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

CAPITAL ASSISTANCE PAPER

Proposal and Recommendations
For the Review of the
Development Loan Committee

Ecuador - Primary Education Improvement

AID-DEC/P-357

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518-22-648-027

518-4-027

PD-AAA-729-B1

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

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AID-DLC/P-~~317~~ 357
ERRATA
July 13, 1965

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Ecuador - Primary Education Improvement

The following typographical corrections should be made
in the subject loan paper:

- Page 1 - (a) 2nd Paragraph - Change first word to reduction.
(b) 2nd Paragraph - Change word "scholl" in fourth
line to school.
- Page 2 - 2nd Paragraph - Change word "indicials" in fourth
line to individuals.
- Page 3 - (a) No. 3 - Change word "suprevisicn" in first line
to supervision.
(b) No. 10 - Change word "increasing" in 2nd line
to improving.
- Page 8 - Sixth line - Insert an before AID/W.
- Page 11 - 3rd Paragraph - Change word "depth" in last line to
details.
- Page 28 - Delete A. The Program.

Helen E. Nelson
Secretary
Development Loan Committee

BEST AVAILABLE

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

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AID-DLC/P-357
June 23, 1965

MEMORANDUM FOR THE DEVELOPMENT LOAN COMMITTEE

SUBJECT: Ecuador - Primary Education Improvement

Attached for your review are the recommendations for authorization of a loan in an amount not to exceed \$5,300,000 to the Government of the Republic of Ecuador which, in conjunction with dollar grant funds, will assist in the construction of three thousand (3,000) primary school classrooms, the construction of thirty (30) teachers lodgings in remote rural areas, the construction of two normal schools, the establishment of training programs for primary and normal school teachers, the preparation, printing and distribution of primary school textbooks, and the establishment of a pilot pre-vocational primary school program.

This loan proposal is scheduled for consideration by the Development Loan Staff Committee at its meeting on June 28, 1965.

Helen E. Nelson
Secretary
Development Loan Committee

Attachments:

Summary and Recommendations
Project Analysis
Annexes I-VIII (Annex VIII being distributed separately.)

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ECUADOR: PRIMARY EDUCATION IMPROVEMENT LOAN

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- ANNEX II TOTAL COST OF EDUCATIONAL DEVELOPMENT PROJECT
- ANNEX III SCHOOL CONSTRUCTION PROGRAM
- Exhibit A Detailed Description of Project
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 - Exhibit C Location and Number of Primary Classrooms to be Constructed Under the Program
 - Exhibit D Proposed Schools to be Constructed during the first year
 - Exhibit E Cost Estimate for One Primary School Classroom
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 - Exhibit G Primary School Construction Material from the U.S.
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 - Exhibit I Quito Normal School Construction imports from the U. S.
 - Exhibit J Transportation and Construction Imports from the U. S.
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 - Exhibit O Sources and Uses of Funds for School Construction Program
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- ANNEX IV TEACHER TRAINING PROGRAM
- Exhibit A Equipment, Materials and Supplies imports from the U. S.
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- Exhibit A Detailed Description of Textbook Program
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- ANNEX VII GOE FINAL APPLICATION AND RESULT OF DISCUSSIONS
- ANNEX VIII JUSTIFICATION FOR LOAN AND DG FUNDING IN RELATION TO U.S. OBJECTIVES (**distributed separately**)

ECUADOR

PRIMARY EDUCATION IMPROVEMENT LOAN

SUMMARY AND RECOMMENDATIONS

1. BORROWER: The Government of Ecuador through the Ministry of Education
2. AMOUNT OF THE LOAN: Up to \$5.3 million
3. AMOUNT OF DOLLAR GRANT: Up to \$0.5 million
4. TOTAL COST OF PROGRAM: Up to \$11.2 million distributed as follows:

SUMMARY OF COSTS OF TOTAL PROGRAM
(Thousands of U.S. Dollars)

	AID Loan		D.G. Funds	GGE Funds	Community Funds	Total	% of Total Cost
	Dollar Costs	L.C. Costs					
1. Construction	2330	2200	30	2040	3170	9770	87%
2. Teacher Training	50	50	330	60	-	490	4%
3. Textbook Program	550	-	130	190	-	870	8%
4. Workshop Program	80	20	-	10	-	110	1%
Totals	3010	2270	490	2300	3170	11,240	
	27%	20%	4%	21%	28%		

Dollar and Local Currency Requirements

U.S. Dollar Cost.....	\$3,500,000
% of Total Project Cost.....	31%
Local Currency Cost.....	\$7,740,000
% of Total Project Cost.....	69%

AID Financing (Loan & Grant Funds)

U.S. Dollar Cost.....	\$3,500,000
% of Dollar Requirements.....	100%
For Local Currency Costs.....	\$2,270,000
% of Total Local Currency Requirements..	29%

iv.

5. PURPOSE: The purpose of this loan, in conjunction with dollar grant funds, is to provide financing for (a) the construction of 3,000 furnished primary school classrooms which will provide new facilities for 80,000 primary age school children and replace dilapidated, rented, and borrowed school facilities for 40,000 school children; (b) the construction of 30 teachers lodgings in remote rural areas; (c) the construction of two normal (secondary) schools with an 800-student capacity each; (d) a teacher training program that will result in establishing a university level program for training normal school teachers and in the training and up-grading of about 16,000 teachers by 1971; (e) a textbook program that will produce over a million primary school books in reading, arithmetic and natural sciences to provide all Federally supported primary schools with such texts; and (f) a pilot pre-vocational primary school program which will provide training and equipment for workshops in 100 primary schools.
6. BACKGROUND: The original loan request for this program, under detailed discussion and consideration for more than two years, was for school construction only; it was further developed to include other complementary and essential educational activities to achieve a more comprehensive educational program. The CAEC considered and disapproved the first IRR in April 1964 due to many then pending issues most of which were resolved and led to the approval of the second IRR by the CAEC in March 1965.
7. EX-IM BANK INTEREST: On March 30, 1965, the Ex-Im Bank indicated that it was not interested in considering this loan application.
8. EMBASSY, USAID VIEWS: Recommend and support project based on (1) the successful impact on the Ecuadorian populace achieved through the School Construction Pilot Project; (2) the impact that the other sub-programs will have on present and future generations through teacher training, furnishing of primary textbooks and pre-vocational training; (3) the important long-range effects on developing manpower resources; and (4) as a major Alliance for Progress contribution to the future development of Ecuador.
9. STATUTORY CRITERIA: All statutory criteria related to this loan have been satisfactorily met.

10. ISSUES: Whether AID financing of 29% of the local costs (equivalent to \$2.3 million) is justified in the light of present and projected Ecuadorian economic conditions.
11. RECOMMENDATIONS: Authorization of a loan not to exceed \$5,300,000 to the Government of Ecuador to finance the above school construction and educational program on the following terms and conditions:
- a. Repayment to be within 40 years from date of first disbursement including a ten-year grace period;
 - b. Credit fee charged on the disbursed balance to be 1% per annum during the grace period and 2 1/2% thereafter;
 - c. Payment of credit fee and principal to be in U.S. dollars;
 - d. GOE shall agree to establish programs at the universities in Ecuador for the education and training of normal school teachers;
 - e. GOE shall agree to establish intensive summer training programs for upgrading normal school and primary school teachers;
 - f. Loan funds are to be disbursed for the construction of primary school classrooms at a rate no more rapid than Borrower is able to provide adequately trained primary school teachers for the primary school classrooms being constructed under the loan and for vacancies elsewhere in the primary school system;
 - g. Disbursements under the loan for construction of primary school classrooms may be suspended if Borrower is unable to implement the other activities to be financed by A.I.D.;
 - h. The loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

ii.

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Project Committee:

Loan Officer (Chairman) - Lewis Ortega
Engineers - George Krumm
 - James Watson
Education Advisors - Charles Briggs
 - Newell Myers
 - Vincent Aloia
Counsel - Gerald Flood
 - David Falk

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I. PROJECT DESCRIPTION

A. HISTORY AND BACKGROUND

1. General Education-Problems and Needs.

Ecuador has an estimated population of about 4,500,000. The major portion of the people live in isolation, are bound by traditional culture patterns, eke out a living in a subsistence economy, and suffer the limitations of an illiteracy rate of 42%. The high rate of illiteracy is a result of economic, social, and political conditions that generally are characteristics of a relatively underdeveloped nation. In Ecuador some of the factors contributing to illiteracy are a low standard of living, low real income of the rural family, continued use of the Quechua language as the only means of communication in certain mountain areas, lack of school facilities, lack of any incentive to attract teachers to the isolated rural areas and the failure to enact up-to-date legislation which would make attendance for a given number of school years obligatory.

Reduction in the rate of illiteracy is further hindered by the present obviously inadequate educational system which continues to suffer from: (1) lack of adequate and sufficient facilities to meet the demand of the total school age population, (2) insufficient properly trained and qualified teachers, (3) inadequate and antiquated teaching methodology, (4) lack of textbooks, (5) delapidated premises, and (6) extremely high drop-out rates at all levels of education.

Reliable statistical data are not available to define with precision the relationship between school age population and actual enrollment. However it is estimated that in 1964 about 200,000 to 300,000 children out of a primary school age population of approximately 900,000 to 1,000,000 primary school age children throughout the country (as many as 1/3 of this total) were not attending school.

A high drop-out rate is another symptom of Ecuador's inadequate education system. Out of every 100 students who were enrolled in the first grade of primary school in the urban areas during 1956, only 38% completed the sixth grade in 1962. In the rural areas only 5.4% finished sixth grade in 1962. The greatest drop-out occurred between the first and second years when there was a 50% drop-out in the rural areas and 30% in the urban areas. However, between 1960-61 and 1963-64 the drop-out rate has been reduced significantly in primary schools and substantially in normal schools. An important contributing factor related to high drop-outs is the requirement that a student who fails one subject

must repeat the entire year. In 1961-1962 it was estimated that 18% of the children in primary schools or about 110,500 were repeating their prior-year grade which represented a significant loss of time and effort. As closely related causative factors, there must be added inadequately trained teachers and antiquated teaching methods. According to the Ministry of Education, of the 21,760 teachers in service in 1965 at the primary school level, approximately 55% lacked the professional title (teacher certificate) which would normally be required to qualify a person to teach. However this percentage had been reduced from about 68% two years earlier by intensive summer training programs attended by a total of 3,500 teachers. The lack of a professional title from a normal school is more significant as an indicator of lack of proficiency in teaching methods rather than indicating inadequate academic training; many teachers are graduates of Colegios Bachilleratos where better academic training is provided than in most normal schools.

These deficiencies permeate all educational, social and economic levels of the nation and limit the number of individuals that can pursue secondary schooling and university training. Increasing the number of individuals educationally prepared at the primary level could lead to a significant increase in well-qualified technicians and professionals, which would in turn have a favorable impact on the economic and social development of Ecuador.

These qualitative and quantitative deficiencies of the educational system have been recognized and evaluated by the Government of Ecuador, which, through the Ministry of Education has prepared a number of significant recommendations tailored to improve the educational system and meet the educational needs of the nation.

The 10-Year Plan proposes by 1973 to reduce the present illiteracy rate by about 50%, to provide enough new schools to accommodate all primary school age children and to more than triple the supply of primary school graduates who can continue their education. To accomplish this, it will be necessary to construct from 9,000 to 11,000 new classrooms and to hire an additional 12,000 teachers. As a first step toward this end, the budget for education has been increasing annually by about 10 to 12% since 1961.

Inter-American and International Organizations placed major emphasis in analyzing and evaluating the total cost of the Ecuadorean 10-Year Development Plan in relation to the number of

classrooms and school teachers. Little consideration, however, was given to qualitative measures recommended to improve the educational system and reduce illiteracy by approximately 50%. The qualitative objectives set forth in the 10-Year Plan include the following:

1. The unification and extension of the number of 6-grade primary schools throughout the entire nation. This would revise a 1938 law which provides for the establishment of 6-year urban schools and 4-year rural schools. Moreover, this revision in the law would make 6-year attendance mandatory for all primary school age children.
2. Train better qualified teachers and up-grade the quality of existing teachers.
3. Improve the supervision of primary schools and increase the retention rate of students.
4. Revise and improve instructional courses as well as the quality of education in primary schools.
5. Improve the environment essential for primary education, that is social services such as breakfast and school lunches, medical service, availability of student's lockers, etc.
6. Effective incorporation of the indigenous population into the economic and cultural development of the nation, guided by adequately prepared and selected teachers from their own groups.
7. Provide the necessary instructional tools and equipment for all primary schools such as textbooks, school supplies, desks, etc.
8. Eliminate the difficult examinations required for promotion from first to second, second to third, third to fourth grades, etc.
9. Gradual and intensive education of adults on a national scale.
10. Provide incentives to improve the quality of teaching, through the allotment of scholarships and ~~increasing~~ ^{improving} economic conditions of teachers.

Thus the Government of Ecuador has been striving - and appears to be determined - to furnish at least an elementary education for all of its people, particularly in the light of its constitutional responsibility and the major role assumed by the Government in furnishing public school facilities. For example, primary school ownership distribution shows that the Federal Government has built and made available 62% of the total number of elementary schools, while municipalities furnished 15% and private institutions provided the remaining 23%. Of the Federally supported schools only 68% have actually been built by the Government, 22% are rented, and the remaining 10% are made up of facilities loaned to the Government.

2. AID Financial and Technical Assistance in Primary School Construction.

In May, 1962 the USAID Mission and the Government of Ecuador created a jointly administered Cooperative Program of School Construction (CPSC) to concentrate on primary school construction. The underlying philosophy was to assist in building schools on a self-help basis by providing the communities with an incentive, the initial financial requirements, and technical assistance to enable them to start and complete the construction of their own schools.

Another objective of the CPSC was to establish a technically and administratively competent agency highly specialized in school construction and able to continue a self-help program in this field. This agency, through practice and experience, was to develop actual construction cost data to be used in developing a large scale primary school construction project and an application for AID financing.

The original pilot program established as its goal the construction of 300 classrooms and/or teacher's lodgings over a 2-year period. The AID Mission contributed \$200,000, the GOE another \$200,000 and the communities the equivalent of \$200,000 in terms of labor, materials, land and/or cash. This tri-partite cooperative effort was so successful that during the initial 2-year period 428 classrooms and 65 teachers' lodgings were completed, a 64% increase over the goal. The additional costs over and above their original commitment were covered by the communities and the GOE. To date 710 classrooms and lodgings have been completed and 175 classrooms are near completion.

In its evaluation of the 10-Year Plan, the Committee of Nine of the Alliance for Progress specifically pointed out the importance of promoting community collaboration and cooperation in the national education effort and firmly backed the principle of community participation in the construction of schools. The Committee supported the primary education program proposed by the Junta Nacional de Planificacion, to make up the nation's primary school classroom deficit within a period of 10 years, in preference to a Ministry of Education plan to do this in only 5 years (1964-1968); because it felt this would cause an unwarranted drain on funds needed to carry out other essential programs. The Committee also recommended establishment of adequate economic incentives to attract teachers to the rural zones. This has been taken into consideration in this program both through provision of teachers' lodgings in the rural areas and through requiring completion of a study to define what additional incentives are required to keep teachers in rural areas.

3. Review of USAID-GOE Discussions of Proposed Program.

The USAID held preliminary discussions with the Ministry of Education on the proposed program in 1960. Until 1963 the Ministry expressed interest only in financing school construction. A conference held in May, 1963 with the AID Administrator, established that a school construction project could be considered only if it included an integrated program to improve normal and primary school curricula, textbooks and teaching methodology.

During the latter part of 1963 a high level GOE/USAID meeting was held and most of the issues and problems were discussed, to a large extent defined, and broad guidelines established for their eventual solution. A feasibility study completed in 1964 proposed the construction of 3,000 new classrooms, 2,000 in new locations and 1,000 to replace dilapidated rented and loaned premises. The study also included proposals for construction of a new normal school in Guayaquil and additional facilities at the Uyumbicho Normal near Quito. Simultaneously the USAID and the Ministry developed a program comprising training of teachers and teacher-trainers, textbook production, and primary level pre-vocational training designed to improve the quality of elementary school instruction. These were combined in a March 26, 1964 official application for a loan of 5.3 million to AID. However, the issues presented were of such magnitude that the Capital Assistance Executive Committee disapproved the IRR on April 10, 1964 (See TOAID A-1101).

The Ministry of Education then established a task force to develop additional information which was used in January, 1965 to prepare a new loan application for 5.1 million. This and the proposed GOE contribution were based on an estimated construction cost of \$1,600 per classroom.

However, a survey of the actual construction costs showed that the cost per classroom was approximately \$2,000. The latter figure was used as the basis for recalculating the cost of the overall program. In subsequent discussions concerning the increased costs of the program, the GOE agreed to increase its contribution substantially and establish a more equitable financing ratio. In the original application the U.S. was requested to finance 64% of the total program from loan and DG funds. The final loan application requests U.S. funding of 51% of the total program, with 49% provided by GOE and the communities. The GOE-Community contribution was increased from \$3.1 to \$5.5 million. (See Annex VII - GOE Final Application and Resume of Discussions.)

B. FINANCIAL PLANTOTAL PROGRAM COST AND PROPOSED SOURCE OF FINANCING

(Thousands of U.S. Dollars or Equivalent)

	AID Loan		D.G. <u>Funds</u>	GOE <u>Funds</u>	Community <u>Funds</u>	<u>Total</u>	<u>% of Total Cost</u>
	<u>Dollar Costs</u>	<u>L.C. Costs</u>					
1. Construction	2330	2200	30	2040	3170	9770	87%
2. Teacher Training	50	50	330	60	-	490	4%
3. Textbook Program	550	-	130	190	-	870	8%
4. Workshop Program	<u>80</u>	<u>20</u>	<u>-</u>	<u>10</u>	<u>-</u>	<u>110</u>	<u>1%</u>
Totals	3010	2270	490	2300	3170	11,240	
	27%	20%	4%	21%	28%		

U.S. Dollar Cost.....\$3,500,000
 % of Total Project Cost..... 31%
 Local Currency Cost.....\$7,740,000
 % of Total Project Cost..... 69%

AID Financing (Loan & Grant Funds)

U.S. Dollar Cost.....\$3,500,000
 % of Dollar Requirements..... 100%
 For Local Currency Costs.....\$2,270,000
 % of Total Local Currency Require-
 ments..... 29%

The total cost from all sources of the integrated program is approximately \$11.2 million. Loan funds will finance 47% (\$5.3 million) of the total cost; Dollar Grant Funds 4% (\$0.5 million); GOE will finance 21% (\$2.3 million) and local communities 28% (\$3.2 million). This represents an overall contribution from Ecuadorean sources of 49%, an unusually high level when compared to many other loans granted under the Alliance for Progress. Annex II, Exhibit A gives the complete breakdown of estimated project costs.

