

UNCLASSIFIED

DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
Washington, D.C. 20523

PROJECT PAPER

Proposal and Recommendations  
For the Review of the  
Bilateral Assistance Subcommittee

LIBERIA - VOCATIONAL TRAINING

AID/BAS-017

UNCLASSIFIED

DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

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AID/BAS-017  
July 12, 1978

MEMORANDUM FOR THE BILATERAL ASSISTANCE SUBCOMMITTEE

SUBJECT: Liberia - Vocational Training

Attached for your review are recommendations for authorization of a grant to the Government of Liberia in an amount not to exceed Five Million Nine Hundred Fifty-Four Thousand United States Dollars (\$5,954,000) to help in financing certain foreign exchange and local currency costs of goods and services required for the project.

No meeting has been scheduled for this grant proposal; however, your concurrence or objection is requested by close of business on Wednesday, July 19, 1978. If you are a voting member, a poll sheet has been enclosed for your response.

Working Group on Bilateral Assistance  
Office of Policy Development and Program  
Review

Attachments:

Summary and Recommendations  
Project Analyses  
Annexes A-D, and M.

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AGENCY FOR INTERNATIONAL DEVELOPMENT  
**PROJECT IDENTIFICATION DOCUMENT FACESHEET**  
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CLASS  C A = ADD  
 C = CHANGE  
 D = DELETE

PID  
 2. DOCUMENT CODE 1

3. COUNTRY/ENTITY Liberia 4. DOCUMENT REVISION NUMBER 1

5. PROJECT NUMBER (7 DIGITS) 669-0131 6. BUREAU/OFFICE  
 a. SYMBOL AFK b. CODE 06 7. PROJECT TITLE (MAXIMUM 50 CHARACTERS)  
Vocational Training

8. PROPOSED NEXT DOCUMENT  
 2 = PRP  
 3 = PP B. DATE 11/7/6

10. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 = \$1.00)

FUNDING SOURCE		BASE
A. AID APPROPRIATED		3,448
B. OTHER		
1. U.S.	2.	
C. HOST COUNTRY		1,266
D. OTHER DONOR(S)		
TOTAL		4,714

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION  
 a. INITIAL FY 77 b. FINAL FY 80

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY <u>77</u>		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) EHR	B 619	690		1,047		3,448	
(2)							
(3)							
(4)							
TOTAL				1,047		3,448	

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)

BU ER

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)

ER BS TNG

14. SECONDARY PURPOSE CODE  
B610

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)  
 An adequate body of trained manpower with relevant knowledge/skills to support the nation's social and economic development.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)  
 To install two institutional and/or structural bases for producing adequately trained middle and lower level skilled workers.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)  
 None

18. ORIGINATING OFFICE CLEARANCE  
 Signature Stanley J. Siegel  
 Title Mission Director USAID/Liberia  
 Date Signed 11/26/6

19. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENT DATE OF DISTRIBUTION  
 MM DD YY

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Volume II available upon request in AFR/DR/CAWARAP, Rm 2723 NS  
(632-9068).

## PART 1 SUMMARY AND RECOMMENDATIONS

### 1. A. Recommendations

The AFR Executive Committee for Project Review (ECPR) considers that the project for Vocational Training is technically, economically, and financially justified and recommends that a grant be authorized to take place on the following schedule (US \$000):

FY 78	\$ 800
FY 79	1,900
FY 80	1,500
FY 81	1,400
FY 82	354
Life of Project US Contribution	\$5,954

It is understood that project approval and authorization of funds includes approval of the following:

(1) An AID-funded host country contract for a U. S. institution or firm to provide required goods and technical services (see Part 4, page 62).

(2) Procurement of commodities and supplies of non-US source/origin in an amount not to exceed \$268,100 (see Part 4, pages 67-68).

(3) Financing of local currency costs in an estimated amount of \$1.3 million relating to housing and local costs for US technical personnel, renovation of facilities, commodities and supplies, and miscellaneous in-country operating costs (see Illustrative Budget, page 49).

(4) Increase in total project funding level from \$3,450,000 as contained in the FY 79 Congressional Presentation to \$5,954,000 with obligation in FY 79 in the amount of \$1,900,000 and FY 80, \$1,500,000.

(5) Plans and financing for renovating existing project buildings and facilities at the Booker Washington Institute (BWI) in the amount of \$135,000 as described in BWI Capital Budget (see Part 3, page 45).

The obligation of these funds will take place only after satisfaction of the following conditions:

(1) Confirmation that the Government of Liberia (GOL) will continue the operation of the Booker Washington Institute (BWI) as a secondary level institution with a 3-year curriculum (60% practical and 40% supportive studies) with a maximum enrollment of 1,500 students during the life of the project.

(2) Commitment that adequate budget will be allocated to BWI to support the objectives of the project throughout its life.

(3) Commitment to a firm admission policy based on aptitude tests and project enrollment projections.

(4) GOL commitment to provide new construction costs for dormitories and staff houses identified in the project design and in line with the implementation schedule.

#### 1. B. Project Description

This project was designed initially in 1976 in response to high-level GOL discussions with AID officials. Subsequently, the design has been revised in line with recent developments at BWI and GOL policy decisions relating to BWI. The revised design described herein was completed by a joint USAID/GOL design team assisted by three AID-funded vocational education specialists during the period December 1977 - April 1978. BWI and other GOL personnel, as well as employers in the private sector, have been involved in and are fully supportive of this project design.

Specific changes include a stronger emphasis on curriculum development and on other project systems. These changes required the extension of project duration to a more realistic 5-year period and an increase in project

funding by slightly over \$2 million. The sector goal and project purpose remain the same except that the subactivity providing support for the apprenticeship program in the Ministry of Labor, Youth and Sports has been deleted for consideration under separate funding arrangements.

One of the two USAID/Liberia EHR sector goals is the provision of an adequate body of trained manpower with relevant knowledge/skills to support the nation's social and economic development. Currently and in the past, the economy and society of Liberia have suffered from the lack of sufficient numbers of trained Liberians to fill the middle-level manpower needs to initiate and sustain economic growth. The result has been a heavy dependence on expensive imported manpower. Currently the GOL, with assistance from other donors, is addressing this key development restraint, and BWI forms a major instrument for producing middle-level manpower requirements.

The purpose of this project is to restructure the secondary vocational program at BWI to produce employable graduates at affordable costs for identified middle-level manpower skill requirements.

The project utilizes state-of-the art technologies in vocational education for upgrading the staff, curriculum, facilities, and supporting systems at BWI. The curriculum structure will be telescoped from a 4-year to a 3-year program with tested instructional packages in 12 vocational specialties covering 4 trade areas (i.e., mechanical, electrical, building construction, and agriculture). The instructional packages will identify skills and performance levels for each specialty and combine the required theory and shop experience in an integrated instructional program. All instruction will be geared toward skill profiles determined by actual work requirements of employers of BWI graduates.

By the end of the project, improvements of both a quantitative and qualitative nature should be observable within the restructured and expanded

**BWI program.** The most outstanding accomplishment will be the capacity to produce 500 graduates annually, 90% of whom will qualify for immediate employment in the jobs for which they were trained and at the level of skilled workers. Recurrent costs for producing a BWI graduate under the approved 3-year program will be maintained at approximately the same level as that of the current 4-year program. Instructional staff will be capable of teaching 30 hours per week as compared to the current level of approximately 15 hours per week. Income generated from the BWI school farm and shops will be used to defray operating costs. All classrooms, shops, equipment, and facilities will be renovated and fully utilized. Teachers, staff, and personnel will function within an administrative structure and instructional schedule that makes optimum utilization of time and resources.

The inputs to achieve project purpose will require an estimated \$14.9 million, including a USG contribution of \$5.9 from AID over a 5-year period, plus an additional \$100,000 contribution from the Peace Corps. The major portion of the USG contribution consists of 32 person years of technical assistance (8 long-term specialists) including two person years of assistance to the MOE Vocational Education Division for the development of a vocational teacher training program to provide replacement training and upgrading for BWI staff. Also, participant training in the form of 21 person years, including 10 long-term programs and 22 short-term programs is provided. These formal training programs and on-the-job training by US technicians, together with in-service training by 5 Peace Corps volunteers and up to 6 other foreign technicians throughout the project, will provide Liberian project staff with the expertise to carry on the new BWI program upon project completion.

Commodities in the amount of \$702,000 will be provided to develop the new 3-year curriculum, renovate and equip existing shops, and improve BWI supporting systems. The GOL will finance the annual operating budget and

provide the costs of new construction for staff houses and dormitories (see Part 3, Table VI, page 54).

1. C. Summary Findings

The conclusions set forth in Part 3. Project Analysis, including technical analysis, social analysis, financial analysis, and economic analysis, indicate that the project is justified, feasible, and ready for implementation. The credibility of this analysis rests largely on the accuracy of available GOL data produced by the Ministry of Planning and Economic Affairs, together with additional data and independent judgments made by AID funded and other donor technical specialists. The Mission is confident that these documents represent the best available data base for project analysis and is convinced that the project analysis is thorough and complete. The project meets all applicable statutory criteria and forms a vital part of AID response to high-level discussions relating to USG assistance to the GOL in this sector.

1. D. Project Issues

Issues which were identified in the initial project design, along with others which have surfaced in subsequent negotiations, are as follows:

(1) More Assistance for a Former AID Project

Concern was expressed in the ECPR whether AID should get back into BWI for fear of repeating previous mistakes. Recent reviews of AID assistance to BWI reveal that there were both strengths and weaknesses in previous AID assistance to BWI and that the GOL shares equally in both.

Upon project completion in 1965, BWI was established as a viable institution producing employable graduates with predictable skills and performance capabilities. The fact that the subsequent performance of the institution and its graduates seriously declined during the past 13 years is not surprising, given the conditions under which the school was compelled to function. The GOL and USAID/Liberia fully recognize and understand the

institutional weaknesses at BWI and have endeavored to avoid these weaknesses in the new project. Among the greatest weaknesses of previous efforts were the loss of qualified staff because of inadequate salaries and other inducements and the mistake of assuming a self-generative capability at BWI in the absence of effective forward planning, adequate and timely support, and systematic evaluation. This project will train an adequate cadre of BWI staff, develop definitive and relevant curricula, establish systematic procedures for updating these curricula, design long-term staff development and upgrading programs, provide follow-up for BWI graduates, and develop an efficient operational plan that is affordable and to which the GOL is fully committed. These project elements were not included sufficiently in previous GOL and AID assistance to ensure full institutionalization and continued operation upon project completion.

(2) GOL Coordination and Support for Vocational Training

A number of issues were raised initially relating to the ability of the GOL to provide adequate planning, supervision, and evaluation to existing and proposed vocational training programs in Liberia. Overlap of institutional functions, competition in job markets for graduates, and training programs that do not match actual manpower needs were among possible consequences envisioned. Most of these concerns surfaced prior to the establishment and full operation of the National Council of Vocational and Technical Education and Training (NCVTET). Actual experience with the Council during the past two years indicates that it has been effective to date in providing the quality of leadership and coordination required. The inclusion of USAID representatives on the Council and the formation of the UNDP donor coordinating group leads to the conclusion that there should be no serious problem in the coordination of GOL and other donor efforts in this sector.

**(3) Inadequate GOL Policies and Support for BWI**

BWI has operated throughout its history as a secondary vocational school (see ANNEX G, Section II, Highlights in BWI History). In fact, it has been and continues to be the only government-financed school specifically designed to provide skilled workers at the secondary level. During and immediately after the period of AID assistance to BWI, the school had an effective program, and its graduates are now found throughout the government ministries and in the private sector. The recently elected Vice-President of Liberia is a BWI graduate.

Due to inadequate policy guidance, professional supervision, and financial support, BWI deteriorated to such extent that it had to be closed in 1974. Since re-opening, the school has received increased government support but lacks qualified staff, updated facilities, relevant curricula, and good administration. The result is that the present BWI program is producing graduates that are employable but with a skill level that is far below that needed to meet the critical skill level manpower requirements in Liberia. What is needed is firm policies, relevant curricula, and adequate support.

Recently the GOL has given adequate policy direction and has budgeted additional resources for project needs. Thus, the role of BWI is now clear, and there is a firm commitment by the GOL to support the restructured BWI program described herein. While there is no way at this time to assure that the current GOL commitment to BWI will be continued indefinitely, both the financial analysis and economic analysis in Part 3 provide ample evidence that the proposed BWI program is affordable and feasible (see Issue 4 below).

**(4) Escalation of Recurrent Costs**

At present the GOL annual budget allocation for BWI is approximately \$900,000, an increase from \$700,000 in 1976. The GOL projected recurrent budget for 1978-83, included in Part 3, shows an average increase in GOL budget

allocations of 8% per annum during the 5-year duration of the project. This modest increase can be accomplished through efficiencies of operation under the restructured program and may be reduced through proposed income-generating services used to defray some operating costs. The actual cost of producing a BWI graduate under the new program will be approximately the same as under the current program.

(5) Inordinate Enrollment Increases

At the time this project was designed initially in 1976, BWI had a total student enrollment of 850 with projections for an enrollment of 1,000. In 1977 the enrollment increased to over 1,000. In March 1978 BWI enrollment increases still further to over 1,300. This, together with the enrollment of over 300 in the evening school, makes a combined enrollment of over 1,600 students. Given these circumstances, the Mission requested the GOL to establish detailed policies with regard to BWI enrollment and institutional function and stipulated that these policy determinations must precede project negotiations.

In response to the USAID request, the GOL Ministries of Education and Planning prepared a draft policy paper in October 1977, which included inter alia a firm ceiling on the BWI day program at 1,500 students. This policy determination was approved at the highest level. It was also determined during GOL/USAID project negotiations that student admission requirements had been lowered to a very low level. Both the total enrollment and student intake issues were brought to the attention of the Ministry of Education, and firm instructions were given to correct them. Subsequently, BWI reported an enrollment of slightly under 1,400 students for the day program.

Since the effectiveness of the proposed project is dependent upon firm admission requirements and controlled enrollment, the project design includes a detailed projection of intakes and total enrollments, including

teacher requirements, for the entire 5-year period of the project duration. These enrollment projections contained in ANNEX B, Section II, have been approved by the GOL with a commitment to establish procedures for meeting these projections. This matter is listed above as one of the conditions to be included in the Project Grant Agreement.

(6) BWI Evening School

In March 1977 a group of over 1,000 Liberian high school graduates presented a petition to the GOL for special consideration. Their problem was the inability to secure employment or gain admission to higher education, the reason being that they did not have employable skills or sufficient grades to compete with other high school graduates for college admission. The GOL established a crash program in which these students were assigned to selected educational institutions including BWI. Initially BWI received over 200 students, but the MOE reported only 174 at the end of the 1977 school year. In March 1978 approximately 200 new students were admitted to the BWI evening program, providing a total enrollment in excess of 350.

At first the establishment of this evening program appeared as a serious threat to the BWI day program. The fear was that it would constitute a drain on staff time and expendable supplies; however, a separate budget has been prepared and there is reasonable assurance that sufficient support will be provided for this evening school. Under these circumstances, the Mission sees no problem with the operation of an evening program at the school. In fact, if properly implemented, it could strengthen the economic and professional viability of the school. For these reasons the evening school is not considered to be a project issue at this time. However, it will remain a substantial concern to be monitored and evaluated along with other matters that have direct bearing on this project.

## PART 2 PROJECT BACKGROUND AND DETAILED DESCRIPTION

### 2. A. Background

Studies of manpower needs in Liberia, including the 1974 "Indicative Manpower Plan of Liberia", consistently point to the critical shortage of skilled blue collar workers who can fill middle- and lower-level manpower needs. There is a surplus of unskilled and semi-skilled workers, and large-scale unemployment exists among these categories. As a result of the narrow manpower base and an imbalanced educational system, Liberia's long dependence upon expensive manpower imports is growing more acute.

The GOL appreciates the dilemma of the Liberian manpower situation and is making efforts across the board to increase both the quality and quantity of educational opportunities in the vocational and technical fields. These efforts extend to all levels: (a) the addition of arts and crafts and agriculture courses in the elementary curriculum; (b) an increased number of comprehensive or multilateral high schools with vocational streams; (c) improved quality and throughput of the BWI, and (d) the establishment of a post-secondary technical institute at Harper.

In 1975 the GOL requested AID assistance to upgrade the Booker Washington Institute (BWI). In responding to this request, AID secured the services of the Harvard Institute for International Development (HIID) in 1976 to conduct an assessment of the education/human resource development sector and to recommend possible joint AID/GOL activities in this sector.

"Dimensions of the Liberian Manpower Problem 1974-1985" (Chapter 3) of the HIID study provides analyses of the projected manpower demands by occupation and industrial categories and is incorporated herein by reference. The study highlights the need in the skilled and semi-skilled labor areas requiring pre-vocational and on-the-job training respectively.

The HIID study also provides an assessment of the education and training programs in Liberia (see ANNEX G, Section I). This report, along with subsequent studies conducted by the USAID and the GOL, point to the need for a national program for vocational and technical education. In 1975, the GOL anticipated this need and established the National Council for Vocational and Technical Education and Training (NCVTET). This Council was given authority and responsibility for coordinating all vocational and technical training activities operated by government ministries and private groups.

The Ministry of Planning and Economic Affairs (MPEA) with assistance from the IBRD serves as the Secretariat. The Council convenes semi-annually and utilizes working groups and committees that function throughout the year. The USAID Director, or the EHR Officer as his alternate, is a member and participates in the work of the Council. An outline of the activities and functions of the NCVTET are included in ANNEX F, Section II. ANNEX J provides a description of other donor activities in vocational and technical training.

Within this context, USAID/Liberia conducted a more thorough review of the HIID study and the "Indicative Manpower Plan of Liberia" in an effort to respond to the GOL request for assistance for BWI and to a subsequent request to assist the fledgling apprenticeship program in the Ministry of Labor. This project is designed in response to the former and a small discrete project, probably under the AIP mechanism, will be developed in FY 79 in response to the latter.

The initial design of this project was submitted and approved by AID/W in December 1976. In preparing the final design, USAID/Liberia became engaged with the GOL in protracted, collaborative discussions focusing on a number of changing circumstances requiring firm policy determinations relating to BWI. For example, enrollment at BWI increased from 850 in 1975 to over 1,200 in 1977. The GOL also directed that BWI begin an evening program

to accommodate up to 200 high school graduates who failed to gain college admission and were without employable skills. During this same period, there was a strong move to make BWI a post-secondary technical school.

At first glance, the increased enrollment and the addition of the night school in an already over-crowded and minimally effective institution rendered BWI a sufficiently moving target to preclude meaningful efforts in project design and negotiations. However, following very candid GOL/USAID discussions, these problems were resolved. In late October 1977, the GOL issued a policy determination that BWI would be continued as a secondary level vocational school with a new 3-year curriculum and a maximum total enrollment of 1,500 students. Subsequently, the GOL has given assurance that the enrollment ceilings contained in the project implementation schedule will be maintained. Further assurance was given that sufficient budget and support for the night school would be continued to avoid adverse effect on the regular day program.

Following these high-level policy determinations, the GOL and USAID established a technical analysis team composed of members of the MOE, MPEA, BWI, and USAID. The purpose of the analysis was to identify in detail the precise scope and magnitude of GOL, AID, Peace Corps, and other donor input requirements for the restructured BWI program prior to becoming involved in long-range commitments. Preliminary work was undertaken during December 1977 - February 1978. The technical analysis was completed in April 1978 with assistance by an AID-funded team from the Organization for Rehabilitation Through Training (ORT). The findings and recommendations of the team were approved by the GOL and a brief summary is included in Part 3. Technical Analysis. The full text of the ORT final report is included herein by reference. Data and analyses from the report are incorporated throughout as appropriate.

