoid cash flow deficits then. By year 2000, the CFM(S) will be operating with a slight positive cash flow. If the major labor force reduction of 1996 goes into effect, the positive cash flow by year 2000 will increase to the level of MT 6,429 million (1991)

ANNEX F ANALYSIS OF CFM SHORT LINE RAILWAYS

CFM is considering the closure of three short lines because of low traffic volumes and revenues. These lines are Zambezia, Xai-Xai, and Inhambane, whose respective distances and current traffic levels are presented in Table F 1. A summary of the situations of these lines and of the analysis conducted concerning their viability follows.

1. Short Line Traffic

Traffic on the short lines is extremely low, a fraction of what it used to be. All three lines are affected by both the insurgency and road traffic competition. The Xai-Xai line has road competition all the way to Manjacaze, but no road service is available to the ends of the line at Chicomo and Mauele because of either a poor road (Chicomo) or a non-existent road (Mauele). Both of the other lines, Zambezia and Inhambane, suffer adversely from road competition. The Inhambane line carried 30,000 passengers in 1981, traffic which has evaporated on account of road competition and the insurgency.

Only the Zambezia line still carries noticeable traffic: stone and building products, petroleum products, corn, wood and cashew, amounting at present to 1200 tons annually. No rail-dependent firms exist in Xai-Xai or Inhambane.

1.1 An Overview of CFM/Zambezia

The Zambezia Line runs 148 kms from the Quelimane port to Mocuba in central Zambezia Province, the jumping off point for roads which lead to what were once some of Mozambique's most productive agricultural regions. CFM/Z is organizationally unique, the railway's only completely domestic line which has directorate status and is granted more managerial autonomy than the short lines of either Xai-Xai or Inhambane.

Currently plagued by security and equipment problems as well as by the war's nearly total disruption in the tea, sisal, cashew, cotton and maize producing lands to the north and east, the railway currently operates two mixed trains per week. Principle products shipped down the line at present are timber (logs) for export, stone and gravel to Quelimane for construction, and small amounts of cashew and sisal. Important products moved up to Mocuba are food (both donated relief commodities and commercially imported ones), petroleum products, and general consumer goods.

The position of CFM/Z in the regional transport economy is conditioned by its relationship with the trucking industry. In the first place, because the railhead is 100-200 kms from the tea areas (earlier the source of most traffic and one of Mozambique's

most important exports until 1982), middle distance haulers feed the rail line. During the early independence era, CFM ran regional trucking operations which transferred goods to rail, since the separation of C A Camionagem as an autonomous state enterprise in 1984, links have been less strong. Increasing privatization of the trucking industry in Zambezia has further weakened the truck to rail transfer at Mocuba for all but heavy goods.

Because the CFM/Z line runs essentially parallel to Zambezia's main highway, many haulers avoid delays and transfer costs by trucking directly to port. However, limitations of highway bridge weight capacity limit the loads which can be carried by truck, and CFM rates are at least 20 percent lower for heavy bulk commodities than parastatal trucking rates, and up to half the cost of private hauling. In any case, competition between rail and road between Quelimane and Mocuba is an important feature in any assessment of the railway's future role.

CFM/Z operations are significantly overstaffed for present traffic levels. An average of two trains a week make the 12-14 hour journey to Mocuba which once took four. Large numbers of support personnel are underutilized, CFM/Z maintains only five stations along its line, having closed three during the 1980s. The only important inland loading points for freight are at the Mocuba railhead and from six sidings which link industrial sites--cotton and sisal processing plants, a ceramic brick and tile factory, a quarry, etc --to the line.

Maintenance of way staff (approximately one per kilometer of line) clear brush and replace sleepers as they fail, however budgets do not permit routine replacement of wooden sleepers (cited at 15,000 per year during colonial times and now less than 200), thus the condition of the line has deteriorated significantly. Workshop personnel maintain and rehabilitate steam locomotives as well as routinely rebuild freight and passenger cars. Many of these maintenance operations can be seen as employment of labor in compensation for the extreme undercapitalization of CFM/Z, the only significant new investment in CFM/Z since 1975 has been second hand equipment passed down from Beira as operations there have shifted to diesel.

The prospects for CFM/Z remain uncertain. The port of Quelimane has been slated for renovation beginning in 1993, increasing its berthing, transfer, storage and container capacities. Agricultural production in Zambezia is expected to rise rapidly and significantly--by at least 10 times within five years after peace. The World Bank is currently appraising an investment program for smallholder production in Zambezia. In addition, the flow of construction materials and other heavy capital goods to Alto Zambezia from the port of Quelimane is expected to be large enough to tax transport infrastructure significantly during the

TABLE F 1
 SELECTED TRAFFIC DATA ON THE SHORT LINE RAILROADS
 AS OF JUNE 30, 1992

	XAI-XAI LINE	ZAMBEZIA LINE	INHAMBANE LINE
	XAI-XAI - CHICOMO 150 KMS MANJAGALIZE - MUELE 90 KMS	QUELIMANE-MACUBA 150KMS	INHAMBANE - INHARRIME 90KMS
TRACK KILOMETERS			
PASSENGER TRAFFIC			
PASSENGER TICKETS SOLD	1 543	5 918	107
PASSENGER - KMS (000)	129	378 5	9 6 #]
FREIGHT TRAFFIC			
TONS	183	595 2	110
TON-KMS (000)	13 4	326 5	9 #]
NO OF TRAINS			
(EXCLUDES SERVICE TRAINS)			
MIXED TRAINS	62	28	18
TRAIN-KILOMETERS	4 310	6 200	1620 #]
PRINCIPAL FREIGHT CARRIED	WOOD AND LUMBER RAIL SLEEPERS	STONE & CEMENT PETROLEUM PRODUCTS CORN WOOD CASHEW	WOOD CASHEW COTTON COPRA SAND AND STONE
RAIL-ORIENTED FIRMS IN ALONG THE RAIL LINE	NONE	ENABEL (LOG EXPORTS) J DOMINGO MARQUES (LOG EXPORTS) CFTA (CEMENT & STONE)	NONE
SPECIAL COMMENT			LINE CLOSED FROM 1970 TO 1980

#] ESTIMATED

TABLE F.2
 SELECTED FINANCIAL INFORMATION ON THE SHORT LINE RAILROADS
 AS OF JUNE 30 1992
 (IN 1992 METICALS) *

	XAI-XAI LINE	ZAMBEZIA LINE	INHAMBANE LINE
REVENUES (000)	6 412	107,265	10,843
PASSENGER REVENUES	2 103	N.A.	N.A.
FREIGHT REVENUES	2 164	N.A.	N.A.
OTHER REVENUES	2 145	N.A.	N.A.
EXPENSES (000)	106 191	620 933	112,620
SALARIES AND WAGES	76,148	211,816	N.A.
GENERAL EXPENSES	18 732	402,139	N.A.
EXPENSES ON PROTECTION FORCES	11,311	6,978	N.A.
NET CASH FLOW INCOME	(99 779)	(513 068)	(111 677)
PERSONNEL	196	793	264
RAILROAD WORKER	162	793	264
PROTECTION FORCES	34	N.A.	N.A.
REQUIRED LABOR FORCE REDUCTION TO BREAKEVEN (@ 1.5 MILLION MT PER PERSON - YEAR)	67	342	74
RAIL COSTS PER TON TRANSPORTED (000)	584	1 437	1,023

* 1 USD = 2 900 MT6

TABLE F.3
TRUCK/RAIL COST COMPARISONS ON THE SHORT LINE RAILROADS
AS OF JUNE 30 1992 (THOUSAND METICAIS) *

	XAI-XAI LINE	ZAMBEZIA LINE	INHAMBANE LINE
TRUCK SERVICE AVAILABILITY	GOOD DIRT ROAD TO MANJACAUZE UNIMPROVED DIRT ROAD MAJACAUZE-CHICOMO NO ROAD TO MAULELE	PARALELL TO THE NATIONAL HIGHWAY (IN SOME STATE OF DISREPAIR)	PARALELL TO THE NATIONAL HIGHWAY
FIRMS PROVIDING COMPETING PASSENGER/FREIGHT SERVICE	CAMIOGEN OLIVEIRA TRANSPORT (PASSENGER SERVICE TO MANJACAUZE)	CAMIOGEN PRIVATE FIRMS INDEPENDENT TRUCKERS	CAMIOGEN
TRUCK/RAIL COST COMPARISON			
TON-KMS	13 4	326 5	9 0
RAIL COSTS	108 191	820 933	112 520
TRUCK COSTS	5 026	122 457	3 376
SAVINGS FROM LINE CLOSING	101 168	496 496	109 146

* 1 USD = 2,900 MTS

NOTE

- a** ESTIMATED AT 376 METICAIS PER TON-KM FOR CAMIOGEN SERVICE (INCLUDING 226 METICAIS PER TON-KM AT OFFICIAL TARIFF RATES 60 PERCENT EMPTY RETURN AND AN 11 PERCENT SURCHARGE FOR SECURITY PROTECTION SERVICE)

reconstruction effort. It is extremely likely that the flow of goods in and out of Zambezia will grow rapidly in coming years.

However, the possibility of substituting truck for train transport calls into question the railway's future role. Clearly CFM/Z has lost its position in the passenger market, it is too slow and too inflexible to be attractive to any but the poorest passengers. Should investment in reinforcing or rebuilding bridges and the roadbed from Quelimane to Mocuba be made, heavier loads may be able to move by road, further eroding the competitive advantage of the railway for freight traffic.

It is clear that with reductions in staff on par with those proposed system-wide and with realistic expectations for the growth of traffic in coming years, CFM/Z operations could reach a break-even point earlier than some of the larger international CFM lines. But the extreme undercapitalization of CFM/Z makes this short-term financial break-even misleading. Unless CFM/Z is recapitalized significantly, mainly through investment in line rehabilitation but also in locomotives, rolling stock, and other equipment over the middle term, its operations will be neither competitive nor sustainable.

A thorough feasibility study of the prospects for CFM/Z is required in order to assess its potential long-term technical and economic viability. Only on the basis of accurate traffic projections, recapitalization requirements, detailed staffing and operating cost projections, etc. can the decision of whether or not to close the line, privatize it, or rehabilitate it within CFM be taken with confidence.

While the closure of the Zambezia line would be a significant blow to the local economy, especially in Quelimane, it would not eliminate transport access to rural Zambezia. Road transport would easily substitute for lost rail facilities in transport of passengers and light goods. Heavy goods and local produce for export may remain the problem.

The question of whether rail-port links from Mocuba are more efficient than road-port links, requires further study. An assessment of the investment and operating costs of the entire regional transport system in Zambezia is needed in order to place any decision regarding CFM/Z in context. It may be that over the middle run the Zambezia line is an economically viable and important link from Mozambique's most productive highlands to the national and export markets.

2. Financial Results From Operations

As shown in Table F 2, all the short lines exhibit negative cash flows for the first semester of 1992. Xa1-Xa1's and Inhambane's negative cash flows range between MT 100 to 112 million as of

June 30, 1992 The Zambezia's negative cash flow is five times larger, but approximately equal on a per ton basis. These cash flow deficits are a negligible proportion of CFM's operating deficits. The labor force reduction requirements to break even on cash flow are 67 workers at Xai-Xai, 342 workers at Zambezia and 74 workers at Inhambane. The cost per ton of freight transported exceeds the value per ton of the commodities transported in all the three short lines.

3 Road Competition

Both the Zambezia and the Inhambane lines compete with parallel truck and passenger service along the principle south-to-north national highway. The road, however, is in some state of disrepair north of Quelimane, where the depth of the base and sub-base and bridge supports are not sufficient to support heavy trucks.

The issue of road competition on the Xai-Xai hinterland is more complex. A good dirt road exists from Xai-Xai to Manjacauze over which trucking and passenger service is available from Camionagem and private entrepreneurs. Manjacauze and Chicomo are linked by an unimproved dirt road which is in significant disrepair, but no trucking and passenger service is provided. Only a trail is available to Mauele.