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Of the total amount, \$3.5 million or approximately 31% represents dollar cost of U.S. technical advisors and U.S. equipment. The equivalent of \$7.7 million, approximately 69%, is required for local costs. AID loan and DG funds will cover all foreign exchange costs and about 29% of local costs. In accordance with ^{an}AID/W approved USAID request, DG funds will be made available for the first three years at an annual rate of about \$165,000 to provide technical assistance for the teacher training and text book sub-projects.

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C. DESCRIPTION OF SUB-PROJECTS

This project is comprised of sub-projects in school construction (including teachers lodging), teacher training, preparation and Production of Textbooks and Pilot Pre-vocational Workshops. The Sub-Project for School Construction is to be administered by the Cooperative Program of School Construction (CPSC) in conjunction with the Ministry of Education. The Teacher Training, Textbook and Workshop sub-projects are to be administered by the Ministry of Education.

1. School Construction

This portion of the project is based on the construction cost data developed by the pilot project discussed in A-2 above. This program, to be carried out in about 3 1/2 years, comprises the construction of approximately 609 schools with 3,000 furnished classrooms which will provide new facilities for 120,000 primary age school children. Of these, 80,000 are presently without any buildings whatsoever, while 40,000 occupy dilapidated, rented, and borrowed quarters which are to be replaced. Thirty teachers' lodgings will be constructed in remote areas where it is difficult to provide fully trained primary school teachers due to the lack of living quarters. Two normal schools, which are integral to the teacher training sub-project, one near Quito and one in Guayaquil, with an 800 student capacity each, are also included in this construction program. For administrative purposes the program has been divided geographically into zones "A", "B" and "C". Annex III Exhibit C summarizes by Provinces and zones both the total classrooms to be provided and the estimated number for each year of the proposed three year construction program. During the first year (see Annex III Exhibit D) 14 teachers lodgings and 169 schools will be built to provide 802 classrooms as follows:

Number of														<u>Total</u>
Schools:	12	18	30	32	5	32	13	8	11	1	1	1	1	164
Number of Class-														
rooms per school:	1	2	3	4	5	6	7	8	10	14	16	24		-
Total Class-														
rooms:	12	36	90	128	25	192	91	64	110	14	16	24		802

The building design consists of a simple reinforced concrete frame on a modular concept to accommodate any number of classrooms desired. The designs have been standardized by the engineering staff of the CPSC for both one and two story building types. Exterior and interior walls will consist of varied indigenous materials which are readily available at the particular locations where the schools are to be constructed.

In addition there will be constructed two Normal Schools; one, Leonidas Garcia at Guayaquil; and the other Carlos Zambrano at Uyumbicho.

The Leonidas Garcia Normal School will be located approximately 1.6 miles south of the city of Guayaquil. The terrain at the school site is flat and is approximately two feet above sea level. The normal school proper will provide a gross floor area of 3570 square meters and can accommodate an enrollment of 800 students. Dormitory facilities will be provided for 250 students along with dining facilities for both students and teachers. Included in the plan is an annex school with a gross floor area of 740 square meters, which will serve as a demonstration school for the normal and also as a Federally supported primary school for a new housing project being developed by the Social Security Agency of Ecuador. At present the students in this housing project are attending schools in the Center of Guayaquil.

The Carlos Zambrano Normal School will be located approximately twelve miles south of Quito near the village of Uyumbicho. The site is readily accessible from the Pan American Highway and is also served by railroad. The terrain is excellent, relatively flat and approximately 8800 feet above sea level. The school with its gross floor area of 4180 square meters will accommodate an enrollment of 800 students.

A detailed description of the School Construction Program is given in Annex III, Exhibit A and the breakdown of the sources and uses of funds for this sub-project is provided in Annex III, Exhibit O.

2. Teacher Training Program

The teacher training elements of this project comprise:

(a) Training selected normal school professors as the nucleus of university-level schools of education, and establishing professional training for normal school teachers in the five national universities.

(b) Installing professional courses in Educational Administration, Psychology, Curricula and Teaching Methods in two pilot normal schools, and subsequently in all other principal normal schools.

(c) Upgrading within 5 years after 1967, all primary school teachers (who neither have titles equivalent to "normalista" nor professional training as teachers), and all professors and principals of normal schools in the above professional courses, through intensive summer training courses for primary teachers in the pilot normal schools and for others in the universities starting in 1967 or 1968.

This sub-project involves: 1) equipping, furnishing and introducing administrative and organizational reforms in two normal schools to be built under this program in order to establish them as models for normal school training in school administration, educational psychology and teaching methods and curriculum; 2) a three-year seminar training program in these professional areas directed by three U.S. specialists, for highly selected experienced normal school professors (12 to 24 at any one time); 3) further overseas training to include, but not necessarily be limited to, those seminar-trainees who appear likely candidates for teaching positions in Ecuador's five universities; 4) training of the Uyumbicho rural normal school faculty by the U.S. specialists; 5) in-service training of teachers in four primary schools to be selected for demonstration, observation, practice teaching and testing the new materials developed under the textbook program; 6) developing and testing the new primary course of study for Ecuador in close cooperation with the Ministry of Education; 7) advising or assisting the Ministry on establishing a schedule and program for (a) introducing professional education courses in the five national universities and in all other principal normal schools and (b) conducting intensive summer training for primary school teachers and supervisors, and for normal school administrators, supervisors and professors. (See Annex IV, Exhibit A and B for Cost details.)

The University of Pittsburgh and St. Louis University, under AID contracts, are functioning in the secondary teacher training field. Pittsburgh University has been continuously engaged in holding 6-8 week seminars for training and upgrading secondary school directors, inspectors and Ministry supervisors. Inasmuch as normal schools fall within the nation's five categories of secondary schools, they are benefitting directly from these university programs.

St. Louis University is concentrating on upgrading secondary school teachers in subject matter and teaching methodology. In addition, the two U.S. universities in conjunction with USAID, will offer a specialized summer training course for all normal school professors in the field of natural sciences, which will include the proper use of laboratory equipment.

In addition, the AID loan will also finance instructional material and equipment to be imported from the U.S., locally manufactured furniture, and local cost training scholarships for the two normal schools. See Annex IV, Exhibits A and B for complete cost details. The present premises at Uyumbicho will be used as temporary quarters to initiate the program pending completion of the new buildings.

3. The Textbook Program

The textbook program is designed to furnish all federally supported primary schools, including those to be constructed under this project, with the necessary reading, arithmetic and natural science textbooks through the preparation, publication and distribution of over a million and a half textbooks during the three and one-half years of this program. This is essential because textbooks for elementary school children are not presently provided by the government. The typical teaching method is for the teacher to explain or write the lesson on the blackboard for later memorization. U.S. technical advisors and USAID Mission technicians will assist and collaborate in the preparation and composition of the textbooks.

This program will require the services of five U.S. technicians to assist the Ministry in implementation of the textbook program. One technician will serve full time for three years assisting authors and editorial personnel with writing and book planning activities. Three specialists for a total of nine man-months will assist Ecuadorean authors and teachers in the area of reading, arithmetic, and natural science with emphasis on the solution of problems related to the nature and accuracy of content, grade placement of skills, and appropriateness of text presentation. One expert experienced in all techniques of offset reproduction as well as general shop operation, including preparation of production schedules, is required for a six-month period. These advisory services are considered essential to successfully complete this program.

To further guarantee effective execution of this program, it is anticipated that the GOE will officially request the service of the Regional Educational Materials Advisor, Lima, Peru, for three months each year. This would include advisory services and guidance to Ecuadorean authors, (except intensive subject matter authorship training), training in editorial processes, preparation of production schedules, and improvement of distribution activities. (See Annex II, Exhibit A, Part II for summary of technical assistance costs; Annex V, Exhibit A for a description of technical assistance and the textbook production process; and Annex V, Exhibit B for details concerning printing equipment and supplies.)

4. The Pilot Pre-Vocational Workshop Program

The proposed workshop program is designed for Ecuadorean children whose terminal education is the primary school.

The GOE requested \$249,000 in loan funds to equip 600 primary schools for boys and 150 primary schools for girls with tools, equipment and home economics material.

The project was to be implemented in two phases. The first phase was to be a pilot project to furnish equipment to an initial 100 primary schools. (75 boys and 25 girl schools) The second phase was to be a program for the remaining 650 schools based on experience gained in the pilot project.

A careful technical evaluation revealed that the amount of proposed equipment to be furnished to each primary school was only one-third of the amount required. Also, it appeared doubtful that more than 100 primary schools could meet the necessary standards. To qualify as pre-vocational training schools each primary school must evidence that it can provide proper equipment maintenance and storage facilities, proper space for instruction, properly trained teachers and adequate instructional materials.

In view of the above, the program proposed by the GOE has been reduced and restructured as a pilot project for 100 primary schools (75 boys and 25 girl schools). Each school would be furnished with sufficient equipment to provide adequate pre-vocational training, an average of three times the amount of equipment originally requested by the borrower. The cost of equipment for each boy's primary school would then amount to \$1,056 and for each girl's school \$756. The total cost of the pilot pre-vocational project would be \$93,100. (See Annex VI for a detailed equipment list.)

D. Implementation Plan

1. Construction-General Comments

The Cooperative Program for School Construction (CPSC) has already prepared detailed standard plans for two basic types of primary school. Both types are based on California criteria and consist of a modular type reinforced concrete frame readily adaptable to provide the number of classrooms required for any particular location. One of the basic designs is for a two story building for urban locations. The other is for a one story building for rural areas. The designs are excellently developed to meet economically the needs of the Ecuadorean school program.

The CPSC has also prepared detailed plans and specifications for the proposed new normal schools near Guayaquil and Quito. These designs are well conceived with adequately developed functional layouts which retain in principle the basic two story primary school structural plan. All work on each normal school will be performed under a single unit price contract. The contractor will be responsible for local procurement. The CPSC will supply imported equipment and material. The entire cost of the building (except land) will be financed by the A.I.D. loan.

Generally, there are no building codes in Ecuador except for Quito and Guayaquil. The CPSC has however developed a complete set of satisfactory specifications for preliminary site inspection, site soil tests, and overall construction standards for primary schools.

The CPSC will administer and supervise the construction of the 3000 classrooms, 30 lodgings and the two normal schools. The CPSC has demonstrated its capabilities to undertake this construction program by successfully completing similar facilities, with the guidance of the AID Mission, under a pilot project which initially authorized the construction of 300 classrooms with funds contributed in equal amounts of \$200,000 each by the GOE, the Communities and AID. Additional contributions were subsequently made by the GOE, the Provinces, the local communities and private entities. Under continued guidance by the AID Mission, using both the original and additional funds, a total of 710 classrooms have been completed with another 175 classrooms now nearing completion.

The CPSC has, for organization and administrative purposes, divided the country into three zones (See Annex III Exhibit B). Zone A is composed of ten provinces in the northern and central portion of the country. Zone B comprises five provinces and includes the highly populated coastal area. Zone C includes the five provinces in the southern portion of the country. At present CPSC has 33 trained employees to supervise construction work under the pilot project. Among these 33 people are 5 engineers, who have successfully handled the construction of about 900 classrooms over a 3-year period. During the next three years approximately three times this number of schools will be built. By establishing sub-zones and thus greatly reducing the distance that has to be traveled by each engineer, it has been concluded that 11 engineers will be sufficient

to carry out the construction program; provided a competent engineering firm is employed to supervise operations.

Annex III Exhibit K is an Organization Chart, which indicates the approximately 60 persons that will be required to administer and supervise the construction work for the proposed school program. The additional personnel required are available and their selection is presently in process. Annex III Exhibit L is a detailed breakdown of the total cost of administrative services to be furnished by CPSC and which are to be funded by the GOE.

The functional duties of all personnel listed in the CPSC Organization Chart are self-explanatory with the exception of the Engineer and the Community Worker. The Engineer with respect to primary school construction not only is responsible for the inspection of work performed but also directs the construction operations. In other words he acts as the superintendent, and in turn is supervised by the Chief Regional Engineer of his particular Zone.

The Community Worker can best be described as the coordinator of community effort in the primary school construction program, and is responsible both for the formalization of a specific school sub-project and, once the sub-project becomes operational, the fulfillment on an orderly basis of commitments made by all parties concerned.

A competent Architectural-Engineering Organization, preferably a U.S. firm affiliated to some degree with an Ecuadorean firm, will be contracted as consultants to supervise construction operations.

Duties of the consulting firm will be to:

- a. Assist the CPSC in the formalizing of sub-projects,
- b. Review and approve bidding documents and the awarding of contracts,
- c. Make recommendations pertaining to contractual methods to be used for each sub-project,
- d. Train CPSC management and engineering personnel,
- e. Coordinate CPSC administrative activities with the engineering and construction phases of the project,
- f. Provide technical advice on site selection, construction implementation and the maintenance of work schedules. (See Annex III, Exhibit P for site selection criteria.)
- g. Visit each sub-project site and assist in preparing a site plan for adaptation of the standard building type to the site.
- h. Review and approve Memoranda of Understanding and contracts with communities.

- i. Assist in the preparation of lists of materials, equipment and supplies including quantities of U.S. commodities to be used. The list shall cover the total requirements for the total School Construction Program and shall be broken down by requirements for each construction year.
- j. Certify all requests for payment of commodities and services. The certification will state that the request complies with specifications and that quantities are correct.
- k. Make field inspections on an orderly scheduled basis to determine the quality of the work performed and the effectiveness of the performance of the CPSC field engineers.
- l. Establish orderly controls of shipments to the sub-projects to assure that loan procured commodities are correctly used and not diverted elsewhere.
- m. Make a final report for each completed sub-project which will include: (1) the value of community contribution; (2) the cost of locally procured items; (3) the cost of U.S. commodities used; (4) the cost of material transportation; (5) other miscellaneous costs, and (6) total cost of the sub-project.

It is proposed that the CPSC would procure all construction equipment, materials and supplies from both local and U.S. sources as well as supervise the marshalling of those items contributed by the communities. This procedure would be followed for the entire primary school construction program including the 3000 classrooms and 30 lodgings. The use of this procedure for local procurement is justified because; (a) relatively few local contractors have the financial resources to purchase the commodities required; and (b) CPSC would be able to obtain the most advantageous prices since they would buy in bulk quantities. In considering procurement of U.S. commodities, CPSC is the only organization geared to accomplish this effectively.

2. Primary Schools and Teacher's Lodgings - Construction

The following is a step-by-step description of the procedures that will generally be followed in the development and execution of the primary school and teacher's lodging construction sub-project and is based largely on the system worked out during the pilot program.

The CPSC headquarters in Quito gathers information as to potential construction projects primarily from two sources. The first is the Ministry of Education's budget which each year allocates specific funds for the construction of specific schools. (This specific allocation is to be replaced by a lump-sum allocation to the loan project). The second source is applications sent to CPSC by communities requesting the construction of a particular school. This information is then sent to the appropriate zone to be added to the applications received directly by the zones from community groups. The zone office will then send questionnaires

(Annex III Exhibit N) to the communities which cover such subjects as the need for the school, amount and form of the local contribution, and available labor, contractors, storage facilities, electric power, and water supply. Shortly thereafter a community worker visits the community, makes recommendations and helps complete the questionnaire (or validates it if it has already been completed).

As part of this process the community worker makes a preliminary inspection of the proposed school site, and forms a preliminary judgement of the contribution that can be anticipated from community sources (individuals, municipality, province, etc.). The community worker then reports to the zone or sub-zone office and discusses the questionnaire and the proposed project with a CPSC engineer. One of the consulting engineers will participate in these discussions and will give guidance, advice and approvals at various other stages of the construction. (Since the consulting engineer's duties will be those mentioned in the preceding subsection of this paper they will not be repeated in this description). The engineer and community worker then tentatively decide whether to go ahead with the project based principally on the following criteria: (1) Number attending primary school relative to number of primary school age children; (2) estimated number of primary school age children not attending school due to lack of facilities; (3) proximity of nearest school which may have capacity to absorb additional pupils; (4) adequacy of existing building for pupils served; (5) condition of existing building; (6) whether existing building loaned or rented; (7) amount and nature of proffered community contribution; (8) offer by community to maintain building once built. If they decide to go ahead, they meet with the zone director and chief engineer. This group considers the project in light of zone priorities and if it decides to proceed, a report is prepared for the central office of CPSC in Quito which makes the final decision (subject to A.I.D. approval) based on country-wide priorities. Once final approval is granted, the community worker and engineer visit the site, complete the site adaptation and firm up cost estimates and the local contribution. The community worker and the engineer then prepare the "Memorandum of Understanding" to be executed with the community and develop the plan of construction. The Memorandum of Understanding spells out the type and source of the local contribution and recites that the GOE and AID will provide the rest. It spells out also such things as to whom and under what conditions the land on which the school is to be built will be transferred or held. The Memorandum of Understanding is reviewed at the zone office. It is executed by the zone director and those who are to make the local contribution. After the community has deposited its cash contribution (if any) with the CPSC, after the land on which the school is to be constructed has been deeded to the GOE or otherwise made available, and after satisfactory evidence has been provided to the zone or sub-zone office that the contributions in labor, equipment and materials will be available when needed, construction will be ready to proceed.

The CPSC zone or sub-zone engineer will then prepare a complete list of materials for the locally procured and U.S. imported commodities for the sub-project. He will also prepare a site plan including site adaptation of the facilities to be constructed, utilities, drainage, walks and other data pertinent to the required construction work.