## 2. B. Detailed Project Description

GOAL: To provide an adequate body of trained manpower with relevant knowledge and skills to support the nation's social and economic development.

This project addresses the first of two EHR sector goals. The quantitative extent to which this project will contribute to the sector goal is illustrated by Table A on the following page. There are a number of other vocational and training programs which contribute directly or indirectly toward the sector goal; however, BWI will continue to be the largest single supply base for skilled middle-level manpower of Liberia. Even under ideal circumstances following the successful completion of the restructured BWI program, there will continue to be significant gaps in manpower supply. Assuming the accuracy of available manpower statistics and data, BWI graduates will form a sufficient cadre to meet at least the growth rates in some of the occupational specialties offered at BWI.

It is anticipated that the higher quality BWI graduates will probably move upward to the supervisory jobs, leaving a gap to be filled at the lower levels by other training facilities. Graduates of the multilateral high school vocational programs along with graduates of the apprenticeship training programs operated by the private sector will contribute toward narrowing this gap. However, as stated previously, BWI will continue to function as the principal supply base. Furthermore, the quality of its program will affect the standards of training programs operating above and below its training level. Hence the rationale for an efficient and effective BWI program as a part of a total national vocational training scheme for Liberia.

### Verification of Goal Achievement

The major means for verifying the achievement of the sector goal will be the manpower survey statistics produced on a regular basis by the Ministry of Planning and Economic Affairs (MPEA). These statistics should substantiate

ESTIMATES OF TOTAL EMPLOYMENT FOR OCCUPATIONS RELATED TO EWI TRAINING (Selected Sample of Detailed Occupational Groups)

OCCUPATIONAL CODE	SAMPLE OCCUPATIONS BY CATEGORY	BASE: 1976*	1976-1985*	ANNUAL* REQUIREMENTS			EWI ANNUAL OUTPUT	% OF ANNUAL REQUIREMENT MET BY EWI
		EMPLOYMENT LEVELS	PROJECTED REQUIREMENTS	NEW	ATTRITION	TOTAL		
0/1	Prof., Tech., & Rel. Workers	<u>1,030</u>	<u>1,443</u>	25	135	160	<u>55</u>	<u>346</u>
032	Draughtsmen							
034	Electrical & Electronic Technicians							
037/38	Metalurgical & Mining Technicians							
135	Special Education Teachers							
162	Commercial Artists & Designers							
3	<u>Clerical &amp; Related Workers</u>	<u>8,691</u>	<u>12,193</u>	214	1,141	1,355	<u>28</u>	<u>26</u>
320/30	Secretaries, Typists & Clerical Wkrs.							
330	Bookkeepers, Cashiers & Rel. Wkrs.							
340	Computing Machine Operators							
6	<u>Agricultural Workers</u>	<u>23,196</u>	<u>32,560</u>	570	3,047	3,617	<u>72</u>	<u>26</u>
600	Farm Managers & Supervisors							
610/21	Farmers & General Farm Workers							
622	Field Crop & Veg. Farm Workers							
624/26	Livestock & Poultry Workers							
627	Nursery Workers & Gardeners							
628	Farm Machinery Operators							
7/8/9	<u>Production &amp; Related Workers</u>	<u>14,731</u>	<u>20,674</u>	362	1,935	2,297	<u>305</u>	<u>136</u>
720	Metal Processing Workers							
796	Upholsterers & Related Workers							
810	Cabinet Makers & Related Workers							
812/33	Tool Makers, Setters & Operators							
835	Metal Grinders, Polishers, etc.							
839	Blacksmiths & Machinery Operators							
841	Machine Fitters & Machine Assemblers							
843/49	Motor Vehicle Mech. & Machine Fitters							
850/60	Electricians & Related Workers							
871	Plumbers & Pipe Fitters							
872/73	Welders, Flame Cutters, Sheet Metal Wkrs.							
874	Structural Metal Preparers & Erectors							
951/52	Bricklayers, Stonemasons & Tile Layers							
953/54	Roofers, Carpenters & Joiners							
955/57	Plasterers, Glassiers							
959	Construction Workers							
960	Stationary Engine & Related Workers							

\*Based on Ministry of Planning and Economic Affairs Manpower Data and Projections: 3.25% Employment Increases linked to 4% GDP Growth Rate; Est. 12% Annual Attrition by Occupational Code. (12% attrition appears excessive and probably reflects seasonal fluctuations of semi-skilled labor.)

Table A

increased employment of Liberian technicians at the middle and lower levels with a corresponding decrease in expatriate technicians. Accuracy of this measurement would be affected should the economic growth rate far surpass expectations requiring the continued services of large numbers of expatriate manpower. Current MPEA statistics may not be sufficiently accurate to fully assess this possibility.

Two other indicators, perhaps more directly related to the Liberian economy than manpower availability, are a stabilized currency outflow for expatriate technicians and a continued growth in the economic projections.

#### Goal Assumptions

In addressing the overall goal, the following assumptions must be made:

- (1) Trained manpower projections are reliable.
- (2) The GOL priorities in the EHR sector will remain as stated.
- (3) The GOL will actively pursue a policy of Liberianization in terms of low and middle level technician positions.

PROJECT PURPOSE: The project purpose derived from the sector goal is: To restructure the secondary vocational program at BWI to produce employable graduates at affordable costs for identified middle-level manpower skill requirements.

While the project purpose describes an institutional development activity, it indicates the existence of an on-going institution at BWI. The emphasis is on redirecting the institution in line with a more specific output target. The focus is on efficiency of operation and quality of output.

#### End of Project Status

By the end of the project, quantitative and qualitative means will be available to validate the following conditions directly attributable to the project purpose:

(1) BWI will be organized to produce 500 graduates annually; 90% of these graduates will be able to qualify for job entry as skilled workers in the area of their training. Job profiles for occupational codes, employment data, and BWI records will comprise the major means of verification.

(2) BWI liaison with industry will provide links that will enable a systematic updating of job profiles, relevant curriculum revisions, and information on job opportunities to permit counselling and placement of graduates. Means of verification will consist of formal and informal contacts with industry and records of feedback from student internship programs.

(3) The BWI program will be operating at a cost not significantly different from that of the current program. Verification will be possible through a comparison of operational budgets at BWI.

(4) BWI instructors will have sufficient training and experience to maintain a 30-hour per week teaching schedule as compared to the current average of 15 hours per week for BWI instructors. This will be verified by staff schedules and performance ratings of instructors.

(5) Income generated from BWI school services and activities will be cost effective and profits will be applied to defray BWI recurrent operating costs. Verification can be made by review of records of the school farm and shops along with the BWI budget.

#### Project Purpose Assumptions

In achieving the project purpose it is necessary to make the following assumptions:

(1) Liberian students graduating from junior-secondary schools (9th grade) with identifiable vocational aptitudes will seek admission to BWI and will be sufficiently motivated to complete the new 3-year job-oriented curriculum. Currently the GOL is strengthening the junior-secondary curriculum with the addition of industrial arts streams. Thus, it is anticipated

that the graduates from these selected schools will be among the most qualified for admission to BVI. Other junior-secondary schools will be able to improve the quality of their graduates through current efforts to upgrade the curriculum of these schools.

(2) GOL ministries and industries who employ BVI graduates will cooperate and support effective liaison with the BVI vocational training program. It is expected that BVI faculty will serve periodically in selected industries on an exchange basis to update their practical skills and shop practices relative to specific industry job performance requirements. Through the student intern program, additional linkages can also be developed and maintained to assure the relevance and practicality of the BVI training programs.

(3) Inflation rates remain constant at an estimated 5 to 6%.

(4) Industry inducement will not cause BVI staff attrition rates to exceed replacement training capabilities. It is expected that the upgraded BVI staff will have opportunities to gain employment in industry. Hopefully, increased salary scales, staff housing, and other incentives will tend to offset an inordinate drain on the BVI instructional staff.

(5) Markets will be available for BVI goods and services. In order for the school farm and shop programs to provide profitable services, accessible markets and customers must be developed. The primary market for food production will be the school cafeteria. It is anticipated that the GOL/MOE and other ministries, along with private businesses, may well profit by services, repairs, furniture, etc., that can be provided by the students and faculty of BVI and will be willing and able to pay BVI for these services.

#### OUTPUTS

The linkage between the end-of-project status elements above and the outputs required to achieve them are fairly direct. Project outputs are

derived from the findings and recommendations of the technical analysis team as shown in Part 3. 7. Technical Analysis. These outputs are divided into five categories: trained staff, adequate facilities, job-oriented 3-year curriculum, supporting systems, and graduates produced.

(1) Trained Staff

The organizational structure for proposed BWI staff is shown in the Project Staffing Tables in Part 4, Section E, pages 76-77, and a more detailed list of proposed BWI staff is included in ANNEX H, Section I, BWI Operating Budget. The following is a summary of BWI staff requirements for project year 5 (1983), which will accommodate the ultimate projected enrollment of 1,500 students.

BWI Projected Staff (1983)

<u>Department</u>	<u>Instructional</u> <sup>1</sup>	<u>Administrative</u> <sup>2</sup>	<u>Support</u>		<u>Total</u>
			<u>Prof.</u>	<u>Non-Prof.</u> <sup>3</sup>	
(A) Administrative	-	12	-	72	84
(B) Guidance	-	1	4	-	5
(C) Curriculum	-	2	5	5	12
(D) Mechanical	26	2	-	-	28
(E) Building	30	2	-	-	32
(F) Agriculture	11	2	-	2	15
(G) Electrical	19	2	-	-	21
(H) Business	6	1	-	-	7
	<u>92</u>	<u>24</u>	<u>79</u>	<u>79</u>	<u>204</u> <sup>4</sup>

<sup>1</sup>Includes all workshop instructors, related subject teachers, and department heads.

<sup>2</sup>Includes only higher level staff with salary of \$3,600 a year or above.

<sup>3</sup>Includes typists, drivers, laborers, cooks, etc.

<sup>4</sup>Coincides with list of employees contained in line item budget, ANNEX H, Section I.

Formal training, including short and long term programs will be provided for key administrative and instructional staff. In-service and on-the-job training will be provided on a continuing basis, including workshops, seminars, and observation trips for all administrative, instructional, and support staff.

a. Long term training - Long term training (20 month program) will be provided for 4 department heads and 4 assistant department heads. Training for the curriculum coordinator and the guidance counsellor will consist of one 12-month training program each.

b. Short term training - The principal and vice-principal will receive up to 6 months each in specialized short term training relating to improved administrative and supervisory practices. Twenty (20) study-observation programs of 1 to 3 months duration each will be provided for selected instructors and staff.

(2) Adequate Facilities

The current BWI plant and facilities will be upgraded and expanded to accommodate the new training programs included in the 3-year curriculum for an ultimate enrollment of 1,500 students by 1983. Assistance in renovating and equipping the shops and classroom areas will be provided primarily by the US with assistance by the German Government. The construction of new dormitories, staff houses, and the installation of improved water, power, and sewerage facilities will be provided by the GOL. A description of the sources of particular inputs is included in Part 3. B. Financial Analysis (Budget). The schedule for renovation and new construction is included in ANNEX B, Section I, Detailed Implementation Plan. A more complete description and analysis of physical facility requirements is included in the ORT final report which is included as a part of this document by reference.

(3) Job-Oriented 3-Year Curriculum

The GOL policy guidelines call for a 3-year curriculum with a mix of approximately 60% trade training and 40% academic studies. The technical analysis team developed a curriculum structure that requires seven hours of instruction per day for five days of the week. Four periods each day will be devoted to trade training and three periods to related studies in English,

math, and science. These related studies will focus on the communication and theoretical knowledge required in a particular vocational specialty and will form a part of the instructional program of individual departments of instruction. The emphasis in related studies will be on applied English, math, and science rather than pure academic studies.

Five departments of instruction will be organized to include trade training and related studies. They are mechanical, building trades, electrical, agriculture, and business. AID assistance will focus primarily on the first four; however, the reduced business education program will benefit from improved administrative arrangements, better physical facilities, and overall logistical support.

The first four departments of instruction will offer training programs in a total of 12 vocational specialties. The curriculum objectives of each specialty will be derived from occupational profiles appearing in the International Standard Classification of Occupations (ISCO) that have been identified and adapted to meet the skill-training requirements in Liberia. These adaptations were made by the technical analysis team and are included in ANNEX F, Section IV, BWI Occupational Profiles.

The curriculum and instructional program will be organized and presented in modular form. Individual modules and learning packages will be prepared for each vocational specialty. Curriculum panels in each instructional department will be formed and charged with the responsibility for designing, evaluating, and updating the modules of instruction. Individual modules will present instructional tasks in a logical sequence required for BWI students in achieving training objectives and skill performance levels identified in the Occupational Profiles. With stated curriculum objectives and learning materials to support these objectives, BWI instructors with adequate training will be able to devote 30 hours per week in the

classroom and shops, as compared to an average of 15 hours per week under the current program.

Requirements for graduation will include the successful completion of the specified curriculum in one of the vocational specialties along with certification by the Standards Committee of the National Council for Vocational and Technical Education and Training. A certificate will be attached to the student's diploma which will detail the proficiencies achieved in a particular specialty. This will provide prospective employers with evidence of specific qualifications of BWI graduates.

(4) Supporting Systems Developed

To implement the restructured BWI program, it will be necessary to establish and/or strengthen the following institutional sub-systems:

a. Firm Student Admission Policy - The MOE will establish an admission committee composed of BWI department heads, the guidance counsellor, registrar, a representative from the MOE, and a member of the National Trade Standards Committee. This admission committee will draft a detailed admission policy for approval by the MOE and when approved, the committee will monitor the application of these policies.

b. Student Guidance and Counselling Service - In order to improve student inputs and outputs, a guidance/counselling service will be developed to provide information for Liberian students about the training and employment opportunities for BWI students and graduates. The purpose will be to attract students with the interest and aptitudes for skilled workers. Also, information and counselling services will be available to BWI students and graduates to improve their performance.

c. Student Internship Program - The current student internship program will be continued and improved. The major aim will be to develop a placement program for interns that will match student skills with job

requirements and to provide adequate preparation and supervision for the interns.

d. Job Placement and Follow-up of Graduates - The current informal job placement program will be formalized as a direct responsibility of department heads, instructors, and staff in collaboration with representatives of government ministries, industries, and other employers of BWI graduates. A graduate follow-up program will be developed to generate feedback on BWI graduates. This feedback will be used in curriculum revisions and for upgrading the guidance program.

e. Faculty Evaluation and Certification Standards - Certification and evaluation policies for BWI instructors will be based on industry experience, work performance, and academic achievement. Job descriptions and performance standards will be developed to evaluate all instructors.

f. Faculty Liaison with Industry - BWI will establish an industry liaison committee composed of BWI department heads, representatives of GOL ministries and industries that employ BWI graduates. The purpose will be to review the curriculum in terms of actual employment needs and potential changes in manpower requirements and to accomplish the tasks in c. and d. above.

g. Library and Instructional Resource Center - An instructional resource center will be established with the curriculum coordinator serving as its head. This center will establish curriculum panels composed of members of the instructional departments as mentioned above. This center will coordinate the preparation and production of instructional modules, catalogue all resource materials in the current library, and integrate the functions of the center with that of the current library at BWI. Also, the center will develop a system for retrieving information for use by teachers and students.

h. Procurement and Maintenance - The current system for procurement and supply control will be decentralized to effect more direct accessibility

and accountability by instructional departments. A new system for the repair and maintenance of BWI buildings, equipment, and facilities will also be developed as a direct function of the instructional departments.

i. Income-Generating School Services - In previous years BWI operated a student work program on the 1,000 acre school plot which generated the bulk of the food required for student consumption. Other student work programs and services were also sponsored. The new program will revive and upgrade these efforts as a means of achieving a degree of self-sufficiency in operational costs and to provide students and faculty with practical work experience. It is estimated that the school farm could earn up to \$100,000 annually. Additional income could be derived from the repair of government and private vehicles and the production of chairs, desks, and other small furniture for schools and government ministries.

j. Vocational Teacher Training Program - At present Liberia has no teacher training program to supply vocational and technical teachers for Liberian schools. The absence of a teacher training program is considered to be one of the key factors in the deterioration of the current BWI program. More importantly it continues as a serious threat not only to the future of BWI but also to the vocational programs in the multilateral high schools, the Monrovia Vocational Training Center, and the industrial arts programs in junior-secondary schools. For this reason, the project will provide the services of a vocational teacher trainer who will assist the MOE in the development of a coordinated vocational teacher training program for Liberia. Specifically, this specialist will focus on the design and implementation of a program for training and upgrading BWI instructors. (see Part 4, Project Personnel)

(5) Graduates Produced

BWI will increase its output capability from 210 in 1979 to a

projected 451 graduates in 1983. The current 4-year program will be phased out at the end of project year 3 in 1981 with a total output of 959 graduates during this period. The first intake of students under the new 3-year program will begin in March of 1979, providing annual outputs of 198 graduates in 1981, 371 in 1982, and 451 in 1983, yielding a total of 1,020 graduates during the period of the project. A combined total of 1,979 graduates of both programs will be produced during the 5-year duration of the project (1978-1983). (see Enrollment Chart, ANNEX B, Section II)

#### Output Assumptions

In achieving project outputs, it is necessary to make the following assumptions:

(1) There will be sufficient continuity in the MOE to enable effective implementation of the restructured BWI program. At present there is a strong commitment by the GOL to provide the necessary technical, administrative, financial, and logistical support for BWI, and prospects appear good that this commitment will be continued.

(2) The GOL will provide the additional dormitories, staff houses, and other new construction required to implement the new BWI program. The GOL is fully aware of the cost implications of proposed new construction and has fully accepted this responsibility. However, it is likely that the GOL may require some external assistance in providing all of these construction costs.

(3) The occupational profiles designed and periodically updated for use in BWI instructional programs will reflect the actual job skills required by employers of BWI graduates.

(4) GOL ministries, industries, and private groups who employ BWI graduates will continue to cooperate and support the intern program, job placement, and BWI industry liaison activities.

(5) The educational system of Liberia will produce qualified candidates for the BWI program.

### INPUTS

The inputs required to produce outputs and achieve the project purpose will cost an estimated \$14.9 million, including an AID contribution of \$5.9 million over a 5-year period. The detailed per annum cost breakdown appears in the financial plan in Part 3. Financial Analysis (Budget). A summary of total inputs is listed in the Logical Framework Matrix in ANNEX A. The schedule for technical assistance appears in the Implementation Plan in Part 4. The Project Staffing Pattern included in Part 4 shows the schedule for US and GOL personnel, including short-term consultants and participant training. Consequently, the following is limited to a narrative description of project inputs by the US, GOL, and other donors as they link to project outputs and purpose.

#### (1) US Government Contributions

a. AID Contributions - The bulk of AID inputs (estimated 65%) consist of 32 person years of technical assistance (8 long-term specialists), including 2 person years of assistance to the MOE in Vocational Teacher Training. The strategy for technical assistance inputs is designed to develop and institutionalize the systems, procedures, and technologies described in the output section above. The 21 person years of participant training, including 10 long-term programs and 22 short-term programs, together with on-the-job training and in-service training by US specialists, are provided to develop Liberian project staff capabilities to carry out the new BWI program without technical assistance on project completion.

Project commodities comprising equipment, tools, and supplies are required as necessary conditions for effective instruction.

b. Peace Corps - The services of 10 person years of Peace Corps volunteer instructors at BWI has been requested. It is anticipated that a total of 5 PCV instructors will be assigned to the agriculture and building trades departments as early as the CY 1979 school year. Emphasis is placed on these two departments since they will be assuming responsibility for an increasing proportion of student work programs and sub-systems in the school farm.

The value of one year of PCV services has been arbitrarily set at \$10,000.