Comparisons of rail costs with trucking costs presented in Table F.3, reveal that trucking costs at official rates (assuming 50 percent empty return and heavy security) are much smaller than rail, and that overall cost savings would be realized by the short line closings. That is, based on present traffic and personnel costs, the lines should be closed solely on economic criteria. However, social considerations play an important role in abandonment decisions, as is discussed below.

4. Social Considerations

4.1 Loss of Transport to Rural Areas

Social issues pertaining to the closure of the short rail lines concern the loss of mobility to the residents of Chicomo and Mauele on the Xai-xai line, and the need to convert the rail lines' property and assets to productive use, while safeguarding and protecting the social use of some of the property.

Thirty weekly passengers ride the Xai-Xai line in each direction. If this line is closed, these travelers would lose their mobility and access to markets and health care available through the rail service. However, the passenger and freight traffic generated by Chicomo and Mauele is too small to justify a major road investment. At construction costs of \$5,000-\$20,000 per kilometer of dirt road, it would be cost-effective to maintain a

skeleton rail service in lieu of building even 150-kilometers of low quality road to these places

Another problem with investing in road improvement to substitute for a closed Xa1-Xa1 line concerns the numerous rivers that would require bridges, since existing rail bridges are the most narrow in the CFM system, they would require widening to carry vehicles. A related issue concerns whether the road Xa1-Xa1 to Manjacauze has sufficient traffic to upgrade it to an all-weather gravel road. Traffic volumes of 50 vehicles per day (or 25 trucks/buses/vans) would be required for the improvement to be viable, from a benefit-cost analysis viewpoint.

Thus the expense of replacing Xa1-Xa1 rail service, important for social reasons even if not profitable, may be greater than that of absorbing its losses for several more years until post-war development of production justifies road construction.

In addition to the loss of socially important transport facilities, closure of the short lines will effect the communities, especially in the port towns, where their operations are located.

4.2 Loss to Communities of CFM Owned Social Infrastructure

CFM's real estate property along the short lines is extensive. At Xa1-Xa1, CFM owns the stations, the manager's house, four warehouses (two already rented to the private sector and one used gratis by a provincial furniture factory), two large yard shops used to manufacture kitchen furniture), 48 houses, the best sports stadium in the town, and the Clube Ferroviaria, which is the center of social activities in Xa1-Xa1. In Quelimane, Inhambane and Mocuba CFM is similarly endowed with extensive properties, many used by the general community and for public purposes.

The social uses of the Clube Ferroviaria's facilities, the sports stadium, and the building housing the health clinic should be protected for the general public by transferring responsibility for administering them to the provincial government, under the condition that the social services rendered will be maintained and opened to the general public. Current residents of CFM housing and CFM employees should also have first option of renting or using CFM facilities.

5. Recommendations Regarding Short line Closures

While there are strong economic arguments for the closure of CFM's three short lines, consideration of factors unique to each line makes the recommendations for each case different. The following recommendations on each line can be advanced.

5 1 The Inhambane Line

This line, which had been closed from 1970 to 1980, should be abandoned. The first ten kilometers of track should be kept open, since they are needed for the National Railway school. Convert CFM's social-oriented property in Inhambane to public use.

5 2 The Zambezia (Quelimane) Line

It is premature to close this line because it has some economic potential. A full scale feasibility study should be undertaken to analyze the economic viability of rehabilitation and/or privatization of the line. Attempts should be made to find a private buyer (preferably a local buyer) for this railroad.

In the meanwhile, large scale rehabilitation activities should be postponed. A manpower reduction of at least 342 workers should be implemented to bring expenses in line with revenues. Public use facilities (stadiums and clubs) associated with this line should be transferred to the provincial government.

If adequate traffic increases fail to materialize in peace time conditions, the line should be closed.

5 3 The Xai-Xai Line

On purely economic grounds, the Xai-Xai line should be closed. But the first 50 kilometers of track and steam locomotives should be kept (mothballed) pending a time when the tourist traffic to the Xai-Xai beaches materializes. Operation of this stretch of the Xai-Xai line as a tourist facility may ultimately be profitable, preferably under the auspices of a private owner or lessor.

However, there are strong social reasons to suggest that the strict economic decision of closure is not appropriate for this line. The cost of running the railroad is considerably smaller than the cost of building poor quality dirt roads to Chicomo and Muele. Thus the line should be left open if the government's policy is not to adversely affect the mobility of these residents.

In any event, CFM should further reduce the staff of this line by at least 67 workers to bring expenses more in line with receipts. No investments in improving the track should be undertaken. Skilled labor and personnel in the yards should be encouraged and assisted to go into private manufacturing. Key railroad property with social/public uses should be administered by the provincial government and opened to the public.

ANNEX G ANALYSIS OF OPTIONS FOR REDEPLOYING LABOR

1 Staff Profile

Accurate staffing figures have proved very difficult to obtain. Manpower planning statistics are not systematically kept in CFM. Monthly staff returns are made to the Human Resources Department in the General Directorate but different collection and presentation systems are used by each Executive Directorate and little effort is made centrally to collate the information and turn it into current management information. The final figures used to assess levels of excess staff in the various areas and departments are deemed to be as accurate as possible. (See Table G 1) Some discrepancies in totals will be found in tables showing the age and education of the work force as data came from different sources.

As shown in Table G 1, the Mozambique Railroad (CFM) currently employs total of about 19,900 permanent workers, 13,775 in the railroads and 6,155 in the ports. Of the total number of permanent workers approximately 60 percent are unskilled with less than four years of education. And 24 percent are above the age of 50 years.

The staffing figures shown exclude 952 permanent employees and 2,799 temporary workers in the Brigadas de Melhoramento (rehabilitation brigades) who work solely on donor funded track improvements and do not come into the frame of normal CFM activity. They also exclude 11,352 temporary workers in the ports to whom CFM has no legal responsibilities and who do not come into the scope of this study.

Almost all staff over the age of 60 have now left CFM due to the policy of early retirement that has been in force for two years. This has been an effective policy in shedding staff who are in the unskilled categories where the majority of excess is to be found. Where data is available (from CFM/N) almost 70 percent of those retired early were in Group III, the basic unskilled manual labor category. Many workers, however, in this category, while not having the ability to be promoted are highly skilled in their trades after years of experience and in some cases could be a loss to their departments.

The work force is in general very poorly educated. This is largely a historical legacy from colonial times when Africans received no education, so reducing staff in the upper age ranges should gradually lead to a better educational balance in the work force. Unfortunately young people are often still not receiving much education and in CFM/C (where the information is available) 140, or 11 percent, of employees under the age of 30 are illiterate. Only 9 percent of the entire work force in CFM/C has an education above primary level (6th grade).

There is currently a policy not to take any recruits who have less than 9th grade education. CFM provides literacy classes.

Table G 1 Profile of CFM's Permanent Staff

Total CFM Staff

	Maintenance Way & Structure	Traffic Operations	Workshop Engineering	Management & Support	TOTAL RAILWAY	TOTAL PORT	TOTAL STAFF
CFM/S	1027	1650	1207	683	4567	2915	7482
CFM/C	1908	1459	1485	512	5364	2125	7489
CFM/N	962	731	571	474	2738	947	3685
CFM/Z	223	167	138	195	723	168	891
Gen Direct				383	383		383
Total	4120	4007	3401	2247	13775	6155	19930

Education profile*

	Maintenance Way & Structure	Traffic Operations	Workshop Engineering	Management & Support	TOTAL RAILWAY	TOTAL PORT	TOTAL STAFF
Nil	1,001	576	372	247	2,196	981	3,177
1-3 years	1,901	760	1,029	585	4,275	1,910	6,185
4-6 years	1,050	1,354	1,499	819	4,722	2,110	6,832
7-8 years	73	1,189	175	215	1,652	738	2,390
9-10 years	82	112	274	295	763	341	1,104
11th year	11	7	4	43	65	29	94
College	2	5	37	29	73	33	106
University	0	4	11	14	29	13	42
Total	4,120	4,007	3,401	2,247	13,775	6,155	19,930

Age Profile*

	Maintenance Way & Structure	Traffic Operations	Workshop Engineering	Management & Support	TOTAL RAILWAY	TOTAL PORT	TOTAL STAFF
18-25	196	199	421	200	1,016	454	1,470
26-30	274	405	453	386	1,518	678	2,196
31-35	694	574	440	366	2,074	927	3,001
36-40	762	549	422	313	2,046	914	2,960
41-45	653	704	521	301	2,179	974	3,153
46-50	490	574	375	239	1,678	750	2,428
51-55	543	508	417	251	1,719	768	2,487
56-60	507	491	351	183	1,532	685	2,217
>60	1	3	1	8	13	6	19
Total	4,120	4,007	3,401	2,247	13,775	6,155	19,930

* Age and Education Profile Compile from Reports received from regional CFM's Offices

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and encourages employees to improve their academic qualifications through evening classes. The National Railway School at Inhambane provides academic education from grade 6 up to grade 9 as well as vocational training.

While CFM is overstaffed in the unskilled areas of work it has a serious shortage of good quality staff in technical and managerial positions.

The restructuring and the streamlining of Mozambique National Railroad Company, will displace approximately 10,300 permanent workers in the railroad department and approximately 3,450 permanent workers in the ports. The number of redundant workers is estimated as the difference between CFM's current labor force and calculated labor requirement. The labor requirement analysis takes into account traffic estimates for 1991 for the four lines -- CFM/South, CFM/Central, CFM/North and CFM/Zambezia, and selected railroad performance standards for the second best African railroad company (high standard) see Table G 2 - Work Force Attrition.

USAID through this project wants to assist the Government of Mozambique (GRM) to absorb as many as possible of these redundant workers into the productive economy. The redundant work force will be taken off CFM's payroll through attrition, and several redeployment programs.

2 Attrition

Realistically it will be mid-1994 by the time that the project financial manpower study on CFM is completed and approved for implementation. During this period of approximately two years there will be natural attrition of the existing work force through a combination of resignations, disciplinary dismissals, medical disabilities, death and retirement.

It is estimated that normal attrition excluding retirements will reduce the work force by approximately 4 percent or 660 employees over the two years, while normal and accelerated retirements at age 60 will account for a further reduction of 3,300 employees, providing a total reduction of 3,970 workers. See Table G 2 Work Force Attrition.