The zone office will then proceed to select a labor contractor for the job. The exact method of selecting the contractor will vary depending on the resources of the community, but normally the engineer will attempt to find a competent contractor within the community and negotiate a single unit price labor contract with him. (The CPSC has a register of qualified labor contractors rated according to their capabilities. The rating is often based on prior work with the CPSC). Where a qualified contractor cannot be found in the community, an attempt will be made to find another contractor from the general area who has established or can establish his capabilities. In some remote areas experience has shown that it may not be possible to find one contractor willing to risk signing a contract for the entire job, small as it is, and in these cases, the CPSC will attempt to negotiate unit price labor contracts for different parts of the job with several contractors or will hire a foreman to go into the area and hire local laborers on a piece-work basis. Experience has shown that both skilled and unskilled labor will be available as required even in remote communities. In the larger communities the contract will be awarded where possible on the basis of competitive bids. Because most of the various labor contractors that will be used on these very small jobs will have little or no capital, it will not be feasible to require bonds or in most cases even to require a retained percentage. Because of the large number of contracts it will not be feasible for A.I.D. to review each contract. However, form contracts will be prepared by the CPSC for the various types of contracts anticipated, and review and approval of each type will be performed by A.I.D. if possible before the loan agreement is signed and in any event prior to the first disbursement.

Once the arrangements for the labor work have been completed, the engineer will begin ordering the necessary equipment and materials. Some items, such as sand, gravel, rock and lumber, may be provided by the community as part of its local contribution. The rest will be ordered through the zone purchasing agent. He will purchase local items at the most reasonable price by obtaining quotations from all reliable local suppliers. Local items ordered will be delivered directly to the job site in rented trucks or trucks otherwise made available to the CPSC under individual agreements. All local material required is readily available and can be supplied at reasonable prices and in quantities required to meet the demands of the entire program.

The CPSC headquarters at Quito would be responsible for the procurement of all U.S. commodities. A building located at Guayaquil, formerly a customs warehouse, is available for CPSC use. This building has excellent security features and is ideally located for economically receiving U.S. commodity imports. There is sufficient floor space to accommodate all U.S. imports required for the total school construction project. However, it is proposed to limit procurement to one year construction requirements. Therefore the initial order would cover only the commodities required for 802 classrooms, 14 teachers lodgings, two normal schools and the construction equipment items listed in Annex III Exhibit J. Shipment would be made from this warehouse to the Quito and Cuenca zone warehouses, up to the capacity of the zone warehouses, which will be replenished upon request from the zone purchasing agent.

The zone warehouses have satisfactory security arrangements.

When the CPSC engineer orders imported materials, the zone purchasing agent will then draw them out of the zone warehouse (or order them from the central warehouse if necessary) and have them trucked to the job site. A member of the community is then hired as guardian of the equipment and materials. The contractor (or foreman) is also made responsible for the care and safekeeping of the materials and equipment to be used on the work for which he is responsible. Upon completion of the sub-project any excess materials would be returned to one of the zone warehouses. Analysis of the controls and records kept at these warehouses (including the central warehouse) under the current dollar grant project indicates that loss is negligible and property is properly accounted for. Reasonable assurance can therefore be given that construction materials and equipment purchased abroad and locally with loan funds would be subject to all necessary controls.

After the contractor has been selected and the equipment and materials necessary to start the job have been ordered or have been supplied by the community, the CPSC engineer will lay out the initial work for the contractor. The engineer will return periodically to inspect the work, to pay the contractor for work performed, to send an order for additional equipment and materials necessary, and to lay out successive stages of work.

As demonstrated by the pilot project, the School Construction Program is technically feasible. The cost estimates developed in Annex III, Exhibit E are considered to be reasonably firm and are based upon actual experience under the pilot project.

Maintenance of the school buildings will be provided by the GOE and the communities. In the "Memorandum of Understanding" and also in a "Memorandum of Completion" executed at the termination of construction to record acceptance of the completed school by the community, a provision is included which not only obligates the community to adequately maintain the school but requires that sufficient evidence to this effect be submitted before the school is turned over to the community. This provision was applied to the classrooms constructed under the pilot project and maintenance practices have proved to be satisfactory.

3. Primary Schools and Teacher's Lodgings Construction-Disbursement

Foreign exchange costs of the primary school and teachers lodging construction program will be financed under the letter of commitment procedure.

The local contribution of the community will generally be made in kind at the jobsite, but occasionally some or all of it will be made in cash. Cash contributions will be deposited in a Quito bank account and credited to the community on the central office and zone office books.

The three zones will pay local currency costs from a revolving fund established in each zone by the central office of the CPSC from funds provided by the GOE, the AID loan and community cash contributions.

At the end of each month the zone submits supplier's and contractor's invoices (generally on forms provided by the CPSC) to the Quito office under cover of a summary sheet essentially in the form of the standard AID "Summary Claim for Reimbursement". This sheet will indicate among other things the school to which the invoices apply, those schools on the sheet for which community cash contributions were deposited in Quito, the total amount of the invoices and the amount remaining in the zone revolving fund. This summary sheet will be approved by the zone engineer and the Quito office will then replenish the zone office fund by the amount shown on the summary sheet. The accompanying invoices will be retained at the Quito office and copies of the invoices will be retained at the zone offices. With the establishment of sub-zones it is anticipated that the zone offices will provide small advances to sub-zone engineers, to cover labor costs, out of the zone revolving fund and follow a similar reimbursement procedure.

Upon satisfaction of conditions precedent under the loan, AID and the GOE will make an initial advance (at a ratio of two to one) in an amount necessary to establish zone revolving funds on a scale adequate for the increased size of the project. To obtain replenishment of zone revolving funds, the central office in Quito will send all zone summary sheets to AID together with standard documentation required by AID with the exceptions noted below. The Quito office will also be required to submit a statement with each summary sheet as to the total amount of any community cash contributions used to replenish the amount shown on the summary sheet, it being understood that the Quito office will be instructed to use the entire applicable community contributions before requesting reimbursement from AID and the GOE. The USAID proposes not to require submission of supplier's and contractor's invoices received by CPSC or require supplier's certificates for minor procurement of off-the-shelf imports. It is felt that AID will be adequately protected by the summary statements approved by the CPSC Engineer (and Consulting Engineer) and by the fact that duplicate copies of the invoices will be retained, subject to AID inspection, at the Quito and zone offices. As far as supplier's certificates are concerned, most of the invoices will be for labor costs or for materials of clearly local origin such as sand and gravel. Almost the only local "off-the-shelf" purchases that will be made will be designed to take care of emergencies arising from unexpected shortages of equipment or materials at the job-site. Furthermore, it is expected that in most of these situations (the emergency purchase of a kilo of nails at a nearby store to finish a certain job, for example) the local supplier will not know the origin of the goods. Eliminating these requirements for presentation to the USAID of supplier invoices and certificates will also greatly reduce the amount of paperwork that will be imposed on the USAID. Therefore, the USAID requests waiver of origin requirements on local procurement for school construction.

Upon review and acceptance of the documents submitted, AID will reimburse the CPSC for 2/3's of the amount representing the total amount shown on the summary sheets less the amount shown as reimbursed out of community contributions. The remaining 1/3 will be paid by the GOE. Prior to each reimbursement AID will require evidence that the GOE's previous 1/3 contribution has in fact been made. The GOE has agreed to utilize any loan-financed materials and equipment procured in excess of the needs of individual schools or in excess and remaining on completion of this project, to construct additional schools using standards applicable to the project.

Under the school construction program the GOE has also agreed to pay on an advance of funds basis to the CPSC the cost of vehicle maintenance, equipment rental and administration of the CPSC, and the USAID will require evidence that the agreed advances have been paid as part of the documentation required for each disbursement of AID funds.

The GOE has agreed to guarantee the community contributions and will make-up any shortages which may occur.

4. Teachers Training Program

The teacher-training component will be implemented as follows:

(1) August-September 1965 - Assignment of three U.S. advisors in school administration and organization, educational psychology, and teaching methods and curriculum. Selection of up to 28 highly qualified experienced normal school professors, initiation by U.S. advisors of intensive seminars in the above professional fields, and commencement of training abroad for professors who will become the professional nucleus for schools of education at the national universities.

(2) June-December 1967 - Continuation of Seminars (including practice teaching for professors in the seminar), initiation of teacher training at the Carlos Zambrano Rural Normal School in Uyumbicho and in the four selected demonstration primary schools. Development by GOE of plans including budgets for initiating professional education course in other normal schools and in the five national universities.

(3) September 1967 - Completion of training at Carlos Zambrano and abroad for approximately 10 selected professors; assignment of three professors to start the professional education program at the newly constructed Leonidas Garcia Normal School and initiation of practice teaching at associated primary schools; assignment of approximately seven other professors to start professional education courses in other selected principal normal schools.

(4) September 1968 - Completion of training at Carlos Zambrano and abroad for the balance (about 18) of the selected professors. Assignment of three professors to each of the five national universities (one each in educational administration psychology, curriculum and teaching methods) and initiation in the universities of professional education courses. Assignment of three other professors to Begin professional education courses in another principal normal school.

(5) Summer 1969 through Summer 1971 - Initiation and continuation each summer of intensive summer training sessions in educational administration, psychology, curriculum and teaching methods for normal school professors at one or more of the national universities, and for primary school teachers at the Carlos Zambrano and Leonidas Garcia model normal schools.

Each professor enrolled in the seminar group of Carlos Zambrano will be expected to specialize in one of the three professional fields mentioned above and prepare himself as a professor in this field. Administration specialists will study school organization, finance, budgeting, and personnel practices, while specialists in educational psychology will study testing, guidance, and child growth and development. In addition, experts in primary curriculum and methods will study curriculum revision methods, methods for teaching primary subjects and supervision of classroom teaching.

U.S. technicians, with the assistance of the seminar participants, will develop courses of study in the field of school administration, educational psychology, and teaching methods (to be used in this and other normal schools in Ecuador; none exist at present). They will also work with the normal school staff in trying out and demonstrating the teaching of these courses and assist in reorganizing four nearby rural primary schools as centers for student observation and student practice teaching. Seminar participants who have had limited background and experience and those who, when they return to their teaching jobs, will have to teach in more than one field, will require a longer training period. Those with a strong background of training and experience who will be responsible for one special field may complete their training in one year. Those professors planning to teach in schools of education in the universities will be given the most intensive course and priority consideration in the matter of third-country or U.S. advanced training. While a total of 144 man-months of such training are scheduled assignments will be flexible, ranging from short observation programs to extended training leading to a degree. For these reasons the number of seminar participants who will receive training will exceed the number registered in the seminar at any particular time. During the three year project approximately twenty-eight should be able to complete their seminar training and practice at Uyumbicho.

The scheduling of this sub-project offers no special problems. Although complete new facilities are planned for construction at Carlos Zambrano in Uyumbicho, the buildings that are presently available can be used temporarily. New construction is planned for completion during the first project operational year at which time enrollment can be expanded from 500 to 800. If possible, the U.S. technician in administration should be brought on board three to six months before the others to assist the Ministry in selecting the seminar participants and to assist the Rector of the Normal school in ordering basic supplies and with planning and organizational details.

The assignment of three professors from the seminar to the new Leonidas Garcia Normal School in Guayaquil is timed so that they can institute the curriculum in professional education at the time the first two classes begin in the 5th and 6th years. This normal school, presently located in rented quarters, is completing its second year of development and is adding one class each year. The School Construction component of this Loan Project provides for the construction of a completely new normal school plant ready for occupancy during the second project operational year, and in time for the newly trained professors to initiate their teaching of 5th and 6th year professional courses. U.S. technicians will assist in the reorganization of the cooperating primary schools to be used for observation and practice teaching at the time the 5th and 6th year courses are offered at Leonidas Garcia.

The teacher-training sub-project is closely related to the new primary school curriculum now under development by the Ministry. This curriculum has only been completed in very general terms for grades 1-6. The assistance of the three U.S. technicians working in the normal schools will complement the work of the U.S. textbook specialist working in the textbook development component of this project. All U.S. technicians will be available as consultants, and the cooperating primary schools will be used to try out new textbooks and other instructional materials.

5. Textbook Program

The textbook sub-project covers the preparation of 15 elementary school textbooks in the fields of reading, arithmetic and natural science together with accompanying teachers' guides. These materials will be printed and bound in the Ministry's print shop. The entire project, including selection and assignment of writing personnel and manufacture of the books, is projected over a three year period. It is estimated that implementation of this sub-project can begin September, 1965, and will be completed in December 1968.

In general, preparation of each textbook involves a preliminary planning stage, a writing stage, and a stage of photomechanical processing leading to the actual printings of books by the offset process. Once pages have been printed in the quantities required, there remains the process of gathering press sheets, folding them into signatures, binding them in 4-color covers and finally storage or distribution by the Ministry of Education to the schools.

Six U.S. specialist will be required to assist the Ministry of Education in implementing this sub-project. The first to be assigned will be a general advisor to the Ministry who will coordinate the program for the USAID during the entire three-year period. The Regional Educational Material Advisor in Lima, Peru will provide advisory service on repeated short-term assignments.

Four short-term specialists are scheduled to assist local personnel with subject matter problems and efficient operation of the Ministry's print shop. An off-set printing specialist is scheduled to arrive, in Quito, November 1st, 1965 and remain for a period of 6 months until May 1st, 1966. During this time, this specialist will have responsibility for renovation and remodeling of the print shop facilities. He will also be expected to supervise installation of new equipment, rearrange shop equipment for more efficient work flow, and train technicians in all of the off-set processes to the extent possible in a 6-month period.

A Reading specialist is scheduled to arrive in Quito September 1st and remain for a period of 3 months until the first of December 1965. A specialist in Arithmetic is scheduled to arrive October 1st, and remain until January 1st, 1966. A Science specialist is scheduled to arrive in Quito, November 1st, and remain until February 1st, 1966.

All four specialists mentioned above are scheduled to be in Quito during the month of November. Their services will be utilized to create broad understanding among all personnel who are contributing to the successful culmination of this project. The reading specialist will be expected to make contributions to writers in the fields of Arithmetic and Science with respect to basic techniques in writing. Altogether these short-term specialists will provide 15 man months of assistance.

During September, 1965 a series of tests will be given to people selected by the Ministry of Education in order to determine the special interests and talents of potential writers in each of the three subject matter fields. Two writing commissions will be established as provided for in the Ministry's original application for an education loan. Within each of the commissions, writing teams will be selected. Special emphasis will be given to writing manuscripts for first grade reading, as a part of preliminary training for authors participating in this sub-project. Also, during September, there will be general briefings on the scope of the total project, the establishment of procedural rules and preparation of whatever regulations seem appropriate to the overall conduct of the three year activity. Texts produced under AID auspices in other countries (Central America and Bolivia) will be reviewed to determine whether some material may be used in this project.

Production of the series of Six Reading textbooks has been spread throughout a three year period. This is more time than would be required normally to create and print six reading books. However, preparation and printing schedules for six Arithmetic titles and three Science titles have

been so interwoven (See Annex V, Exhibit A, Part V) that the different books will be available on approximately the same dates first for grade one, then grade two, then grade three, etc.

For producing the six Arithmetic books, a preparatory period has been scheduled from September-December 1965. General orientation for the writing teams who will produce the Arithmetic texts is scheduled for September. October and November will be devoted to general research and discussion leading to the establishment of firm objectives for teaching Arithmetic in the elementary grades. During December, outlines will be prepared of grade distribution and location of Arithmetic skills in terms of curriculum requirements for Ecuador. It is hoped that actual writing for all six Arithmetic textbooks can begin during December.

Preparation of three Science textbooks for the middle grades will require extensive basic research and orientation of writers in an area that is crucial to modern day living. Consequently, a period of 6 months has been scheduled for examination of current philosophies in the teaching of Science at the elementary level and careful appraisal of curriculum problems in the field prior to initiating writing in February 1966. All printing for the fifteen basic textbooks has been scheduled on the new two-color press to be financed by this project. At present, the Ministry's print shop operates an off-set press that normally is utilized for production of the regular flow of jobs required by the various departments of the Ministry of Education. From time to time existing equipment will be available for the textbook project as a safeguard against mechanical failure or other interruptions to continuous operation of the new equipment.

No production schedule has yet been prepared for printing of the 4-color paper or hard covers for this textbook project. However, the project includes purchase of small off-set equipment in two sizes. These two machines will be utilized exclusively for production of covers. Printing runs will be comparatively short and the scheduling of the 15 covers must be prepared until the receipt of recommendations from a short-term shop specialist who will be contracted to advise the Ministry on shop practices.

Fifteen teachers' guides will be prepared as a complement of this project. These, however, are planned to be produced in inexpensive duplicated form. Production of the guides, is also not being scheduled at the present time since they will be produced in small runs. 15,000 guides will be required for the Arithmetic series, 15,000 will be required for the Reading series and only 5,000 will be needed to accompany the Science textbooks for grades 4, 5 and 6.

Content for the teachers guides will be prepared in conjunction with the development of each textbook. They cannot be assembled in final form until the books to which they are related have been printed in final form. However, a total of only 35,000 guides, averaging 64 pages each, have been planned for this project. Standard typewriters will be used for composition. Printing will require relatively short runs on Multiliths and schedules can easily be adapted to the overall production requirements. (See Annex IV, Exhibit A, Part V for a detailed analysis of the projected schedule for textbook production.)

6. Pilot Pre-Vocational Workshop Program

A.I.D. will finance \$98,100 in materials and equipment to initiate pre-vocational skill training in wood-work, metal work and gardening in 75 boys primary schools and home-crafts including sewing and cooking in 25 girls schools. The cost will average, \$1,056 for a typical boys school and \$756 for a typical girls school. Letter of Commitment procedures will be used for procurement. (See Annex VI, Exhibit A for the detailed equipment list and costs).

Tools and other equipment will be provided to 100 schools (to be selected by the Ministry with USAID concurrence) which meets the following conditions: (1) a teacher, or teachers, have been trained to teach the pre-vocational courses; (2) the school has adequate space in which to carry on the instructional program; (3) the school has a proper and safe place in which to store the equipment when not in use; and (4) there is evidence that the community will support the program by providing necessary instructional materials for use in the pre-vocational classes (wood, metals, seeds, cloth, foods for cooking etc.) The Ministry has indicated that if any school subsequently does not meet its obligations, the tools and equipment will be removed and located in some other school where proper use will be made of them.