(2) GOL Contributions

The GOL contribution of \$7.9 million includes \$6.9 million in personnel and operating costs, \$30,000 in commodities and \$1 million in construction costs. The project projects a modest increase in the GOL allotment for personnel and operating budget from its current level of \$900,000 to \$1.4 million in project year 5. Since the current BWI budget projected over a 5-year period would be an estimated \$4.5 million, the additional GOL contribution for operating costs attributable to the project : are \$2.4 million for the duration of the project.

(3) Other Donor Contributions (Estimated)

Currently, other donor assistance at BWI consists primarily of 2 instructors provided by the German Government. The GOL has requested the German Government for additional assistance to meet project needs. The German Government is expected to provide 8 person years in technical assistance to the mechanical department, as well as funds for further staff training, equipment, and renovation of department facilities in an estimated total of \$900,000.

Assuming the availability and timely arrival of all project inputs and their effective coordination and utilization, the successful achievement of project outputs and project purpose is virtually assured.

### PART 3 ANALYSES

#### 3. A. Technical Analysis

This project proposes standard technologies that have been developed and utilized in a variety of educational situations in the more developed as well as developing societies. The choice of components and the specific application of the composite project design were prepared by seasoned practitioners of vocational education with extensive experience in the US, West Africa, including Liberia, and other areas of the world.

These professionals formed a technical analysis team that included planners and technical personnel from the GOL Ministries of Education and Planning, including the principal and senior instructional staff at BWI, the USAID/EHR and Evaluation Officers, and 3 AID-funded vocational specialists from the Organization for Rehabilitation Through Training (ORT). The team completed its work in mid-April 1978. The findings and recommendations are presented below.

#### Major Findings of the Technical Analysis Team

The major findings and observations of the team were made in relation to the following institutional factors:

##### (1) Institutional Policy Base and Support

Since the early 1950s, BWI has operated as a government institution with an appointed Governing Board. However, actual direction and financial support comes from the GOL/MOE. The Department of Vocational Education in the MOE has had the day-to-day responsibility for providing guidance and professional backstopping for the school; however, until recently BWI has operated in the absence of adequate policy directions within which the school could develop an effective operational plan. The school has received minimal professional backstopping. Budgeting has been carried out under what appears

to be ad hoc fiscal planning. Although the total annual projected budgets during recent years appear to be relatively adequate in most line items, the school principal and administrative staff complain about delayed funding availabilities, and the team was unable to determine a precise record of actual expenditures. Thus, these conditions add up to what the team considered to be a weak overall institutional base, giving rise to many of the problems described in items 2 - 6 below.

(2) Administration

BWI is administered by a principal and vice-principal who report directly to the Ministry of Education and share unilateral authority and responsibility for administering a very highly centralized line and staff organizational structure. The 5 instructional departments are administered by department heads who report directly to the principal. These instructional departments and other school functions and services are centrally administered with little actual effective delegation of authority. The procurement and disbursement of expendable supplies, teaching aids, materials, shop tools, and spare parts are under tight central control. The supply warehouse was found to be over-stocked in some items and depleted in others due to an inadequate administration of this central function.

Uncontrolled enrollment increases during the past several years are due in part to the absence of firm admission policies but to a greater degree to ad hoc arrangements occasioned by pressures from students, parents, and politicians for administrative exceptions to the admission policies that do exist. Although admission tests are administered to incoming students, there appears to be no systematic adherence to minimum standards of performance or to vocational aptitudes on these tests.

During 1977, a new governing board for BWI was appointed. Members of the new board represent a broad range of top level GOL officials, industry

and concession leaders. The Vice-President of Liberia was designated Chairman of the Board. The Board's new charter, now in preparation, will likely provide for an increased role in BWT activities and enable much needed direct liaison and support by the Liberian industrial community.

(3) Campus and Facilities

The majority of the buildings and facilities, including water and sewerage, were designed and constructed in the mid-1950s for a student body of approximately 300-500 with later modifications and additions to accommodate 600-800. More recent additions, including a modern administrative building and library, made it possible to accommodate a resident student body of approximately 850. However, the current enrollment of over 1,300 students in 1978 represents serious over-crowding of dormitory facilities, resulting in large numbers of students having to find accommodations in the local community, and some students in the dormitories are without adequate sleeping accommodations.

The team observed that nearly all buildings appeared to be in structurally sound condition, but due to poor maintenance, considerable repair and renovation would be required. Also, nearly all buildings were determined to be inadequate in terms of electrical service and water supply, along with inadequate sanitary and toilet facilities. The school cafeteria will require extensive renovation with the provision of additional cooking and sanitary facilities. Classrooms and shop areas can be made functionally adequate to accommodate a total enrollment of up to 1,500 students through appropriate renovations, modifications, shifting of instructional departments, and rearranged schedules. However, new construction will be required for additional dormitories and staff houses to accommodate the proposed resident student body of 1,400 and a resident instructional staff of 75-100. The projected enrollment, annual input of new students, and output of graduates are shown on the

Enrollment Chart in ANNEX B, Section II. A description of AID assistance for renovating existing facilities and the construction of new facilities by the GOL is included in Part 3. B. Financial Plan (Budget, p.53) and the schedule is included in Detailed Implementation Plan, ANNEX B, Section I.

(4) BWI Staff

In January 1978 BWI reported a total staff of 243 including a cadre of 65 instructional staff. Over half of these instructors were either academically or pedagogically unprepared to teach effectively, and only 18 instructors had relevant experience in industry. The average teaching load for instructors during the 1977 school year was 15 hours per week. The obvious inadequacy of trained staff at BWI is due to several factors. Past experience gained from the previous AID assistance to BWI indicates that low salaries compared with that of industry and other employment opportunities are a key factor. There were 30 BWI instructors trained under the previous AID assistance to BWI and only a few remain. While there has been some GOL-sponsored scholarships for BWI instructors, they have been far too few. In the absence of available trained instructors, BWI has had to resort to employing recent BWI graduates and others without industry experience or adequate training.

In reviewing this serious inadequacy of staff, the first reaction of the MOE was to advocate a crash program in which up to one-half of the BWI instructional staff would be sent for foreign training. On further review, this crash program proved to be not feasible. After considerable deliberations, the MOE decided to establish an in-country training program for upgrading current BWI staff and for training proposed new replacement staff. This decision is reflected in the approved recommendations listed below.

(5) Curriculum

The current BWI curriculum and instructional program accept 9th

grade graduates for a 4-year course in one of the following vocational specialties: mechanical, building trades, electrical, agriculture, and business education. Each entering student is required to take 15 hours per week in a trade specialty, 3 hours per week each in English, mathematics, and science, and 2 hours per week each in social studies, physical education, music, and ROTC. This same requirement is continued in the second year. In the last 2 years, all requirements are continued except for music. The intent was to provide a 50/50 mix between trade and academic studies. Given the inadequacy of qualified instructors, poorly maintained shop equipment and facilities, students do not currently receive parity in the trade areas. Even if parity were achieved, this curriculum is still inadequate for producing skilled workers for Liberian industries. The team discovered a glaring absence of stated curriculum objectives, specific course syllabi and instructional materials for classroom use. Thus in actual practice, particularly in the trade specialties, there is an existence of an ad hoc curriculum that varies in quality and emphasis with each instructor.

The team also observed declining enrollment in trade specialties and increased enrollment in business education. While there is an obvious need for increased numbers of secretaries, which comprise the bulk of the current business education enrollment, there is an even greater and more crucial need for skilled workers in the trade specialties. This increased emphasis toward business education is probably explained by the inability of BWI to retain qualified instructors to attract students in the trade specialties. A full review of this shift and its consequences to the basic purpose of BWI was made, and the decision is described in the approved recommendations below.

(6) Graduates

The quality and quantity of BWI graduates was observed to be disappointingly low. Attrition rate had soared to approximately 60% for the

4-year program. Furthermore, those who do graduate were observed to enter employment at the very lowest skill levels. Visits to concessions, industry, and other employers of BWI graduates found the majority of recent graduates employed at far below the level for which they should have been trained.

Employers explained that BWI graduates could not perform at the skilled level, but with additional training and experience, many of them learned to perform effectively. In fact, there were some BWI graduates who had achieved supervisory positions over a period of several years. All employers expressed the urgent desire to receive increasing numbers of BWI graduates who could enter employment as skilled workers. Most of these employers expressed the willingness to participate in the internship program, faculty exchange, and other activities designed to enhance the effectiveness of the BWI training program.

Based on the above findings, the technical analysis team proceeded in the design of a restructured BWI program in line with the GOL policy determinations. Recommendations of the team are included below. These recommendations were presented, discussed, revised, and approved as follows:

Recommendations of the Technical Analysis Team

(1) Reduce the instructional period from four to three years thus increasing the production of graduated by 25%. This recommendation was a part of the GOL policy determination prior to the establishment of the technical analysis team; however, the team fully confirmed the appropriateness and feasibility of the move from a 4-year to a 3-year training program at BWI.

(2) Increase the intake of students in accordance with a planned schedule of classes of limited size in proportion with the projected manpower requirements. The maximum student population will be 1,500. This also forms a part of the previous GOL policy determinations prior to the work of the technical team. However, the team did identify inputs and total enrollment projections for each of the instructional areas for the life of the project.

This proposed enrollment plan is included in ANNEX B, Section II.

(3) Establish a goal statement for B.W.I. which embodies occupational profiles as the basis for increasing achievement. Agreement was reached by the GOL that the instructional program at BWI should be geared to the occupational specialties identified in the manpower projections and performance levels should be maintained in line with industry skilled middle-level manpower requirements. The initial occupational profiles completed by the team are included in ANNEX F, Section IV.

(4) Transfer the business education program to the specialized school planned in Monrovia and to multilateral high schools in development. This program shall include courses in marketing and distribution management. This recommendation was the only one in which the technical team did not reach unanimous agreement. The BWI principal and staff prepared a minority report advocating the continuation of the business education program as it is now being conducted. The GOL approved the majority recommendation with the modification that the business education department be reduced in size, transferring the major responsibility of business education to the new business school in Monrovia when it is completed. The reduced business education program at BWI will consist of courses in secretarial science and bookkeeping/management, with annual intakes limited to 20 students, beginning in March 1979.

(5) Add course offerings in diesel engines, cabinet making and food processing. The schedule for introducing these new courses of study is included in the enrollment projections and the project implementation plan as mentioned above.

(6) Establish a guidance program to counsel applicants and students during their studies at B.W.I. The guidance and counselling program will be an integral part of the curriculum, student admission policy, internship

program, and student work program. The organizational structure of the guidance and counselling function is included in Part 4 below, and a more detailed description of this service is provided under Part 2, Project Outputs above.

(7) Establish an office of industrial liaison at B.W.I. (see Outputs above).

(8) Evaluate the existing staff for their technical competencies to determine training needs, provide a salary structure competitive with industry. The evaluation of instructional staff and the standardization of certification of BWI instructors will take place during the first three months of project year 1.

(9) Establish a recruiting mechanism for the acquisition of new and replacement staff. Following the evaluation of present staff and the standardization of employment policies, the MOE will begin recruitment for new and replacement staff for the restructured BWI program.

(10) Assign English, math, and science instructors to each of the instructional departments, and to relate and integrate the subject matter with the workshop instruction. This major reorganizational task for the instructional departments is crucial to the new emphasis on skill training in the trade specialties. This reorganization will become effective beginning March, 1979.

(11) Establish an instructional materials center for the production of learning materials and their related audio-visual software. (see Outputs above).

(12) Remodel industrial department buildings. Transfer the agriculture department to the site of the basic metals shop. Remodel the agriculture and business buildings into related subjects classrooms. The team emphasized the necessity of this transfer to avoid the continuation of considerable overlapping of functions in the basic metal shop in relation to other instructional departments. The basic metal shop is currently located on the school

farm across the road from the main campus. The logic of this transfer is obvious. Remodeling of the current agriculture and business buildings for use as related subjects classrooms will be accomplished in project years 4 and 5 (see Implementation Plan).

(13) Place all agricultural production under the agriculture department's instructional program. Expand the scope of agricultural production (see Outputs above).

(14) Provide annual budgets in anticipation of the start of the school year to each department. Locate all instructional supplies and materials storage in the departments. This recommendation is designed to make funds available for BWI operation at the beginning of the school year rather than at the start of the GOL fiscal year. Decentralization of instructional supplies, materials, and spare parts is needed to expedite effective instruction.

(15) Provide additional housing for students and faculty. (see Part II, Capital Budget, and ANNEX B, Detailed Implementation Plan.)

(16) Water, power, and telephone facilities should be reviewed and needed changes made. The GOL is now in the process of securing the services of the electrical, water, and sewerage authorities to provide adequate service, not only for BWI but for the Kakata Rural Teacher Training Institute located adjacent to the BWI campus.

(17) The military program should be transferred to a facility where the trainees will enjoy an environment of social and educational peers. Their instructional program should be designed to satisfy the technical requirements of the military. The GOL is now in the process of making preparations to implement this recommendation. (NOTE: Issue here refers to special program for Ministry of Defense personnel.)

(18) Recurrent costs of the instructional departments should be offset by sale of products and services produced by those departments by the end of project year 3 and thereafter. (see Outputs above.)

(19) Establish a technical teacher education program at the William V.S. Tubman Technical College at Harper. The college will train technical teachers for BWI, industrial arts, multilateral and vocational training centers in Liberia, and this will constitute the initial intake of students at Harper.

The GOL approved this recommendation, with the precise details for establishing the program to be developed as a part of the activities of project years 1 and 2. It is envisioned that the vocational teacher training program will be located ultimately at Harper, with the provision of training programs for BWI instructors, multilateral high school teachers, and teachers for the industrial arts program in junior-secondary schools. Elements of the teacher training program for BWI graduates will be installed as a part of the BWI project activities. Other elements will be conducted at Harper. While AID will assist in the development of those elements at BWI, the GOL will seek other donor assistance for implementation of the total program at Harper. The AID-funded contract vocational teacher educator will assist the MOE in the development of the total program.

Based on the above findings of the technical analysis team and the above recommendations approved by the GOL, the technical design of this project is considered feasible, sound, and ready for implementation.

### 3. B. Financial Analysis and Plan (Budget)

#### (1) Financial Rate of Return and Viability

This project is a non-revenue producing project. The project purpose reflects the commitment to restructure BWI in such a way as to produce higher quality graduates at an affordable cost. The starting point for constructing a realistic BWI operating budget was the existing budget, 1976

through the present. With the assistance of the three-man technical assistance team, the joint MOE/USAID committee scrutinized data available on BWI funding sources and funds application. Information from comparable institutions elsewhere in West Africa was used in rationalizing the cost of producing a BWI graduate at the specified level of skills.

The result of the analysis is the BWI Operating and Capital Budget for the five-year period, 1978-1983, that appears in summary in Tables A and B below. Detailed line item budgets are provided in Illustrative Budget Tables I - VI at the end of this section and in ANNEX H. Earlier funding projections made by BWI and MOE were 25% to 50% higher than these proposed by this project and have been scaled down to a level affordable by the GOL. The proposed budget is necessarily derived from institutional changes and policy-level decisions.

The financial viability of BWI as a secondary vocational institution depends on three main factors:

a. BWI reaching a maximum student body of 1,500 by 1983 without a substantial increase in operating budget;

b. More efficient application of the existing resources, such as increased teaching hours of instructional staff, decreased ratio of administrative and support staff to instructional staff, and the introduction of income-producing or, at minimum, budget-defraying student activities;

c. Successful transition from the 4-year program to a job-oriented 3-year program with support systems that provide lower wastage rates and concomitant higher throughputs.

All three of these elements, basic to success of the design and budget, are addressed in project outputs. They will give assurances of BWI financial viability during the life of project and as a permanent educational institution.

(2) Recurrent Budget Analysis

a. BWI Existing Budget

The MOE is the GOL entity responsible for requesting and justifying the BWI budget. According to the official GOL Budget for FY 1977/78 (July 1977-June 1978), the MOE is allocated the highest budget of any GOL Ministry. In FY 1977/78 it is estimated that \$25,512,454 will be expended by the MOE of which \$21,518,405 is recurrent budget and \$3,994,049 is attributed to the development budget. These totals are exclusive of allocations for the University of Liberia and of allocations for human resource development programs sponsored by other functional ministries and agencies. The Ministry of Education receives approximately 14% of the total GOL budget and the percentage is expected to rise several percentage points over the existing development plan period, July 1976 through June 1980.

It appears somewhat artificial to review the proposed BWI operating budget in terms of "project costs" and "GOL contributions" since BWI has been and will continue receiving a sizeable recurrent budget through the existing MOE budgeting procedures. In the GOL fiscal year 1976/77 (July, 1976 - June 30, 1977) a total of \$710,405 was budgeted for BWI recurrent costs and in the current fiscal year 1977/78, the amount increased to \$886,000. The modest funding requirements over the life of project, when compared to the overall MOE budget and existing allocations for BWI, indicate that the full financial commitment of the GOL for operating costs will be met.

Sections (b) and (c) that follow describe the proposed BWI operating and capital budgets for 1978-1983. Table A presents the combined operating and capital budgets.. Table B presents the operating budget in greater detail. These budgets have been assembled to plot BWI's institutional requirements for the restructured programs exclusive of technical assistance and training. The Life-of-Project Costs discussed in Section (3) and

contained in the Illustrative Budgets combine the institutional costs with technical assistance and training anticipated from external sources.

b. BWI Operating Budget

The total operating budget required for BWI during the five-year period is \$7,024,510. The budget appears in summary in Table B and in greater detail in ANNEX H, Section I.

Using the current 1977/78 GOL allocation for BWI as a base, the operating budget reflects an increase of 8% annually over the five years, ranging from a 16% increase in the first project year to a 3% increase between project years 4 and 5. The major assumptions that are built into these requirements include the ability to attract qualified instructors at a salary range between \$7,000 and \$8,500 per annum, to provide food to all boarding students at a cost of \$1.50 per student day, and to gradually increase the student body to 1,485 in year 5. These assumptions relate to the two line items, professional salaries and food, which together absorb over 80% of the annual operating budget.

In line with recommendations for greater departmental autonomy, the operating budget is divided into two sections: I. Personnel & Supplies (by Departments) and II. Non-Departmental Services & Supplies, which relate to overall institutional needs. Levels for salaries, expendable materials and supplies, maintenance, and other operating costs were determined by the joint GOL/USAID technical analysis team.

To link the BWI Operating Budget to Life of Project Costs, it is necessary to examine the sources of funding. Table C identifies funding required from internal and external sources. During the life of project, only minor USG and German Government contributions are requested to defray the costs of expendable supplies for the new instructional departments. Neither donor will supplant the GOL in financing the operating budget. In lieu of

resorting only to the GOL Development Budget for funding (which has proven an error in USAID experience), the GOL Recurrent Budget is gradually increased. By the end of year 5 all but 15% of GOL budgeted funds are supplied through the regular GOL Recurrent Budget.

In addition to the GOL Recurrent Budget and Development Budget, approximately 13% of the Operating Budget by year 5 will be supplied from student fees, of which the major portion is collected from boarding students and applied to their room and board.