To facilitate accelerated attrition it is proposed to introduce a special severance scheme for those employees who will reach 55 years of age or more by the end of 1994. On a phased basis during 1993 and 1994 3,300 such employees will be provided with a special severance payment of up to three months pay per two years of service until they reach the age of 65 or have completed 35 years total service, whichever

Table G.2 Work Force Attrition

Class of Labor	Current Level*	1991		Projected Attrition 1992 - Mid 1994			Attrition Adjusted Surplus
		Required	Surplus	Retirement Program	Other attrition	Total Attrition	
Maintenance of Ways & Structures	4,248						
Best Sub-Saharan Africa Railroad		1 354	2 894	777	139	916	1 977
High Standard		2 132	2 118	777	139	916	1,200
Medium Standard		2 809	1 439	777	139	916	523
Low Standard		3 486	762	617	145	762	(0)
US Class I Railroad Average		577	3 671	777	139	916	2 755
Workshop Engineers & Technicians	3 273						
Best Sub-Saharan Africa Railroad		158	3 115	540	109	649	2,466
High Standard		748	2 525	540	109	649	1 876
Medium Standard		1 421	1 852	540	109	649	1,203
Low Standard		2 135	1 138	540	109	649	489
US Class I Railroad Average		58	3,215	540	109	649	2 565
Traffic Operations	4 007						
Best Sub-Saharan Africa Railroad		153	3 854	669	134	803	3 051
High Standard		301	3 706	669	134	803	2 904
Medium Standard		394	3 613	669	134	803	2 810
Low Standard		601	3 506	669	134	803	2 703
US Class I Railroad Average		25	3 982	669	134	803	3 179
Management & Support Services	2,247						
Best Sub-Saharan Africa Railroad		150	2 097	301	78	379	1 718
High Standard		286	1 961	301	78	379	1,582
Medium Standard		694	1 553	301	78	379	1 174
Low Standard		1 775	472	301	78	379	93
US Class I Railroad Average		152	2 095	301	78	379	1 716
All Railroad Employees	13 775						
Best Sub-Saharan Africa Railroad		1 816	11 959	2 288	459	2 747	9 212
High Standard		3 467	10 308	2 288	459	2 747	7 561
Medium Standard		5 318	8,457	2 288	459	2 747	5 710
Low Standard		7 897	5,878	2,127	466	2 593	3,284
US Class I Railroad Average		812	12,963	2 288	459	2 747	10,218
PORTS							
Full Time Staff	6 155	2 698	3,457	1 022	205	1,227	2,230
GRAND TOTAL (Railways + Ports)	19 930						
High Standard		6,165	13,765	3,309	665	3,974	9,791

* Current Levels - All permanent employees excluding foreigners and brigadas de melhoramento

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Table G 3 Deployment of Surplus Labor

Class of Labor	Attrition Adjusted Surplus	Skilled	Unskilled	Spin-off Business Absorption	Training	Agricultural & Credit Assistance	Micro Enterprise Credit Assistance	Out-Placement		Balance of Surplus
								Road Construction	Other Formal Employment	
Maintenance of Ways & Structures High Standard	1 200	240	960	50	120	360	24	300	0	346
Workshop Engineers & Technicians High Standard	1,876	750	1 125	500	375	0	94	200	94	613
Traffic Operations High Standard	2 904	871	2 032	0	290	581	145	0	0	1 887
Management & Support Services High Standard	1,582	949	633	0	318	79	79	0	237	870
All Railroad Employees High Standard	7,561	2 810	4 751	550	1 102	1 020	342	500	331	3 716
PORTS Full-Time Staff	2,230	334	1 895	0	334	0	45	0	111	1 739
CFM -Total	9,791	3,145	6,646	550	1,436	1,020	387	500	443	5,456

Total absorption into the productive economy

4 335

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comes first, when they will become entitled to a full retirement pension ¹

This severance payment will be paid out on a monthly basis and adjusted to reflect future increases in CFM salaries. For those employees who will exhaust their special severance payments before attaining the age of 65, or 35 years of service they may opt to take an early slightly reduced pension at that time or to wait and take a full pension when they qualify

In all cases when the pensions become due they will be based on what the employee's salary would have been had he or she remained in service until normal pension would have become payable. If an ex-employee secures any form of employment while receiving severance pay this will not effect his entitlement to continue to receive this payment

This arrangement will require funding of both the severance payment which is estimated to average \$25 per employee per month, plus some small additional funding of the pension scheme which is estimated to average eight month's pay per employee

It has been assumed that these monthly severance payments will not be subject to income tax, which is currently levied at 2,000 MT per month in the Maputo Province and 1,500 MT per month elsewhere, since lump sum severance payments have already been paid in other state enterprises free of income tax.

Under this arrangement and with this addition of natural attrition, it will be possible to reduce the labor force by 3,970 employees by mid 1994

3 Redeployment of Surplus Labor

Having established a scheme for the early retirees there will still be a requirement to shed about 9,800 employees from the remaining permanent labor force of approximately 16,000. Due to the high proportion (55 to 60 percent) of employees to be retrenched, it will not be possible to target a particular age group of employees for retrenchment but rather be a case of selecting only the best to remain regardless of age or length of service. If this policy is adopted the retention of employees with developed skills and high performance will be pursued in order to provide the railway and the port system

¹ The severance pay computation assumes an average pay of 80,000 MT per month converted to dollars, using the exchange rate of US\$ 1 00 = 2,900 MT, and length of service of 30 years giving a severance payment of 45 months pay. In addition, a further 8 months pay has been provided as additional contribution to top up pension contributions

with the best available labor force to improve its performance

The severance scheme will be based on the existing scheme for employees recruited from 1989 or later, that is, three months pay for each two years of service subject to three months notice. For the average employee with approximately 15 years service this will equate to 22 months pay². This has been used as a basis for costing "all other severance pay" in Table G 4.

If as anticipated, the younger employees aged under 40 years are somewhat over represented amongst the employees to be retrenched due to having acquired fewer skills than the 40 to 55 age group, many of whom were trained during the pre-independence period, then there will be a number of other positive effects.

First, it is expected that reemployment assistance for these younger individuals will have more long term benefit on their families and their communities thus training, credit, and technical assistance are a better investment. Second, it will provide for further continued gradual reductions of personnel in the coming decade. This attrition will be beneficial not only in moving toward ultimately optimal staffing levels, but will also provide greater opportunities for hiring new and more highly educated and skilled personnel as replacements for retirees, should new hiring be justified by traffic increases.

While macro-targets for force reduction may be applied to each line, specific retrenchments will vary by department based on detailed analysis of personnel needs by functional area. Thus it is expected that retrenchment task forces and middle-managers will, based on targets established analytically, select the most valuable workers to remain with CFM irrespective of age or years of service. Those not selected will enter the retrenchment program. In this way, coherent but across the board downsizing of the CFM work force can be achieved without jeopardizing the middle term capacity of remaining personnel to operate the railway.

In view of the large number of employees to be retrenched it is proposed that retrenchment is phased over a three year period commencing in 1994 with the reduction of approximately between 3,000 and 4,000 employees each year. This will be necessary in order to allow for the progressive absorption of retrenchees into the redeployment program.

With the early retirement of 3,300 employees aged over 55 years over 1993 and 1994 period and the retrenchment of nearly 10,000 workers phased over the 1994 to 1996 there will be considerable savings on labor cost to CFM over the project period. In terms of basic pay alone payroll savings are

² The average monthly salary is set at 80,000 MT per month converted to dollars

**Table G 4 Cost of Retrenchment
('000 OF US DOLLARS)**

Class of Labor	Severance Pay			Spin-off Business Absorption*	Training	Agricultural & Credit Assistance	Micro- Enterprise Credit Assistance**	Out-Placement		Total Program Cost	Severance + Program Cost
	Retirement	All Other	Total					Road Construction	Other Formal Employment		
Maintenance of Ways & Structures High Standard	1 137	728	1 865	75	120	270	96	30	0	591	2 456
Workshop Engineers & Technicians High Standard	790	1 138	1 928	750	375	0	375	20	9	1 530	3 457
Traffic Operations High Standard	978	1 762	2 741	0	290	436	581	0	0	1 307	4 047
Management & Support Services High Standard	440	960	1 400	0	316	59	316	0	24	716	2 116
All Railroad Employess High Standard	3 345	4 589	7 933	825	1 102	765	1 368	50	33	4 143	12 076
PORTS Full-Time Staff	1 494	1 353	2 847	0	334	0	178	0	11	524	3 371
CFM - Total	4,839	5,942	10,781	825	1,436	765	1,547	50	44	4,667	15,448

* Includes training matching fund and credit assistance

** Includes credit assistance and institutional building

estimated at US\$ 12.9 million and taking into consideration the cost of all other benefits such as housing, medical services, schooling, family payments and so on, the total saving is estimated at US\$ 19.3 million (basic pay plus 50 percent for benefits)

3.1 Spin-off Business Assistance

Using existing CFM facilities, equipment and tools several specialty businesses could be established and spun off. These business units could retain most of the workshop skilled workers as well as absorb additional skilled redundant workers from other departments of CFM.

CFM currently operates two concrete sleeper factories, staffed by the maintenance brigades and employing more than 100 people each. These factories could be used to produce concrete pipes, precast concrete slabs, and other products for which a potential demand exists in road building, waterworks, commercial, industrial, and residential construction. Quarries, currently producing ballast, could begin to provide aggregate for concrete and ballast for road construction for which there is a large potential demand.

CFM workshops in Beira and other locations, currently produce a variety of products including office and household furniture including chairs, tables, bed frames, cabinets, and bookshelves for which there exists a high potential demand outside of CFM. In Beira, a small buildings material production workshop is producing concrete blocks, doors and windows for the construction of new staff houses. Given the supply of high-quality tropical hardwood from Manica Province, these carpentry workshops could begin to produce furniture, doors and windows, parquet flooring, and veneers for domestic and export markets.

CFM's iron and brass foundry, forges, machine shops and chroming workshops could produce plumbing fittings and fixtures, industrial valves, pump components, agricultural implements and a variety of other metal products for industrial use at competitive market prices for which there is a large potential local and regional market. Indeed, in the past, the workshop in Beira has produced spare parts such as axles for heavy trucks for outside contractors.

The Beira wagon repair workshop, with machinery and technical assistance having been provided by DANIDA, currently produces train wagon bodies. Given that metal sheets are available from South Africa and Zimbabwe at competitive international prices, this group could produce containers of various sizes for domestic use and the regional and international market.

In addition, the restructuring of CFM and the sub-contracting of certain railroad functions to private operators will provide additional options for the productive redeployment of

workers For example, functions such as locomotive and wagon maintenance and repair and track maintenance and repair can be contracted out to private entities Some of the redundant work force can be organized, trained and managed by these private contractors

It is estimated that approximately 550 workers can be absorbed into the spin-off ventures that result from the restructuring of CFM Detailed studies are, however, required to establish the number and kinds of business units and the optimal numbers of personnel they can absorb, based on analysis of market potentials for different lines of products and services

The key to success in these spin-off businesses depends upon the acquisition of entrepreneurial skills Even if the cadre of workers are sufficiently skilled, and vast domestic, regional and international market opportunities exist, it will require experienced private operators to make these spin-off businesses a commercial success The project provides sufficient funds for technical assistance and matching funds for skills training for spin-off businesses Under the training matching funds scheme, the private operator will contribute approximately 50 percent of the training cost for each employee while the project funds the balance

In cases where spin-off businesses are established by private operators, it is recommended that workers are given ownership shares in these ventures to the value of the severance pay which would otherwise have been paid to them

3 2 Agricultural Assistance

While it is not feasible to contemplate resettling urban-based CFM workers to rural areas, considerable potential exists to enable many CFM maintenance of ways workers, who are currently based in rural areas to become self supporting productive farmers. Although Mozambique is endowed with extensive fertile agricultural land, it is one of the most food deficient countries in the world An estimated 30 to 40 percent of the total national supply of basic foods comes from food aid Therefore, this unmet demand for food crops creates a huge opportunity for productive farming provided the security situation allows

A large majority of CFM's rural unskilled labor force are already either part time farmers or are people with strong ties with smallholder farmers Some of these workers could be assisted to settle as full time farmers Assistance in the form of farm inputs, improved farm technology, extension services and agricultural marketing can be provided to enhance their productivity and their farm income To the extent that CFM has use of potential farm lands along the railroad lines and at other locations, it should be converted, where appropriate, into productive farm land to resettle redundant workers.

It is estimated that approximately 1,000 workers will take advantage of such agricultural assistance in the form of inputs, extension services and some credit facilities

3 3 Micro-enterprises Assistance

Some of the displaced workers, particularly from the workshops, may choose to operate as micro-entrepreneurs. These workers will be provided with technical assistance in the form of business management training, vocational training and assisted in gaining access to credit. These workers can potentially be engaged in the production of wood burning stoves, farm implements and tools and other household items for rural as well as urban households.

Along the short lines, where it is anticipated that these lines will be closed down, there is opportunity for independent truckers and passenger transport operators. Displaced workers with some business management training and credit for working capital and purchase of equipment can be organized to operate independent trucking and transport businesses. The termination of passenger train services and the closure of the freight hauling train traffic does create demand for alternative transport and freight services. For example, along the Beira Corridor the passenger train service has been eliminated. Private and cooperative bus, truck and minivan operators now offer cheaper, and faster services.

Given the restructuring and privatization of the trucking industry currently being undertaken with USAID assistance, the scope for private operators to buy or lease trucks and to provide private trucking services exists. This project fund might support existing other donor programs to provide loan guarantees or other forms of financial assistance to former CFM employees seeking to enter into this industry.