Training of teachers for this program is a Ministry's responsibility which is being undertaken through intensive summer training programs. USAID industrial vocational technicians will assist the Ministry in training teachers to use simple hand-tools for wood and metal-work. Ministry vocational agriculture schools and instruction also will be available to assist in developing training in agriculture. Elementary courses of study for teachers and simple teachers guides will have to be developed in each pre-vocational area under the Ministry's supervision.

7. Project Supervision and Monitoring

Overall coordination and monitoring responsibility for the USAID will be assigned to a top level education generalist, now under recruitment, and to the USAID Human Resources and Social Development Division. The project coordinator will be responsible for assuring speed and coordinated implementation of all sub-projects. He will receive assistance from other USAID education advisors. A direct-hire U. S. engineer supported by Ecuadorean engineers, will monitor the construction sub-project. As explained under I-C above, Description of Sub-Projects,

substantive and detailed planning and supervision will be undertaken by the Cooperative Program of School Construction, an agency of the Ministry of Education. Overall supervision and inspection will be provided by a U. S. engineering firm, preferably with an Ecuadorean affiliation.

Three U. S. contract technicians will assist the Ministry in carrying out the teacher training sub-project and five U. S. contract technicians will assist in carrying out the textbook sub-project. The USAID vocational education specialist will advise the Ministry in finalizing and implementing the pilot pre-vocational primary education sub-project.

The Chief Capital Development Officer, Chief Engineer and USAID staff officers will provide overall technical supervision and guidance in project implementation.

3. Technical Feasibility

Careful review of engineering plans, technical studies, educational equipment requirements and other cost estimates, shows that the requirements of Section 201 (t) (2) and 611 of the Foreign Assistance Act of 1961, as amended, have been met.

E. TECHNICAL CAPACITY OF BORROWER TO EXECUTE THE PROGRAMA. The Program

School construction will be administered by the Cooperative Program of School Construction, an agency of the Ministry of Education especially organized and technically staffed for this purpose. It will be endowed by the GOE with any additional power and authority needed to execute the construction phase of this program expeditiously and efficiently. The CPSC is highly qualified to undertake and execute all of the construction under this program. It has had more than two years experience of successful operations and has established all of the technical, organizational and administrative mechanisms required to execute the construction phase of this program. (See Part I-D Implementation Plan)

Under GOE-USAID pilot and subsequent projects, the CPSC as an agent of the Ministry of Education, built 710 classrooms, 73 teachers' lodgings and two vocational schools, one in Manta and one in Ambato. At present it is in the process of completing the construction of an additional 175 classrooms, several teachers' lodgings and three vocational schools. In all instances the Ministry provided the necessary teaching personnel for each new school as soon as construction was completed.

The CPSC technical staff developed the construction cost data used as the basis for computing the estimated total cost of the program included in the present loan application. The agency has developed the basic designs to be utilized in the construction of primary schools and in the construction of the two normal schools. It has also, (1) developed a complete set of specifications for site inspection, site soil tests, overall construction standards and standard labor bidding documents; (2) developed a "Memorandum of Understanding" which obligates the communities to provide their contribution (30 to 40%) toward the cost of the schools; (3) **developed methods to be used in the purchase, storing and handling of materials;** (4) devised a system of administration by geographical zones for more efficient use of men and materials; and (5) defined additional technical resources needed to carry out this construction program.

While the Ministry of Education and CPSC have the necessary technical and administrative capability to properly manage and execute the construction phase of this program, AID will nevertheless require that expert architectural engineering contractual services be retained from the U.S. to supervise construction.

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The teacher training project will be administered at the Uyumbicho Normal School which is presently staffed with about 40 professors. The program has the whole-hearted support of the Ministry of Education which will coordinate and direct the program through committees composed of Normal School, Ministry of Education and USAID representatives. Technically guidance will be provided by U. S. contract personnel and administrative procedures, mutually acceptable to GOE/USAID, will be established for its proper execution.

The textbook project will be administered by the Ministry of Education with the technical guidance of five U. S. contract technicians and the Regional Educational Materials Advisor.

The pre-vocational primary workshop project will be administered by the Ministry of Education as a pilot activity. However, USAID education specialists (now on board) will provide advice on curricula development, intensive training of teachers and use and protection of tools and materials.

In summary, the borrower and its administrative agencies have the technical and administrative capability to properly execute this program. This will be further guaranteed by the provision of qualified U. S. technicians to provide advisory and training services, and monitor each component of the program.

F. ECONOMIC AND FINANCIAL ANALYSIS

The primary education project proposed for financing under this loan is among those priority projects approved by CIAP and the External Financing Advisory (IDB Consultative) Group for implementation in the June 1965 - June 1966 period. In meetings held during May 1965 CIAP approved revisions in the 10-Year Plan and a list of projects proposed by the Ecuadorean Government for external financing from 1965 through 1968.

In addition to preparing a development plan (considered by CIAP to be one of the best in Latin America) the Ecuadorean Government has completed or has underway major structural reforms including consolidation and integration of government agencies, creation of a career civil service, simplification of the tax structure and significant improvements in tax administration and collections, development of institutions and incentives (including tax relief) for private investment, enactment of an agrarian reform law and initiation of a related agricultural development and colonization program.

Ecuador has grown at a rate of about 3% a year from 3.2 million people in 1950 to 4.8 million people in 1964. From 1950 to 1960 gross domestic product (GDP) per capita increased from \$223 to \$268. This fluctuated slightly during the last few years but was still approximately \$268 in 1964. From 1950 through 1963 the annual rate of GDP growth was 4.6% in total and 1.6% per capita. The goal of the 10-year development plan is to increase the overall GDP growth rate to 6.5% per year and per capita GDP growth rate to 3% per year.

The Plan calls for a total investment of the equivalent of \$2,454 million of which \$1,974 million would be financed by Ecuadorean resources and \$571 million by foreign lending. The external input is thus about \$57 million per year.

Unfortunately, projections of Government budget receipts and the balance of payments, were predicated upon maintenance of banana exports approximately at the level of recent years; that is about \$84 million in banana receipts out of \$145 million in average exports. Increases in production, particularly in Central America and Taiwan will have adverse effects on Ecuadorean banana export **receipts at least** for some years. Trade specialists differ slightly but generally agree that 1965 banana export receipts will decline approximately 18-26% below 1964 levels. During 1965 Ecuador's foreign exchange reserves have declined substantially due to the decrease in banana export receipts

and to continue strong import demands resulting both from the continuation of a boom psychology and from an effort to hedge against an anticipated increase in import costs (this resulted from an advance announcement that tariffs would be increased).

In May 1965 the Consultative Group and CIAP carefully considered the effect of this situation on the development program. The decline in export earnings and related effects forced the government to adjust the development program to a 300 million sucre decrease in 1965 revenues. Almost 150 million sucres was cut **from planned expenditures** mostly outside the capital budget, while the balance is to come from internal borrowing. This should offer no problem because Ecuador can borrow up to about 130 million sucres from the Central Bank without exceeding limitations established by mutual agreement with the IMF. This leaves a balance of 20 million which can be financed by internal bond sales.

The immediate and cumulative affect of the decline in banana earnings is to force rescheduling or cuts in some priority projects, and to require greater financing by external agencies both of import and local costs of development projects. Recognizing the importance of Ecuador's carrying out its approved development plan, CIAP recommended that the financing agencies be prepared to provide more assistance than anticipated in the early years and provided it on terms which take into consideration the balance of payments problem (See Section IV, Issues, below, for further discussion of local cost financing).

As analyzed in Part I-A-3, and I-B above the total cost of this project is \$11.2 million. AID will provide a loan of up to \$5.3 million and a grant of up to \$0.5 million. The government of Ecuador will contribute \$2.3 million and the local communities \$3.2 million. The Government has earmarked funds for this purpose in the approved 1965 budget and proposed 1966 budget. The estimated community contribution for the first years construction is based on negotiations between the Ministry and the communities, and for the balance of the program upon experience (gained in the pilot construction project) which clearly substantiates the estimated total community contribution. A covenant in the loan agreement also will provide assurance that the GOE will make up any shortfall in community contributions. This is highly unlikely since community contribution have averaged 35% in the pilot project compared to the proposed 28% community contribution for the loan project.

While normally development grant funds would not be proposed to finance technical assistance in conjunction with a loan, the history of the discussions with the Government prevent our now withdrawing from providing the small amount of grant financing requested by the Government, recommended by the USAID and previously approved by AID/W.

The Ex-Im Bank, on March 30, 1965, stated that it was not interested in considering this loan. The Inter-American Bank also indicated disinterest in the loan in view of its interest in financing a variety of other Ecuadorean projects.

Other free world sources are not available for this project.

G. Repayment Prospects

As discussed under F above, Ecuador is faced by difficult short-term balance of payments problems. However, analysis by CIAP and the Inter-American Development Bank reveal that as of December 31, 1964 the total contractual external public debt of Ecuador was 163.0 million dollars (See Table A below).

As indicated in Table B, below, debt service on this contractual debt ranges from a peak of 12.3 million dollars in 1964 to 10.6 million dollars in 1970, which is approximately 6% of 1963 exports of \$150 million in goods and services. Even taking a more conservative base--say 140 million dollars--the percentage of the projected contractual service payments would be only 7% of exports of goods and services. Assuming that external financing is made available for Ecuador's export diversification program, there is reason to believe that export earnings may begin to grow again in several years. Accordingly based on available data Ecuador has **demonstrated a** capacity to repay.

Since this is a loan to the Government, the latter's past performance in meeting its obligations offers the best assurance that this loan will be repayed according to schedule.

TABLE AECUADOR: EXTERNAL PUBLIC DEBT a/

(Millions of dollars)

	Debt as of June 30, 1964		Major additions	Total
	Disbursed & outstanding	Undisbursed balances	July 1, 1964 to December 31, 1964	contractual debt <u>b/</u>
U. S. Government loans	34.4	26.4	9.7	70.5
(AID)	(21.4)	(25.1)	(1.7)	(48.2)
(EXIMBANK)	(13.0)	(1.3)	(8.0)	(22.3)
IFRD Loans	32.2	9.1	-	41.3
IDA Loans	-	8.0	-	8.0
IDB Loans	2.4	12.8	-	15.2
Publicly-issued bonds	6.5	-	-	6.5
Privately-placed debt <u>c/</u>	13.3	6.4	-	19.7
Colombian Government loan	1.8	-	-	1.8
TOTAL	90.6	62.7	9.7	163.0

a/ Debt repayable in foreign currencies. Original maturities in excess of one year.

b/ Excludes any repayments or cancellations between July 1, 1964, and December 31, 1964.

c/ Including suppliers' credits and bank loans to private borrowers which are guaranteed by the government.

Source: Table XXVII - External Public Debt - Ecuador: Economic Background and Development Plans, Inter-American Development Bank, Consultative Group on External Financing General Economic and Social Development Plan of Ecuador. June 1965

TABLE B

ECUADOR: CONTRACTUAL SERVICE PAYMENTS a/
(Millions of dollars)

	1964	1965	1966	1967	1968	1969	1970
Debt service as of June 30, 1964	12.3	9.3	10.1	9.5	9.3	9.7	9.5
New loans to December 31, 1964	-	0.2	0.4	0.7	1.1	1.1	1.1
TOTAL	12.3	9.5	10.5	10.2	10.4	10.8	10.6
Service as percentage of 1963 Goods and services exports (US\$174.7 mm.)	7%	5%	6%	6%	6%	6%	6%

a/ External public debt repayable in foreign currencies.

Source: Table XXVIII - Ecuador: Contractual Service Payments, Economic Background and Development Plans, Inter-American Development Bank, Consultative Group on External Financing General Economic and Social Development Plan of Ecuador. June 1965

II. IMPACT ON THE U.S. ECONOMY

All imported equipment will be procured in the U.S. with the exception of one item--manual sewing machines for the pilot prevocational workshop program--which may no longer be produced in the U.S. If necessary, a waiver will be subsequently requested and justified. The AID's \$5.3 million loan will directly finance imports of \$3.5 million from the U.S. and \$2.3 million in local costs. AID dollars for local currency financing will be made available using procedures which will assure their use only for imports from the U.S. Accordingly, the loan will have a beneficial effect on the U.S. economy--\$5.3 million in net procurement of U.S. goods and services.

III. CONDITIONS

To implement the loan authorization (See Part VI, below) the loan agreement and implementation letter will include provision under which the GOE agrees to:

1. Employ qualified U. S. engineers preferably affiliated with an Ecadorean firm, to perform the necessary functions of consultation, inspection, and supervision relating to the construction of primary schools, teacher lodgings and normal schools.
2. Provide sufficient qualified teachers to staff all primary schools to be constructed under this program and to satisfy present replacement requirements and future demands resulting from population increases; implement the decreed salary increase for teachers as scheduled in January 1966 and conduct a study of additional incentives needed to attract and keep qualified teachers, particularly in rural areas.
3. Provide adequate funds for the maintenance of the primary and normal schools to be constructed under this program and utilize the funds that have accrued for this purpose in excess of need, to repair existing schools.
4. Not use primary school classrooms constructed under this loan principally for religious instruction or services or for other religious purposes, nor to deny children entrance to primary schools constructed under the loan on religious grounds, nor to require children to attend religious instruction or services as a condition of entrance or attendance in school.
5. Make available the primary school classrooms constructed under the loan for use after school hours by community organizations and for other community purposes.
6. Conduct an intensive study of the causes of student drop-outs in the primary schools (including lack of food and poverty) and develop and implement a plan to reduce the rate of drop-outs. Immediate attention should be given to reforming the examination system in the primary schools and to establishing a wide-spread school lunch program.

7. Assign qualified faculty and administrative staff to the normal schools to be constructed under this program; assure that the Carlos Zambrano normal school will operate as an Experimental and Demonstration School and will continue as a Co-educational institution; select the best qualified normal school professors available to participate in the seminar group to be trained at Uyumbicho and abroad; and by 1969 staff the Leonidas Garcia Normal Schools with professors trained at Uyumbicho and abroad under this project.
8. Adopt the professional educational courses and programs best suited for Ecuador which are to be developed at Uyumbicho and establish them in all other principal Ecuadorean Normal Schools between 1969 and 1971.
9. Develop and implement a plan mutually acceptable to the two governments to establish by 1969 professional training of normal school professors at the five national universities initially through employing the fifteen most highly qualified professors (trained under the project) in educational administration, psychology and curricula and teaching methods to teach these courses in the national universities.
10. Develop and implement a plan mutually acceptable to the two governments to establish intensive summer training courses for normal school administrators, supervisors, and professors at the universities and for primary school supervisors and teachers (without the normalista certificate) at the pilot normal schools so that by 1971 all principal normal schools have trained staff members to teach professional educational courses and all unqualified primary school teachers have received professional training.
11. Assign priority to printing the textbooks developed under this program with both the printing machines earlier provided by the U. S. and the new machinery to be purchased under this loan; and use the latter only for the reproduction of educational materials.

12. Prepare, reproduce, and distribute textbooks in accordance with a program and schedule developed by Ecuadorean and U. S. experts and mutually acceptable to the two governments.
13. Submit a plan and budget satisfactory to the Ministry and AID, designed to assure establishment of a special fund derived from the annual budget and from the sale or rental of textbooks produced under this program sufficient to repair, replace, and produce additional primary textbooks so that starting in 1969 children in all federally supported primary schools will have all necessary textbooks.
14. Select the construction sites, adapt the standard primary school and teachers' lodging designs to the sites, and complete, to the satisfaction of A.I.D., all other necessary preparatory work for the construction of the primary school classrooms and teachers' lodgings during the first year, such construction to be planned so that construction of an average of not less than twenty-five new schools will begin each month, provided that this condition precedent shall not prevent disbursements for engineering services.
15. Submit within 6 months of signing this loan the details concerning normal school construction to be undertaken the first year.
16. Finalize and implement a plan mutually agreeable to the two governments to assure control, efficient utilization and maintenance of the workshop and sewing equipment to be financed under this loan.
17. Develop a mechanism to provide for exchange of current information and experiences and for close coordination of USAID and other international educational programs in Ecuador.
18. Provide the necessary office space, supplies, equipment and transportation for U. S. technicians and for authors trained under this project.

IV. ISSUESWhether AID Financing of 29% of the Local Costs of This Project are Justified.

As explained under Part V-B and D, the education budget has been increased very substantially (to a projected 1966 level of the equivalent of about \$33.3 million) in order to provide for the GOE contribution to this project, and to increase teacher salaries. A 300 million sucre (about \$16.6 million) adjustment has already been made in the 1965 budget; adjustments of similar magnitude may be required in the 1966 budget. While CIAP favored the 300 million sucre adjustment, it does not recommend downward adjustments in the development plan; on the contrary, CIAP recommends that international agencies increase their financing and liberalize their terms in order to meet both foreign exchange and local cost short-falls resulting from the decline in banana export earnings and related side effects. Furthermore, the Ministry of Education agreed earlier to a USAID request to increase its contribution by another million dollars. In the opinion of the project committee it is neither feasible nor desirable to request larger GOE or community contributions.

V. PROBLEMS AND CONSIDERATIONS

A. Availability of New Teachers to Meet Primary Education Program Needs

A serious situation would be created if the Ecuadorean Government found itself unable to provide sufficient new primary school teachers to replace annual attrition in teachers ranks and maintain or if possible decrease the pupil-teacher ratio.

Under the loan agreement 3,000 classrooms will be built over a three and a half year period. Since 1,000 of these will replace delapidated, borrowed or rented facilities which already have teachers, only 2,000 rooms will require new teachers, at an average rate of 570 teachers per year. According to the USAID and Ministry about 1,000 teachers per year will be required to take care of estimated attrition among elementary teachers. Making allowances for unforeseen replacement requirements it appears that a minimum of about 1,600 and maximum of about 2,000 new teachers will be required each year, or a minimum of about 5,600 and maximum of 7,000 over the 3-1/2 year construction period.

There are several reasons for concluding that the GOE has the capacity to meet this requirement. In the first place the GOE created 2,760 new elementary posts during the last two years along, exclusive of replacement teachers and teachers added by municipal and private institutions. Second, there are three principal sources for supplying elementary teachers in Ecuador, the graduates of the normal schools, the graduates of the colegios de bachilleratos and the graduates of the colegios tecnicos.