TABLE A

BWI SUMMARY OPERATING AND CAPITAL BUDGETS

<b>BWI Operating Budget (1)</b>	<u>FY78/79</u>	<u>FY79/80</u>	<u>FY80/81</u>	<u>FY81/82</u>	<u>FY 82/83</u>	<u>TOTALS</u>
<b>I. Personnel and Supplies</b>	\$ 820,350	\$ 931,200	\$ 973,000	\$1,002,500	\$1,002,500	\$4,729,550
<b>II. Non-Departmental Services &amp; Supplies</b>	<u>422,760</u>	<u>457,800</u>	<u>486,400</u>	<u>450,000</u>	<u>478,000</u>	<u>2,294,960</u>
<b>Subtotal Operating</b>	\$1,243,110	\$1,389,000	\$1,459,400	\$1,452,500	\$1,480,500	\$7,024,510
 <b>BWI Capital Budget (2)</b>						
<b>I. Construction &amp; Renovation</b>	\$		,160	-	-	\$1,189,640
<b>II. Equipment &amp; Furnishings</b>	-		,000	53,000	38,000	738,000
<b>Subtotal Capital</b>	\$		,160	\$ 53,000	\$ 38,000	\$1,927,640
 <b>5 Year Total</b>	\$1		,560	\$1,505,000	\$1,518,500	\$8,952,150

(1) The Operating Budget is itemized in Bable B, and a detailed line item budget breakdown appears in ANNEX H, Section I.

(2) Detailed line item breakdown appears in ANNEX H, Section II.

TABLE B\*

BWI OPERATING BUDGET (SUMMARY)

<u>I. Personnel &amp; Supplies (by Departments)</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>	<u>TOTAL</u>
(A) Administration	\$ 165,100	\$ 165,100	\$ 165,100	\$ 165,100	\$ 165,100	\$ 825,500
(B) Guidance	28,000	28,000	28,000	28,000	28,000	140,000
(C) Curriculum	32,350	54,800	57,200	57,200	57,200	258,750
(D) Mechanical Trades	136,700	159,200	174,700	211,200	211,200	893,000
(E) Building Trades	174,100	210,600	240,100	240,100	240,100	1,105,000
(F) Agricultural Trades	75,300	89,300	97,800	97,800	97,800	458,000
(G) Electrical Trades	115,600	138,100	145,100	152,100	152,100	703,000
(H) Bus.(ness Education	<u>93,200</u>	<u>86,100</u>	<u>65,000</u>	<u>51,000</u>	<u>51,000</u>	<u>346,300</u>
Subtotals	\$ 820,350	\$ 931,200	\$ 973,000	\$1,002,500	\$1,002,500	\$4,729,550
<u>II. Non-Departmental Services &amp; Supplies</u>						
Student Food	\$ 378,000	\$ 407,000	\$ 423,000	\$ 395,000	\$ 430,000	\$2,033,000
Staff Local Travel	5,000	5,000	5,000	5,000	5,000	25,000
Fuel & Lubricants	14,000	16,000	16,000	18,000	18,000	82,000
Maintenance, Spare Parts & Supplies	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>25,000</u>	<u>25,000</u>	<u>110,000</u>
Subtotals	\$ 422,760	\$ 457,800	\$ 486,400	\$ 450,000	\$ 478,000	\$2,294,960
Operating Budget	\$1,243,110	\$1,389,000	\$1,459,400	\$1,452,500	\$1,480,500	\$7,024,510

\*This Table is repeated in ANNEX H, Section I, preceded by a detailed line item budget.

TABLE C

Proposed Sources of Funding the BWI Operating Budget

<u>Determined Sources</u>	<u>1978/79</u>	<u>79/80</u>	<u>80/81</u>	<u>81/82</u>	<u>82/83</u>	<u>TOTAL</u>
GOL Budget	\$1,031	\$1,163	\$1,226	\$1,261	\$1,273	\$5,954
(Recurrent Budget) <sup>1</sup>	(897)	(943)	(990)	(1,040)	(1,092)	(4,962)
(Development Budget)	(134)	(220)	(236)	(221)	(181)	(992)
Student Fees <sup>2</sup>	170	184	191	178	194	917
BWI Sale of Agricultural Products <sup>3</sup>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>20</u>
INTERNAL RESOURCES <sup>4</sup>	\$1,205	\$1,351	\$1,421	1,443	\$1,471	\$6,891
USAID	28	28	28	-	-	84
Other Donor	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>50</u>
TOTAL	\$1,243	\$1,389	\$1,459	\$1,453	\$1,481	\$7,025

<sup>1</sup>5% annual increase in GOL Recurrent Budget with base year FY 1977/78 total of \$855,000.

<sup>2</sup>Calculated at \$176 per boarding student and \$24 for non-resident with 70% of student body in residence.

<sup>3</sup>Includes only identified income from 48 acres currently planted in rubber; potential self-generated revenues are discussed in narrative section.

<sup>4</sup>Internal resources total appears as GOL Contributions, A. Operating Costs in Illustrative Budget Summary Table I on page 49.

Only clearly identified sources of operating budget have been included in Table C above. However, as suggested by the \$4,000 annual income currently being generated by the sale of rubber produced on 48 acres of BWI land, there are possible means of defraying costs which will be encouraged during the life of the project. An estimated \$100,000 of food production (such as rice, palm oil, vegetables, poultry, etc.) can be expected on the BWI lands each year and be used for sale and/or student consumption. An estimated \$35,000 in income from student services and products can also be anticipated beginning in project year 3. This would include such items as basic metal

products and auto repair services from the mechanical trades department, wood products and finishing from the building trades department.

Since the success of such a major self-help endeavor is yet to be proven no amount from these potential sources has been included in the above source of funds list. At best, the \$135,000 projected income could reduce the annual GOL budget allocation by 10%. At worst, the income from such activities could cover the anticipated 6% increase in the annual budget in post-project years due to inflation.

c. BWI Capital Budget

The total capital budget required for the 5-year period is \$1,927,640. The budget appears in summary in Table A and in greater detail in ANNEX H, Section II.

Approximately 60% of the capital budget will be dedicated to the construction and furnishing of housing for professional staff and dormitories for students, and to improvements required in the campus water and sewerage system. High priority is placed on the provision of an additional 8 dormitories and of 25 additional staff housing units to attract capable instructional staff. The construction will occur in project years 1, 2, and 3. The GOL will assume financial responsibility for the actual construction, in an estimated amount of \$1,014,700, while the USG will supply the necessary furnishings.

The cost estimates for construction of dormitories and staff houses are based on recently let contracts in Liberia for similar local materials construction and, barring exceptional inflation in the construction industry, are reasonable.

Besides the new staff and student accommodations, the capital budget will be applied to renovation and equipping some existing dormitories, clinic, kitchen, auditorium and library to acceptable standards, and

renovation and equipping the vocational departments for the new focus on workshop and job-oriented curriculum. The majority of these funds are requested from the US and the German Government. It is not anticipated that additional classroom space will be needed for the student body of 1,500. Rather, more attention needs to be paid to appropriate space utilization, tighter class scheduling, and coordination between workshop and related academic subjects.

The GOL has committed itself to the construction of the dormitories and staff housing and has earmarked development budget accordingly. However, the GOL is actively seeking other donor assistance to defray at least a portion of the costs involved. The GOL has requested that the German Government contributions (both direct and channeled through German Foundations) be focused on the Mechanical Department and the provision of funds for renovation and equipment of the department's facilities in an estimated amount of \$154,000. The US contribution will provide comparable renovation and equipment for three other departments: electrical, building trades, and agriculture. The minor costs of renovation and equipment for the shrinking business education department will be borne by the GOL.

The US contribution for renovation (\$135,000) and equipment (\$584,000) is shown in Table D below. Budget Table VI shown at the end of this section and in ANNEX H, Section II, provides a breakdown of these renovation costs for instructional departments and other campus facilities. The \$135,000 earmarked for renovation will be used to repair and remodel existing shops and classroom buildings, the school cafeteria, and other service facilities, including the addition and/or removal of walls and partitions, the extension of covered work areas adjacent to shops, adding toilet and other sanitary facilities to existing structures, furnishing air conditioning to protect delicate electrical equipment from climatic conditions,

remodeling the school cafeteria, and extending walls to selected classrooms.

Cost estimates for these renovations and new construction were made by an AID-funded ORT contract team of three vocational planning specialists including one member who is a practicing architect currently engaged in building construction in the US. Estimates were based on local costs of similar projects recently completed in Liberia. The total estimate for US-funded renovation consists primarily of material costs. The bulk of the skilled labor will be provided by students and teachers at BWI as a part of the practical work experience of the school's Building Construction Department. The Liberia Mission Engineer reviewed the plans and cost estimates and found them to be reasonable and feasible.

TABLE D

Proposed Sources of Funding BWI Capital Budget

Determined Sources	<u>1978/79</u>	<u>79/80</u>	<u>80/81</u>	<u>81 '82</u>	<u>82/83</u>	<u>TOTAL</u>
GOL TOTAL	\$189	\$529.5	\$305.2	\$ 3	\$18	\$1,044.7
(Recurrent Budget)	(3)	(3)	(3)	(3)	(18)	(30)*
(Development Budget)	(186)	(526.5)	(302.2)	-	-	\$1,014.7)*
OTHER DONORS	3	70	63	28	-	164
USAID TOTAL	243	287	147	22	20	719
(Renovation)	(75)	(35)	(25)	-	-	(135)
(Equipment)	<u>(168)</u>	<u>(252)</u>	<u>(122)</u>	<u>(22)</u>	<u>(20)</u>	<u>(584)</u>
	\$435	\$886.5	\$515.2	\$53	\$38	\$1,927.7

\*These amounts appear as GOL Contributions, B. Capital Costs in Illustrative Budget Summary Table on page 49.

(3) Life of Project Costs

The Illustrative Budget, Table I on page 49 summarizes contributions on an annual basis. The estimated total project costs over the five-year period are \$14.9 million. The amount excluded from the discussion of institutional operating and capital budgets in section 2. above, a total of \$5.1 million, is the price tag for the USAID and German technical assistance,

training provided by the two donors, Peace Corps volunteer services, and the amounts specified for inflation and contingency under the US contribution.

The percentage of total costs from each source is as follows:

US Contribution	:	40.6%
GOL Contribution	:	53.3%
Other Donor Contributions		<u>6.1%</u>
		100 %

A strict constructionist approaching the above breakdown of contributions would quickly point out that only that amount additive to the existing annual GOL allocations for BWI can be justifiably included. Subtracting \$900,000 per year, the FY 1977/78 GOL allocation, for the five years would establish a new total project cost of \$10.4 million (\$14.9 minus \$4.5) and contributions would be recast as follows:

US Contribution	58.2%	(\$6.054)
GOL Contribution	33.0%	(\$3.436)
Other Donor Contribution	<u>8.8%</u>	<u>(\$ .941)</u>
	100. %	(\$10,404)

In either case the GOL clearly meets the 25% requirement for project contributions. The value of the existing BWI land, buildings, and equipment is not included for any purpose in the financial analysis.

#### (4) Summary Conclusion

It is the Mission's judgment that the project is financially sound. The estimate of the BWI institutional operating and capital budgets meet the two requirements of adequate per student expenditures for a vocational technical high school and of a total recurrent budget within the means of the GOL to provide. The average annual increase of only 8% in the operating budget places no undue burden on the GOL. Learning from previous errors, the Mission has avoided the assuming of recurrent costs by donors and has successfully counselled against a heavy dependence by BWI on the GOL Development Budget for

non-capital costs during the life of the project. External assistance has been focused on equipment and renovation and on the technical assistance and training required to install the new 3-year curriculum and upgrade the quality of instruction.

ILLUSTRATIVE BUDGET SUMMARY - TABLE I

		(\$000)											
		<u>MOW</u>	<u>YEAR 1</u>	<u>MOW</u>	<u>YEAR 2</u>	<u>MOW</u>	<u>YEAR 3</u>	<u>MOW</u>	<u>YEAR 4</u>	<u>MOW</u>	<u>YEAR 5</u>	<u>MOW</u>	<u>TOTAL</u>
<b>I</b>	<b>US Contributions</b>												
	(A) USAID												
	1. Personnel												
	Long Term	62	609	91	608	86	552	67	421	30	239	336	2,429
	Short Term	15	73	12	58	6	30	8	39	7	26	48	226
	Subtotal	77	682	103	666	92	582	75	460	37	265	384	2,655
	Overhead (A)*		246		329		294		239		118		1,226
	TOTAL		928		995		876		699		383		3,881
	2. Participants												
	Long Term	80	88	80	103	40	56	-	-	-	-	200	247
	Short Term	6	13	21	49	10	25	5	8	-	-	42	95
	TOTAL	86	101	101	152	50	81	5	8	-	-	242	342
	3. Commodities		230		280		150		22		20		702
	4. Other Costs		75		35		25		5		5		145
	5. Inflation (B)*		67		146		170		147		102		632
	6. Contingency (5%)		66		73		56		37		20		252
	TOTAL USAID		1,467		1,681		1,358		918		530		5,954 (D)*
	(B) PEACE CORPS VOLUNTEERS (5)	12	10	36	30	36	30	24	20	12	10	120	100
	TOTAL US CONTRIBUTIONS		1,477		1,711		1,388		938		540		6,054
<b>II</b>	<b>GOL Contributions</b>												
	(A) Operating Costs (Includes Personnel)		1,205		1,351		1,421		1,443		1,471		6,891 (C)*
	(B) Capital Costs: Commodities		3		3		3		3		18		30
	Construction		186		527		302		-		-		1,015
	TOTAL GOL CONTRIBUTIONS		1,394		1,881		1,726		1,446		1,489		7,936
<b>III</b>	<b>Other Donor Contributions</b>												
	(A) Technical Assistance (4)	24	150	24	150	48	300		-		-		600
	(B) Commodities/Construction		3		70		63		28		-		164
	(C) Training	24	20	24	20	24	20	24	20	24	20		100
	(D) Operating Costs		10		10		10		10		10		50
	TOTAL OTHER DONOR CONTRIBUTIONS		183		250		393		58		30		914
<b>IV</b>	<b>TOTAL PROJECT COSTS</b>		\$3,054		\$3,842		\$3,507		\$2,442		\$2,059		\$14,904

(A)\* 100% of salary level

(B)\* Inflation incremental 5% each year

(C)\* Total includes funds from student fees and produce sales. See Table C on page 43.

(D)\* Of total USAID contributions, estimated local costs = \$1.3 million or 22%

USG PERSONNEL COSTS - TABLE II  
(\$000)

US Experts

	<u>MOW</u>	<u>YEAR 1</u>	<u>MOW</u>	<u>YEAR 2</u>	<u>MOW</u>	<u>YEAR 3</u>	<u>MOW</u>	<u>YEAR 4</u>	<u>MOW</u>	<u>YEAR 5</u>	<u>MOW</u>	<u>TOTAL</u>
<b>(A) Long Term</b>												
Team Leader (Chief of Party)	10	\$ 94	12	\$ 81	12	\$ 75	2	\$ 24	-	\$ -	36	\$ 274
Curriculum Coordinator	10	94	12	81	12	74	12	71	14	95	60	415
Guidance Counsellor	10	94	12	81	2	28	-	-	-	-	24	203
Mechanical Specialist	8	82	12	80	12	75	12	71	4	36	48	344
Building Construction Specialist	8	82	12	80	12	75	12	71	4	36	48	344
Electrical/Electronics Specialist	8	82	12	80	12	75	12	71	4	36	48	344
Agricultural Education Specialist	8	81	12	80	12	75	12	71	4	36	48	343
Vocational Teacher Educator	-	-	7	45	12	75	5	42	-	-	24	162
<b>Total Long Term</b>	<b>62</b>	<b>609</b>	<b>91</b>	<b>608</b>	<b>86</b>	<b>552</b>	<b>67</b>	<b>421</b>	<b>30</b>	<b>239</b>	<b>336</b>	<b>2,429</b>
<b>(B) Short Term</b>												
Advance Admin. Officer	1	5	-	-	-	-	-	-	-	-	1	5
Curriculum Consultant	8	39	4	19	-	-	3	15	-	-	15	73
Guidance Consultant	2	10	4	19	-	-	3	14	-	-	9	43
Vocational Teacher Training Consultant	4	19	2	10	4	20	-	-	3	11	13	60
Evaluation Consultant	-	-	-	-	2	10	-	-	4	15	6	25
Vocational Specialists	-	-	2	10	-	-	2	10	-	-	4	20
<b>Total Short Term</b>	<b>15</b>	<b>73</b>	<b>12</b>	<b>58</b>	<b>6</b>	<b>30</b>	<b>8</b>	<b>39</b>	<b>7</b>	<b>26</b>	<b>48</b>	<b>226</b>
<b>(C) Overhead (100% of Salary)</b>		<b>246</b>		<b>329</b>		<b>294</b>		<b>239</b>		<b>118</b>		<b>1,226</b>
<b>(D) Total US Experts</b>	<b>77</b>	<b>\$928</b>	<b>103</b>	<b>\$995</b>	<b>92</b>	<b>\$876</b>	<b>75</b>	<b>\$699</b>	<b>37</b>	<b>\$383</b>	<b>384</b>	<b>\$3,881*</b>

\*Estimated Local Costs \$880,200

PARTICIPANT TRAINING - TABLE III

(\$000)

(A) <u>Long term Training (US)</u>	<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>	<u>YEAR 4</u>	<u>YEAR 5</u>	<u>TOTAL</u>
4 Department Heads	1,100X20X4 88	-	-	-	-	88
4 Assistant Department Heads	1,287X20X4-	103	-	-	-	103
Guidance Counsellor	1,400X20-	-	28	-	-	28
Curriculum Coordinator	1,400X20-	-	28	-	-	28
LT Subtotal	<u>88</u>	<u>103</u>	<u>56</u>	<u>-</u>	<u>-</u>	<u>247</u>
(B) <u>Short Term Training</u> (US & 3rd country)						
Principal	2,167X6 13	-	-	-	-	13
Vice-Principal	2,333X6 -	14	-	-	-	14
5 Instructors	2,333X3X5 -	35	-	-	-	35
10 Instructors	2,500X1X10 -	-	25	-	-	25
5 Instructors	1,600X1X5 -	-	-	8	-	8
ST Subtotal	13	49	25	8	-	95
(C) Total Participant Training	101	152	81	8	-	342*

US FUNDED COMMODITIES - TABLE IV  
(\$000)

(Includes cost of shipping)

<u>US Dollar</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Vehicles	34	-	-	-	-	34.0
Workshop Equipment	104.2	66.5	17.4	8	-	196.1
Instructional Equipment & Aids	3	5	15.1	5.9	-	29.0
Furnishings (Office & Classroom)	36.8	5	-	-	-	41.8
Furnishings (Living Quarters)	-	50	50	-	-	100.0
Service Equipment	<u>8</u>	<u>10</u>	<u>12</u>	<u>3</u>	<u>-</u>	<u>33.0</u>
Subtotal	186.0	136.5	94.5	16.9	-	433.9
 <u>Local Costs*</u>						
Hand Tools	-	9.5	7.5	4.9	4.2	26.1
Workshop Equipment	-	16	2	.2	6	24.2
Expendable Supplies	28	28	28	-	-	84
Furnishings (Office & Classroom)	-	36	-	-	9.8	45.8
Furnishings (Living Quarters)	<u>16</u>	<u>54</u>	<u>18</u>	<u>-</u>	<u>-</u>	<u>88</u>
Subtotal	44.0	143.5	55.5	5.1	20.0	268.1
<b>TOTAL US FUNDED COMMODITIES</b>	<u>\$230</u>	<u>\$280</u>	<u>\$150</u>	<u>\$ 22</u>	<u>\$ 20</u>	<u>\$702</u>

\*Local cost breakdown by source/origin:

Liberia/Liberia	\$104,000
Liberia/US	73,300
Liberia/Code 899	90,800
Total	<u>\$268,100</u>

USG OTHER COSTS - TABLE V  
(\$000)

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total*</u>
(A) Renovation	\$ 75	\$ 35	\$ 25	-	-	\$135
Dormitories	(24)	-	-	-	-	(24)
Clinic	(8)	-	-	-	-	(8)
Kitchen/Auditorium	(5)	-	-	-	-	(5)
Library	(1)	-	-	-	-	(1)
Guidance Dept.	(2)	-	-	-	-	(2)
Curriculum Dept.	(2)	-	-	-	-	(2)
Building Trades Dept.	(8.5)	(25)	-	-	-	(33.5)
Agricultural Trades Dept.	(15.5)	(10)	(20)	-	-	(45.5)
Electrical Trades Dept.	(5)	-	(5)	-	-	(10)
Business Education Bldg.	(4)	-	-	-	-	(4)
(B) Local Per Diem	-	-	-	5	5	10
<b>TOTAL</b>	<b>\$ 75</b>	<b>\$ 35</b>	<b>\$ 25</b>	<b>\$ 5</b>	<b>\$ 5</b>	<b>\$145</b>

\*All Local Costs = \$145,000

GOL CONTRIBUTIONS - TABLE VI  
(\\$000)

<u>Operating Costs</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
<b>I Personnel and Supplies</b>						
Personnel	781.7	892.7	934.2	964.6	964.6	4,537.8
Supplies & Materials	<u>.6</u>	<u>.5</u>	<u>.4</u>	<u>28.4</u>	<u>28.4</u>	<u>58.3</u>
Subtotal	782.3	893.2	934.6	993	993	4,596.1
<b>II Non-Departmental Services/Supplies</b>						
Student Food	378	407	423	395	430	2,033
Staff Local Travel	5	5	5	5	5	25
Fuel & Lubricants	14	16	16	18	18	82
Participant Travel	5.7	9.8	22.4	7	-	44.9
Maintenance, Spare Parts, Supplies	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>25</u>	<u>110</u>
Subtotal	422.7	457.8	486.4	450	478	2,294.9
<b>Total Operating Costs</b>	<u><u>1,205</u></u>	<u><u>1,351</u></u>	<u><u>1,421</u></u>	<u><u>1,443</u></u>	<u><u>1,471</u></u>	<u><u>6,891 (A)</u></u>
<b><u>Capital Costs</u></b>						
<b>I Commodities</b>	3	3	3	3	18	30
<b>II Construction</b>	<u>186</u>	<u>527</u>	<u>302</u>	<u>-</u>	<u>-</u>	<u>1,015</u>
Subtotal	<u>189</u>	<u>530</u>	<u>305</u>	<u>3</u>	<u>18</u>	<u>1,045</u>
<b>Total GOL Contributions</b>	<u><u>\$1,394</u></u>	<u><u>\$1,881</u></u>	<u><u>\$1,726</u></u>	<u><u>\$1,446</u></u>	<u><u>\$1,489</u></u>	<u><u>\$7,936</u></u>

(A) This total is \$134,000 less than the total for BWI Operating Costs in Annex H, Section I. The \$134,000 will be contributed by the USG (\$84,000) and the German Government (\$50,000) to defray Supplies & Materials.