While the project is providing direct assistance to micro-enterprises, it also will provide additional technical assistance and training to those financial institutions and other organizations that deal with micro-enterprises to enhance their ability to monitor and assist these enterprises (for example, FFPI, GPE, DIFAP, etc.)

3 4 Road and Bridge Construction

Some displaced workers can be organized into independent entities to contract for road works with the Ministry of Construction and Waters and the Ministry of Public Works. Several major road building projects are underway, or in planning stages, affecting most of the major transport routes in the country. These include projects funded by UNDP and the World Bank. These projects have, however, been one of the main reemployment options for demobilized soldiers and for workers repatriated from the South African mines due to employment cutbacks. As a result the number of workers available for such projects exceeds the demand and the project for the most part

employ residents at the locations where the road is being constructed and is of a short term nature

However, there still is some potential to employ ex-CFM workers particularly along those short lines that are expected to be closed. It is estimated that about 500 workers will probably be absorbed into this type of activity. The projects could possibly engage a qualified organization to place ex-CFM workers in road building brigades as the opportunity arises

3 5 Training Assistance

As can be inferred from the educational profile of workers in Table G.1, a large proportion of the displaced workers are either illiterate or have a low level of education and skill. Many of these workers can be given short-term training to enable them to acquire basic skills and others can upgrade their educational levels to improve their potential to find productive employment in the private sector or go into business for themselves

It is estimated that about 15 percent or 1,450 of the displaced workers will take advantage of the training assistance offered to them. The severance payments they receive can be used to maintain them while in training. Additional training funds are provided by the project for rehabilitating training facilities and to enhance the capacity and capability of Mozambican training institutions. Funds are provided for technical assistance to develop appropriate curriculum and for the hiring of appropriately trained trainers. To this end, links with DIFAP should be developed

3 6 Out-Placement of Displaced Workers

Workers that have not been absorbed into either the spin-off businesses, opted to go to business on their own, or into farming will be assisted to locate jobs in the formal private sector, including the road and bridge construction referred to above. If local private institutions or employment agencies are unavailable to act as an agent, the project could hire qualified individuals on a temporary basis to work with the private sector to identify and place ex-CFM workers. It is estimated that about 820 workers could be assisted through out-placement services

Once an employee has completed his probation in a permanent job with another employer and produces satisfactory evidence to this effect he may elect to receive a lump sum payment for the balance of any severance pay still outstanding

4. Costs Associated with the Redeployment Plan

The breakdown of the estimated cost of implementing the CFM redeployment plan is as follows

Program Component	Number of Qualifying Workers	Total Cost in US\$ millions	Cost per Worker (US\$)
Severance Pay			
Early retirement	3,310	4 839	1,462
Retrenchment	9,790	5 942	607
Sub-Total		10.781	
Spin-Off Businesses Support:			
a. Training Matching Fund	550	0 275	500
b. TA Support		0 550	1,000
Sub-Total		0 825	
Training	1,435	1 435	1,000
Agricultural and related Assistance	1,020	0 765	750
Micro-enterprise Assistance			
a. Assistance to other	387	0 967	2,500
b. Institution Building		0 580	1,500
Sub-Total		1 547	
Out-Placement Services (Road Construction and Others)	943	0 094	100
Grand Total		15 448	

5 Financial and Economic Impacts of CFM's Force Reduction

Despite the prolonged period of deteriorating performance, CFM enjoys a number of significant potential competitive advantages which if properly exploited could provide the basis for recovery in its performance. First, for Swaziland, Zimbabwe, Zambia and Malawi CFM provides shorter freight hauling distance than any other competing route. Therefore, CFM is potentially a major foreign exchange earner for Mozambique from international traffic from these countries. Second, it has excess physical capacity on both the ports and the railways.

Currently, however, costs are too high and CFM is at a competitive disadvantage because of its high cost. The major cost component is loss and damage which is five times higher

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than ports in South Africa, CFM's major competitor for international traffic

In addition, because of over-staffing CFM's operating costs are relatively high. Labor related expenses make up about 55 percent of CFM's operating expense which is significantly higher than that experienced by the better performing sub-Saharan African railroad companies. The shedding of approximately 13,780 employees through accelerated retirement and redeployment into other activities will over the project period reduce CFM's payroll cost by about US\$ 19.3 million. This translates into a reduction of salary and wage expense of approximately \$4.0 million per year, or down to around 35 percent of total operating expenses. The reduction in operating expense will provide room for competitive pricing of CFM's services. It should be noted, however, that the major cost disadvantage faced by CFM is at present a result of weak management. The reduction of the present level of labor force should allow CFM to better manage both its human and material capital optimally thus enhancing its international competitiveness.

6 Programmatic Implications to CFM and Other Institutions

Redeploying displaced workers will require close collaboration with Government Ministries, Provincial Governments and the Private sector.

6.1 CFM

These proposals will be implemented simultaneously with the re-organization of the railways, the need for which has been accepted by CFM management and the Ministry of Transport. Such a re-organization should be in preparation at the same time as the retrenchment program and the form of that re-organization should be an important criterion to be considered in the process of restructuring of the work force.

CFM will also need to implement a major program of training and upgrading of the employees it retains in order to fill the skilled vacancies that exist and in order to achieve the increases in productivity that the restructuring assumes. A program aimed at attitudinal change will also be necessary.

6.2 Legislation

New legislation will be required on the basis of CFM being an exceptional case, to facilitate the implementation of severance and adjustment of pensions for staff under 65 years of age and without 35 years service.

If workshops or other facilities are to be used by the private sector as a means of retaining employment opportunities for certain groups of staff the Government will have to permit this use of State property.

6 3 Financial/Funding Institutions

Payment of severance pay will need to be tightly controlled and an effective administration system will have to be established. There should be a clear distinction between the payment of severance pay and the payment of salary. In order to make it clear that the workers have been separated from CFM it would be preferable if an outside institution undertook responsibility for the payment, for example the Bank of Mozambique, or some other institution that has a nationwide network of outlets.

The establishment of the loan fund for small business investment can best be achieved by linking with existing organizations. Each Ministry has a revolving fund (Fundo de Fomento) set up to encourage small enterprises in its area of responsibility (e.g. in mining, agriculture, fisheries). Linkages with any of these funds could be considered although at present only that in the Ministry of Minerals is operational. In the future it is likely that the Fundo de Fomento para Pequeno Industria (Fund for the Promotion of Small Industry - FFPI) which is linked to IDIL - Instituto para Desenvolvimento de Industria Local (Institute for the Development of Local Industry) within the Ministry of Industry and Energy will be the most suitable.

IDIL has representatives in all provinces but at present it is not especially effective. However, Swedish donors are about to invest in capacity building and training for FFPI and IDIL. FFPI is able to accept money from any source and will set up separate sections for money that is earmarked for particular purposes. The project will fund a technician to administer the CFM accounts of the fund. The Project Management Unit field workers will need to establish close links with the IDIL/FFPI workers at provincial level. Substantial project funds will be available for institutional capacity building and to train professional staff in those institutions selected for lending of project funds and for providing assistance to firms established in the context of the project.

Loan criteria will be determined by the Fund but the loans will be administered by the BPD - Banco Popular de Desenvolvimento (People's Development Bank). It may be considered necessary to set up a guarantee fund to cover any possible losses.

6 4 Training Institutions

The retraining activities will put considerable pressure on the vocational training institutions in Mozambique. In Maputo itself capacity exists in terms of physical space within the three colleges run by DIFAP (Direccao de Formacao Profissional - Vocational Training Directorate) but finance would be required for more professional trainers. The same would be true of the various industrial institutions with which DIFAP has links around the country. Part of the reason for proposing

to phase the retrenchment of younger workers over the three years is to avoid placing an unduly heavy burden on the existing training facilities

With some injection of funds CFM's training institutions may also have some spare capacity, although this could be very limited if their internal training program gets started. It would also not be advisable to continue the connection between the worker and CFM if a suitable alternative exists

6 5 Trade Union

The Trade Union, SINPOCAP, is opposed to the reduction of staff as originally proposed (15,000 displaced) on social grounds and on the basis of fears of sabotage. They accept that there is currently excess capacity within the railways and ports but they would prefer to see temporary layoffs in anticipation of an increase in traffic in the near future. If any severance pay has to be paid the Union expressed a strong preference that it should be paid on a monthly basis rather than in a lump sum

- The Trade Unions in Mozambique are going through the process of establishing themselves as independent entities after years of being tied to Government. It is possible that they may wish to use an issue like this to demonstrate power, but sensitive handling and adequate compensation all the way through should reduce that possibility.

ANNEX H ECONOMIC AND FINANCIAL ANALYSIS

1 COSTS

The project is designed to assist CFM become a viable commercial rail transport and port operator in the region by helping it shed its surplus labor. Given the current and projected levels of domestic and transit traffic (See Annex E), and the work force profile presented in Annex G, CFM is over-staffed with low and semi-skilled workers. As shown in Table H 1, through project assistance, it is anticipated that CFM will be able to shed approximately 13,100 workers through early retirement and retrenchment. In addition, it is anticipated that a force reduction of 1,200 workers could be realized through natural attrition and a hiring freeze over the 1993-2000 period.

As discussed in Annex G, the total severance pay to retirees and retrenched is approximately US\$ 10.8 million. The cost of programs to redeploy the redundant CFM work force into various productive activities in the economy is estimated at US\$ 4.7 million. The cost of project coordination, project feasibility studies, costs associated with the Project Management Unit and contingency funds make up the balance. The total cost of the project is estimated at US\$ 25.0 million. For details see Table H 2.

While major capital investment is not anticipated until the political and the regional market situation improves and until CFM management is improved, the restructuring and streamlining of the work force will need some degree of retraining in order to enhance and maintain the productivity of the retained workers. Technical assistance may also be required to establish improved management systems in order to capture anticipated productivity gains.

This project will not provide such assistance to CFM directly, CFM may have to fund the cost of retraining and the cost of the required technical assistance out of current revenues. This technical assistance and retraining for retained CFM personnel are estimated to cost approximately US\$ 4.3 million from 1993 to 2000. Including the cost of required retraining and technical assistance by CFM and the cost of USAID assistance for reorganization and retrenchment, the total cost of the program is estimated at US\$ 29.3 million.

This cost is far below the benefit generated by the project.

2 BENEFITS

2 1 Direct Benefits to CFM

An analysis of the financial benefits of project-supported reorganization and retrenchment clearly shows that the project will generate a substantial cost savings to CFM over both the project period and the period 1993-2000

Given the proposed level of work force reduction, CFM will experience a significant payroll cost savings in addition to other benefits that may accrue from the management of a smaller work force. The shedding of approximately 13,700 workers will save CFM about US\$ 19.3 million over the project period (1993-1997) and about US\$ 48.6 million by year 2000. There are additional benefits that could accrue to CFM. For example, reduction of the maintenance and repair costs associated with breakdowns from use of sophisticated equipment and tools by unskilled workers and the management efficiency gains from a smaller and streamlined work force are real benefits that impact the productivity of CFM.

Although, the relationships between equipment and tools maintenance costs and the level of workers skills has not been studied systematically and documented, estimates for Kenya, Tanzania, and Ghana railroad companies indicate that equipment maintenance costs, although anecdotal, roughly amount to about 10 percent of the annual salaries of unskilled workers. Organizational and management studies conducted for privatized companies in Sub-Saharan Africa indicate that the management efficiency gains from work force streamlining and downsizing range from 2 to 20 percent, respectively without and with retraining of continuing workers, of the total annual salaries of retrenched workers.

The reorganization of CFM's operation and the repackaging of employee benefits, in accordance with the streamlining of the work force, will generate additional benefit. For example, instead of providing free staff housing CFM should adjust salaries to competitive levels and divest the management of staff housing. Although difficult to quantify, this will certainly stop the drainage of CFM resources in the form of housing maintenance costs and management.

CFM currently uses several commercial and industrial structures that could be rented out to private operators. Although, the stock of commercial and industrial property in use nation-wide by CFM is unknown, the rental of CFM's unused commercial property in Maputo alone can generate an annual rental income of over US\$ 60,000, using the current market rental rate of US\$ 5 per square meter per year. The leasing of surplus industrial tools and equipment could also generate additional income.