There will be an average of 1,400 graduates per year from the normal schools during the period of the loan. In 1965-66 school year an estimated 4,300 will graduate from colegios de bachilleratos many of whose graduates receive a finer education than the typical graduate of the colegio normal and 1,700 from colegios tecnico (both figures are constantly increasing). Thus the combined availability is about 7,400 each year to supply about 2,600 to 2,800 to universities (the estimated average number of entering freshmen) - and from 1,600 to 2,000 teachers to primary schools each year. This compares with 1,760 new teaching posts created and filled last year. In 1962-63 about 11,500 out of 17,306 primary school teachers were secondary school graduates. The latest information is that 3,754 of these were from the colegios de bachilleratos and the balance (about 7,800) were graduates of normal schools. Teaching is being made increasingly attractive to these categories of graduates through pay raises (one is due January 1, 1966 - see D below), improved retirement benefits and construction of teachers lodgings for isolated areas (73 completed in the current construction program and 17 planned for the first year of the loan program).

In the considered opinion of the USAID and GOE the elementary teacher potential is sufficient. In fact the Ministry has rejected recent requests from private schools to set up additional normal school programs until the demand for normal school graduates more clearly justifies any expansion. They too are concerned about any about any multiplicity of normal schools and about maintaining a balance between manpower need and supply in elementary education. At present, the principal interest of the GOE and USAID/E is in improving the quality rather than increasing the quantity of elementary teachers.

Nevertheless, the need for rapid availability of teachers for newly constructed classrooms is of such key importance to the success of this loan program that the synchronization of these two prime elements must be made a condition to the loan agreement. The committee recommends inclusion of language in the authorization and agreement which conditions disbursement for school construction on the Ministry providing sufficient new teachers to meet both the needs of this program and attrition. The Ministry has already expressed agreement to inclusion of a clause of this sort and is confident of its ability to fulfill its obligation. (See TOAID A-1207 for Complete analysis).

B. Sufficiency of Present and Projected Educational Budget to Cover the Cost of Achieving the Goals of the 10-Year Plan Including the Cost of this Project.

USAID is in accord with the 10-Year Plan goals. The education budget has been increased from 247 million sucres in 1961 to 337 million in 1962, 383 million in 1963, 428 million in 1964 and 508 million in 1965. The projected 1966 budget totals 600 million sucres or about \$33.3 million. Sufficient funds are reserved or earmarked to cover the GOE contribution to this project. However, due to an anticipated decline in export earnings and income from bananas, revenues during the next few years may not be sufficient to support all presently scheduled activities. (See also Part I-E The Borrower, and Part I-F Economic and Financial Analysis). If the GOE is unable either to make compensating adjustments in their development program or mobilize additional savings, other elements of the educational program would have to be scaled down during the early years and accomplished later, in order to assure a sufficient GOE contribution to this project. A covenant to accomplish this will be included in the loan agreement.

C. Priority of this Project in Relation to Other Alternatives

For reasons detailed in Annex VIII Justification for Loan and Development Grant Funding in Relation to U. S. Objectives (distributed separately) there is no known alternative, within the context of U. S. and Ecuadorean activities in education, to achieve the objectives of this project.

D. Adequacy of Education Budget Allocation for Maintenance and Teachers Salaries

The Ministry incorporated 1.6 million sucres for maintenance for the first time in the 1964 Budget and in 1965 increased this to S/2,700,000, which appears adequate. Teachers salaries are to be increased 20% (from a present average of the equivalent of \$706 to \$883) on January 1, 1966 by an April 13, 1965 decree. This is important to keeping the teaching staff intact and stimulating teacher recruitment. The pay raise and the GOE contribution to this project are reflected in the substantial 92 million sucre (\$5 million equivalent) increase in the 1966 education budget (600 million sucres vs. 508 million in 1965). In view of the importance of these items and conflicting claims against limited overall availabilities, a covenant of the loan agreement will require allocation of sufficient funds in 1966 and future budgets to implement the pay increase and to maintain both existing facilities and those constructed under this loan.

E. Assurance that GOE will Establish a University Level Program to Train Normal School Professors and Assurance that the Curricula changes in Pilot Normal Schools will Rapidly be Transferred to Other Normal Schools and to Primary School Teachers

The training program for professors established under the project will produce the skilled people necessary to (a) establish a university level program for training normal school professors; (b) provide a multiplier effect in the form of intensive summer training of primary school teachers in the pilot normal schools and training of normal school professors in the universities, in order to reach rapidly all primary school children and normal school students; and (c) rapidly extend to the other normal schools the revised curricula developed in the pilot normal schools. To assure that these trained people are effectively used to achieve the desired wide impact, a covenant in the loan agreement will provide that the government develop plans and budget funds to: (a) establish starting in 1969 a program of professional instruction for normal school professors in the five national universities, and (b) initiate in the summer of 1967 (or no later than the summer of 1968) intensive summer training courses in the three professional fields of Education Administration, Psychology and Curricula and Teaching Methods for normal school professors in one or more of the five national universities and for primary school teachers in the two pilot normal schools, so that by 1971 all normal school professors and primary school teachers will be adequately trained in these fields.

F. Safeguards for any AID Loan Funds Used to Finance Construction of Schools Operated by Religious Institutions.

It is not unusual in Ecuador for government facilities to be operated for the public benefit by private institutions under the terms of a specific agreement between the government and the institution. A few of the schools constructed under the pilot program are operated by religious institutions. They are complying with AID regulations in regard to assisting such institutions. We anticipate that a small number of schools to be constructed under this loan also may be operated by religious institutions. In such cases the Memorandum of Understanding (covering construction, contributions, maintenance, etc.) between the Cooperative Program of School Construction (CPSC) and the institution will contain a covenant under which the institution will agree 1) not to deny entrance to children on religious grounds; 2) not to require children to attend religious instruction or services against their will; and 3) not to use school buildings or any classrooms principally for religious purposes, instructions or services.

G. Assurance that Ministry will Maintain a Reasonable Pupil-Teacher and Supervisor-Teacher Ratios

The announced intention of the GOE is to maintain pupil-teacher ratio at a level of approximately 38 pupils per teacher or less. The best available information indicates that ratios have declined from 43 to 1 in 1956 to 36 to 1 in 1961, and 35 to 1 at present. The Ministry has underway a program to upgrade the skills of primary school supervisors through intensive summer training programs. The school construction program provides an annual increase of about 4% in primary school classrooms, which in the judgment of the Project Committee will be matched by an increase in the supply of teachers, and more than matched by improvements in the overall quality of primary school instruction and supervision. In the Committee's opinion, it would be gratuitous to establish any requirement to maintain specific ratios.

H. Action by the Ministry to Develop and Carry out a Plan to Decrease Primary and Normal Schools Drop-Out Rates

Drop-out rates are functions of a complex set of factors including family and community traditions; student interest, ability, and motivation; socio-economic level of parents; quality and quantity of instructional materials; quantity and quality of the teaching staff; and quantity and quality of teaching space. Some of these factors are being attacked directly by the loan project and the drop-out rate in elementary schools will profit correspondingly. In

recent years improvement on the casual level have already resulted in improvement in drop-out rates. Nevertheless, the problem is so severe in primary schools that the loan agreement will include a covenant requiring the Ministry to conduct a more intensive study of the problem and develop a long-range plan to attack the root causes.

The normal school drop-out rate, beyond the first year, is not nearly as severe as the elementary and improvement has been steady in recent years. Substantial further improvements are expected as a direct result of improvements in normal school curricula and teaching which are part of this project. Since this is already covered by a covenant (See E, above) no additional condition is recommended.

I. Consolidation of Small, Inefficient Normal Schools

While consolidation of inefficient units into larger efficient schools is desirable, no action to achieve this is presently feasible. Consolidation of normal schools is a sensitive issue, a difficult task and can only be performed after consideration of the relationships between existing normal schools and other types of secondary schools existing or needed in different regions. Consolidation efforts can easily boomerang politically against those considered to be responsible for closures in given communities. The problem is best handled as part of a general reform of GOE secondary schools; it will be included as an analysis area in a survey of secondary school requirements which is proposed for AID financing in FY-66.

J. Assurances that the Ministry will Extend the 6-Year Primary Curricula to all Existing and Proposed Primary Schools

This is an avowed purpose of the Ministry; all schools constructed under this program will have 6 grades, although initially some may have less than 6 classrooms. No special conditions or covenants are included.

K. Selection of 3,000 Classrooms to be Constructed Under this Project

This amount represents the first 3 and 1/2 year tranche of a 10-year construction program and is a size which the government (CPSC) is clearly capable of administering. The project is based upon a preliminary study made in 1960 by the National Planning Council, an intensive survey by UNESCO in 1962 and an AID feasibility study of 1963. These have been reviewed by the Project Committee and are considered satisfactory bases for the 10-year construction program. The Committee of Nine of CIAP also supports this program.

L. Method of Covering Initial and Replacement Costs of Primary School Textbooks Produced Under the Project: Free of Charge, Rental, or Sale at Subsidized Prices

Whether to charge for the textbooks and if so how much to charge can only be answered after a more detailed study of social and economic factors. The eventual goal of the GOE should be to make available free texts. The present plans of the GOE are to sell the textbooks to pupils who can afford to pay and make them available free to those who cannot. The selling price is to be sufficient to cover replacement costs.

Among the advantages of a rental system are:

1. The initial outlay per student is much less.
2. It minimizes or completely alleviates the need for setting up the "rich-poor" extremes of paying full price or getting it free.
3. It is a step closer to the eventual goal of free textbooks, and
4. It avoids the appearance of the public school system selling books in competition with the private sector, a fact which stirs up opposition among private printers.

A covenant of the loan agreement will provide for detailed re-study of this question because of the obvious difficulties in drawing a line between those who can and cannot afford to pay. Included in the study will be consideration of alternate funding and combinations of funding from the government's budget, from rental and from sale, with the object of mobilizing funds to support a permanent textbook program which can provide free textbooks to all public school children at some time in the future.

M. Adjustment of Costs of Textbooks

Analysis by the Project Committee revealed that the application used a 1962-63 base for projecting the number of children to be supplied textbooks. An adjustment based on present data resulted in minor increases in the cost and proposed U.S. and Ecuadorean contributions.

Similarly, the application proposed soft covers for all textbooks. Experience in other Latin American countries indicates that soft cover texts for young primary children last only one school year. Since most of the cost of the text is not the cover and since textbooks produced by this project are designed to last an average of 3 years, a careful study will be made to determine which texts, for use in which grades, require hard covers. The financial plan reflects the need for this adjustment.

N. Pre-Vocational Primary School Program

The Ministry's proposal to equip 600 boys and 150 girls primary schools with pre-vocational equipment was not acceptable because of shortcomings in the present small pilot activity. The objective - to provide an understanding of the use of simple tools to children whose formal education does not extend beyond primary school - is good; but proposed curricula, intensive training of teachers and the proposed tools and materials to be supplied, did not appear sufficiently justified by experience. Accordingly the Committee recommends approval of the 100 school pilot project described under Part I-C-4 above. Consideration of any subsequent Ministry of Education request for additional AID financing of this sub-project, should be based on the success of the pilot project as well as on consideration of priorities, budget resources and the economic conditions obtaining at the time of a new application.

O. Supply of Printing Equipment and Grant-Funded Technician

Investigations in Quito and Guayaquil revealed that there were no private printing establishments that could meet the projected printing schedule for primary school textbooks contemplating the printing of over 1,000,000 copies of textbooks and teachers guides by August 1968. (Annex V, Exhibit A). Since the Ministry's Print Shop already had some printing equipment (partly financed by the U.S.) and could handle the textbooks on a priority basis, it was concluded that the demands of the program would best be met by rounding out the Ministry's equipment and supplying the needed technical assistance.

P. Use of Excess Property

The A.I.D. Government Property Resources Division has reviewed the materiel requirements shown in Exhibits G, H, I and J of Annex III; Exhibit A of Annex IV; Exhibit B of Annex V; and Exhibit A of Annex VI. It is possible that a substantial amount of this materiel might be procured from excess property stocks available pursuant to FAA Section 608, accordingly the loan agreement will contain the following provision:

United States Government-Owned Property. The Borrower shall utilize such United States Government-Owned Excess Property as may be consistent with the requirements of the project and as may be available within a reasonable period of time. Prior to the procurement of any new tools, equipment or materials, financed by A.I.D. under this loan, the Borrower shall indicate in writing to A.I.D. either that such tools, equipment and materials are not available from A.I.D.'s stocks of United States Government-Owned Excess Property on a timely basis or that the tools, equipment or materials which may be available are not technically suitable for use in the project.

PART VI

CAPITAL ASSISTANCE LOAN AUTHORIZATION
Provided from: Alliance for Progress Funds
ECUADOR - PRIMARY EDUCATION IMPROVEMENT

Pursuant to the authority vested in the Deputy U.S. Coordinator, Alliance for Progress, by the Foreign Assistance Act of 1961, as amended, and the delegations of authority issued thereunder, I hereby authorize the establishment of a loan pursuant to Part I, Chapter 2, Title VI, Alliance for Progress, to the Government of the Republic of Ecuador ("Borrower") of not to exceed five million three hundred thousand United States dollars (\$5,300,000), which, in conjunction with grants to be authorized of approximately five hundred thousand United States dollars (\$500,000), will assist in the construction of three thousand (3,000) primary school classrooms, the construction of thirty (30) teachers lodgings in remote rural areas, the construction of two normal schools, the establishment of training programs for primary and normal school teachers, the preparation, printing and distribution of primary school textbooks, and the establishment of a pilot pre-vocational primary school program, this loan to be subject to the following terms and conditions:

1. Interest and Terms of Repayment. Borrower shall repay the loan to the Agency for International Development ("A.I.D.") in United States dollars within forty (40) years from the first disbursement under the loan, including a grace period of not to exceed ten (10) years. Borrower shall pay to A.I.D. in United States dollars on the disbursed balance of the loan interest of one percent (1%) per annum during the grace period and two and one-half percent (2½%) per annum thereafter.
2. Conditions Precedent to First Disbursement. Prior to the first disbursement of the proceeds of the loan, Borrower shall:
 - (a) Agree to establish programs, satisfactory to the Ministry of Education ("Ministry") and A.I.D., at the national universities for the education and training of normal school professors.
 - (b) Agree to establish intensive summer training programs, satisfactory to the Ministry and A.I.D., for upgrading normal school and primary school teachers.
 - (c) Employ a qualified United States engineering firm, preferably affiliated with an Ecuadorean firm, to consult, inspect, and supervise the construction of the primary school classrooms, teachers' lodgings, and normal schools.
 - (d) Select the construction sites, adapt the standard primary school and teachers' lodging designs to the sites, and complete, to the satisfaction of A.I.D., all other necessary preparatory work for the construction of the primary school classrooms and teachers' lodgings during the first year, such construction to be planned so that construction will begin on an average of not less than twenty-five new schools each month, provided that this condition precedent shall not prevent disbursements for engineering services.

- (e) Agree with A.I.D. upon the schedule for the preparation, reproduction, and distribution of primary school textbooks financed under the loan.

3. Other Terms and Conditions.

- (a) Equipment, materials and services (except shipping and marine insurance) financed under the loan shall have their origin in and be procured from the United States or Ecuador, provided that tools and materials of free world origin may be procured from Ecuador for emergency needs for the construction of the primary school classrooms, the teachers lodgings, and the normal schools. Shipping financed under the loan shall be procured from the United States, and marine insurance financed under the loan shall be placed in the United States with a company authorized to do marine insurance business in any State of the United States.
- (b) United States dollars utilized under the loan to finance local costs shall be made available to the Borrower or its designee through appropriate procedures and shall be used only for procurement in the United States.
- (c) Loan funds are to be disbursed for the construction of primary school classrooms at a rate no more rapid than Borrower is able to provide adequately trained primary school teachers for the primary school classrooms being constructed under the loan and for vacancies elsewhere in the primary school system.
- (d) Disbursements under the loan for construction of primary school classrooms may be suspended if Borrower is unable to implement the other activities to be financed under the loan and related grant as established and scheduled by agreement between Borrower and A.I.D.
- (e) Borrower shall furnish extra funds for the construction of primary school classrooms and teachers' lodgings to compensate for any failure by the local communities to furnish their allotted shares of funds, materials, or labor.
- (f) Borrower shall establish and maintain to the satisfaction of the Ministry and A.I.D. a qualified teaching and administrative staff at the normal schools constructed under the loan to pursue the educational, experimental, and training objectives of the loan.
- (g) Borrower by 1969 shall install curricula developed at the normal schools constructed under the loan in all the other principal normal schools in Ecuador.

- (h) Borrower shall submit a plan for the establishment and financing (from the sale or rental of textbooks and from annual appropriations) of a special fund to repair and replace primary school textbooks, as well as to prepare additional primary school textbooks, with the objective of providing all primary school children in federally supported primary schools with the necessary textbooks by 1969.
- (i) The printing equipment financed under the loan shall be used only for the reproduction of educational materials.
- (j) Borrower shall make every effort to facilitate cooperation between A.I.D. and other international agencies providing assistance in the field of education, including the establishment of a suitable coordinating mechanism.
- (k) The loan shall be subject to such other terms and conditions as A.I.D. may deem advisable.