### 3. C. Social Analysis

The social soundness of this project derives from current social trends in Liberia. The Government of Liberia is engaged in an effort to redress social imbalances which have persisted for many years in the Liberian society. Development policies and goals declared at the highest levels include broader participation in the development process and more equitable distribution of the benefits of development. This project will provide individuals with employable skills and establish a viable institutional base for continuing these training opportunities.

Since the proposed BWI program is aimed at producing the kind of skills declared by manpower analysts as those now needed most critically in the Liberian economy, it is assumed that once the individual has obtained these skills, he/she will be placed in a job and become both a participant in and a beneficiary of the development process.

#### (1) Beneficiaries

Prime beneficiaries of this project are high school males and females who have elected to obtain a marketable skill. BWI students are primarily of tribal origin and come from the rural areas. Secondary beneficiaries are families of BWI graduates who will achieve a better quality of life resulting from increased income and improved social awareness.

Assuming this project is successful, BWI will produce over 1,900 graduates during the 5-year duration of the project. These skilled workers will be qualified for immediate entry into employment, and it is anticipated that 90% of these graduates will enter employment with the remaining 10% proceeding on to higher education.

The reduction of the program from 4 years to 3 years will be of immediate financial benefit to BWI students whose fees will be accordingly reduced by 25%. In the case of a boarding student, this amounts to savings of approximately \$176.

(2) Role of Women

The BWI program is open to males and females equally, and the ratio in 1977 was 5:1. Normally, female students enroll in the business and secretarial courses offered by the school, and the shrinking of the Business Education Department may have a temporary impact. While in the past most of the students in the trade specialties were male, there are increasing numbers of female students entering the trade specialties, especially building trades and agriculture. It is expected that the proposed guidance and counselling programs for BWI will provide pertinent information and encouragement for even larger numbers of female students to enter the trade skill training programs. The new food processing course should especially attract female students. Effective liaison with industry and other employers of BWI graduates will serve to pave the way for employment opportunities for these new female graduates.

(3) Social Mobility

Traditionally in Liberia, education and training were available primarily to the urban elite, which severely restricted mobility of the rural indigenous population. However, due to expanded educational opportunities, increased numbers of indigenous citizens are to be found in senior level positions in government and in the private sector. The improved BWI program will enhance the trend for greater economic opportunities and increased social mobility of all BWI graduates.

(4) Rural Urban Migration

Excessive migration of rural youth to urban areas continues as an increasing problem in Liberia. There is a reluctance to return to rural areas once modern sector skills are acquired. Most graduates of high schools and technical schools tend to gravitate toward the city. This trend has been encouraged by the fact that most of the jobs available are either in the city

or in concessions, and the skills emphasized have been those most saleable in these two areas. It is expected that this trend will continue because the predominance of employment opportunities available to BWI graduates are concentrated primarily in urban areas. However, increased opportunities for skilled workers are becoming available in rural areas. Through effective guidance and counselling of BWI students and graduates, coupled with an effective job placement program, it is expected that this project will enable larger numbers of BWI graduates to locate employment opportunities in these rural areas. Rural employment opportunities will increase if the new government efforts to decentralize many of its rural development activities get underway and some of the medium and small up-country towns begin to develop.

#### (5) Conclusion

Close examination of the project indicates the absence of negative social and cultural factors. The project does not propose the introduction of alien cultures or behavior patterns which are inconsistent with the life and work of Liberian citizens. Total impact of the project is determined to be positive with benefits accruing primarily to BWI graduates and with spread effects throughout the world of work in Liberia

#### 3. D. Economic Analysis

A prime factor in determining the economic viability of the project is whether there will be any quantifiable economic savings associated with the proposed BWI program. In making this determination, a comparison is made between production costs resulting from continuing BWI as it is presently constituted and as it would be once the proposed program is installed.

For this comparison, Liberian fiscal year 1981/82 is taken as the base, as this will be the first year in which the proposed BWI program will become fully operational. The following assumptions are made regarding the current BWI program:

(1) A student body of 1,300.

(2) Wastage rates will continue to be 42%. (This would undoubtedly be higher if "repeaters" were included; however, there are no reliable statistics on "repeaters" so this element of inefficiency is excluded from the analysis.)

(3) The operating budget is based on the FY 1977/78 level of \$1,033,000 with inflation of 5% per year compounded.

(4) The present 4-year curriculum would be continued.

The following assumptions are made regarding the costs of the proposed BWI program:

(1) A student body of 1,500.

(2) The curriculum would be of 3 years duration.

(3) Graduates would be equal to and probably superior to present graduates.

(4) Wastage rates would be 16% per class. (There would be "repeaters" as at present, but as this is unqualified, it is not included. The design team estimates that the number of "repeaters" would be reduced below present levels, whatever they may be.)

Using the above assumptions, the following calculations result:

Current BWI Program 1982 Costs

Operating Budget \$1,255,000

Cost per student year \$ 965

Cost per graduate (4 years) 3,860

\$3,860 X 42% wastage 1,621

\$1,621 + \$3,860 = \$5,481 Actual Cost Per Graduate in 1982

Proposed BWI Program 1982 Costs

Operating Budget \$1,453,000

Cost per student year \$ 969

Cost per graduate (3 years) 2,907

\$2,907 X 16% wastage           \$ 465

\$465 + \$2,907 = \$3,372 Actual Cost per Graduate in 1982

The above calculations do not include the capital costs associated with the project. As the capital costs are essential to the achievement of project ends (better dormitories reduce wastage; better teacher housing attracts more competent staff better able to transfer skills in a shorter period of time); a final calculation factoring in the capital costs is necessary. Total capital costs associated with the project are \$1,927,640. If a 15-year depreciation schedule is used (logical in view of the fact that 62% of the capital costs will go to buildings), then yearly costs resulting from the capital program would be \$128,500 or an additional \$86 per student year.

The projection for the proposed BWI program, including capital costs, is as follows:

Cost per student year   \$ 969 + \$86 = \$1,055

Cost per graduate       = \$3,165

\$3,165 X 16% wastage = 506

\$506 + \$3,165 = \$3,671 Actual Cost per Graduate in 1982

In analyzing the above, it is found that although the total annual cost per student, including capital costs, under the proposed project is 9% higher than if the present system is continued, the actual cost per graduate is significantly less: \$3,671 as opposed to \$5,481, a 33 1/3% reduction. It should also be noted here that these savings would be marginally greater if the school becomes self-sufficient in food and meets more of its operating budget through the marketing of student-produced items.

There are other economic considerations supporting the implementation of the project. The graduates will be trained to fill jobs which are presently being held by expatriates because of the paucity of trained Liberians.

According to the Ministry of Planning and Economic Affairs, these expatriates cost approximately \$12,000 per annum. A BWI graduate under the project will be better qualified and hence able to fill the jobs presently held by expatriates. If one assumes, at the worst, it would take 2 BWI graduates to produce the same amount of output as one highly skilled and experienced expatriate, and further assumes a salary of \$4,500 per graduate (average GOI salary for skilled technician), then the savings to the economy would be \$3,000. An added advantage would be that most of the BWI graduate salary would remain in the country. A large percentage of the expatriate salary, of which only a portion may be taxed, is returned to the home country. The multiplier effect on the Liberian economy is potentially far better under the project than under the present system.

In 1974 a semi-skilled worker in Monrovia earned \$150 per month; a skilled worker, \$200. This is the latest salary comparison date available from the Manpower Planning Division of the MPEA. The levels are undoubtedly higher now, although the ratio between skills is probably the same. If the favorable assumption holds that a BWI graduate would become a skilled worker rather than a semi-skilled worker as in the current program, then the conclusion follows that the personal income of the BWI graduate should increase by 1/3 over what it would formerly have been. As the number of graduates per year would increase from 190 to 460, the absolute number of beneficiaries would also increase. Taking these two factors together, it can be concluded that there will be a greater economic benefit to more individuals (beneficiaries) through the project than without it.

In sum, economic benefits will accrue to the institution and the MOE through lower cost output, to the economy in general through more productive, lower-cost technicians (who add to economic activity and to the tax base), and to more BWI graduates who will receive higher salaries. It is therefore concluded that this project is economically viable and should be implemented.

## PART 4 IMPLEMENTATION PLANNING

### 4. A. Administrative Arrangements

#### (1) GOL Arrangements

The GOL Ministry of Education will undertake full responsibility for overall project administration. Organizationally, the project will function within the Department of Instruction, headed by a Deputy Minister. Operationally, the responsibility for detailed project implementation and monitoring will be vested in the Bureau of Professional and Technical Education through the Division of Vocational and Technical Education. The Director of this Department will serve as the key MOE contact for GOL and US project personnel. Problems which cannot be resolved at this level will be referred to progressively higher levels and if necessary to the USAID Director and the Minister of Education.

Since all vocational and technical education activities in Liberia come within the purview of the National Council for Vocational and Technical Education and Training (NCVTEET), this project will develop appropriate linkages through the GOL/MOE with the Council. The Executive Order establishing the Council, along with the objectives and a general description of the activities of the Council, are included in ANNEX F, Section II.

The project will be sited on the campus of the Booker Washington Institute (BWI) where 7 US long-term specialists will be assigned. One long-term advisor in vocational teacher education will be assigned to the Vocational and Technical Education Department in the Ministry of Education. (see Project Personnel below)

The GOL will provide office space for all project personnel and transportation for project commodities and supplies from port to project site. Transportation for official project business will be provided by the GOL for

US project personnel from date of arrival until US-funded project vehicles are received on the project site (estimated 3-5 months). Also, office space, secretarial services, and logistical support will be provided by the MOE for the US vocational teacher educator assigned to the MOE. International air transport costs for Liberian participants trained as well as salaries for the trainees while in training will be provided by the GOL. Trainees will be obligated to return to the positions for which they were trained and serve for at least twice the time of their training. Per diem and local travel costs will be provided by the GOL for all BVI staff and employees for official project activities.

(2) AID Arrangements

The project will be implemented through an AID-funded host country contract with a US educational institution or firm. This contract will be executed by the GOL and the implementing organization subject to AID review and approval. The contractor's home office will be responsible jointly to the GOL and USAID/Liberia for the recruitment and support of technical personnel in the performance of the technical tasks required in the project. The technical team leader (chief of party) will report directly to the Minister of Education and the USAID/Liberia Director or their designates for overall policy and administrative guidance in the execution of the field implementation aspects of the contract. Counterpart relationships and professional project-related responsibilities of contractor personnel are described below in Section E, Project Personnel.

Participant training and the bulk of commodities will be funded under the contract; however, in order to expedite contract implementation, procurement of vehicles and selected commodities will be handled through direct AID procurement as soon as project funds become available.

#### 4. B. Implementation Plan

Since the Detailed Implementation Plan/CPI Description appears in ANNEX B, Section I, the following is a brief summary of project implementation activities:

##### (1) Contract Implementation

The GOL with assistance from USAID/Liberia and AID/W will begin the contractor selection and procurement process immediately after obligation of AID funds for that purpose. Since there is an abundance of US educational institutions and firms who have the range of organizational skills and technical expertise for implementing this project, the task in the contractor selection process will be to identify those who demonstrate the greatest capability and willingness to apply the full resources of their institutions or firms in meeting the specific project conditions in Liberia. Agency and Bureau policies relating to increased opportunities for minority firms will be followed. To enhance contractor selection efforts, a joint GOL/USAID technical selection team will conduct personal interviews with a select list of potential contractors determined to be the most responsive to Requests for Proposals (RFP's).

A six-month lag is assumed between final project approval and the anticipated arrival of three long-term members of the contract team in December 1978. The arrival of four short-term consultants no later than January 1979 will be required to conduct and complete initial curriculum development activities prior to the beginning of the Liberian school year in March 1979. Remaining long-term team members will arrive in February 1979.

The technical skills required for the project (see Section E below) are most likely available in academia where the employment year begins in September, January, and June. In order for the contractor to provide the above personnel on schedule, advance notice of this requirement should be

incorporated in the RFP and utilized in the final selection of the contractor. Otherwise the inability to meet this requirement would involve significant adjustments in the project implementation schedule.

Both the project implementation plan and the illustrative budget call for short-term services of a contractor advance administrative officer beginning within 30 days after contract signature. This advance administrative officer will handle all logistical and administrative matters such as housing, project site preparation, and procurement.

(2) Contractor Scope of Work

The following summary description of professional tasks and services to be performed by the contractor will be incorporated in the RFP.

a. Design and implement organizational and administrative procedures for carrying out the restructured BVI program as described herein.

b. Develop a 3-year secondary curriculum and instructional program for 12 vocational specialties in line with the training requirements identified in relevant occupational profiles and such other training programs (i.e., special short courses) as may be required.

c. Finalize plans and supervise work in renovation of classrooms and workshops.

d. Develop job descriptions and implement supervisory practices for BVI administrative, instructional, and support staff.

e. Prepare instructional schedules for all courses of study, including teacher assignments (contact hours per week), student course requirements (hours per week in classroom and shop), and work experiences.

f. Develop and implement institutional support systems required to achieve the professional goals and operational policies of the school with regard to student admission, guidance/counseling and follow-up services for graduates, student internship and work programs, renovation and maintenance

of facilities, operation of the school farm, library services, food services, industry liaison, and other services and school functions as may be deemed necessary.

g. Develop and implement a performance evaluation system for BVI instructional staff as a basis for continuous evaluation and certification of these instructors.

h. Design and implement training programs for BVI instructors, comprising formal courses and on-the-job training and provide assistance in the selection of qualified candidates for long- and short-term training.

i. Provide professional advisory services to the GOL and USAID/Liberia in the general area of vocational education in Liberia with specific reference to training programs offered at BVI.

j. Furnish up to 32 person years in technical assistance, including the services of 8 long-term US specialists as described in section E below.

k. Provide a level of self-sufficiency in professional backstopping and logistical support for long- and short-term contract personnel assigned to Liberia.

### (3) Project Work Schedule

The detailed project description above identifies the full range of outputs required to achieve project purpose. The detailed implementation plan provides a schedule for the major inputs and activities required to achieve these outputs. The outputs and implementation plan have been carefully selected and designed by the technical analysis team mentioned previously. Thus it is anticipated that no major revisions or changes will be necessary by the GOL, AID, or the contractor during project implementation. However, to further assure the accurateness and adequacy of the project design and implementation plan contained herein, the contractor will be required to develop a detailed Life-of-Project Contractor Work Plan to be completed by the end of

project month 12 (May 1979). In preparing this work plan, the contractor will review, revise and/or confirm all project tasks, supporting systems, inputs, and outputs, including the schedule for project implementation. Also, the work plan will contain a PERT-type management and evaluation model which will identify the interdependencies and interrelationships of project sub-systems and activities within the 60-month project time frame.

The contractor will prepare a draft of the work plan for review by the GOL and USAID/Liberia. When approved, the work plan will be incorporated as a part of the GOL/AID Grant Agreement and the GOL host country contract and will form the principal basis of project and contract monitoring and evaluation.

#### 4. C. Procurement Plan

##### (1) Designated Responsibilities

Ideally, the Ministry of Education, Department of Vocational Education or BWI itself would be designated as the unit responsible for procurement of the project commodities. However, several factors have led to the designation of USAID and the technical assistance contractor as procurement agents:

a. The only qualified procurement unit in the Ministry was established by the World Bank specifically for commodities funded under loan arrangements, and the staff is not trained specifically for this type of US procurement.

b. The specialized nature of the majority of commodities requires the professional procurement services afforded by the home office of the selected technical assistance contractor.

c. Considering the lead time required for vehicle procurement, initiation of procurement by USAID as soon as the project is approved will be the most expeditious means for timely arrival.

Procurement responsibilities are as follows:

USAID/Monrovia	Passenger Vehicles	Total	\$ 34,000
Technical Assistance Contractor	All Other	Total	\$668,000

The total of \$668,000, which will be included in the technical assistance contract, includes shipping costs based on recent estimates available to the Mission. Inflation for non-USAID procurement is not included but appears as a separate line item in Total US Contributions.

(2) Equipment List

Contained in ANNEX K is an illustrative listing of equipment and commodity needs for the project. Upon AID/W approval of the project, allocation of funds, and signature on the Project Agreement, USAID will proceed with the indicated vehicle procurement. No later than 60 days after signature of the technical assistance contract, the contractor's advance administrative officer will proceed to Liberia. Included in his/her responsibilities will be the preparation of a detailed listing of equipment and commodities to be procured and initial procurement. The list will contain a breakdown by annual requirements, including source of purchasing and estimated costs. It is anticipated that orders for US source/origin commodities will be placed annually during project years 1 through 4 as indicated in the Implementation Plan in ANNEX B, Section I.

(3) Source of Procurement

The commodity listing contained in ANNEX K also indicates probable source and origin of the various categories of equipment and commodities. All vehicles to be procured will be of US source/origin. A total of \$333,900 (including shipment) for costs of office, classroom and workshop equipment, audio-visual equipment, supplies, furnishings, service equipment, and vehicles will be of US source/origin.