* Source selection information
 - See FAR 3.104 Do not disclose sensitive cost information

Table H 1 CFM Work Force Reduction Plan

	1993	1994	1995	1996	1997	1998	1999	2000	Total
Force Downgrading									3,309
Retirees	1,655	1,655	.						8,791
Retrenchees	1,958	3,916	3,916						1,209
Natural Attrition & Hiring Freeze	366	191	109	109	109	109	109	109	
Sub-Total	3,978	5,762	4,025	109	109	109	109	109	14,309
Cummulative Force reduction	3,978	9,740	13,765	13,874	13,983	14,092	14,200	14,309	

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Table H 2 Analysis of Project Cost

(US\$ thousands)

	1993	1994	1995	1996	1997	TOTAL
PROJECT COST						
Severance Pay	1 628	3 076	3 076	1 859	411	10 050
Early Retirement Pension Fund Contribution	365	365	0	0	0	730
Sub-Total	1 993	3 441	3 076	1 859	411	10 780
AID Project Coordinator (PSC)	250	250	250	250	250	1,250
Project Feasibility Studies ^a	0	300	450	450	0	1,200
Other Short Term TA ^b	0	300	450	450	0	1,200
Sub-Total	0	600	900	900	0	2,400
Project Management Unit (PMU)						
Expatriate Staff Costs						
Technical Advisor (PMU)	250	250	250	250	0	1 000
Employment Advisor (CFM)	250	250	250	250	0	1 000
Employment Advisor (PMU)	250	250	250	250	0	1 000
Local Salaries						
Project Director	50	50	50	50	50	250
Finance/Admin Officer	20	20	20	20	20	100
4 Regional Officers	60	60	60	60	60	300
Driver	6	6	6	6	6	30
Secretary	6	6	6	6	6	30
Operating Costs						
Vehicle		50				50
Computers		50				50
Furniture		50				50
Misc Items		50				50
Procurement		50	50	50	50	200
Total PMU Costs		1,142	942	942	182	4,110
Ex-CFM Workers Redeployment Costs						
Spin-off Business Support						
Training		100	100	75		275
Credit Assistance		200	200	150		550
Agricultural Assistance & Credit		300	400	65		765
Skills Training Support		400	400	400	236	1 436
Micro-enterprise Support						
Institutional Support		250	200	130		580
Credit Assistance		300	300	300	67	967
Out-Placement Support		30	30	30	4	94
Total Redeployment Cost		1 580	1 630	1 150	307	4 667
Inflation and Contingency	199	528	492	485	91	1 794
TOTAL PROJECT COST	2 442	7 539	7,290	5,586	1,251	25 000

^a Assumes five 4 person month studies per year

^b Assumes short term Technical Assistance of 20 person month in the first year and 30 per year the following two years

* Source selection information

- See FAR 3 104 Do not disclose sensitive cost information

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* Source selection information
 - See FAR 3.104 Do not disclose sensitive cost information

Table H3 Financial Analysis of Impact of CFM Restructuring

(US\$ thousands)

	1993	1994	1995	1996	1997	1998	1999	2000	Total	
Total Cost of Project	2,442	7,639	7,290	5,586	1,251				24,109	
CFM's Staff Retraining Costs	796	711	491	482	473	466	456	447	4,321	
Total Cost (CFM + Project)	3,238	8,251	7,781	6,068	1,724	466	456	447	28,430	
Benefits to CFM										
Cost Savings										
Payroll Costs ^a	1,975	4,836	5,835	5,889	6,943	6,997	7,051	7,105	48,633	
Maintenance Costs ^b	49	121	171	172	174	175	176	178	1,216	
Efficiency Gains ^c	40	97	137	138	139	140	141	142	973	
Sub Total	2,064	5,054	7,143	7,199	7,266	7,312	7,369	7,425	60,821	
Income from Lease of Assets										
Commercial & Industrial Structures ^d	60	60	60	60	60	60	60	60	480	
Machinery & Tools	5	5	5	5	5	5	5	5	40	
Sub Total	65	65	65	65	65	65	65	65	520	
Total Benefits to CFM	2,129	5,119	7,208	7,264	7,321	7,377	7,434	7,490	51,341	
Net Project Benefit to CFM	(1,109)	(3,132)	(573)	1,196	5,596	6,912	6,976	7,043	22,911	
PV of Net Benefit including CFM cost	(1,022)	(2,660)	(449)	863	3,722	4,237	3,942	3,867	12,299	FR 49.4%
Present Value of Net Payroll Savings	(430)	(2,296)	(356)	940	3,786	4,299	3,983	3,700	13,615	63.6%
PV of Payroll Savings with CFM cost	(1,164)	(2,900)	(740)	582	3,471	4,004	3,726	3,467	10,455	41.5%

Discount Rate used 8.5% 8.50%

a Assumes an average monthly salary of 60,000 MT and a benefit loading of 50% or US\$ 47 per month per employee

b Assumes that the shedding of the unskilled workshop employees will result in maintenance cost savings equivalent to 10% of their annual salaries

c Assumes efficiency gains are realized as a result of the force reduction and restructuring equivalent to 2% of direct salaries of the redundant work force

d Estimated based on US\$ 5 per square meter per year of commercial property

1/93

As shown in Table H 3, the total benefit to CFM from implementation of this project is estimated at US\$ 51.3 million by year 2000. The payroll cost savings alone over the 1993 -2000 period is estimated at US\$ 48.6 million.

Using a discount rate of 8.5 percent, the net present value of the stream of benefits to CFM net of the total cost of the program is estimated at US\$ 12.3 million. The internal rate of return is estimated at 49.4 percent. The net present value of the net benefits, considering only the payroll cost savings, is US\$ 13.6 million with internal rate of return of 63.5 percent.

2.2 Economic Benefits of An Efficient CFM

Despite the prolonged period of deteriorating performance, CFM enjoys a number of significant potential competitive advantages which if properly exploited could provide the basis for recovery in its performance. First, for Swaziland, Zimbabwe, Zambia and Malawi CFM provides a shorter freight hauling distance than other competing routes. Second, it has excess physical capacity on both the ports and the railways.

The restructuring and streamlining of CFM operations will reduce CFM's direct operating costs and the efficient management of its railroad and port operations will certainly result in the reduction of transport costs. As indicated in Annex E, the cost of loss and damage, which is directly related to days in transit is five times higher than in South Africa. Reduction of days in transit from 18 days to less than 10 days will significantly reduce distribution costs. Transport cost savings over the longer Southern Africa routes is a real economic benefit to the region. See Annex E for transport and distribution cost comparisons.

Economic benefits will also accrue to Mozambique as a result of CFM's stronger international competitiveness. CFM is potentially a major foreign exchange earner for Mozambique from international traffic from Swaziland, Zimbabwe, Zambia and Malawi. Transport cost reductions arising from improved management of CFM could help attract the diverted traffic thus generating more foreign exchange for Mozambique.

2.3 Economic Benefits Of The Redeployment of Redundant CFM Workers

As discussed in Annex G, several potentially productive opportunities exist for absorbing the redundant ex-CFM workers into the economy. It is too early to speculate on the total economic benefits generated by this redeployment. Estimation of the benefits and costs of the redeployment scheme will require a systematic sectoral feasibility study to assess the absorption capacity of each sector and the investment requirements and the

potential employment and income generation of the sector

A step by step analysis of the productivity and income generation capacity of each sector is necessary

- 1 in order to ascertain the total number of ex-CFM workers that could be absorbed in each sector, and
- 2 in order to determine the total cost and benefit of redeployment of the redundant workers in each sector

The sectoral analysis should project demand (domestic as well as export) for the goods and services of each sector and estimate the level of domestic production and imports. On the basis of these data the level of unmet demand could be estimated. The studies should also include estimations of price elasticities of demand for each sector.

The level of unmet demand and the price elasticities provide the basis for determining the level of the required capital investment for each sector. Calculated capital to labor ratios are then applied to develop labor requirements for each sector. On the basis of these estimates and the skill and educational profile of the displaced workers the actual number of workers that could be redeployed in each sector can be reasonably estimated

As suggested in Annex G, it is anticipated that about 550 redundant CFM workers could be employed by businesses spun-off from CFM including -- metal works, construction materials, and furniture manufacturing. About 1,000 ex-CFM workers could be absorbed into the agricultural production sector, and about 400 or more ex-CFM workers could be absorbed into various types of micro-enterprise activities. It is anticipated that between 1,000 to 2,500 workers will be absorbed in various sectors of the economy through out-placement services and skills training. To the extent that the marginal productivity of these workers is positive a net benefit accrues to the economy. However, net benefit estimations have to wait until the above mentioned studies are concluded

ANNEX I INSTITUTIONAL ANALYSIS

Mozambique Railways was the subject of an institutional analysis in both the original Project Paper (1988) and in the first Amendment thereto (1990). These analyses will be updated in late 1992 by a thorough analysis of CFM's host country contracting capacity.

The other major institutional player for this project component is the Ministry of Transport (MOT), where the Project Management Unit will be located. The MOT is extremely weak and presently receiving assistance from the World Bank to improve its capacity in key areas. Since the PMU will not depend on the MOT for its day-to-day operations or for qualified counterpart personnel, its weaknesses should not be critical to the successful implementation of the project.

Several other institutions engaged in training, credit provision, road-building, small business, etc., are identified in the project paper as possible partners in the effort to redeploy excess CFM employees. These institutions will be subject to close scrutiny by USAID and the project-financed TA team during the implementation phase of the project to determine their suitability and capability to further the project's ends.

The final institution to be identified is perhaps the most important, the financial intermediary for the payment of severance to the workers. A thorough investigation of alternatives for this intermediary will take place during Phase I of the project to identify the most appropriate public or private institution for this role. Before any severance payments are made, A I D will analyze and approve the intermediary institution. Short- and long-term technical assistance will be provided as needed to ensure that the flow of funds from the project to the workers is transparent and efficient.

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ANNEX J

JURIDICAL ANALYSIS OF THE REDUCTION OF THE CFM LABOR FORCE

1 FRAMEWORK OF THE MATTER

1 1 One of the central problems of the CFM restructuring process is that of a serious disruption of the dialectic between profitability and renewal of the structure of enterprises and the rationalization and adequacy of the existing human resources

1 2 At the present moment and having the war in Mozambique as background, all the technical-economic analysis of the present PP clearly concludes that there is a serious mismatch between the work posts necessary for the profitability and revitalization of the CFM and the existing workers

1.3. It is not by chance that, between the various proposals that have been outlined and suggested to the Mozambican authorities on the restructuring of the CFM (Memorandum and Recommendations of the President of the International Development Association, May 1992 and IPC Reconnaissance Visit to Review Mozambique RRSS (Blacken & White Report) May, 1992), there is a common denominator acknowledged by the management structures of the enterprise reduction of the surplus labor force as a measure for better rationalization, through the utilization of the existing human resources and the feasibility of the enterprise's restructuring project

1 4 During this phase of the present project, there is no place for the historical analysis of the Mozambique Railways, while prime employer and source of financing and accumulation before Independence, in its primary function of rendering services to neighboring countries

1 5 It is, however, important to remember that before the Independence of Mozambique the Railways integrated a public service of the Portuguese colonial administration where workers holding management or supervisory functions were exclusively officials of Portuguese origin (i.e. foremen, line inspectors, area overseers, port inspectors, traffic and shunting overseers, station masters, first class dispatchers, supervisors, locomotive engineers, crane operators, etc

1 6 After Independence, due to various reasons and also because they were civil servants, all this personnel returned to Portugal to be reintegrated in the departments of the said Public Administration, as happened in 1975 and 1976

1 7. Mozambican workers were then called to perform functions the access to which had, until then been denied to them. Inexperience allied to ignorance and lack of adequate qualifications and

training added up to cause the present problems with special emphasis on the labor force component, in itself already vastly surplus, in view of the poor economic situation of the CFM enterprise

1 8 During the last three years, various efforts have been made in the restructuring of the railways and harbors sector towards endowing it with the management dynamic indispensable to its economic activity, which began with the creation on the 01 01 89 of "Empresa Nacional de Portos e Caminhos de Ferro de Mozambique (CFM) - Empresa Estatal" (National Enterprise of the railways and Harbors of Mozambique (CFM) - State Enterprise) and, now, aims at a new institutional reform such as the subsequent transformation into a "public enterprise", endowed with greater autonomy and management flexibility and an initial step in the process for the scheduling of activities which will, later, be the object of
-----privatization.