Deputy U.S. Coordinator

Date

ANNEX I

CHECKLIST OF STATUTORY CRITERIA (ALLIANCE FOR PROGRESS)

1. Foreign Assistance Act of 1961, as amended (hereinafter FAA), Section 102. The loan will further the policy of the Act, as stated in this Section. Every possible precaution will be taken to assure that the loan proceeds are not diverted to short-term emergency purposes (such as budgetary purposes, balance of payments purposes, or military purposes) or any other purpose not essential to the country's long-range economic development.
2. FAA Section 201(d). Loan funds are to be loaned at rates of interest which are not excessive or unreasonable for the Borrower, and are within the rates of interest established by this Section. - See Authorization - Chapter VI.
3. FAA Section 202(c); Foreign Aid and Related Agencies Appropriation Act of 1964 (hereinafter "App."), Section 117. Funds have been appropriated by Congress for this loan.
4. FAA Section 204. The terms and conditions of the loan are in accordance with standards and criteria established by the Development Loan Committee.
5. FAA Section 251(a). The loan will promote the economic development of Ecuador and contribute to the welfare of its people by building 3,000 primary school classrooms and two normal schools, by training and upgrading normal school teachers, and by providing manual training to primary school children. See Description of Sub-Projects - pp. 9-13.
6. FAA Section 251(b)(1). Account has been taken of the extent to which Ecuador is adhering to the principles of the Act of Bogota and Charter of Punta del Este and is showing a responsiveness to the vital economic, political, and social concerns of its people, and of the extent to which Ecuador has demonstrated a clear determination to take effective self-help measures. - See pp. 2-4 regarding 10-Year Plan.
7. FAA Section 251(b)(2). The activities to be financed are economically and technically sound. - See Technical Feasibility - pp. 26.
8. FAA Section 251(b)(3). The activities to be financed are consistent with and related to other development activities being undertaken and planned, and will contribute to realizable long-range objectives. - See pp. 2-4 regarding 10-Year Plan.
9. FAA Section 251(b)(4). The loan will have no foreseeable adverse effect on the U.S. economy. - See Chapter II - Impact on U.S. Economy - pp. 34.
10. FAA Section 251(b). Financing from other free world sources, including private sources within the United States, is not available for these projects. However, UNESCO-UNICEF is providing a three-year assistance program to other normal schools outside the project and to assist in teacher training, and continuing actions will be taken to closely coordinate the programs. - See page 31.

11. FAA Section 251(b). The Borrower has the capacity to repay the loan. See page 31.
12. FAA Section 251(b). Account has been taken of the extent to which Ecuador is making reasonable efforts to encourage repatriation of capital invested in other countries by its own citizens.
13. FAA Section 251(b). There are reasonable prospects that the loan will be repaid. - See page 31.
14. FAA Section 251(e). An application has been received for this loan which gives sufficient information and assurances to indicate reasonably that the funds will be used in an economically and technically sound manner. See pages 27-28.
15. FAA Section 251(g). In view of the nature of the project, it is not appropriate to utilize the loan to assist in promoting the cooperative movement in Latin America.
16. FAA Section 252(a). Almost the entire proceeds of the loan will be used to procure imports from private sources, to procure materials from private sources in Ecuador, and to procure engineering services from private firms. - See pp. 15-26; Annex III Exhibits G, H, I, J, Annexes IV, V and VI.
17. FAA Section 601. The loan will not directly encourage the efforts of Ecuador to increase the flow of international trade, foster private initiative and competition, encourage development and the use of cooperatives, credit unions, and savings and loan associations, discourage monopolistic practices, improve technical efficiency of industry, agriculture and commerce and strengthen free labor unions, except to the extent that these results flow from improved primary and normal school education.
18. FAA Sections 601(b); 621. The loan will be administered in such a manner as to encourage and facilitate participation by private enterprise to the maximum extent practicable, particularly for the construction of the primary school classrooms and the two normal schools. Facilities of other federal agencies will not be utilized. - See Implementation pp. 14-26.
19. FAA Section 601(d). United States firms shall be used to the maximum extent practicable to provide the engineering services financed by the loan for the construction of the primary school classrooms and the two normal schools. - See page 15.
20. FAA Sections 601, 602. Through the procurement of materials and engineering services from the U.S., the loan will encourage U.S. private trade abroad, will encourage private U.S. participation in foreign assistance programs, particularly use of private trade channels and the services of U.S. private enterprise, and will permit American small business to participate equitably in the furnishing of goods and services financed by the loan. The loan will not encourage U.S. private investment abroad except to the extent that investment opportunities are enhanced by reason of a better educated local population.

21. FAA Section 604(a). Equipment, materials and services (except shipping and marine insurance which shall be procured from the United States) financed under the loan shall be procured from the United States or Ecuador. Dollars utilized under the loan to finance procurement in Ecuador shall be made available through appropriate procedures, and shall be used only for procurement in the United States. - See Authorization - Chapter VI and page 34.

22. FAA Section 604(b). Any commodities financed by the loan and purchased in bulk will be purchased at prices no higher than prevailing U.S. market prices.

23. FAA Section 604(d). In the event that Ecuador discriminates against any U.S. marine insurance company, commodities purchased with loan funds shall be insured against marine risk with a U.S. company, as required by this section.

24. FAA Section 611(a)(1). Necessary engineering, financial, and other studies have been completed and a reasonably firm estimate of cost to the United States of the programs to be financed by the loan has been obtained. See Financial Plan pp. 7-8.

25. FAA Section 611(a)(2). It is not believed that any further legislation in Ecuador is required for the implementation of this project.

26. FAA Section 611(b); App. Section 101. The project does not involve water or water-related land resource construction projects or programs.

27. FAA Section 611(c). Construction contracts to be financed by the loan shall be let on a competitive basis to the maximum extent practicable. See Implementation pp. 14-26.

28. FAA Section 619. Ecuador is not a newly independent country.

29. FAA Section 620(a); App. Section 107. No assistance will be furnished under this loan to the present government of Cuba, nor does Ecuador furnish assistance to the present government of Cuba. Ecuador has taken appropriate steps to prevent ships or aircraft under its registry from engaging in any Cuba trade.

30. FAA Section 620(b). The Secretary of State has determined that Ecuador is not controlled by the international Communist movement.

31. FAA Section 620(c). Ecuador is not known to be indebted to any U.S. citizen for goods or services furnished or ordered where such a citizen has exhausted available legal remedies or where the debt is not denied or contested by Ecuador or the indebtedness arises under an unconditional guaranty of payment by Ecuador.

32. FAA Section 620(d). The activities to be financed by the loan will not assist any productive enterprise which will compete in the U.S. with U.S. enterprise. - See page 34.

33. FAA Section 620(e). The Government of Ecuador, including its government agencies and subdivisions, has not taken steps to repudiate or nullify contracts or taken any action which has the effect of nationalizing, expropriating or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking appropriate steps to discharge its obligations as specified in this Section.
34. FAA Section 620(f); App. Section 109. Assistance provided by this loan will not be furnished to any Communist country.
35. FAA Section 620(g). Assistance provided by this loan will not be used to compensate for expropriated or nationalized property.
36. FAA Section 620(h). Assistance provided by this loan will not be used in a manner which promotes or assists foreign aid projects or activities of the Communist bloc countries.
37. FAA Section 620(i). The President has not determined that Ecuador is engaging in or preparing for aggressive military efforts.
38. FAA Section 620(k). Aggregate value of assistance to be furnished by the U.S. for this project will not exceed \$100 million.
39. FAA Section 620(l). Ecuador has instituted the investment guaranty program.
40. FAA Section 630(h); 612(c). To the maximum extent possible, the Government of Ecuador and local Ecuadorean communities are contributing local currency to meet the costs of contractual and other services required for the projects. The U.S. has no Ecuadorean currency to contribute to this project. See pp. 7-8.
41. App. Section 102. Obligations of funds in excess of \$25,000 for engineering fees to any firms or group of firms financed under the loan will be reported to the committees on appropriations of the Senate and House of Representatives.
42. App. Section 104. Funds obligated by the loan, and local currency generated thereby, will not be used to pay pensions, annuities, etc., as prohibited in this Section.
43. App. Section 111. U.S. personnel to serve under contracts for services financed by the loan shall have security clearance.
44. App. Section 112. Firms which provide engineering, procurement, and construction services financed by the loan for the project, and the terms of their contracts, shall be approved by A.I.D.
45. App. Section 114. Loan funds will not be used to make any payment to the U.S. Government.

46. App. Section 117. Construction work financed by the loan for projects shall be performed by qualified persons, in accordance with A.I.D. regulations promulgated pursuant to this Section.- See Implementation 14-26.

47. App. Section 401. Loan funds will not be used for publicity or propaganda purposes within the United States.

TOTAL COST OF EDUCATIONAL DEVELOPMENT PROJECT
(Thousands of U.S. Dollars or Equivalent)
Based on exchange rate \$1=\$18.18

<u>Description of Sub-Program</u>	<u>U.S. Dollar Costs</u>	<u>Sucre Costs</u>	<u>Total</u>
I. SCHOOL CONSTRUCTION PROGRAM			
a. Land for Primary Schools and Normal Schools	-	1,540	1,540
b. Primary Schools containing 3000 classrooms	1,500	4,500	6,000
c. Lodgings for Primary School Teachers	15	45	60
d. Guayaquil Normal School	48	91	139
e. Quito Normal School	30	79	109
f. Transportation and Construction Equipment	150	-	150
g. Vehicle maintenance	-	120	120
h. Equipment Rental	-	67	67
i. Contingency construction	50	266	316
j. Consulting Engineering Supervision	570	-	570
k. CPSC Administration	-	697	697
SUB-TOTAL	<u>2,363</u>	<u>7,405</u>	<u>9,768</u>
II. TEACHER TRAINING PROGRAM			
a. Training Scholarships and Participant Salaries	-	72	72
b. Overseas Training of Professors and Participant Salaries	60	16	76
c. Three Technical Advisors	270	-	270
d. Equipment, Supplies and Furniture for Normal Schools	49	24	73
SUB-TOTAL	<u>379</u>	<u>112</u>	<u>491</u>

	U. S.	Local	Total
III. <u>TEXTBOOK PROGRAM</u>			
a. Equipment and Materials	548	-	548
b. Printing Office-Personnel Salaries	-	130	130
c. Publication Rights, Travel and Per Diem for Ecuadorean authors and teachers	-	28	28
d. Storage and Distribution	-	35	35
e. Advisor - 3 years	90	-	90
f. Shop Expert (6 months)	15	-	15
g. Three Specialists (3 months each)	23	-	23
SUB-TOTAL	<u>676</u>	<u>193</u>	<u>869</u>
IV. <u>PRIMARY SCHOOL WORKSHOP PROGRAM</u>			
a. Tools for metal and wood work	40	12	52
b. Cooking and Sewing Equipment	10	5	15
c. Equipment for Livestock Farming	11	3	14
d. Procurement and Transportation Costs	19	-	19
e. Miscellaneous	-	11	11
SUB-TOTAL	<u>80</u>	<u>31</u>	<u>111</u>
GRAND TOTAL:	<u>3,567</u>	<u>7,739</u>	<u>11,306</u>
Percentage:	31%	69%	

A N N E X I I I

SCHOOL CONSTRUCTION PROGRAM

I N D E X

- Exhibit A Detailed Description of Project
- B Map of Ecuador
- C Location and Number of Primary Classrooms to be Constructed Under the Program
- D Proposed Schools to be Constructed During the First Year
- E Cost Estimate for One Primary School Classroom
- F Cost Estimate for Two Normal Schools
- G Primary School Construction Material from the U.S.
- H Guayaquil Normal School Construction Imports from the U.S.
- I Quito Normal School Construction Imports from the U.S.
- J Transportation and Construction Imports from the U.S.
- K Organization Chart CPSC Personnel
- L Breakdown of Estimated CPSC Administration Cost
- M Primary Classroom Construction Schedule Plan
- N English Translation Community Questionnaire
- O Sources and Uses of Funds for School Construction Program
- P Site Selection Criteria

DETAILED DESCRIPTION OF PROJECT

SCHOOL CONSTRUCTION PROGRAM

A. Project Description

The proposed project contemplates the construction in Ecuador of:
(1) 3000 primary school classrooms in twenty provinces; (2) thirty teachers lodgings; (3) two normal schools; and (4) one primary school to be used for demonstrational purposes in connection with the normal schools.

For convenience of administrating and supervising constructional procedures of the proposed primary school project, the CPSC had divided Ecuador into three geographical zones. A total of 1348 classrooms are programmed for construction in Zone A which includes ten provinces. In Zone B, comprising five provinces, 1069 classrooms are programmed for construction; and in Zone C, also comprising five provinces, 583 classrooms are programmed. Thirty lodgings are programmed for thirty school sites in remote locations where it is not possible for teachers to otherwise obtain living quarters.

Specific selections, within each of the provinces of the three zones, denoting school sizes and locations have been made only for the first year of the primary school construction program. During the first year of construction 802 classrooms and 14 lodgings at 164 school sites are scheduled to be completed. A summary of the first year's projected primary school construction schedule, broken down by zones, follows:

Zone	<u>School Classroom Size</u>												Total Sites	Total Class rooms	Total Lodgings
	1	2	3	4	5	6	7	8	10	14	16	24			
A	2	15	18	15	3	15	1	5	1	1	1	1	78	362	4
B			5	8	1	9	10	3	9				45	290	--
C	10	3	7	9	1	8	2		1				41	150	10
	12	18	30	32	5	32	13	8	11	1	1	1	164	802	14

The second year's primary school construction schedule would be formalized during the first year's construction period and the remaining facilities to be constructed would be formalized during the second year's construction period.

The two normal schools; Leonidas García School At Guayaquil and the Carlos Zambrano School at Uyumbicho (near Quito) would be scheduled for completion also during the first year. The Leonidas García School is presently quartered in temporary facilities in the city of Guayaquil and would be constructed at a new site located approximately 1.6 miles south of Guayaquil. The Carlos Zambrano School would be constructed on the existing school site replacing the antiquated and dilapidated existing structures.

B. Technical

1. Primary Schools and Lodgings

Architectural and engineering designing for both the primary schools and lodgings have been virtually completed by the CPSC.

In developing these designs the CPSC was assisted by representatives of USAID and the Peace Corps.

The designs for primary schools are developed for both one and two story structures. Both designs, structurally, are based upon criteria of the California code. These basic designs are developed on a standardized modular concept so that the needs for any locality may readily be met by simply adding the required number of classrooms with accommodating toilet facilities. Each classroom unit is designed to accommodate 42 pupils. Generally, urbane schools would consist of structures of the two story type; and, rural schools would be one story structures. The standard designs prepared are completed and can be adjusted for construction requirements from a school having one classroom to a school requiring any number of classrooms upwards. Since none of the sites under this project have been acquired, the standard school buildings have not yet been site adapted to any specific site. One lodging unit would consist of two bedrooms, a kitchen and a combination dining and living-room, construction standards follow:

Foundation: Reinforced concrete

Structural: Reinforced concrete frame consisting of beams, columns, and integrated end trusses.

Floor: Concrete with color additive layed on compacted fill.

Exterior Walls: Either concrete block or baked clay brick

Interior partitions: Baked clay brick or concrete block with certain removal wood panels in larger schools to provide a multi-purpose room.

Secondary Story Floor: Interlocking block and beam system with concrete surfacing containing a color additive.

Windows: Alto-plano locations glazed steel sash. Tropical locations -
O pen with steel bars.

Doors: Plywood flush panel with wood frames-both exterior and interior.

Furniture: Locally fabricated pupils' desks, teachers' desk and chairs, chalk board and peg board.

Painting: Water base emulsion paint on all interior walls, oil base paint for doors and wood trim.

Roof Cattle: Type with lumber framing covered with asbestos-cement corrugated roofing sheets.

Electrical Wiring: Interior wiring systems with grounded neutral to be provided for all schools. Where electrical power is available the electric service connection will be immediately installed. Electrical system will include ceiling fixtures and wall receptacles.

Toilet Facilities: Where water is available at the site separate facilities for teachers, boys and girls would be provided within the building. If water is not available, a modern latrine would be provided. The latrine would consist of a nobile reinforced concrete base unit covered by a wood framed structure with separating partitions to accommodate teachers, boys and girls.

Walks: Gravel.

Roads: Access roads to all sites will be provided by the communities and not included as part of their contributions.

Sanitary Sewage Disposal: Septic tanks with sub-surface tile fields will be provided where required.

The designs of both normal schools are structurally based on criteria of the California code on a modular concept. Site adaptation of the detailed and designed structure components has virtually been completed for each of the two schools.

a. Carlos Zambrano School, Uyumbicho

The facilities at this site would consist of buildings as follows:

1. Two story men's dormitory
2. Two story women's dormitory
3. Classroom Buildings, two story, containing fourteen classrooms (40 students each), one natural sciences room, one music and artistic activities room, and one manual arts room.
4. Administration Building, single story, separately partitioned to provide facilities for the Principal, Secretary, Inspector, Teachers' Room, School Store, Files, Library and the Treasurer.
5. Multi-purpose Building, with mezzanine and kitchen to be used as a cafeteria or auditorium.
6. Teachers' Building, single story, including a dining and lounging-room.
7. Warehouse Building, single story partitioned to provide separated areas for storage and a workshop.
8. Covered open walkways, will interconnect the boarding facilities only.

Construction standards follow:

Foundation: Reinforced concrete.

Structural: Reinforced concrete frame consisting of beams, columns and intermittent integrated roof trusses

Ground floor: Concrete with color additive

Exterior Walls: Concrete block with interior cement tile wainscoat only in toilet, rooms, Chemistry, Physics and Biology Laboratories and the Kitchen.

Other than Ground Floors: 6" thick concrete block with cement tile wainscoat only in the toilet rooms, Chemistry, Physics and Biology laboratories and the Kitchen.

Roof: Gable type, consisting of reinforced concrete and wood trusses. Asbestos cement corrugated sheets fastened to wood purlins.

Windows: Glazed steel sash.

Doors: Exterior and interior Plywood flush panel.

Painting: Exterior and interior walls: water base emulsion. Oil base paint for doors and trim.

Laboratory Equipment: To be furnished from the U.S. under the Teacher Training Sub-project.

Furniture: To be manufactured locally if furnished under the Teacher Training Sub-project.

Electrical Wiring: All interior wiring to wall receptacles shall include a grounded neutral.

Covered open walkways: Concrete walk with roof supported by reinforced concrete open columns and reinforced concrete flat roof superstructure covered with tile type roofing.

Retaining walls: Masonry

Terrace and other stairways (Exterior): Reinforced concrete.

Access and on site roads are existing

New on site roads: Gravel

Side walks: Concrete adjacent to buildings. Other walks gravel.

Electrical Power: Available on site, source from power plant located at Machachi, 20 km. from site.

Water: Artesian well on site which delivers approximately 10 liters per second into a 10 cubic meter storage tank, Water distributing system will be by galvanized steel pipe.

Sewage Disposal System: Septic tank with tile leaching field.