For the remainder of the commodities, totalling \$268,100, AID/W is hereby requested to approve the procurement by designated source and origin indicated below:

a. Off-the-shelf procurement in Liberia of US origin: (Office and classroom furnishings, workshop equipment, and hand tools)	\$ 73,300
b. Off-the-shelf procurement in Liberia with origin in Code 899 countries: (Workshop equipment and expendable supplies)	90,800
c. Liberian source/Liberian origin: (Dormitory and classroom furnishings)	<u>104,000</u>
TOTAL	\$268,100

Since the equipment list in ANNEX K is illustrative, with specifications to be developed by the contract personnel, it is understood that approval of the above procurement plan establishes dollar limits in total and does not restrict source/origin by individual line item commodities. The dollar totals indicated in Budget Table IV, US-Funded Commodities, are valid planning figures. Notwithstanding approval of the above procurement scheme, procurement from US will be maximized whenever feasible.

#### 4. D. Project Evaluation Plan

Since the impact of this project could have broad implications for vocational education in Liberia, it is essential that AID and the GOL conduct systematic assessments and evaluations of all project activities throughout the life of the project.

The Implementation Plan in ANNEX B calls for an interim evaluation in project month 40 and an end-of-project evaluation to be completed by the end of project month 64. In order for these evaluations to be effective, it will be necessary to conduct annual reviews and other periodic assessments that will permit appropriate changes and provide essential data for the mid-project and end-of-project evaluations. The overall project evaluation plan includes the

following:

(1) Annual Evaluation

An annual review will be conducted jointly by the GOL, USAID/Liberia, and the contractor. The GOL will establish a project review committee composed of professional members of the Ministries of Education and Planning, EWI staff, US contract team members, the USAID/Liberia EHR officer, and representatives of Liberian industries. To the extent possible the committee should include members of the original project design team. The Minister of Education or his designate will chair the committee and will organize, schedule, and provide advance notice and planning for the annual review sessions. The life-of-project work plan will provide basic criteria for evaluating project problems and progress.

(2) Mid-Project Evaluation

Beginning in September 1981 the GOL and AID will conduct a thorough assessment of all project activities. While the date for this mid-project evaluation occurs slightly past the mid-point in project implementation, this particular time was selected due to the following reasons:

- a. The full 3-year curriculum will have been introduced, enabling sufficient experience for initial evaluation;
- b. Long-term training for the 4 department heads will be completed;
- c. The US curriculum and guidance specialists will be completing their tours of duty;
- d. Long-term training for assistant department heads will be in progress but with sufficient time to make necessary adjustments in training if required, and
- e. The first class of students in the new 3-year program will be nearing graduation.

Because of the above factors, the GOL and USAID/Liberia will expand

the project review committee to include additional representatives of the GOL ministries, members of industry, and professional vocational educators in Liberia, along with top-level vocational training specialists from the international community as needed. The purpose of this mid-project evaluation will be to identify and assess major problems and accomplishments for use in re-directing project activities, if needed, during the remaining period of the project.

### (3) End-of-Project Evaluation

This evaluation will be conducted in a similar fashion to the mid-project evaluation; however, this terminal evaluation will enable a more complete assessment of all project activities and sub-systems. At this point sufficient data and experience will be available to permit specific generalizations about the content, duration, and specific application of the new 3-year curriculum at EWI (the 3rd group of students entering the new program will be nearing graduation). Feedback from two graduating classes will be possible. The Instructional Materials Center, the school farm, and other student services, along with the teacher training program, will be fully operational.

Based upon positive results, many of the project elements may be replicable to specific vocational training activities in Liberia and other countries in West Africa. Furthermore, effective results from the performance of teachers and students utilizing the modular organization of instructional materials could prove beneficial for wider application in the Liberian school system.

### 4. E. Project Personnel

The project staffing pattern included at the end of this section identifies US and GOL project personnel, and the project organization diagram identifies the line and functional relationships of these personnel.

It is important to note that Liberian project personnel are fully responsible for all project activities from the beginning and throughout the duration of the project. US contract personnel will serve as co-workers with Liberian personnel and will perform the specified tasks, responsibilities, and services in a collaborative fashion.

The following is a description of the tasks and responsibilities of US and GOL project personnel, including the identification of training and experience required to accomplish these tasks.

(1) US Contract Personnel

US contract specialists will furnish expertise that is either not available or insufficiently available in the GOL to meet project requirements.

a. Technical Team Leader (Chief of Party)

A 3-year position that requires a minimum of 10 years recent experience in industrial and/or vocational school administration with successful service as a principal or department head of a technical college or vocational secondary school. Work experience in a trade or industrial activity which is relevant to at least one of the vocational specialties at BWI is highly desirable. Successful L.D.C. experience is extremely important. This technical team leader will serve as the Chief of Party with direct responsibilities to the GOL and AID in carrying out the terms of the contract. This senior specialist will assist the principal and vice-principal in the planning, administration, and evaluation of all BWI programs and activities.

b. Curriculum Coordinator

A 5-year position requiring a minimum of 8 years experience in the development of curricula and instructional materials for one or more vocational/technical trade specialties provided at BWI. Prior experience as a vocational teacher is considered essential, and L.D.C. experience as a vocational teacher trainer is deemed highly desirable. This person will assist

the ~~BWI~~ curriculum coordinator in the establishment of a curriculum model and in the preparation of modules of instruction for each trade specialty. They will also assume prime responsibility for the design, preparation, production, distribution, and continuous revision of all instructional materials.

c. Guidance Counsellor

A 2-year position requiring extensive training in the area of psychological testing and vocational counselling with a minimum of 5 years experience in a technical college or vocational high school, serving in the general area of vocational counselling. This specialist, together with the Liberian guidance counsellor, will assume primary responsibility for the development of student recruitment programs, entrance tests, admission policies, and prepare public information materials that explain the role and function of BWI. Programs will be developed for briefing and debriefing student interns, graduates, faculty members, administrators, industrial representatives, GOL officials, in an effort to facilitate an effective two-way flow of information basic to BWI program improvement.

d. Mechanical Specialist

A 4-year position which requires 10 years combined experience in industry and vocational teaching in one or more of the mechanical trade specialities offered at BWI. Some relevant L.D.C. experience is important. This specialist will serve as a counterpart to the Liberian mechanical department head and will assist in the following general departmental responsibilities:

- Design and test instruments for the evaluation of departmental instructional staff
- Evaluate staff qualifications based on tests and observation
- Identify a training program for each instructor in accordance with particular needs

- Assist in the development of curricula and instructional materials for all mechanical vocational specialties
- Identify equipment needed for the instructional program
- Assist in the development of a system for procurement, installation, maintenance, and inventory of all equipment and expendable supplies
- Serve as a member of the Industry Liaison Committee
- Assist in the design and implementation of the internship program
- .. Assist with the guidance and counselling program for students in the department
- .. Assist with classroom instruction and demonstration teaching up to 6-8 hours per week

In addition to the above general responsibilities, this specialist will be required to assist the department head in the supervision of 25 instructors in the mechanical department, including responsibilities for the instruction of up to 360 students. The department will offer vocational specialties in auto mechanics, machine shop, and diesel mechanics. This person and his Liberian associate will be responsible for working with two or more foreign instructors provided by the German Government.

e. Building Construction Specialist

A 4-year position with requirements in training and experience along with general duties and responsibilities similar to that described for the Mechanical Specialist above.

This specialist will assist the department head in the supervision of 29 teachers and 570 students in the department who are involved in vocational training programs in carpentry, cabinetmaking, drafting, plumbing, and masonry. Also, assistance in the development of a maintenance program for all buildings and facilities on the campus will be required.

f. Electrical/Electronics Specialist

A 4-year position similar to that for Mechanical Specialist

described above, with specific duties in assisting the head of this department in the supervision of 17 teachers and 267 students engaged in training programs in electricity and electronics, including radio/TV.

g. Agricultural Education Specialist

A 4-year position similar to Mechanical Specialist described above with specific responsibilities required for assisting the department head in the supervision of 11 teachers and 199 students engaged in farm management and food processing specialties. This person will assist the department head in specific responsibilities in the department for developing and implementing plans for the school farm and establishing a new training program for food processing, including the actual production, harvesting, and processing of produce from the school farm for student consumption in the school cafeteria.

h. Vocational Teacher Educator

A 2-year position with a minimum of 3 years combined teaching and teacher training activities in a technical college or vocational secondary school. An earned master's degree is essential, but a doctorate is preferred. This specialist will be assigned to the Vocational and Technical Education Department of the Ministry of Education, and will serve in a counterpart relationship to the head of this MOE department. Principal duties will consist of working with MOE personnel involved in vocational training activities in an effort to develop a coordinated program for training vocational teachers. Effective linkages with EWC, the multilateral high schools, the new technical college at Harper, and the proposed vocational training center at Monrovia, and other government and private programs in vocational training will be required. It is essential that this specialist possess the professional and personal qualities and experiences for working with educational planners, technical personnel, and policy makers at the national level.

**Relevant L.D.C. experience is essential.**

**(2) GOL Project Personnel**

Counterpart relationships for US technical team specialists will be based on the following GOL project personnel and positions:

BWI Principal

Curriculum Coordinator

Guidance Counsellor

Mechanical Department Head

Building Construction Department Head

Electrical Department Head

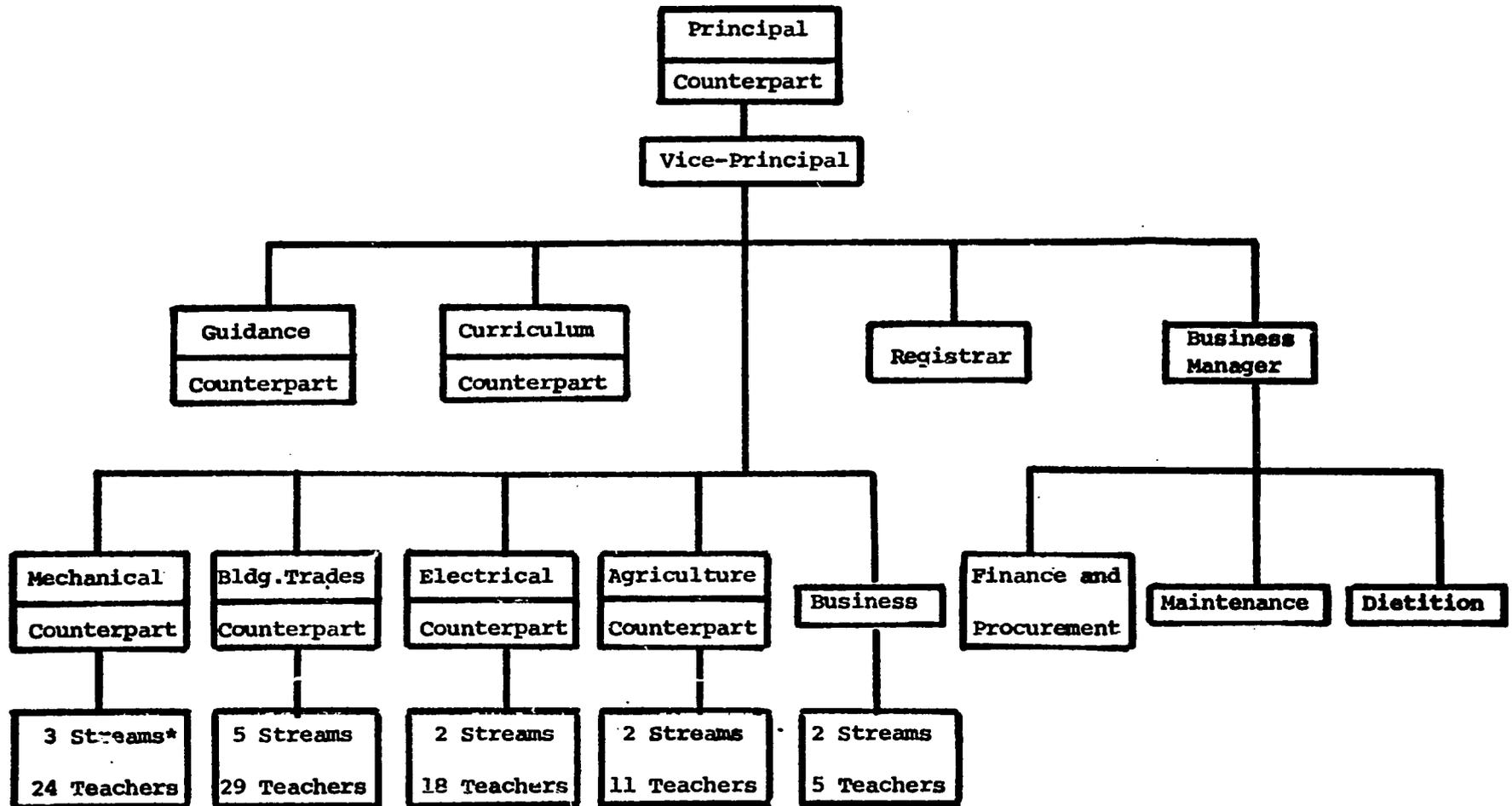
Agriculture Department Head

MOE Director of Vocational/Technical Education

In addition to the above, GOL project personnel will comprise the entire administrative, instructional, and support staff employed at BWI.

PROJECT STAFFING

(Liberian and U.S. Counterparts)



\* Vocational Trades

**PROJECT STAFFING  
U. S. and Liberian**

Position	CY 1978	1979	1980	1981	1982	1983
1. Principal* Technical Team Leader (COP) Vice Principal*	xxx	-----	-----	-----	-----	-----
2. Curriculum Coordinator* U.S. Counterpart	-----	-----	-----	-----	-----	-----
3. Guidance Counsellor* U.S. Counterpart	xxx	-----	-----	-----	-----	-----
4. Department Head* (Mechanical) U.S. Counterpart Asst. Department Head*	-----	-----	-----	-----	-----	-----
5. Department Head* (Bldg. Const.) U.S. Counterpart Asst. Department Head*	-----	-----	-----	-----	-----	-----
6. Department Head* (Electrical) U.S. Counterpart Asst. Department Head*	-----	-----	-----	-----	-----	-----
7. Department Head* (Agriculture) U. S. Counterpart Asst. Department Head*	-----	-----	-----	-----	-----	-----
8. Teacher Trainer* (MOE) U.S. Counterpart	xxx	-----	-----	-----	-----	-----

----- Training in U. S. or 3rd Country

===== U.S. and Liberian Staff on Post

xxx Short Term Consultants (varies from 1 to 8 MOW each)

Total of 20 short-term participant training programs of less than 3 months each not shown.

\* Liberian Staff

ANNEXES

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**ANNEX A**

**LOGICAL FRAMEWORK MATRIX**

**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

Master Log Frame

Project Title Vocational Training #669-0131

Life of Project:  
From FY 78 to FY 83  
Total U.S. Funding \$5.9  
Date Prepared: May 8, 1978

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><b>GOAL</b> Adequate body of trained manpower with relevant knowledge/skills to support the nation's social, economic development.</p>	<ol style="list-style-type: none"> <li>1. Manpower survey statistics evidence increased Liberian employment.</li> <li>2. Foreign exchange outflow for expatriate technicians covered or stabilized.</li> <li>3. Growth continues unabated.</li> </ol>	<ol style="list-style-type: none"> <li>1. MOPEA statistics</li> <li>2. GNP figures</li> <li>3. GNP figures</li> </ol>	<ol style="list-style-type: none"> <li>1. Trained manpower requirement projections reliable.</li> <li>2. GOL EHR priorities will remain as stated.</li> <li>3. GOL actively pursues policy of Liberianization</li> </ol>
<p><b>PURPOSE</b> To restructure the secondary vocational program at BVI to produce employable graduates at affordable costs for identified middle-level manpower skill requirements.</p>	<p><b>EOBS</b></p> <ol style="list-style-type: none"> <li>1. BVI producing 500 graduates per year who qualify for skilled job level entry.</li> <li>2. Links with industry enabling:               <ol style="list-style-type: none"> <li>(a) updated job profiles;</li> <li>(b) relevant curriculum revisions;</li> <li>(c) placement at least 90% of graduates in area of training.</li> </ol> </li> <li>3. Cost to produce a BVI graduate will not increase..               <p>** (Est \$3,160 individual 4-yr program; est \$3,000 individual 3-yr program)</p> </li> <li>4. Upgraded staff maintaining 30 contact hours per week (increased from 15).</li> <li>5. Income generated from school services and activities applied to or defraying BVI operating costs.</li> </ol>	<ol style="list-style-type: none"> <li>1. BVI records, job profiles</li> <li>2. Discussions with industry, employment records</li> <li>3. BVI budget</li> <li>4. Staff schedule</li> <li>5. BVI budget</li> </ol>	<ol style="list-style-type: none"> <li>1. Students with vocational aptitudes will be attracted to and will complete new 3-year job-oriented program.</li> <li>2. Industry will cooperate and support system (i.e., liaison with BVI).</li> <li>3. Inflation rates remain constant.</li> <li>4. Industry inducements will not cause staff attrition rates higher than supply.</li> <li>5. Available market for BVI goods and services.</li> </ol>

OUTPUTS

1. Trained Staff
  
2. Adequate Facilities
  
3. Job-oriented 3-year Curriculum Curriculum and Instructional Program
  
4. Supporting Systems Developed

MAGNITUDE OF OUTPUTS

1. Administrative and instructional staff for 4 vocational departments comprising 12 vocational specialties.
  
2. Housing, classrooms, shop and equipment to support 1,500 students.
  
3. Twelve (12) instructional packages developed reflecting 60% practical and 40% academic curriculum.
  - (a) Mechanical (3)
  - (b) Building Trades (5)
  - (c) Electrical (2)
  - (d) Agricultural (2)
  - (e) Business Education\*
  
4. Ten functioning systems:
  - (a) Firm student admissions policy
  - (b) Student guidance and counseling service
  - (c) Student internship program
  - (d) Job placement and follow-up of graduates
  - (e) Faculty evaluation and certification standards
  - (f) Faculty liaison with industry
  - (g) Library and instructional resource center
  - (h) Procurement and maintenance system
  - (i) Income generating school services
  - (j) Vocational teacher training program

\*Only limited U.S. assistance (See Part 2.B. Outputs)

1. Approved staffing pattern and BWI records
  
2. Master plan, equipment lists, schedules, and on-site observation
  
3. Curriculum prospectus, school catalogue
  
4. BWI and MOE records, industry interviews, on-site observation

1. MOE will implement and support the restructured program.
  
2. GOE will provide additional dormitories and staff houses
  
3. BWI job profiles as designed and periodically updated reflect actual graduate employment opportunities.
  
4. Industry continues to cooperate with intern program, job placement, and faculty liaison (#c, d, f)

5. Graduates Produced

5. Graduates Annually:			
	Existing	New	Total
	4-yr.	3-yr.	
Project Year 1	210	-	210
Project Year 2	371	-	371
Project Year 3	378	198	576
Project Year 4	-	371	371
Project Year 5	-	451	451
<b>TOTALS</b>	<b>959</b>	<b>1,020</b>	<b>1,979</b>
<b>TOTALS</b>			

5. MOE annual reports and SWI records

5. Junior/secondary schools will produce qualified candidates for SWI program

**INPUTS**

	5 YR. PERIOD* (\$million)	
(A) AID Contributions:		
Personnel (384 MOU)	\$3.881	
Participants (242 MOU)	.342	
Commodities	.702	
Other Costs	.145	
Contingency/Inflation	.685	
<b>Total AID</b>		\$5.954
(E) Peace Corps Contributions (120 MOU)		.100
(C) GOL Contributions: Personnel and Operating		
Costs	\$6.891	
Commodities	.030	
Construction	1.015	
<b>TOTAL GOL</b>		7.936
(D) Other Donor Contributions (Est):		
	\$ .914	
<b>Total Other Donor</b>		.914
<b>TOTAL PROJECT COSTS</b>		\$14.904