1 9 But besides these measures occurring in the structure of enterprises, other measures falling on the reorganization of the labor system have also been adopted, of which the following should be highlighted due to their importance to the present project,

- Retirement of all workers of 60 or more years of age, which means a global reduction of about 5 000 to 7 000 workers,
- Retirement of workers who, due to health and other reasons, are unfit to render services rentable to the enterprise, irrespective of their age,
- Adoption and institutionalization of a new wage system, more competitive and aiming at the stabilization of mid-level and technical staff, and respective incentives, culminating with the new wage table recently in force, as per service order dated 09 06 92

But the measures taken are not yet sufficient for the solution of the still surplus labor force in the restructuring process of the sector specially as regards the railway area

1 11 Alternative solutions for the degree of massive reduction of the labor force and the forced return to inactivity were outlined in the said Blacken and White and developed, delved into and characterized in the present PP, as a means to minimize the social costs arising from such reduction

----- 1-12 At the present moment it is important to analyze, within the framework of the constitutional and legal rights in force, the legitimacy and validity of such measure and the legal implications thereof

2 WORK RELATIONS IN THE STATE ENTERPRISE CFM -- JUDICIAL REGIME THEREOF

2 1 The labor rights regime of state enterprises is that of the individual work contract, ruled by law no 8/85, of the 14 12 85

2 2 It happens, however, that in the particular case of the CFM state enterprise, because of the occurrence of the transformation of a public service integrated in the Ministry of Transports (the ex-National Directorate of Railways and Harbors) into a business entity to which it was ordered to transfer all the movable and immovable patrimony, including the rights and obligations attached to the said ex-national Directorate, as well as the respective staff, with the express safeguard of the rights acquired, the following was found out:

Workers who, up to the date of the creation of the enterprise, that is, 01 01 89, were at the service of the ex-National Directorate of Railways and Harbors and, due to this reason, subject to the General Statutes of State Functionaries, when passing on to the new enterprise, albeit if bereft of the quality of civil servants, remained subject to that "Statute" as regards the rights acquired (seniority, career progression, retirement, pensions, salary, among others)

However, the situation of workers engaged after the 01 01 89 is different, since they are subject, exclusively, to the individual labor contract law

-- 2 3 - It thus can be concluded that in the CFM enterprise there exist two distinct regimes to regulate labor relations

One, of public right, ruled by Decree no 14/87, of the 20 05 87, "General Statutes of State Functionaries", applicable only to workers who were bound to the ex-National Directorate of Railways and Harbors up to the 01 01 89 and who, on that date, passed on to the new enterprise

The other, of private right, ruled by Law no 8/85, of the 14.12 85, applicable to

- all workers who were admitted to the Enterprise after 01 01 89,

- workers who have passed on to the new enterprise, in the part that does not collide with the rights acquired under the terms of the "Statutes of State Functionaries"

2 4 Thus, there exist not only two distinct work statutes in the CFM enterprise, but there also exists a duality of regimes applicable to the legal labor relations of workers who have passed on to the new enterprise, who retain a nucleus of "rights acquired" arising from the previous statute of public right, but

who also benefit from the norms of private right that do not prejudice those rights

a) They are subject, because it is more favorable, to the wage system and respective incentives, specific of the enterprise, and no longer to the wage structure applicable to workers of the State Apparatus, necessarily less favorable (in accordance with Decree no 40/90, of the 29 12 90),

b) They benefit from the right to form a union (Law n: 23/91, of 31 12.91), from the right of collective contracts (Decree no 33/90, of the 24 12 90) and from the right to go on strike (Law no 6/91, of the 09.01 91 and Dispatch of the 10 01 90, which rights are not applicable to State functionaries

2 5. However, in a different manner, the right is applicable for the purpose of retirement and respective pensions or in case of termination of their work relation, the advantages of the more favorable public right regime constituting, for these workers, the nucleus of "acquired rights" intangible to the less favorable regime of the individual labor law

2 6 An important number of workers are still subject to the General Labor Law, who render their activity in the Ports (approximately 9,750), the so-called "Card Workers" and those who render their activity in the maintenance teams (approximately 1,900) who constitute the group of the so-called "eventual workers "

2 7 In reality, these workers render their activity for satisfaction of topical and temporary needs, sometimes of an exceptional nature, being paid by the day by the week, subject to specific rates calculated by the hour, the day, the week, without any guarantee of the continuity of the labor post, in contrast with the rest who are permanent workers

2 8. It appears important to note an initial conclusion which is Workers who have passed from the ex-National Directorate of Railways and Harbors to the new enterprise, now benefit from a duality of regimes, one, of public right, for the purposes of seniority, bonus, retirement, pensions and termination of their legal labor relation, and another, of private right, for the purposes of wage regime, incentives, collective employment, etc , which enables them to accumulate the advantages pertaining to each regime, placing the CFM enterprise in an exceptional position in the labor and employment market

3 SOME ASPECTS OF THE SOCIAL SECURITY REGIME OF THE CFM WORKERS

3 1 As we have been mentioning, the greater part of the CFM workers are subject to the "General Statute of State

Functionaries" for pension purposes

3 2 We speak about the retirement pension apropos the measures for the reduction of the labor force, including therein the disability or sickness pension

3 3 It is important, because it also refers to expenses born directly by the State Budget, to identify other situations giving place to pensions, such as

- Survival Pension (Article 258)
- Subsidy due to Death (Article 263)
- Blood Pension (Article 269)

The Survival Pension is due to the heirs, upon the death of the functionary entitled to retirement, or already retired, calculated in the same manner as the retirement pension and the amount thereof is 50% of the latter

The Death Subsidy is given to the next-of-kin under the charge of the deceased functionary and is equivalent to six months of the remuneration inherent to the respective post or function

The Blood Pension is due in case the functionary dies due to injury, accident on the job or resulting from disease contracted through professional activities in contact with toxic materials

This pension is calculated it amounting to 70%, plus as a retirement pension, 6% for each minor child

3 4 These pensions were recently updated by 35%, according to the already referred service order of the 09 06 92

4. LEGAL MECHANISMS FOR REDUCTION OF THE LABOR FORCE IN THE CFM ENTERPRISE

4 1 For workers attached to the CFM up to 01 01 89

4 1.1 Taking as a basis the data furnished by the Directorate of Planning of the CFM, pointing to a global figure of 32 500 workers, of which 9 750 are card workers (temporary) and 1 900 belong to the maintenance teams (also temporary), the remainder, approximately 21 000, are permanent workers

4.1 2 In turn, among these, approximately 65% to 70% work in the railways, that is, 12 500 to 13 000 Considering, on the other hand, that workers admitted after the 01 09,89 were not more than 5%, more than 95% of workers attached to the Railways originated from the ex-National Directorate of Railways and Harbors and, therefore, are subject to the public right regime for the purpose of retirement, pensions and termination of the labor relation thereof

4.1 3 Thus, the legal mechanism to which the CFM enterprise may take recourse for the reduction of the labor force through its own initiative, in relation to these workers, is that of compulsory retirement

4.1 4 In reality, it is possible, through the initiative of the CFM, as a consequence of the reorganization of work measures, to carry out compulsory retirement of workers (Article 237, no 2 of Law Decree no 14/87)

The legal requirements for this compulsory retirement are only defined in the case of age limit, 65 years for men and 60 years for women, and not in the other situations

4.1.5. It appears, however, that there must exist a retirement, no longer as regards age but as regards the minimum time of service, which is 15 years service

In reality, if the minimum time to acquire the pension is fifteen years, it would not make sense, in case of retirement through the initiative of the CFM enterprise and not for reasons of age limit, that the legal presupposition of minimum time to acquire that right was not respected (according to Article 238, paragraph b)

4 1.6. Another possibility is the recourse to voluntary retirement (Article 238, Decree no 14/87), that is, the one that is applied for by the worker's initiative. The requirements thereof are as follows

- a) To have satisfied or going to meet the expenses incurred for retirement,
- b) If the worker is 60 years of age, if a man and 55 years of age, if a woman, and has rendered 15 years service, at least, or
- c) To have rendered 35 years service

4.1.7 For topical situations, recourse to the legal model of the "extraordinary retirement" (Article 256), whose determinant factor is the worker's disability, is also possible. A characterizing aspect of this regime is the fact that the time of service rendered is always considered to be equivalent to 15 years, if the worker has not attained such a minimum number of years of service

However, if the determinant factor of disability due to accident in service or serious and incurable disease contracted by virtue of the functions exercised, the time of service is always considered equivalent to thirty-five years

4 1 8 Calculation of the retirement pension is done taking the following formula as a basis

$$P = R \times A / 35$$

where

P = retirement pension

R = remuneration earned at the time of retirement

A = years of service

(including all the situations comparable to the years of service as is the case of those who have participated in the national liberation struggle and who are entitled to a 100% increase when counting time of service, to a maximum limit of 35 years)

4.1 9 Under a labor force decongestion and rationalization perspective, the CFM has continued with the adoption of a specific measure of early retirement, with the agreement of those concerned, within the legal limits that characterize the voluntary retirement model, as follows,

15 years service and 55 years of age, for women, and 60 years of age, for men, or 35 years service

4.1 10 Through this measure it has been possible to make a substantial reduction in the labor force, of the order of seven thousand workers

The expenses arising from this "voluntary retirement" are being born by the State Budget and by the enterprise, in cases where it is necessary to cover the difference to full pension, because workers have not reached 35 years service

4 1 11 In this context it appears to be justifiable, seeing that it is inserted in the continuation of the already existing set of rationalization measures, to continue to invest in an early retirement strategy which would take the form of a voluntary retirement because it would always have the agreement of the worker concerned, obeying the following requirements

15 years service and 50 years of age, being a woman and 55 years of age, being a man with the right to opt either through a 20% retirement bonus, without prejudice to the maximum limit of same having to correspond to 35 years, or through an indemnity corresponding to X months remuneration

4 1 12 Expenses would be born by the State Budget in the part corresponding to the value of the pension for the years of service rendered, either option, the 20% bonus or the indemnity, being born by the CFM enterprise.

4 1 13 This measure, although introducing an age limit not envisaged in the "General Statutes of State Functionaries", would not constitute an unprecedented fact in the Mozambican labor rights order, seeing that in the relations ruled by the General Labor Law (private right), is contemplated the possibility of being able to apply for an early retirement at 50 years of age (Article 7 of Decree no 46/89, of the 28 12 89)

4 1.14 The major consequence would be the pressure on the State Budget resulting from a retirement of this nature, even if the bonus or indemnity to bring it up to a full pension would have to be born by the CFM

It must be added that the CFM, under the terms of the General Statutes of State functionaries (Article 248), are obliged to make the legal discount of 7% on the gross remuneration of functionaries (for the purposes of their right to acquire this retirement pension), and the consequent delivery of those discounts to the Treasury (in the Ministry of Finance), have never done so, it presently constituting a debt by the CFM to the State Budget, which debt may come to integrate the State constitution fund (credit capital) in the future public enterprise in which the CFM may transform itself

4 1 15 Another alternative and this one being eligible under the light of the legal framework in force, even if applicable to situations of the restructuring of State services, but which could be extended to the CFM enterprise through the creation of an appropriate juridical normative, would be the creation of a supernumerary or surplus cadre that would gather those available or under-utilized by virtue of restructuring measures equivalent to "suppression or compression of the organic structure", as is disposed in Article 94, paragraph c) of the General Statutes of State Functionaries

4 1 16 The option for this alternative would belong to permanent workers, considered surplus and who did not opt for early retirement measures

The advantages of this alternative were obvious

- Legitimacy of such measure under the light of the legal framework,
- Receptivity by the union structure, binding it to the perfect execution thereof,
- Gradual and progressive reform of the sector, allowing a sort of postponement as regards the moment of final detachment from the enterprise

4 1.17 This cadre of supernumeraries would have the following as fundamental aspects defining the regime thereof,

Workers would retain

- the work tie and the category,
- full salary, for example, during the first six months and, afterwards, 60(70)% up to two years, including Christmas bonus,
- complementary installments bonus, for those entitled to them, such as child allowance, house rent subsidy,
- the right to health care,
- the time workers remained as supernumerary would count for all effects, namely, seniority, retirement and career progression

In case they were called for professional training and advancement actions, they would receive their wages as though they were in activity.