- b. Leonidas García School and Annex (12 classrooms demonstration primary school)

The facilities for the normal school would consist of the following:

1. Three story dormitory building, Second and third story will provide dormitory facilities, Ground floor will provide the following facilities: Dining-rooms, kitchen, laundry, wardrobe, and inspector's dormitories, upper floors dormitories.
2. Administration Buildings, single story, containing partitioned areas for the: Principal, Secretary, Inspector, Teachers, Files, Treasurer and Porter.
3. Auditorium: Single story.
4. Lobby and Reception: Single story
5. Library: Single story
6. Classroom Buildings, single story, five buildings, containing 14 classrooms (40 pupils each), 2 natural science classrooms, 1 music and artistic activities classroom.
7. Shop Building, single story, for manual activity.
8. Warehouses, single story, three buildings
9. School toilet building, single story, toilet and shower facilities.
10. Covered open walkways, will interconnect all facilities of the normal school

The annex will be a twelve classroom primary school including the following facilities:

1. Administration Building, single story, containing Principal's

Office, Teachers Room and the sanitor's lodging,

2. Classroom Buildings, single story, two buildings containing 12 classrooms (42 pupils each) and toilets, for boys and girls,
3. Music room and Library, single story
4. Covered open walkways, will interconnect all facilities of the primary school.

Construction standards for both the normal school and the annex will be the same as described for the Carlos Zambrano School excepting for windows which will consist of openings with steel bar protection.

Electrical power, water supply and telephonic service are available at the site.

On site roads and parking areas will be gravel.

Sewage disposal system, septic tank with tile leaching field.

Fencing, chain link.

The terrain at the site is approximately 0.7 meters above sea level. It is proposed to place dirt fill over an area of approximate 50,000 square meters, where the facilities will be located, to raise the grade of the site by 1.7 meters. Soils tests were made at the site and indicate a bearing value of 0.5 kilograms per square centimeter (approximately, 930 pounds per square foot). Since the water table is 0.5 below natural grade, it will be necessary for the consulting engineer to take additional soils test and review the foundation designs especially for the three story dormitory building.

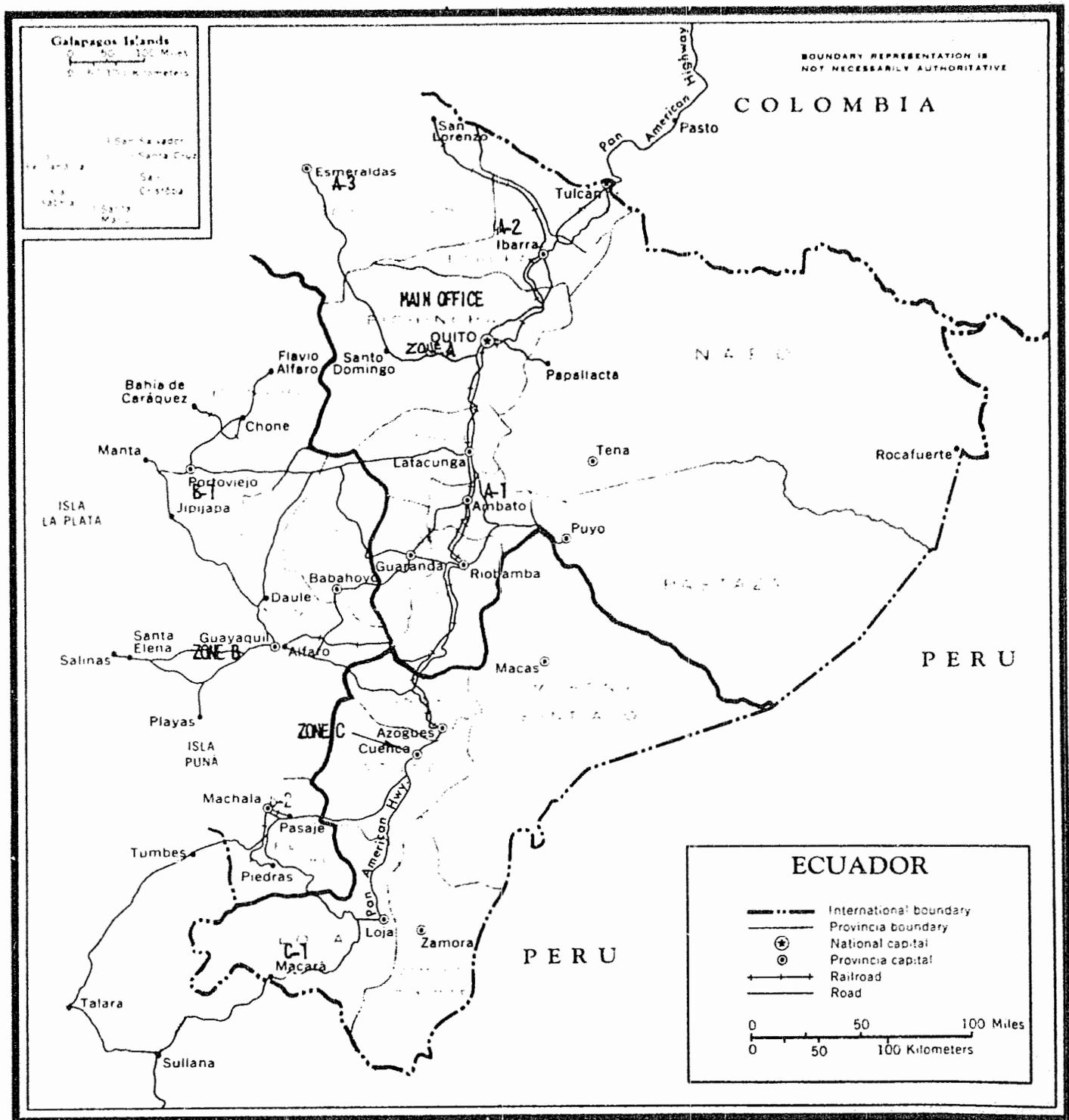
Imports from the U.S. which are required for the School Program are itemized in Annex III Exhibits, G, H, I and J. The total cost of the School Program is estimated to cost \$9,767,800. Of this amount \$2,363,400 will be used to finance dollar costs to cover the purchase of U.S. equipment and supervisory engineering services. A breakdown of the

total cost follows:

(Thousands of U. S. Dollars)

Description	U. S. Dollar Costs	Local Currency Costs	Total
a. Land for Primary Schools and Normal Schools	-	1540	1540
b. Primary Schools containing 3000 Classrooms	1500	4500	6000
c. Lodgings for Primary School Teachers	15	45	60
d. Guayaquil Normal School	48	91	139
e. Quito Normal School	30	79	109
f. Transportation and Construction Equipment	150	-	150
g. Vehicle maintenance	-	120	120
h. Equipment Rental	-	67	67
i. Contingency Construction	50	266	316
j. Consulting Engineering Supervision	570	-	570
k. CPSC Administration	-	697	697
TOTAL:	2363	7405	9768
	24%	75%	

REGIONAL ZONES
 For
 PRIMARY SCHOOL CONSTRUCTION PROGRAM



Base 39169 7-64

Heavy Solid Lines Denote Regional Zone Boundaries

ANNEX III Exhibit C

LOCATION AND NUMBER OF CLASSROOMS TO BE CONSTRUCTED UNDER THE
U.S. LOAN FOR 3,000 PRIMARY SCHOOLS AND TWO NORMAL SCHOOLS

<u>PROVINCES</u>	<u>1st.Year</u>	<u>2nd.Year</u>	<u>3rd.Year</u>	<u>Total</u>
<u>ZONE "A"</u>				
Carchi	25	30	40	95
Imbabura	30	40	45	115
Pichincha	80	100	126	306
Cotopaxi	35	40	50	125
Tungurahua	35	40	50	125
Chimborazo	50	60	70	180
Bolívar	35	40	50	125
Esmeraldas	52	50	70	182
Napo	10	15	25	50
Pastaza	10	15	20	45
Total Zone "A"	<u>362</u>	<u>440</u>	<u>646</u>	<u>1348</u>
<u>ZONE "B"</u>				
El Oro	65	55	65	185
Guayas	110	100	115	325
Los Ríos	49	60	70	179
Manabí	66	147	152	365
Galápagos	-	5	10	15
Total Zone "B"	<u>290</u>	<u>367</u>	<u>412</u>	<u>1069</u>
<u>ZONE "C"</u>				
Cañar	30	40	45	115
Azuay	50	65	73	188
Loja	50	65	70	185
Morona Santiago	10	15	25	50
Zamora	10	15	20	45
Total Zone "C"	<u>150</u>	<u>200</u>	<u>233</u>	<u>583</u>
Totals:	802	1007	1191	3000

PROPOSED SCHOOLS TO BE CONSTRUCTED
DURING THE FIRST YEAR

ZONE "A"

Carchi: 25 rooms

"Rafael Arellano" School, Mira, Espejo	6 rooms	
"San José" School, Chabayán, Espejo	3 "	
"Juan Montavlo" School, Cristóbal Colón, Montúfar	8 "	
"Mercedes de Moscoso" School, La Paz, Montúfar	6 "	
"2 de Agosto" School, Montalvo, Espejo	2 "	1 lodging
Total:	25 rooms	1 lodging

Imbabura: 30 rooms

"Antonio Ante" School, Salinas, Ibarra	4 rooms	
"Leopoldo N. Chávez," School, San Pablo, Otavalo	8 "	
"Enrique Vacas G. " School, Chilcapamba	2 "	
School without name, El Ejido, Ibarra	3 "	
School without name, Ajaví, Ibarra	3 "	
School without name, La Cruz, Ibarra	3 "	
"Martí" School, Otavalo	6 "	
"Vicente Rocafuerte" School, Tumbariro	1 "	1 lodging
Total:	30 rooms	1 lodging

Pichincha: 80 rooms

"San Fco. de Quito" School, Quito	24 rooms	
"Numa P. Llona" School, Wuito	16 rooms	
"Andrade Coello" School, El Tingo, Quito	3 "	
"CrespoToral" School, Cayambe	3 "	
"9 de Julio" School, Cayambe	4 "	
"Luisa de Marylac" School, Machachi, Mejía	6 "	
"Mariana de Jesús" School, Calderón, Quito	4 "	
"Pedro J. de Arteta" School, La Merced, Quito	4 "	
School without name, Conocoto, Quito	6 "	
"La Merced" School, Sangolquí, Rumiñahui	6 "	
School without name, Curipungo, Rumiñahui	4 "	
Total:	80 rooms	

Cotopaxi: 35 rooms

"General Píntag" School, Cumbijín, Salcedo	2 rooms	
"Leopoldo Navas" School, Rumipamba, Salcedo	2 "	1 lodging
"Pedro V. Maldonado" School, Pujilí	6 "	
"Simón Bolívar" School, Latacunga	8 "	
School of La Libertad, suburb. Saquisilí	2 "	
"Manuel Quiroga", School, Tanicuhí, Latacunga	6 "	
"M. de Veintimilla" School, Alaquez, Latacunga	1 room	1 lodging
"Pedro Moncayo" School, Angamarca, Pujilí	2 "	
"School of Manguila, La Maná, Pujilí	3 "	
"San Agustín, Iasso, Latacunga	3 "	
<hr/>		
Total:	35 rooms	2 lodgings

Tungurahua: 35 rooms

School of Artijón, Pelileo	3 rooms	
"Manuel Jiménez" School, San Andrés, Píllaro	2 "	
"Santo Domingo" School, Cevallos, Ambato	6 "	
School of Ambabaquí, Pelileo	3 "	
"Secundino Egüez, School, Augusto Martínez, Ambato	4 "	
"San Vicente" School, Los Andes, Pelileo	3 "	
"Francisco Flor" School, Huachi Chico, Ambato	3 "	
School without name, Ambato	6 "	
School without name, Baños	5 "	
<hr/>		
Total:	35 rooms	

Chimborazo: 50 rooms

School without name, Guayllabamba, Riobamba	3 rooms	
School without name, San Luis, Riobamba	3 "	
School of Punín, Riobamba	3 "	
School of Quimiag, Riobamba	6 "	
"2 de Agosto" School, Cajabamba, Colta	7 "	
"Juan de Velasco" School, Colta	6 "	
School of Cañí, Colta	4 "	
School of Lucero Loma, Licto	6 "	
School of Chahuapata, Chunchi	3 "	
School of Sevilla Parrish, Alausí	3 "	
School of Alausí	6 "	
<hr/>		
Total:	50 rooms	

Bolívar: 35 rooms

"Juan R. González" School, La Magdalena, Chimbo	5 rooms
School of Chalata	2 "
"Huayna-Cápac" School, Colina Vieja	4 "
"Juan Celio Secaira" School, San José, Chimbo	4 "
"Angel P. Chávez" School, Guaranda	8 "
"Río Mapo, School, Pedro de Guayabal, Chillanes	4 "
"Adolfo Pérez" de Echeandía	8 "

Total: 35 rooms

Esmeraldas: 52 rooms

"Juan Montalvo" School, Esmeraldas	14 rooms
"Rafael Palacios" School, Esmeraldas	10 "
"San Martín" School, Tabizú, Esmeraldas	4 "
"Luis Tello" School, La Tola, Eloy Alfaro	5 "
"Argentina" School, Rocafuerte, Esmeraldas	3 "
School of San Gregorio, Musine	6 "
School of Changuaral, Eloy Alfaro	2 "
"Teodoro Worlf" School, Montalvo, Esmeraldas	2 "
"Walter Willmelmán" School, Río Gualte	4 "
"Velasco Ibarra" School, Km. 180 Santo Domingo- Quinidé	2 "

Total: 52 rooms

Napo: 10 rooms

School of Nuevo Rocafuerte, Aguarico	4 rooms
School of Tena, Napo	4 "
School of Baeza, Quijos	2 "

Total: 10 rooms

Pastaza: 10 rooms

School of Andoas, Pastaza	2 rooms
School of Puyo, Pastaza	4 "
School of Madre Tierra, Pastaza	2 "
School of Tarqui, Pastaza	2 "

Total: 10 rooms

Zone A - Grand Total - 362 rooms 4 lodgings

ZONE "B"

"El Oro": 65 rooms

"Isabel La Católica" School, Machala	10 rooms
"Cristóbal Colón" School, Machala	6 "
"Gonzalo Suárez" School, Machala	5 "
"Simón Bolívar" School, Machala	8 "
"Miguel Moreno" School, Machala, Bocana	4 "
"Daniel Córdova T. #4" School, Machal, Pto. Boliv.	8 "
"Abdón Calderón" School, Pasaje	10 "
"Eugenio Espejo" School, Santa Rosa	8 "
"Piedad Castillo de Levy" School, Arenillas	6 "
<hr/>	
Total:	65 rooms

Guayas: 110 rooms

"José Salcedo D.", García Moreno, Guayaquil	7 rooms
"24 de Mayo" School, Sucre, Guayaquil	7 "
"Club Rotario" School, Tarqui, Guayaquil	7 "
"Thomas Jefferson" School, El Cisne, Guayaquil	10 "
"27 de Febrero" School, Pascuales, Guayaquil	4 "
School without name, Gral. Villamil, Guayaquil	6 "
"Gustavo Ledesma" School, Isidro Ayora, Daule	3 "
"Mariscal Sucre" School, Isidro Ayora, Daule	6 "
"Honorato Vásquez" School, Limonal, Guayaquil	3 "
"Juan de Velasco #5" School, Laurel, Daule	4 "
"2 de Agosto" School, Lorenzo de Garalcoia, Yaguachi	3 "
"Carlos Torres Salas", Pedro Montero, Yaguachi	4 "
"Carlos A. Flores #25" School, Vuelta Larga, Yaguachi	4 "
"Modesto Chávez F". School, Cdla. Arosemena, Milagro	10 "
"León de Febres Cordero" School, Kmr. 4 Milagro	4 "
"Eugenio Espejo" School, Naranjito, Milagro	6 "
"Abdón Calderón" School, El Guabo, Urbina Jado	6 "
"Adolfo Jurado G." School, Prosperidad, Sta. Elena	6 "
"Galdys P. de Arosemena" School, Libertad, Salinas	7 "
"26 de Septiembre" School, San Jacinto, Balzar	3 "
<hr/>	
Total:	110 rooms

Los Ríos: 49 rooms

"Cuenca #133" School, Mocache, Quevedo	7 rooms
"Aurora Estrada de Ayala" School, Babahoyo	10 "
School without name, Babahoyo	10 "
School without name, Catarama, Rudaneta	6 "
"Guayaquil" School, Vines	10 "
Without name, Baba	6 "

Total: 49 rooms

Manabí: 66 rooms

"Fco. Pacheco #4" School, Portoviejo	10 rooms
"Carchi-Imbabura" School, Portoviejo	7 "
School without name, Sucre, 24 de Mayo	7 "
"Justino Cornejo" School, El Pueblito, 24 de Mayo	4 "
"Angel Arteaga Cañarte" School, Santa Ana	10 "
"Adolfo Jurado González" School, Manta	7 "
School of Junín	7 "
"Juan León Mera #84" School, Recinto Colorado Manabí	3 "
School of Pedro Pablo Gómez, Jipijapa	4 "
"Simón Rodríguez" School, Olmedo, Santa Ana	7 "

Total: 66 rooms

ZONE "B" Grand Total..... 290 rooms

ZONE "C"

Cañar: 30 rooms

"Octavio Cordero" School, Déleg	6 rooms	
"Vicente Rocafuerte" School, Taday	6 "	
"4 de Junio" School, Charcay	1 room	1 lodging
School without name, Pucur	4 "	
School without name, San Miguel	1 room	1 lodging
School without name, Contamarca	4 "	
"Fary Vacas Galindo" School, Ayancay	2 "	1 lodging
"Jaun Benigno Vel " School, Sageo	2 "	1 "
School without name, Luis Cordero	4 "	

Total: 30 rooms 4 lodgings

Azuay: 50 rooms

"Fernando de Aragón" School, Sta. Isabel	10 rooms	
"Juan José Flores" School, Girón	3 "	
"Ezeauiel Márquez" School, Octavio Cordero	5 "	
"General Farían" School, San Joaquín.	4 "	
"José Peralta" School, Chinguitad	4 "	
Juan Gómez" San Bartolomé	4 "	
"Alfonso Carrión" School, Baños	2 "	
"Miguel Días" School, Llacao	4 "	
"Manuel Balarezo" School, Nulti	3 "	
"Mercedes de J. Molina" School, Gualaceo	6 "	
School without name, Huagazhumi	1 room	1 lodging
"Rafael Moscoso" School, Susdel	1 "	
School without name, Léntag	1 "	1 lodging
"Francisco Cisneros" School, Chacopamba	1 "	1 "
School without name, San Juampamba	1 "	1 "
	<hr/>	
Total:	50 rooms	4 lodgings

Loja: 50 rooms

"Filomena Mora", Loja	7 rooms	
"Cuarto Centenario" School, Loja	6 "	
"Juan J. Rousseau" School, Cañacocha	7 "	
"Doce de Octubre" School, Gonzanamá	6 "	
"Luz de América" School, Cariamanga	6 "	
"John Kennedy" School, Macará	6 "	
School without name, Celica	6 "	
School without name, Sacapalca	3 "	
"San Pedro", Vilcapamba	1 room	
"Pedro Vaca", Guaringa	1 "	1 lodging
School without name, Portete	1 "	1 "
	<hr/>	
Total:	50 rooms	2 lodgings

Santiago Morona: 10 rooms

School of Gualaquiza	4 rooms	
School of Leonidas Plaza, Limón, Indanza	3 "	
School of Macas, Morona	3 "	
	<hr/>	
Total:	10 rooms	

Zamora Chinchipe: 10 rooms

School of Zumba, Chinchipe	3 rooms	
School of Yacuambi	3 "	
School of Zamora	4 "	
	<hr/>	
Total:	10 rooms	

ZONE "C" Grand Total... 150 rooms 10 lodgings

Total First Year, Zones A
B and C 802 rooms 14 lodgings

ANNEX III Exhibit E

COST ESTIMATE
FOR
ONE PRIMARY SCHOOL CLASSROOM
 In U.S. Dollars based on exchange rate
 \$1=\$18.18

<u>Item</u>	<u>Description</u>	<u>Material Cost</u>	<u>Labor Cost</u>
1	Excavation and site development	- - -	\$ 12.15
2	R. C. Foundations	\$ 117.60	27.20
3	R. C. Frame	207.00	38.20
4	Walls and Plaster	97.80	40.40
5	Floors and sidewalks	71.25	55.00
6	Ceilings	150.00	50.00
7	Roof and roofing	383.00	62.70
8	Doors and installation	55.25	36.80
9	Windows and installation	95.00	44.00
10	Furniture	89.60	38.45
11	Painting	51.20	38.50
12	Electrical	40.80	13.20
13	Plumbing	143.00	41.90
		\$ 1,501.50	\$498.50

Total cost \$2,000.00 per classroom.