\*See Illustrative Budget Tables, Part 3 for breakdown

**ANNEX B**

**IMPLEMENTATION PLANNING**

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DETAILED IMPLEMENTATION PLAN/CPI DESCRIPTION

<u>CPI</u>	<u>TIME</u>	<u>DESCRIPTION</u>	<u>ACTION AGENT</u>
	0*	Submission of PP to AID/W	
1	1	Approval of PP by AID/W	(AID/W)
2	2	Signing of Project Agreement	(USAID-GOL)
	2	Submission of PIPA	
	3	Procurement of project vehicles by USAID	
	4	Contractor selected	
	6	Contractor advance TDY Adm. Officer arrives	
3	7	Initial members of team arrive in Liberia	(AID/W-USAID)
	7	In-country training for PCV instructors begins	
4	8	Short-term consultants arrive to prepare provisional first-year curriculum	(Contractor-USAID)
	8	Initial commodity procurement begins	
	8	Evaluation of BWI instructional staff completed	
	8	BWI Admissions Committee established	
	9	Second group of long-term US experts arrive	
	9	Recruitment of new BWI staff (professional and administrative) completed	
5	9	New admissions policies established	(GOL-BWI)
	9	Four long-term participants identified	
6	10	Provisional curriculum for first-year new program completed	
7	10	Admit up to 220 students for new first-year program	(BWI-Contractor)
	11	Begin counselling program for new students	
8	12	Draft Life of Project Work Plan completed by contractor	(Contractor)
9	12	Industrial Liaison Committee established	(BWI-Contractor)

\*0 Month = May 1978

<u>CPI</u>	<u>TIME</u>	<u>DESCRIPTION</u>	<u>ACTION AGENT</u>
	13	Complete plans for internship program for seniors	
10	13	Four long-term participants depart	(BWI-USAID-Contractor)
	14	Draft second-year curriculum completed	
	14	BWI principal departs for short-term training	
	14	BWI student recruitment plan finalized	
	15	Initial commodity shipment arrives	
	16	Plan for BWI school farm completed	
11	16	Instructional Materials Center established	(BWI-Contractor)
	16	Begin student recruitment visits to junior high schools	
	17	Second commodity procurement initiated	
	18	Employment opportunities identified for graduating seniors	
	19	Graduate follow-up system installed	
	19	Revision of first-year curriculum completed	
12	19	Second-year curriculum completed	(BWI-Contractor)
13	19	Water/sewerage systems upgraded	(GOL-BWI)
	20	BWI occupational profiles reviewed	
14	21	Agricultural Department facilities renovation completed	(BWI-GOL-Contractor)
15	21	Renovation of dormitories, clinic, kitchen, auditorium, and library completed	(BWI-GOL-Contractor)
	21	Recruitment of new BWI staff completed	
	22	Second commodity shipment arrives	
	22	Vocational teacher training specialist arrives	
16	22	Admit up to 410 students for first-year new program	(BWI-Contractor)
	23	Short-term observation trip for 5 participants arranged	

<u>CPI</u>	<u>TIME</u>	<u>DESCRIPTION</u>	<u>ACTION AGENT</u>
	23	Begin counselling of new students	
	26	Draft of third-year curriculum completed	
	26	Vice-Principal departs for short-term training	
	26	Five short-term participants depart for observation/study program	
	26	Senior students enter internship	
	27	Four long-term participants identified	
	29	Third commodity procurement initiated	
	29	Begin student recruitment visits to junior high schools	
17	30	Plans approved for income-producing school services	(BWI-Contractor)
	30	Employment opportunities identified for graduating seniors	
	31	Revision of second-year curriculum completed	
18	31	Third-year curriculum completed	(BWI-Contractor)
	32	Review/revise occupational profiles	
19	32	Four long-term participants depart	(BWI-USAID-Contractor)
20	33	Business education building renovation completed	(BWI-GOL-Contractor)
21	33	Electrical trades department renovation completed	(BWI-GOL-Contractor)
22	33	Recruitment of new BWI staff completed	(Contractor)
	33	Four long-term participants return	
23	34	Admit up to 500 new students for first-year new program	(BWI-Contractor)
	34	Third commodity shipment arrives	
	34	Two long-term participants selected	
	35	Short-term observation trip for 10 participants arranged	

<u>CPI</u>	<u>TIME</u>	<u>DESCRIPTION</u>	<u>ACTION AGENT</u>
	35	Begin student counselling for new students	
	38	Senior students and third-year students enter internship	
	38	Ten short-term participants depart	
24	40	Interim evaluation completed	(GOL-USAID-BWI)
25	40	Two longterm participants depart	(BWI-USAID-Contractor)
	41	Begin student recruitment visits to junior high schools	
	41	Fourth commodity procurement initiated	
	42	Employment opportunities identified for graduating seniors	
26	43	Revision of third-year curriculum completed	
	43	First class of students in 3-year program graduate	(BWI-Contractor)
	43	Final class under 4-year program graduate	
	44	Review and revise BWI occupational profiles	
	45	Recruitment of new BWI staff completed	
27	45	New dormitory and staff housing construction compcompleted	(BWI-GOL)
28	46	Admit up to 520 students for first-year new program (transition to 3-year program now completed)	(BWI-Contractor)
	46	Third commodity shipment arrives	
	47	Begin counselling of new students	
	47	Short-term observation trip for 5 participants arranged	
	50	Third-year students enter internship	
	50	Five short-term participants depart	
29	52	Four long-term participants return	(Contractor)

<u>CPI</u>	<u>TIME</u>	<u>DESCRIPTION</u>	<u>ACTION AGENT</u>
	53	Begin student recruitment visits to junior high schools	
30	55	Employment opportunities identified for graduating third-year students	
	55	Second class of students in 3-year program graduate	(EWI-Contractor)
	56	Review and revise EWI occupational profiles	
31	57	Recruitment of new EWI staff completed	
	57	Four US long-term experts depart	
32	58	Admit up to 540 new students	
	58	Fourth commodity shipment arrives	
	59	Begin counselling for new students	
33	60	Last 2 long-term participants return	(Contractor)
	62	Third-year students enter internship	
	63	Final evaluation initiated	
34	64	Final evaluation completed	
	65	Begin student recruitment visits to junior high schools	
	66	Employment opportunities identified for graduating third-year students	
	67	Third class of students in 3-year program graduate	
	67	Last long-term US expert departs	
35	67	PACD	

CRITICAL PERFORMANCE INDICATORS

COUNTRY:	Project No.:	Project Title:	Date:
Liberia	669-0131	Vocational Training	5/17/78

**Project Purpose**

To restructure the secondary and vocational program at BWI to produce employable graduates at affordable costs for identified middle-level manpower skill requirements.

**CPI DESCRIPTION**

- |   |   |
|---|---|
| 1. Approval of PP by AID/W  | 18. Third-year curriculum completed   |
| 2. Signing of Project Agreement   | 19. Four long-term participants depart  |
| 3. Initial members of team arrive in Liberia                                      | 20. Business education building renovation completed  |
| 4. Short-term consultants arrive to prepare provisional first-year curriculum     | 21. Electrical trades department renovation completed   |
| 5. New admissions policies established  | 22. Recruitment of new BWI staff completed  |
| 6. Provisional curriculum for first-year new program completed                    | 23. Admit up to 500 new students for first-year new program   |
| 7. Admit up to 220 students for new first-year program                            | 24. Interim evaluation completed  |
| 8. Draft Life of Project Work Plan completed by contractor                        | 25. Two long-term participants depart   |
| 9. Industrial Liaison Committee established                                       | 26. Revision of third-year curriculum completed   |
| 10. Four long-term participants depart  | 27. New dormitory and staff housing construction completed  |
| 11. Instructional Materials Center Established                                    | 28. Admit up to 520 students for first-year new program (transition to 3-year program now complete) |
| 12. Second-year curriculum completed  | 29. Four long-term participants return  |
| 13. Water/sewerage systems upgraded   | 30. Employment opportunities identified for graduating third-year students                          |
| 14. Agricultural Department facilities renovation completed                       | 31. Recruitment of new BWI staff completed  |
| 15. Renovation of dormitories, clinic, kitchen, auditorium, and library completed | 32. Admit up to 540 new students  |
| 16. Admit up to 410 students for first-year new program                           | 33. Last 2 long-term participants return  |
| 17. Plans approved for income-producing school services                           | 34. Final evaluation completed  |
|   | 35. PACD  |

CRITICAL PERFORMANCE INDICATOR NETWORK

COUNTRY: Liberia PROJECT NO. 669-0131 PROJECT TITLE: Vocational Training

	0	12	24	36	48	60
<u>Administrative</u>	(1) PF approved (2) Proag signed	(3) Initial members of team arrive (4) Short term consultants arrive to prepare provisional 1st year curriculum (8) Draft Life-of-Project Work Plan completed by contractor (10) Long term participants depart		(19) Long term participants depart	(24) Interim evaluation completed  (25) Long term participants return	(29) Long term participants return  (34) Final evaluation completed  (35) PACD  (33) Long term participants return
<u>Programmatic</u>		(5) New admissions policies established  (7) Admit up to 220 new students  (9) Industrial Liaison Committee established  (11) Instructional Materials Center established  (6) 1st yr provisional curriculum completed  (12) 2nd yr curriculum completed  (13) Water/sewerage system upgraded  (14) Ag. dept. facilities renovation completed  (15) Renovation of dorms, clinic, kitchen, auditorium and library completed	(16) Admit up to 410 new students  (17) Plans approved for income-producing services  (18) 3rd yr curriculum completed	(22) Recruitment of BWI staff completed  (23) Admit up to 500 new students	(28) Admit up to 520 new students  (26) Revision of 3rd yr curriculum completed	(30) Graduate employment identified (31) Recruitment of BWI staff completed  (32) Admit up to 540 new students

DEPARTMENT	PROJECT YEAR 1 (FY 1979/80)								BWI Projected Enrollment and Teacher Requirements PROJECT YEAR 2 (FY 1980/81)								
	STUDENTS				Total	Grads	TEACHERS		STUDENTS				Total	Grads	TEACHERS		
	4 Year Program	New	Total	Grads			Shop	Reltd.	4 Yr. Prog.	New	Total	Grads			Shop	Reltd.	
<u>Mechanical</u>																	
Automechanics <sup>1</sup>	AM	30	39	30	20	119	30	5	2.5	27	35	40	19	121	35	5	2.5
Machine Shop <sup>1</sup>	MAC	23	37	17	20	97	17	3	2.5	21	33	20	19	93	33	3	2.5
Diesel <sup>1</sup>	DIE	-	-	-	20	-	-	-	-	-	-	20	-	20	-	2	1
SUBTOTAL MECHANICAL		53	76	47	40	216	47	8	5	48	68	80	38	234	68	10	6
<u>Building Trades</u>																	
Carpentry <sup>1</sup>	CAR	39	29	18	15	101	18	3	2	35	26	30	15	106	26	3	2
Cabinetmaking <sup>1</sup>	CAB	-	-	-	15	15	-	1	.5	-	-	30	15	45	-	2	1
Drafting <sup>3</sup>	DR	32	29	18	30	109	18	3	2	28	27	30	27	112	27	3	2
Plumbing <sup>1</sup>	PL	105	38	14	20	177	14	4	3	95	34	40	19	188	34	4	3
Masonry <sup>1</sup>	MAS	-	-	-	20	20	-	1	.5	-	-	40	19	59	-	3	2
SUBTOTAL BUILDING		176	96	50	100	422	50	12	8	158	87	170	95	510	87	13	10
<u>Electrical</u>																	
Electricity <sup>1</sup>	EL	29	26	10	20	85	10	4	2	27	24	40	19	110	24	5	4.5
Electronics <sup>1</sup>	EO	36	54	9	20	119	9	4	3	32	48	20	19	119	48	4	2.5
SUBTOTAL ELECTRICAL		65	80	19	40	204	19	8	5	59	72	60	38	229	72	9	7
<u>Agriculture</u>																	
Existing Ag. Students		81	58	29	-	168	29	3	2	73	52	-	-	125	52	2.5	2
Farm Management <sup>2</sup>	FM	-	-	-	20	20	-	1	1	-	-	50	19	69	-	1.5	1
Food Processing <sup>2</sup>	FP	-	-	-	-	-	-	-	-	-	-	20	-	20	-	1	1
SUBTOTAL AGRICULTURE		81	58	29	20	188	29	4	3	73	52	70	19	214	52	5	4
<u>Business Education</u>																	
Secretarial Science <sup>3</sup>	SEC	26	29	17	10	82	17	2	1.5	23	27	15	10	75	27	2	1.5
Bookkeeping/Management <sup>3</sup>	MAN	65	73	48	10	196	48	5	2.5	59	65	15	9	148	65	4	2.5
SUBTOTAL BUSINESS		91	102	65	20	278	65	7	4	82	92	30	19	223	92	6	4
<b>TOTALS</b>		<b>466</b>	<b>412</b>	<b>210</b>	<b>220</b>	<b>1,308</b>	<b>210</b>	<b>39</b>	<b>25</b>	<b>420</b>	<b>371</b>	<b>410</b>	<b>209</b>	<b>1,410</b>	<b>371</b>	<b>45</b>	<b>31</b>

- 1 20 students/class
- 2 25 students/class
- 3 30 students/class

ASSUMPTIONS: 10% Dropout Rate Per Year in 4-Yr Program  
5% Dropout Rate Per Year in New Program



ANNEX C

STATUTORY CHECKLISTS

PROJECT CHECKLIST

ANNEX C  
Section I

Listed below are, first, statutory criteria applicable generally to projects with FAA funds, and then project criteria applicable to individual fund sources; Development Assistance (with a sub-category for criteria applicable only to loans); and Security Supporting Assistance funds.

A. GENERAL CRITERIA FOR PROJECT.

1. App. Unnumbered; FAA Sec. 653 (b)

(a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project;

A Congressional Notification will be sent.

(b) Is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure plus 10%)?

Yes.

2. FAA Sec. 611 (a) (1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U. S. of the assistance?

Yes.

3. FAA Sec. 611 (a) (2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

NA

4. FAA Sec. 611 (b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept. 5, 1973 (replaces Memorandum of May 15, 1962; see Fed. Register, Vol 38, No. 174, Part III, Sept. 10, 1973)?

NA

5. FAA Sec. 611 (e). If project is capital assistance (e.g., construction), and all U. S. assistance for it will exceed \$1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project? NA
6. FAA Sec. 209, 619. Is project susceptible of execution as part of regional or multi-lateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. If assistance is for newly independent country, is it furnished through multi-lateral organizations or plans to the maximum extent appropriate? No.
7. FAA Sec. 601 (a); (and Sec. 201 (f) for development loans. Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. NA
8. FAA Sec. 601 (b). Information and conclusion on how project will encourage U. S. private trade and investment abroad and encourage private U. S. participation in foreign assistance programs (including use of private trade channels and the services of U. S. private enterprise). The project will provide U. S. technical assistance and some commodities. All of these inputs will be obtained in the U. S.
9. FAA Sec. 612 (b); Sec. 636 (h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U. S. are utilized to meet the cost of contractual and other services. GOL contributions to this activity will be assured through normal budget allocations.

10. FAA Sec. 612 (d). Does the U. S. own excess foreign currency and, if so, what arrangements have been made for its release? NA

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(c); Sec. 111; Sec. 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions?

NA

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available? (include only applicable paragraph -- e.g., a, b, etc.--which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source.)

NA

(1) (103) for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers;

NA

(2) (104) for population planning or health; if so, extent to which activity extends low-cost, integrated delivery systems to provide health and family planning services, especially to rural areas and poor;

NA

(3) (105) for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development;

This project supports the development of relevant... vocational education that will produce employable graduates, the majority of whom come from the ranks of the rural poor.

(4) (106) for technical assistance, energy, research, reconstruction and selected development problems; if so, extent activity is:

NA

(a) technical cooperation and development, especially with U. S. private and voluntary, or regional and international development, organizations;

NA

(b) to help alleviate energy problem;

NA

(c) research into, and evaluation of, economic development processes and techniques;

NA

(d) reconstruction after natural or manmade disaster;

NA

(e) for special development problem, and to enable proper utilization of earlier U. S. infrastructure, etc., assistance;

NA

(f) for programs of urban development, especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development.

NA

98  
(5) (107) by grants for coordinated private effort to develop and disseminate intermediate technologies appropriate for developing countries.

NA

c. FAA Sec. 110(a); Sec. 208(e). Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?

Yes. Host country contributions defined within Project Agreement includes a minimum 25% contribution.

d. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing?

NA

e. FAA Sec. 207; Sec. 113. Extent to which assistance reflects appropriate emphasis on; (1) encouraging development of democratic, economic, political, and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained worker-power in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient country's national economy.

This project will increase the output capability of the Booker Washington Institute (BWI) from 200 to 500 graduates annually, enabling an increased supply of skilled middle-level workers in the vocational trade areas. Both male and female students and faculty will participate in this project on an equal basis.

f. FAA Sec. 281 (b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.

Project based on Government of Liberia policy of providing vocational education to increased numbers of school age children. The attempt is to extend low-cost, effective, and efficient education to all students who desire to become productive citizens.

g. FAA Sec. 201 (b) (2)-(4) and - (8); Sec. 201 (e); Sec. 211 (a) (1) - (3) and - (8). Does the activity give reasonable promise of contributing to the development: of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?

Yes. The activity gives reasonable promise of contributing to the development of educational systems directed toward social progress. The Project Paper provides the relevant information.

h. FAA Sec. 201 (b) (6); Sec. 211 (a) (5), (6). Information and conclusion on possible effects of the assistance on U. S. economy, with special reference to areas of substantial labor surplus, and extent to which U. S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U. S. balance of payments position.

No adverse impact on the U. S. economy.

7. Development Assistance Project Criteria (Loans only)

a. FAA Sec. 201 (b) (1). Information and conclusion on availability of financing from other free-world sources,

NA

- b. FAA Sec. 201(b)(2); 201(d). Information and conclusion on (1) capacity of the country to repay the loan, including reasonableness of repayment prospects, and (2) reasonableness and legality (under laws of country and U. S.) of lending and relending terms of the loan. NA
- c. FAA Sec. 201(e). If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds \$100,000, has country submitted to AID an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound matter? NA
- d. FAA Sec. 201(f). Does project paper describe how project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development? Yes.
- e. FAA Sec. 202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources? NA
- f. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete in the U. S. with U. S. enterprise, is there an agreement by the recipient country to prevent export to the U. S. of more than 20% of the enterprise's annual production during the life of the loan? NA

3. Project Criteria Solely for Security Supporting Assistance

FAA Sec. 531. How will this assistance support/promote economic or political stability?

NA

4. Additional Criteria for Alliance for Progress

(Note: Alliance for Progress projects should add the following two items to a project checklist.)

NA

a. FAA Sec. 251(b)(1),-(8). Does assistance take into account principles of the Act of Bogota and the Charter of Punta del Este; and to what extent will the activity contribute to the economic or political integration of Latin America?

b. FAA Sec. 251(b)(8); 251(h). For loans, has there been taken into account the effort made by recipient nation to repatriate capital invested in other countries by their own citizens? Is loan consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress (now "CEPCIES", the Permanent Executive Committee of the OAS) in its annual review of national development activities?

STANDARD ITEM CHECKLIST

Listed below are statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by exclusion (as where certain uses of funds are permitted, but other uses not).

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U. S. small business to participate equitably in the furnishing of goods and services financed? Yes.
  
2. FAA Sec. 604(a). Will all commodity procurement be from the U. S. except as otherwise determined by the President or under delegation from him? Yes.
  