During the time they remained as supernumerary, they could either be reintegrated in the new enterprises resulting from the restructuring of the sector or, if they were not, one of the two situations following could occur

- supernumerary workers, in continued or interpolated inactivity during two years and who had 15 or more years service, would be compulsively pensioned off, without any gratuity, or
- workers who remained supernumerary during twelve months, continued or interpolated, could retire voluntarily, opting for a pension with gratuity (20%) or for an indemnity

4 1 18 These and other measures leading to the reduction of the surplus labor force in the CFM are innovative elements not covered in a specific legal framework, and would possibly require the creation of an appropriate diploma

4.2 Retrenchment Options for Workers Engaged after 02 01 89

4.2.19 Let us now proceed with the analysis of the labor rights situation of workers engaged after the 01 01 89 who, such as we have mentioned before, are subject to the General Labor Law

4.2 20. As regards them, their work relation is characterized by the rendering of continued and permanent service that allows its subsumption in the legal framework of "labor contracts for indeterminate time" (Articles 9 and 10 of Law no 8/85)

The faculty to put an end to labor contracts unilaterally, by either party, in order to make cease the effects thereof, is one of the characteristics of the juridical discipline thereof. Differently from the public employment relation, where unilateral cessation by either party carries strong conditions (for example,

on the part of the State, civil servants only see the termination of their juridical tie through retirement or, eventually, following a punitive measure applied in a disciplinary process), the private labor relation can cease through traditional situations of "recision with prior notice" and "recision with just cause" proven through disciplinary process (Article 24 of Law no 8/85)

4 2 21 But the interaction between public rights and private rights, on the matter of labor questions, produces an increasing approximation between the two regimes, gradually fading away the differences between them, as regards the question of stability in the work post, for example.

Thus, restrictions to the termination of the labor relation, by initiative of employers, are also found in private right.

4.2.22. Under the light of Mozambican laws, termination of labor contracts through recision with prior notice, by initiative of the CFM, is only possible in the objective situation expressly envisaged in the law for the adoption by it of technical-organizational measures that impose the adequacy of the labor force (Article 26)

In the latter case, the process followed is that of the minimum 90 day prior notice, followed by an opinion by the union body, the right to an indemnity being guaranteed, calculated on the basis of time of work rendered (three months for each two years) and by communication to the Secretariat of State of Labor for the preferential re-posting of workers (Article 26 of Law no 8/85 and Article 7 of Decree no 9/89, of the 01 06 89)

4 2.23 In cases where it is found that there exists a continued rendering of service subject to a final term, in case of early termination of contract the CFM would be obliged to pay an indemnity equivalent to the remunerations due up to the term of the stipulated period

4 2 24. Workers whose work relation is fully ruled by the general labor law, can be pensioned off due to age limit (60 years for men, 55 for women), but can still be the object of early retirement at the age of 50, in cases where they show premature physical decay

4 2 25 The Social Security Institute is in charge of all pensions and, due to the recent creation of the social security legislation, they are born alternately or jointly, by that organism and by the employer (CFM) (according to Decree no 46/89, of the 28 12 89, Decree no 5/89, of the 18 09 89)

Contributions to social security amount to 7%, the worker paying 3%, the CFM paying 4%

4 2 26 Would it then be possible to extend to all the CFM workers the early retirement legal regime of the General Labor Law and to propose the respective retirement at 50 years of age? If such decision regarding retirement had acceptance on the part of workers would, after all, be another form of voluntary retirement that seems legitimate. At bottom, everything would happen as if CFM workers were given the right to opt, for retirement purposes, for the private right system, provided the latter would not result in a less favorable consequence

The question is that contributions paid to the State Budget would have to be transferred to the Social Security institute and such transfer would imply a certain complexity seeing that the CFM, although making the 7% discount on the remunerations earned, have not really handed over such contribution

5. SOME REFLECTIONS ON THE CREATION OF A SPECIFIC
NORMATIVE FOR THE REDUCTION OF THE LABOR FORCE IN THE
CFM

5.1 Under the light of the present juridical ordination what is the legitimacy of applying specific measures to the CFM sector which contemplate the massive reduction of the labor force, either through early retirement, or through recision with prior notice (in cases where this form was applied)?

5.2 It is important to bear in mind that what stands out from the legal texts is the principle of the causality of the dismissal, to be legitimate, any termination of the labor relation by employer's initiative needs to be well-grounded, either for economic reasons or others, so that such cause, that motivation, gains such a dimension it supersedes other values such as, for example, the right of the enterprise and the profitability thereof over the right to labor protection and justifies the sacrifice of the latter

5.3 In the case under consideration it is the causality "restructuring, redimensioning, revitalization of the CFM" that confers the legitimacy necessary for the reduction of its labor force and the inherent measures

5.4 But because the measures to be adopted prove to be innovative, both as regards the situations covered thereby (early retirement, temporary or definitive return to inactivity) and as regards the reparative or compensative procedures to be followed (bonus, indemnity, professional re-orientation, re-employment), the creation of a specific legal framework imposes itself no longer as a question of legitimacy but of its juridical and practical efficacy, the advantages of which appear to be undeniable

5.5 Let us see some of those advantages

- Consecration of a concrete solution and, therefore, more adjusted to the real situation in the enterprise and to the peculiar situation of the CFM workers,
- It would endow the sector with greater dignity, fully justifiable due to its economic importance,
- In its execution it would comprise not only State bodies and the enterprise's management but also the union structure, whose opinion is compulsory throughout this process,
- It would contribute to the transparency of the criteria to be followed,
- It would objectify the factual situations covered by the reduction of the labor force which would give greater certainty to those they aim at,
- It would consecrate the exceptional character of the compensative or reparative measures (incentives) indispensable for its acceptability by those concerned

5.6 If it is not opted for the creation of a specific legal framework contemplating these and other measures for the reduction of the CFM labor force, only through voluntary retirement, based on 60 years of age for men and 55 years, for women, and 15 years service, will it be possible to continue to invest in the labor force reduction. For the very few cases of workers, engaged after 01/01/89, rescission with a 90 day prior notice will be possible, but always subject to a favorable opinion by the union body and the attribution of an indemnity

5.7 The creation of a specific legal framework for the Railways sector, legitimated by the causality of those measures (economic reasons, reasons for the restructuring and redimensioning of the sector) would also have to encompass preferential re-employment measures

5.8. In cases where the permanent work relation is terminated, either through early retirement or through rescission with prior notice, the CFM worker would not have a subjective right of being re-employed in this or in any other sector of economic activity but only the more general right, common to all citizens, of access to work

However, with the creation of a specific normative, a public and institutional commitment would be assumed (Ministry of Labor, Ministry of Transports and Ministries with portfolios of the economic areas eligible for re-employment, for example, Agriculture, Mineral Resources, Industry and Energy, Construction and Water Resources) to preferentially re-employ in their sectors workers falling under the reduction of labor force measures, or

to give them preferential access to economic free initiative (i.e. small scale industry development fund, mining development fund, agrarian and rural development fund, agricultural hydraulics development fund, fishing development fund)

5.9 In this way, CFM workers would not benefit from the right to demand re-occupation of a work post in this or that sector. But they would benefit from a preference right to be re-posted or re-oriented to employment initiatives, new or under course.

If not so, there will be social costs arising from a sector so sensitive and the risk that the so-forced inactivity, in of historical organisative tradition, will supersede the useful purpose of the restructuring thereof.

5.10 To reinforce everything just stated above, as regards the need of creating a specific juridical normative for the massive reduction of the CFM labor force, is the fact that such reduction may assume an unprecedented character not envisaged in the juridical ordination in force.

Therefore, such a reduction can hardly fit in the framework of the labor rights legislation in force, be it within the scope of public rights or within the scope of private rights, seeing that same was created under the provision of solution of topical cases of termination of the work relation and not for application in situations of "collective dismissal".

6. CONSTITUTIONAL ECONOMIC SYSTEM A PLURI-FORM SYSTEM

6.0 Within the framework of the objectives outlined in this PP, another central question is the redimensioning of the CFM enterprise in the recent legal framework of privatization, through the total or partial transfer of the exploitation of the railways to a private entity and through the total or partial transfer of ownership of the respective patrimony that, by decision of the government, will be detached from public dominion.

Then, let us see the legal implications of the re-dimensioning (privatization) of the CFM state enterprise, under the light of the new Constitution of the Republic of Mozambique and of the economic legislation in force.

6.1. The new Mozambican economic constitution, which came into force on the 30.11.90, has consecrated the coexistence of various economic forms in accordance with the respective ownership and management of the means of production.

Let us see each one of those economic forms

The State Sector - constituted by state enterprises, by public enterprises and other public entities, whatever their juridical statute public enterprises in the strict sense, public capital enterprises, public institutes, public funds),

The Co-operative Sector - which integrates the Co-operative enterprises,

The Private Sector - rather heterogeneous, integrating from the small artisan, passing through the family sector, up to large enterprises;

The Mixed Sector - integrating public capital and private capital enterprises

6 2. The essential characteristic of the Mozambican constitutional economic system is not the existence of various types of ownership and management common to any market economy, nor of the greater or lesser dimension of either one, although a hegemonic tendency of the state sector results therefrom

But what is essential in the constitutional framework is the guaranty of the pluralism of the different forms of ownership

6 3 In turn the guaranty of these three sectors of ownership implies the existence of three forms of economic initiative

- public
- private
- co-operative.

The public economic initiative is one of the dominant aspects of the Constitution of the Republic of Mozambique, because no economic area is reserved thereto

6.4. On the contrary, there exists reservation of public ownership of certain properties (Land, Natural Reservations, Air Space, Maritime Zone, Water Resources, Mineral Resources) But this does not necessarily signify reservation of public exploitation, some of these properties being able to be the object of exploitation by private entities (i. e. concession regime for land use and development, concession regime for research and exploitation of mineral resources)

6 5. But in some sectors and fields of activity there is conditioned access to private initiative Then which are those sectors or those activities?

Such definition is a matter of the government's competence, under the terms of Article 4 of Law no 15/91, of the 03 08 91, which

diploma, in turn, has determined some of those sectors, only as an example but not in depth and which are the following

- Attribution of mining rights,
- Production and issue of currency,
- Exploitation of games of chance

These are forbidden to private initiative, the exercise of the respective activities being only allowed to State enterprises, under the exclusivity regime

6.6. However, other sectors are partially forbidden to private initiative, because they permit the exercise of the respective activity in concurrence (public sector, private sector), it behoving the State what the law calls "an economy regulating role".

The juridical forms of this conciliation between the public and the private sectors are, normally, the joint ventures and the public concession contracts

6.7 Although the Government has not yet expressly established the further sectors the economic activity of which must be exercised under the exclusivity regime by state enterprises, or in concurrence with the private sector, Law no 15/91 has established, as of now, the informative principles as which must those sectors be

Thus the present state enterprises that "develop activities of a strategic nature", considering as such "the rendering of public services to the community" which, due to their essentiality, must be rendered or controlled by the State, have to remain in the State enterprise sector

6.8. But what is not yet identified and, therefore, is omitted under the light of the recent legal economic framework, is which are the economic activities of a strategic nature that have to remain under the exclusivity regime in the State sector and which are those that may concur with the private activity

7 THE CFM STATE ENTERPRISE PLACE THEREOF IN THE ECONOMIC CONSTITUTIONAL FRAMEWORK

7.1. Juridically, the "Caminhos de Ferro de Mozambique" (Mozambique Railways) are a state enterprise and, as such, integrated in the state enterprise sector, the latter understood, in accordance with the legal texts in force, in the economic sense, as the set of enterprises under the Supervision or management of Public Administration

The juridical forms that, in Mozambican economic rights, characterize the State enterprise sector are,

- state enterprises
- public enterprises

- corporations of public capital exclusively

Until a very short time ago, the state enterprise was the dominant juridical form to which the State took recourse to intervene in the economic activity

However, with an internal structure similar to that of any public service, markedly bureaucratic and administrative, connected to the organisms of portfolio (ministries, Secretariats of State) by hierarchic links strangling any management autonomy, these economic units, organized more in administrative than in enterprising moulds, today appear to be in a declining phase

In reality, with all the new Mozambican economic legislation on public enterprises and privatization systems, state enterprises will necessarily tend to transform themselves into public enterprises or public corporations, or to become extinct and give place to private enterprises

7.2 The CFM state enterprise does not appear to be the exception to this rule. Although created recently, in 1989, under the form of a state enterprise (it is important to recall here that it was the first step towards the transformation of what was and, historically, has always been a public service), the next step appears to be the transformation thereof into a public enterprise

7.3 As a matter of fact, identical processes are being followed in the sector of transport, as is the case of the transformation into public enterprises of the state enterprise "Correios de Mozambique" (Mozambique Posts) and the state enterprise "Telecomunicacoes de Mozambique "

7.4 Reasons of an economic order, on the one hand, but also legal, have determined this transformation

7.5 In reality, any of those enterprises, as well as the CFM, render a public service to the community which inserts them in the field of the activities of a strategic nature. In the case of the CFM, the diploma that created it expressly states that the CFM enterprise renders a "public service for transport of persons and goods" and constitutes an "important vehicle of national unity" (Decree no 6/89, of the 11 05 89)

7.6 This means that we are faced with one of the activities that must remain in the State enterprise sector (Law no 15/91)

The doubt that remains is if this activity is exclusive of the State or if it can be exercised in concurrence with the private sector.

But in whatever situation, state enterprises that have to remain

in the state enterprise sector, which is the case of the CFM, either exclusively or in association with private parties, have to be transformed into public enterprises before acquiring any other juridical form

The public enterprise is as if the first step of the restructuring and redimensioning of the state enterprise sector (Article 3 of Law 15/91)

7.7 The advantages of the transformation of state enterprises into public enterprises, although they both integrate the state enterprise sector, lies in the drastic decrease of the intervention of public powers in the internal management of the latter For example, public enterprises, differently from state enterprises, are able to freely transact the movable and immovable property integrating the patrimony thereof, with the exception of those that integrate public domain and which constitute what the law calls "universality" Public domain properties are those determined by law (i e land) and those attached to a public utility function, constituting an universality (Article of the Civil Code)

Such is the case of the railway lines, with all its components, infrastructures and line superstructure, their annex buildings and accessory works, "Buildings, signals, telegraph and telephone lines and all the fixed material of any kind "

Such properties, when detached from their public activity, can then be the object of transaction That is, if the rails, the level crossings gates, the signals are separated, each one of these things, individually, because they have autonomy when subtracted from the universality they constitute lose the public domain character and can be freely negotiated by the enterprise, with the exception of those that per force of the law are always public domain property (i e land)

7.8. Flexibility and autonomy in management, possibility to take recourse to hetero-financing and self-financing schemes equal to those of private economic agents, a management molded on the image of corporations and the possibility of transacting goods and services in the market for a price calculated according to economic criteria, are as much again advantageous aspects of the transformation of state enterprises into public enterprises

7.9 It is also important to refer that subscription of the statutory capital is not only by the State, the same being understood as the State Budget, but it can be by other public entities (i e other public enterprises, public funds, public capital corporations exclusively)

7.10. One of the difficulties in the transformation of state enterprises into public enterprises lies in the need of the

internal financial reparation thereof, seeing that almost all of them show a very high deficit in the State Budget

In the case of the CFM, there is the possibility that the State may participate in the statutory capital through the capitalization of the enterprise's debts

7 11. At this point it seems important to extract two conclusions

a) The restructuring and redimensioning process of state enterprises exercising an activity of a strategic nature, under the light of the legal economic framework is a gradual and consecutive process because the state enterprise has first to be transformed into a public enterprise and only after having acquired this statute can it later assume other juridical forms of enterprises of a private nature (trading companies)

b) State enterprises not situated in strategic sectors can be privatized immediately

7.12 Having identified the juridical-economic forms to which the State takes recourse when it wishes to intervene in the economic activity, having analyzed the options possible within the legal framework of the redimensioning of the state enterprise sector, to totally or partially liberate the public component of the titularity of the capital and the titularity of management (public enterprises, public capital corporations, joint ventures, private capital companies), let us see the concrete legal implications of the redimensioning and restructuring of the CFM state enterprise.

8 PRIVATIZATION OF THE CFM RELEVANT ASPECTS OF ITS JURIDICAL REGIME

8. 13 Identified as an enterprise rendering public service to the community and, therefore, exercising an activity of a strategic nature, everything points out that the CFM enterprise should remain in the state enterprise sector and, as such, assume the juridical-economic form of a public enterprise

8.14 But the restructuring process of the CFM can be preceded by or simultaneously with measures of total or partial alienation of the patrimony thereof

The laws in force on this matter (Law 15/91, of the 03 08 91, Decree 28/91, of the 21 11 91, Decree 21/89, of the 23 05 89) allow that state enterprises can be alienated totally or in part and that such alienation may take two forms essentially

- a) private negotiation
- b) public tender

In the case of the CFM, simultaneously with its transformation into a public enterprise, it will be possible to alienate and privatize the properties that are detached from their public utility function (closing down of lines and consequent sale of buildings, workshops, etc)

The administrative procedure for this alienation is ruled by Law 15/91, of the 03 08 91, Decree 28/91, of the 21 11 91

The decision on the alienation of the CFM, through private negotiation or public tender, behooves the Prime Minister, assisted by the Inter-Ministerial Enterprise Restructuring Commission, created by Decree no 27/91, of the 21.11 91

8.15 In conclusion

8.15.1 Any privatization of the "Caminhos de Ferro de Mozambique" (CFM) is faced by this limitation the universality of the railways and harbors system (railway lines with all the components already mentioned above) is a public domain property, seeing that it is attached to a public utility function the transport of persons and goods

This means that such property cannot be alienated nor, for example, be the object of sale or confiscation

8 15.2. Such alienation is only possible after these properties have been subtracted from the statute of public domain property, by authorization of the Government

(In addition, the universality of the properties constituting the railways and which, under the light of Portuguese law were a part of the public domain of the State, have maintained the same statute under the light of the Mozambican legal framework, since they integrated the patrimony of a public service (ex-National Directorate of Railways and Harbors) and under this capacity of property submitted to public domain were, later, transferred to the CFM state enterprise, only a change of ownership having occurred, which change will also take place if this enterprise is transformed into a public enterprise because the latter also integrates the state sector).

8.16 It will then be possible to question which is the regime applicable to things of public domain Under the terms of the law in force (Article 1304 of the Civil Code), the things of public domain may be the object of public rights, such as

- Concession to private entities for exploitation
- Ownership by other public entities only
- Public use and fruition (collection of tariff for utilization of property).

8 17 The exploitation concession is the privileged juridical instrument to which public powers normally take recourse for the management of public domain property

The concession of the railway service, for example, implies the transfer of the respective railway line to the ownership and management of the concessionaire

But what is important to retain from this concession regime is that the holder of the exploitation concession is a "manager" who undertakes to manage, at his own account and risk, and provide the public utility of the railways system (the operation), for example, offering the use thereof in an adequate manner (i e charging tariffs, prices, drawing up regulations, supervising and patrolling, if such is the case)

8.18. The "exploitation concession" system allows a reciprocal compromise between the fulfillment of the obligations of a public service that cannot be dispensed (transportation of people, for example) and the application of methods of private commercial management, in accordance with the commercial opportunities made evident for the transport market, giving the concessionaire flexibility to temporarily or partially shut down some lines or sidings granted or, eventually, reduced traffic stations, whenever such exploitations do not prove to be commercially viable, nor justified

8 19 The juridical instrument for the "exploitation concession" is the concession agreement through which the CONCESSOR (i e CFM) transfers to the CONCESSIONAIRE (i e private entity) the rights that, legally, have been attributed to him, so that the latter can provide the use of the things that have been entrusted to him and that the rights and obligations of both are strictly defined in order to clarify the relations between CONCESSOR and CONCESSIONAIRE and between them and the users of the railway service

8.20 A decisive question for the validity of an agreement of this nature is that of the authorization thereof by the Government

Actually, if the CFM opt for granting to a private entity the rights that have been attributed thereto by the government, in the act of constitution thereof (Decree 6/89, of the 11 05,89, that created the state enterprise or, eventually, the legal diploma that will determine the transformation thereof into a public enterprise), such transfer can only take place, validly, with the government's intervention

And

- either the CFM enterprise is previously authorized by Decree or

resolution by the Cabinet to celebrate a concession agreement with a private enterprise, establishing, as regards the latter, some statutory and share capital requirements and the capacity of the Government to participate in the administration of the said enterprise (i e one delegate, one administrator)

- or the Government, through resolution by the Cabinet, a posteriori ratifies the concession agreement celebrated between the CFM and the concessionaire, so as to give it full validity and efficacy

8.22 Only in this way can the private entity be validly invested with the rights of the CFM enterprise that will allow it to manage the public property which integrates the universality of the railways and acquire, for example, title to the Use and Development of the Land for industrial purposes or others necessary for the concession thereof, or constitute rights in favor of third parties, benefitting from the returns thus obtained (i e, leasing of immovables)

8.23 Some aspects of the regime of a contract of this nature seem expedient to refer

- The concession agreement can establish the evolutionary character thereof, as the modernization of the railway network in the territory is being carried out and in accordance with technical progress

- The possibility of extending the contract to other infrastructures of land transport and which have technical analogy to railway transport

- Period of concession
- Conformity with the transport policy defined by the Government
- modernization of the lines and of the equipment and the investments in accordance with the technical progress and market opportunities
- Rights for the materialization of works that are not the simple maintenance or renovation of the railway lines and the buildings annexed thereto
- Financing of investments, returns and expenses
- Financial and patrimonial management
- Terms of concession within the juridical framework of the guaranties in force for foreign investors
- Juridical statutes of staff (national and foreign) and professional training plans

8.24 It must be emphasized that in the case of foreign concessionaires, it will be necessary to set down in the text of the contract the rules of action for foreign investments, with the observance of what is disposed in the legal framework in

force (Law 4/84, of the 18 08 84 and Decree 8/87, of the 30 01.87), of which it is pointed out

- over the property and rights involved in the investment,
- transfer abroad of the exportable profits and of the re-exportable capital,
- general and special incentives (i e fiscal) compatible with the importance of the project within the framework of national economy,
- in case of conflict, recourse to international arbitration

8 25 Other juridical solutions may yet be outlined in the privatization process of the CFM, such as the State desiring to play a role of economic agent, intervening directly in the production of services (transport of persons and goods)

Incidentally, concessions in areas such as the rail ways, when requiring large investments for the re equilibrium thereof and because they serve the rest of the industry, tend to cease passing on to the State's orbit, which is favorable to private interests.

8.26 A group strategy according to the logic state holding (and/or sub-Holdings) and participated companies (holding + private operators, national and foreign) in which the CFM workers could have preference in the subscription of the share capital, is another eligible option within the framework of the economic legislation in force

However, these or other alternatives depend on strategies and options of public investment policies

8 27. It is important to mention that, in this last case, the question of the detachment of property from public domain will only take place in cases where, in the capital of participated companies, the state holding holds a minority.