3. FAA Sec. 604(d). If the cooperating country discriminates against U. S. marine insurance companies, will agreement require that marine insurance be placed in the U. S. on commodities financed? Yes.
  
4. FAA Sec. 604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? NA
  
5. FAA Sec. 608(a). Will U. S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items? Yes.

6. FAA Sec. 901 (b). (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U. S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. NA

7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as goods and professional and other services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs. Yes.

8. International Air Transport. Fair Competitive Practices Act, 1974

If air transportation of persons or property is financed on grant basis, will provision be made that U.S. -flag carriers will be utilized to the extent such service is available? Yes.

B. Construction

1. FAA Sec. 601 (d). If a capital (e.g., construction) project, are engineering and professional services of the U. S. firm and their affiliates to be used to the maximum extent consistent with the national interest? NA

2. FAA Sec. 611 (c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? NA

3. FAA Sec. 620 (k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U. S. not exceed \$100 million? NA

C. Other Restrictions

1. FAA Sec. 201(d). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? NA
2. FAA Sec. 301 (d). If fund is established solely by U. S. contributions and administered by an international organization, does Comptroller General have audit rights? NA
3. FAA Sec. 620 (h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the U. S.? Yes.
4. FAA Sec. 636 (i). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U. S. or guaranty of such transaction? Yes.
5. Will arrangements preclude use of financing:
- a. FAA Sec. 114. to pay for performance of abortions or to motivate or coerce persons to practice abortions? NA
- b. FAA Sec. 620 (g). to compensate owners for expropriated nationalized property? NA

- c. FAA Sec. 660. to finance police training or other law enforcement assistance, except for narcotics programs? NA
- d. FAA Sec. 662. for CIA activities Yes.
- e. App. Sec. 103. to pay pensions, etc., for military personnel? Yes.
- f. App. Sec. 106. to pay U. N. assessments? Yes.
- g. App. Sec. 107. to carry out provisions of FAA Sections 209 (d) and 251 (h)? (transfer to multilateral organization for lending). Yes.
- h. App. Sec. 501. to be used for publicity or propaganda purposes within U. S. not authorized by Congress? Yes.

ANNEX D

**INITIAL ENVIRONMENTAL EXAMINATION**

Initial Environmental Examination

Project Location: Booker Washington Institute, Kakata, Liberia

Project Title : Vocational Training (#669-0131)

Funding : FY 1978 \$800,000

Life of Project : \$5,954,000

IEE Prepared By :

Date: May 13, 1978

NTumavick, Program Evaluation Officer  
BGuillot, Environmental Assessment Officer

Environmental Action Recommended:

The project will not have a significant effect on the environment and an Environmental Assessment is not required.

Concurrence:

Edward E. Anderson  
Harvey E. Gutman  
Acting Director

Date:

5/12/78

Assistant Administrator's/Director's Decision

Date:

\_\_\_\_\_

\_\_\_\_\_

## I Examination of Nature, Scope, and Magnitude of Environmental Impacts

### (A) Description of Project

The purpose of this project is to restructure the secondary vocational program at BWI to produce employable graduates at affordable costs for identified middle-level manpower skill requirements.

The project utilizes standard technologies in vocational education for upgrading the staff, curriculum, facilities, and supporting systems at BWI. The curriculum structure will be telescoped from a 4-year to a 3-year program with tested instructional packages in 12-15 vocational specialties covering 4 trade areas (i.e., mechanical, building construction, electrical, and agriculture).

The most outstanding accomplishment by the end of the project will be the capability to produce 500 graduates annually, 90% of whom will qualify for immediate employment in the jobs for which they were trained and at the level of skilled workers. Recurrent costs for producing a BWI graduate under the approved 3-year program will be maintained at approximately the same level as that of the current 4-year program. Instructional staff will be capable of teaching 30 hours per week as compared to the current level of approximately 15 hours per week. Income generated from the BWI school farm and shops will be used to defray operating costs. Classrooms, shops, equipment, and facilities will be repaired, renovated, and fully utilized. Teachers, staff, and personnel will function within an administrative structure and instructional schedule that makes optimum utilization of time and resources.

The bulk of the USG contribution consists of 32 person years in technical assistance. Twenty-one person years of participant training are also provided to establish local expertise in carrying out the restructured BWI program effectively by project completion. Commodities in the amount of \$702,000 to support the new program are included.

### (B) Identification and evaluation of Environmental Impact

As suggested in the guidelines for preparation of an initial environmental examination, there are certain AID projects which by their general nature ordinarily have little or no impact on the environment. Included in the example of such projects are education and training programs not directly affecting the environment. The proposed "Vocational Training" project falls within this category.

The Mission has given careful consideration to the several categories of possible impact which are listed in the attached "Impact Identification and Evaluation Form" and has drawn the following conclusions with regard to the proposed project:

1. Project implementation deals solely with institutional development activities at BWI. While U. S. commodities will include some materials for the renovation of existing classrooms and workshops, there

will be no environmental impact in the areas of (a) Land Use, (b) Water Quality, (c) Atmospheric, (d) Natural Resources, or (g) Health in that the US portion of the project contains no new physical construction nor any adverse alteration of quality or quantity of the relationship between people and their existing physical surroundings.

2. The project will have little environmental impact in the categories of (e) Cultural and (f) Socio-economic. In terms of the project's purpose and implementation, there are no provisions for introducing alien cultures or dispersing or otherwise adulterating the indigenous culture. Introduction of culturally detrimental or offensive concepts has been avoided by utilizing state-of-the art procedures for vocational training at the secondary level.

Little or possibly moderate environmental impact anticipated is in the area of behavioral patterns within BWI and MOE staff and students. The potential impact, viewed as positive, derives from increasing the competence and job satisfaction of BWI instructors and graduates. The improved effectiveness of graduates will provide government ministries, industries, and other employers in Liberia with increased numbers of skilled Liberian workers to fill the vast manpower gaps required to initiate and sustain rapid social and economic development.

## II Recommendation

The proposed project activities will not have a significant effect on the environment, and it is recommended that no Environmental Assessment or Environmental Impact Statement be required for project approval.

IMPACT IDENTIFICATION AND EVALUATION FORM

<u>Impact Areas and Sub-areas 1/</u>	<u>Impact Identification and Evaluation 2/</u>
<b>A. LAND USE</b>	
1. Changing the character of the land through	
a. Increasing the population	<u>N</u>
b. Extracting natural resources	<u>N</u>
c. Land clearing	<u>N</u>
d. Changing soil character	<u>N</u>
2. Altering natural defenses	<u>N</u>
3. Foreclosing important uses	<u>N</u>
4. Jeopardizing man or his works	<u>N</u>
5. Other factors	
_____	<u>N</u>
<b>B. WATER QUALITY</b>	
1. Physical state of water	<u>N</u>
2. Chemical and biological states	<u>N</u>
3. Ecological balance	<u>N</u>
4. Other factors	
_____	<u>N</u>

1/ See Explanatory Notes for this form.

2/ Use the following symbols: N - No environmental impact  
L - Little environmental impact  
M - Moderate environmental impact  
H - High environmental impact  
U - Unknown environmental impact

IMPACT IDENTIFICATION AND EVALUATION FORM

C. ATMOSPHERIC

- 1. Air additives N
- 2. Air pollution N
- 3. Noise pollution N
- 4. Other factors N
- \_\_\_\_\_ N

D. NATURAL RESOURCES

- 1. Diversion, altered use of water N
- 2. Irreversible, inefficient commitments N
- 3. Other factors N
- \_\_\_\_\_ N

E. CULTURAL

- 1. Altering physical symbols N
- 2. Dilution of cultural traditions N
- 3. Other factors N
- Behavioral changes L

F. ~~SOCIO-ECONOMIC~~

- 1. Changes in economic/employment patterns M
- 2. Changes in population N
- 3. Changes in cultural patterns N
- 4. Other factors N

IMPACT IDENTIFICATION AND EVALUATION FORM

G. HEALTH

- 1. Changing a natural environment N
- 2. Eliminating an ecosystem element N
- 3. Other factors

\_\_\_\_\_ N

H. GENERAL

- 1. International impacts N
- 2. Controversial impacts N
- 3. Larger program impacts N
- 4. Other factors

\_\_\_\_\_ N

I. OTHER POSSIBLE IMPACTS (not listed above)

\_\_\_\_\_ N

**ANNEX I**

**GRANTEE REQUEST FOR ASSISTANCE**



REPUBLIC OF LIBERIA  
 MINISTRY OF PLANNING AND ECONOMIC AFFAIRS

P. O. BOX 9018  
 MONROVIA

ANNEX I

*EDU-HID Proj*

ACTION: PPM  
 INFO: DIR/AD  
 C&R/RF

OFFICE OF THE MINISTER

MPEA-429/F-1.2/'76

March 8, 1976

Mr. Director:

I have the honour to refer to our letter No. MPEA-346/D-7-1.8 of March 3, 1976, acknowledging your letter of January 30, 1976 in which you distributed copies of the Harvard Institute for International Development Team Report entitled: "New Directions for Education and Training in Liberia: Preliminary Survey"

I am pleased to inform you that the agencies of Government concerned with education and training have examined the report and conferred on its findings and recommendations, and their reactions generally suggest that the report is in harmony with the goals and objectives of government on education and training. While we do not agree with certain of the detail statements of the report, the conclusions however are found to be generally acceptable.

This letter will therefore convey the formal approval of the recommendations contained in the report for our further consideration and implementation in the following order of priority:

Priority No. 1

Shift emphasis in vocational/technical education away from formal schooling for high level occupations by:

- a) Improving capacity of present vocational schools to produce graduates at intermediate skill levels;
- b) Developing national apprenticeship system to provide on-the-job training connected with Liberianization program;
- c) Supporting skill training programs run through Sector Ministries;
- d) Developing centers for wayward youth.

Priority No. 2

Raise number and quality of graduates, through improved teacher training and provision of teaching materials:

The Director  
USAID

March 8, 1976

- a) Shorten pre-service teacher training and develop a system to provide in-service training regular for all teachers;
- b) Create school libraries including complete sets of Liberian textbooks, for use by all public school children.

Priority No. 3

Increase supply of agricultural extension, home and community development workers in conjunction with agricultural research and integrated rural development programs and train villagers as model farmers or small equipment operators.

Priority No. 4

Establish a system of non-formal education with the following goals:

- a) Increase agricultural production among small farmers;
- b) Improve health of rural populations;
- c) Increase effectiveness of local development and self-help efforts;
- d) Augment GOL training capacities at local level;
- e) Develop system of vital statistics in rural areas;
- f) Increase literacy in both indigenous languages and English.

You will note that recommendation (1) on 'freeze enrollments at all levels for at least five years' has been deleted because it is not in harmony with announced policies and objectives of the Government of Liberia. Inasmuch as the Liberian Education System does not have unlimited resources and as such we could not increase enrollment significantly due to resources constraints, it does not seem expedient at this time to pronounce this recommendation as a policy of Government

The Director  
USAID

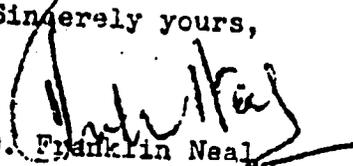
March 8, 1976

In order that we may continue with the momentum which has characterized progress thus far, we would be pleased to meet with you soonest should further clarification seems necessary and to assure fast follow-up actions.

Please convey to the members of the Team of the Harvard Institute for International Development our appreciation for a very informative presentation and a report which can serve as a useful basis for further action. May I also express the appreciation of the Government of Liberia for your Government's prompt action.

Kind regards,

Sincerely yours,

  
D. Franklin Neal  
MINISTER

The Files

November 15, 1976

J. L. Sperling

Report on Meeting held in the Director's office 11/10/76 - 4:30 p.m.

**GOL Participants:**

Dr Franklin Neal, Minister of Planning  
F. Chenoweth, Asst. Minister of Agriculture  
Mr. Kennedy, Asst. Minister of Labor  
Olivia Ockner, Director, Teacher Training MOE  
Mr. Cassell, Asst. Minister of Local Government  
Mr. Duncan, Deputy Minister of Education  
Mr. Morris, Director of Instruction

**USAID Participants:**

Mr. Siegel, Director  
Mr. Marsh, Program Officer  
Nancy Tumavick, Design/Evaluation Officer  
J. L. Sperling, Deputy Program Officer  
Messrs. Nichols and Ellison - blk health consultants

The meeting opened with Mr. Siegel noting that one year had passed since the visit by Mr. Parker and that there had been much work done in that time. He referred to the Harvard Team and the continuing discussions with various elements of the GOL. The strategy, as it has evolved from the various reports and studies was then spelled out, by the use of charts which are attached. Mr. Siegel discussed the strategy which had been evolved by Dr. Jacobs in response to the GOL's perceived needs and the USG's ability to respond to them. The place of other donors was acknowledged and discussed. This aspect of the discussion put the USAID strategy in the context of a long range association with the EHR sector and elucidated the two major goals which have evolved from the strategy.

At this point USAID representatives gave a quick description of the general nature of the projects which are under preparation in response to the goals which have been evolved from the overall strategy. The three projects which are being designed were described in terms of the logical framework matrices and their close policy proximity to one another. The projects were discussed mainly in terms of their impact on the rural beneficiaries of the efforts, and a quick run through of the actual modus operandi of each project. Although aspects of each project had been discussed with each involved Ministry during the development and conceptualization stages, the entire package had not been presented to all of them.

This meeting was scheduled because it was felt that the projects were far now enough along in development that the combined sector strategy and opinions of various GOL individuals concerned with Human Resources Development was considered a necessary input to confirm that the entire approach was fully in line with their concepts of Human Resource Development.

The results of the meeting were heartening. The various ministries involved appeared supportive of the projects which were being constructed. There appears to be good communications between the lower levels and the Ministers and Deputy Ministers who were present. On several occasions the Liberians expressed concern that the outputs of the projects would progress at too slow a rate. This was particularly true in the project which has been designed to improve the efficiency of learning. Minister Neal stated that he would like to see the generalization of the project accelerated to year three rather than wait until all of the results of the comparative experiment were in before spreading the technology to other areas of the country. A cost analysis was briefly described of the ways to accelerate the spread, and the USAID designers will attempt to speed up the preparatory aspects of the project in order to reach full implementation quicker. On the Non-formal project, the possibility of using some ECC funds to complement the techniques being installed under this project were discussed. A further discussion related to the use of anthropological data in all three projects took up the remainder of the meeting.

One very important point discussed was the cost to both the USG and the GOL. It was pointed out that the US portion of the effort would total approximately 12 million over a five year period, and that definite phase out plans were being built into each project. The GOL contribution has been calculated at approximately 4 million. There was no discussion on this point and the general impression gained was that the GOL appeared prepared to fully support with their funds the new initiatives.

Comment: The meeting produced the impression that the GOL is satisfied with the directions that the new EHR Sector undertakings is following. Certain details remain to be worked out. However, it is the impression of the observers of the meeting that major roadblocks on the Liberian side have been overcome and that if the projects can obtain speedy approval in AID/W there is a strong chance that an active EHR Sector program can be functioning and starting to make a difference before the end of FY77.

**CLEARANCE:**

NRMarsh (draft)  
NTumavick (draft)  
SSiegel (draft)

JLSperling:eg

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

COUNTRY : Liberia  
PROJECT : Vocational Training  
PROJECT NUMBER: 669-0131

Pursuant to Part I, Chapter 1, Section 105 of the Foreign Assistance Act of 1961, as amended, I hereby authorize a Grant to the Government of Liberia of not to exceed eight hundred thousand United States Dollars (\$800,000) to help in financing certain foreign exchange and local currency costs of goods and services required for the project as described in the following paragraphs.

The purpose of this project is to restructure the secondary vocational program at the Booker Washington Institute (BWI) to produce employable graduates at affordable costs for identified middle-level manpower skill requirements. The project utilizes standard technologies in vocational education for upgrading the staff, curriculum, facilities, and supporting systems at BWI. The curriculum structure will be telescoped from a four year to a three year program with tested instructional packages in twelve-fifteen vocational specialties covering four trade areas (i.e., mechanical, building construction, electrical, and agriculture).

The most outstanding accomplishment by the end of the project will be the capability to produce 500 graduates annually, 90% of whom will qualify for immediate employment in the jobs for which they were trained and at the level of skilled workers. Recurrent costs for producing a BWI graduate under the approved three year program will be maintained at approximately the same level as that of the current four year program. Instructional staff will be capable of teaching thirty hours per week as compared to the current level of approximately fifteen hours per week. Income generated from the BWI school farm and shops will be used to defray operating costs. Classrooms, shops, equipment, and facilities will be repaired, renovated, and fully utilized. Teachers, staff, and personnel will function within an administrative structure and instructional schedule that makes optimum utilization of time and resources.

I approve the total level of A.I.D. appropriated grant funding planned for this project of not to exceed five million nine hundred and fifty four thousand United States Dollars (\$5,954,000) including the funding authorized above, during the

period FY 1978 through FY 1982. Of the total amount I approve further increments during that period of Grant funding up to \$5,154,000 subject to the availability of funds in accordance with A.I.D. allotment procedures.

I hereby authorize the initiation of negotiation and execution of the Project Agreement by the officer to whom such authority has been delegated in accordance with A.I.D. regulations and Delegations of Authority subject to the following essential terms and covenants and major conditions; together with such other terms and conditions as A.I.D. may deem appropriate:

a. Source and Origin of Goods and Services:

Except as A.I.D. may otherwise agree in writing and except as provided in paragraph b, below, goods and services financed by A.I.D. under the project shall have their source and origin in the United States. Ocean Shipping financed under the Grant shall be procured in the United States.

b. Local Currency:

The financing of local currency costs is approved in the amount of approximately \$1,300,000 related to housing for United States technical personnel, salary for local hire personnel renovation of facilities, commodities and supplies, and miscellaneous in-country operating costs.

c. Conditions Precedent:

The Project Agreement shall contain a Condition Precedent providing in substance as follows:

Prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.

- (a) Evidence of GOL budget availability for the first year of the project and further assurance in writing that the GOL budget will be available for all succeeding years.
- (b) Written approval for all counterparts and identification by name of the two main counterparts.

(d) Covenants:

The Project Agreement shall contain covenants providing in substance as follows:

1. Grantee covenants to follow the implementation and evaluation plans contained in the Project Paper.
2. Grantee covenants to provide suitable office space at Kakota, Liberia and in the Ministry of Education.
3. Grantee covenants to assist in identifying suitable housing for rent by U.S. contractor personnel.
4. Grantee covenants to conduct ongoing analyses using the National Council for Vocational and Technical Education and Training, or other similar unit, in areas outlined in ANNEX M. The grantee further agrees to put the information resulting from these analyses at the disposal of the implementing unit on a periodic basis.

Assistant Administrator  
Bureau for Africa

ONGOING ANALYSES

With funds provided within this grant, the GOL and the USAID will, through the National Council for Vocational and Technical Education and Training, or other similar unit, monitor, gather necessary data, and carry out appropriate analyses to insure periodic information to the project implementation unit concerning:

1. Demographic information on entering students and representativeness of overall population.
2. Ability to retain students in program to its completion taking account of such variables as sex, socio-economic status and geographic origin.
3. Appropriateness of training program (all elements) to student characteristics and labor market requirements.
4. Cost effectiveness of BWI and other options for training skilled manpower.
5. Tracer studies of graduates and students who leave program before graduation.
6. Impact over time of BWI and other activities in skill training on recurring budget allocation.
7. Operation of systems described beginning on Page 21 of Project Paper.

These ongoing analyses will provide information to be used throughout the life of the project by the project implementation unit, the GOL and by the USAID. There will be yearly reviews of the information generated by the activities described here by the GOL, the USAID and the project implementation unit, the first taking place in month 20 (after the first group finishes the first year).