ANNEX III Exhibit F

COST ESTIMATE
FOR
LEONIDAS GARCIA NORMAL SCHOOL
GUAYAQUIL

In U.S. Dollars based on exchange rate \$1=\$/18.18

<u>Item</u>	<u>Description</u>	<u>Material & Labor Cost</u>
1	Excavation, Site Development, Utilities Services	\$ 2,500
2	14 Classrooms 700 m ²	21,000
3	4 Special rooms 300 m ²	8,280
4	Administration Offices 310 m ²	9,300
5	School Boarding Facilities 2100 m ²	73,500
6	Warehouses 160 m ²	3,800
7	Annexed School 12 classrooms plus auxiliary spaces 740 m ²	20,880
TOTAL COST: 4310 m ²		\$139,260

COST ESTIMATE
FOR
CARLOS ZAMBRANO NORMAL SCHOOL
UYUMBICHO

1	Excavation, Site Development and Utilities services	1,500
2	14 Classrooms 700 m ²	15,750
3	3 Special rooms 240 m ²	5,400
4	Administration Offices 340 m ²	7,820
5	School Boarding facilities 2600 m ²	72,800
6	Warehouses 300 m ²	6,000
TOTAL COST: 4180 m ²		109,270

ANNEX III Exhibit G

SCHOOL CONSTRUCTION PROGRAM
PRIMARY SCHOOL CONSTRUCTION MATERIAL IMPORTS FROM U. S.
 FOR 3000 CLASSROOMS

<u>Item</u>	<u>Description</u>	<u>Amount</u>
1.	T iron 1-1/4 x 1-1/4 x 1/8"	\$ 122,500
2.	L iron 1-1/4 x 1-1/4 x 1/8"	122,500
3.	Steel bars 3/4 x 3/16"	6,600
4.	Round steel bars 1/2"	70,000
5.	Window panes	129,600
6.	Putty	387
7.	Expansion shields	1,350
8.	4" Bolts	414
9.	2-1/2" bolts	771
10.	Reinforcing steel 1/4", 3/8", 1/2"	452,000
11.	Tying wire No. 18	18,750
12.	6 x 5/8" wood bolts	6,480
13.	5/8" washers	410
14.	Insulated wire No. 14	2,556
15.	Insulated wire No. 12	3,672
16.	Insulated wire No. 10	5,544
17.	Lampholder	2,268
18.	Switches lampholder	612
19.	Toggle switches	1,008
20.	Switch plates	288
21.	Double outlets	612
22.	Rigid conduit	19,008
23.	Octagonal outlet boxes	1,728
24.	Rectangular utility boxes	1,872
25.	Friction tape	220
26.	Exterior oil paint	15,120
27.	Water paste paint	43,200
28.	Thinner	2,042
29.	Oil varnish	7,380
30.	6" brushes	16,370
31.	4" brushes	3,690
32.	2" brushes	1,126
33.	Furniture paint	11,880
34.	Plumbing	244,000
35.	Additional packing, shipping, freight, etc.	150,000
		\$1515,085

ANNEX III Exhibit H

SCHOOL CONSTRUCTION PROGRAMGUAYAQUIL NORMAL SCHOOL CONSTRUCTION MATERIAL IMPORTS FROM U.S.LEONIDAS GARCIA SCHOOL

<u>Item</u>	<u>Description</u>	<u>Amount</u>
1.	T iron 1-1/4 x 1-1/4 x 1/8"	\$ 2,920
2.	L iron 1-1/4 x 1-1/4 x 1/8"	2,920
3.	Steel bars 3/4 x 3/16"	194
4.	Round steel bars 1/2"	1,760
5.	Window panes	4,102
6.	Putty	12
7.	Expansion shields	40
8.	4" bolts	12
9.	2-1/2" bolts	23
10.	Reinforcing steel 1/4", 3/8", 1/2", 1"	20,390
11.	Tying wire No. 18	550
12.	6 x 5/8" wood bolts	190
13.	5/8" washers	12
14.	Insulated wire No. 14	75
15.	Insulated wire No. 12	108
16.	Insulated wire No. 10	163
17.	Lampholder	67
18.	Switches lampholder	18
19.	Toggle switches	30
20.	Switch plates	9
21.	Double outlets	18
22.	Rigid conduit	558
23.	Octagonal outlet boxes	51
24.	Rectangular utility boxes	55
25.	Friction tape	7
26.	Exterior oil paint	944
27.	Water paste paint	2,267
28.	Thinner	60
29.	Oil varnish	217
30.	6" brushes	480
31.	4" brushes	108
32.	2" brushes	33
33.	Furniture paint	349
34.	Plumbing	6,865
35.	Switch control of transformer	1,000
TOTAL:		\$47,774

ANNEX III Exhibit I

SCHOOL CONSTRUCTION PROGRAMQUITO NORMAL SCHOOL MATERIAL IMPORTS FROM U.S.

<u>Item</u>	<u>Description</u>	<u>Amount</u>
1.	T iron 1-1/4 x 1-1/4 x 1/8"	\$ 1,980
2.	L iron 1-1/4 x 1-1/4 x 1/8"	1,980
3.	Steel bars 3/4 x 3/16"	158
4.	Round steel bars 1/2"	1,440
5.	Window panes	3,111
6.	Putty	9
7.	Expansion shields	33
8.	4" bolts	10
9.	2-1/2" bolts	19
10.	Reinforcing steel 1/4", 3/8", 1/2", 3/4", 1"	12,138
11.	Tying wire No. 18	450
12.	6 x 5/8" wood bolts	156
13.	5/8" washers	10
14.	Insulated wire No. 14	61
15.	Insulated wire No. 12	88
16.	Insulated wire No. 10	133
17.	Lampholder	55
18.	Switches lampholder	15
19.	Toggle switches	24
20.	Switch plates	7
21.	Double outlets	15
22.	Rigid conduit	456
23.	Octagonal outlet boxes	42
24.	Rectangular utility boxes	45
25.	Friction tape	5
26.	Exterior oil paint	363
27.	Water paste paint	1,037
28.	Thinner	49
29.	Oil varnish	177
30.	6" brushes	393
31.	4" brushes	89
32.	2" brushes	27
33.	Furniture paint	285
34.	Plumbing	5,617
	TOTAL:	<u>\$30,477</u>

ANNEX III Exhibit J

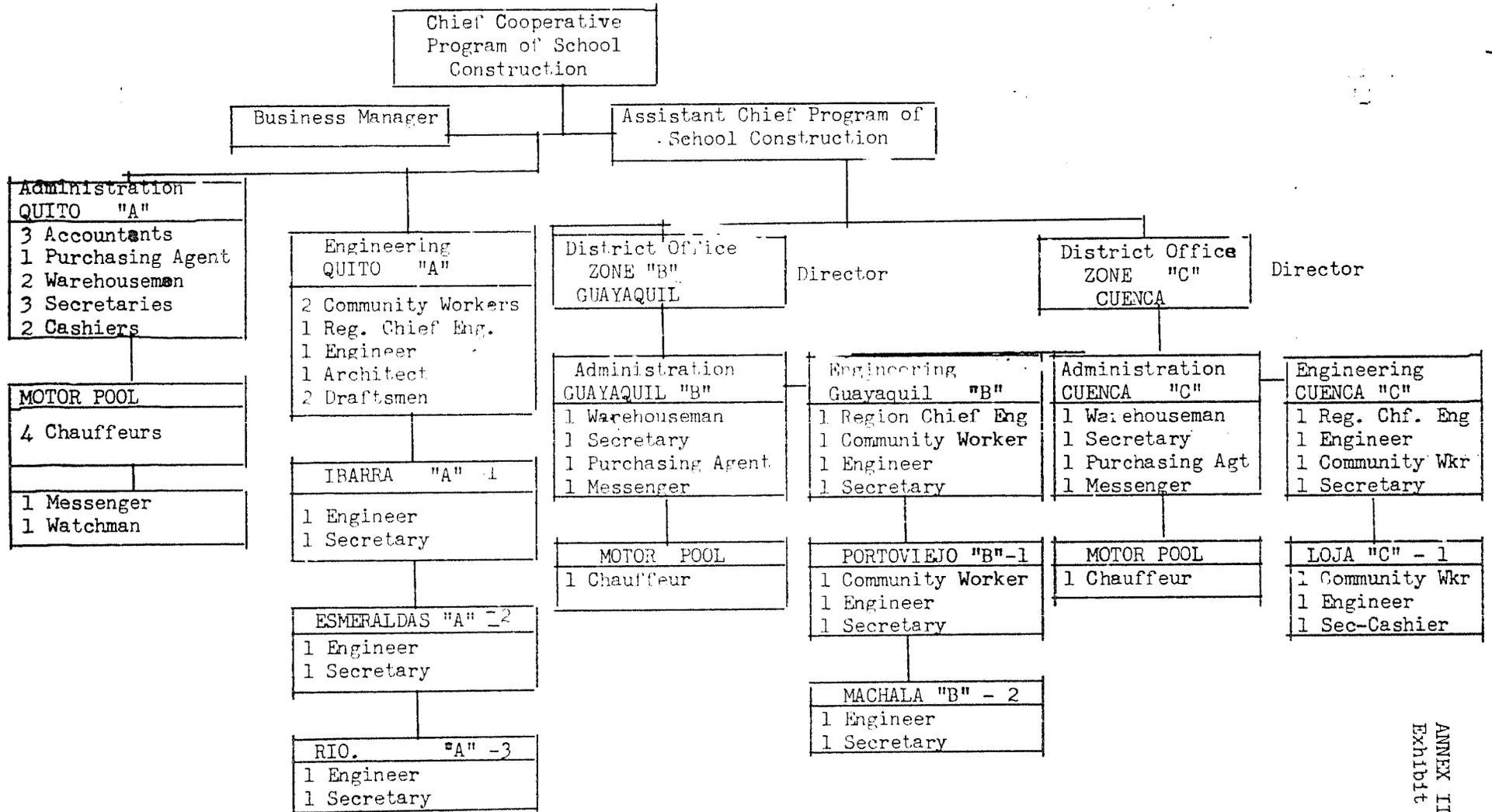
SCHOOL CONSTRUCTION PROGRAM

TRANSPORTATION AND CONSTRUCTION EQUIPMENT IMPORTS
FROM U.S.

<u>Item</u>	<u>Quantity</u>	<u>Description</u>	<u>Approx. Unit Price</u>	<u>Cost</u>
1.	3	International Dump Trucks-Med	\$ 5,500	\$ 16,500
2.	2	6 Ton Scout Trucks - Chevrolet	4,700	9,400
3.	8	Scout 2-wheel Drive 3/4 ton Pick-up Trucks	2,380	19,040
4.	8	Scout 4-wheel drive 3/4 ton Pick-up Trucks	2,600	20,800
5.	9	Cement Vibrators	290	2,610
6.	9	Generator for Item 5.	425	3,825
7.	14	Jaeger 3 $\frac{1}{2}$ c.f. Cement Mixer	1,800	25,200
8.	6	King No. 560 Hoists with Incline Trucks	1,000	6,000
9.	126	3920-640-9236 Wheelbarrows 3 cu.ft.	16	2,016
10.	252	5120-293-3336 No.2 Round Point Shovels	2	504
11.	210	7240-634-0437 -14 qt.Pails	1	210
12.	84	5120-248-9959 Pick Style Mattox	3	252
13.	3	74110 K & E Transists with Tripod	735	2,205
14.	6	Small K & E Transists Levels with Tripod	262	1,572
15.	12	30 Meter Measuring tapes	19	228
16.	9	Frisco Rods	52	468
17.	2	Collins Transceiver Rigs, Complete	1,900	3,800
18.	3	Adding machines	300	900
19.	3	Adding calculator machines	400	1,200
20.	29	7110-270-9842 Desks	53	1,537
21.	29	7110-273-8782 Chairs	15	435
22.	17	Typewriters	200	3,400
23.	3	Model 1100 Toledo Scale-1, 1,000 lbs.	100	300
24.	200	Meters 5/16" Flexible Hoisting cable	1	200
25.		Additional packing, shipping and freight:		22,084
26.		Contingencies		5,314
TOTAL:				\$ 150,000

CPSC ORGANIZATION CHART FOR SCHOOL CONSTRUCTION
 3,000 classrooms, 30 Lodgings and 2 Normal Schools

ANNEX III EXHIBIT K



ANNEX III
 Exhibit K

ESTIMATED CPSC ADMINISTRATION COSTS

POSITION	1st. Year	2nd. Year	3rd. Year	4th. Year
1. Director (1)	72,000.00	75,500.00	70,200.00	84,000.00
2. Manager (1)	57,600.00	60,000.00	62,400.00	66,000.00
3. Accountant, Chief (1)	45,500.00	48,000.00	50,400.00	51,000.00
4. Accountant (1)	38,400.00	42,000.00	45,600.00	48,000.00
5. Asst. Accountant (1)	21,500.00	24,000.00	26,400.00	30,000.00
6. Home Adm. Officers (2)	85,400.00	92,400.00	98,400.00	104,400.00
7. Chief Engineers (3)	158,000.00	175,200.00	186,000.00	193,200.00
8. Cashier (1)	35,000.00	38,400.00	42,000.00	45,600.00
9. Asst. Cashier (1)	21,500.00	24,000.00	26,400.00	30,000.00
10. Engineers (5)	425,000.00	441,000.00	480,000.00	501,500.00
11. Community Workers (5)	234,400.00	240,000.00	246,400.00	246,000.00
12. Secretaries (13)	256,800.00	242,800.00	330,400.00	316,500.00
13. Architect (1)	48,000.00	50,400.00	54,000.00	56,400.00
14. Draftsman (2)	48,000.00	52,800.00	56,000.00	61,000.00
15. Purchasing Agents (3)	78,000.00	85,200.00	90,000.00	100,200.00
16. Warehouseman (3)	70,200.00	75,400.00	84,800.00	91,400.00
17. Asst. Warehouseman (1)	21,500.00	24,000.00	26,400.00	30,000.00
18. Head of Transport (1)	25,400.00	30,000.00	32,400.00	36,000.00
19. Drivers (5)	103,000.00	120,000.00	132,000.00	150,000.00
20. Watchman (1)	12,000.00	14,400.00	18,000.00	21,500.00
21. Messengers (3)	30,000.00	34,800.00	42,200.00	51,500.00
ANNUAL	1,905,600.00	2,052,000.00	2,246,400.00	2,420,400.00
9.5% SOCIAL SECURITY	181,032.00	194,940.00	213,408.00	220,638.00
	2,086,632.00	2,246,940.00	2,459,808.00	2,650,338.00
1 MONTH BONUS PAY	158,800.00	171,000.00	187,200.00	201,700.00
RESERVE FUND	158,800.00	171,000.00	187,200.00	201,700.00
	2,404,232.00	2,588,940.00	2,834,208.00	2,953,738.00
Unforeseeables	411,941.50	447,065.40	490,124.56	436,664.44
GROSS TOTALS	2,816,173.60	3,036,005.40	3,324,332.56	3,490,402.44
TOTAL, 4 YEARS	\$ 12,666,915.00	\$695,750 based on exchange rate \$18.18 = \$1 U.S.		

SCHOOL CONSTRUCTION PROGRAM - CONSTRUCTION SCHEDULE PLAN

Total Classrooms and Teachers Lodgings	Total Program Time	Conditions Precedent	Construction Initiation Time	Terminate Last Construction Starts	Construction Starts Each Month-36 months
3,030	42 months	Import Material and Delivery 2-6 months	Total 36 months	4-6 months	84 Classrooms
CONSTRUCTION STARTS					
1st Mo. Total	2nd Mo. Total	3rd Mo. Total	4th Mo. Total	5th Mo. Total	6th Mo. Total
Zone A 30	30 60	30 90	30 120	30 150	30 30 150
Zone B 30	30 60	30 90	30 120	30 150	30 30 150
Zone C 24	24 48	24 72	24 96	24 120	24 24 120
AVERAGE SIX CLASSROOMS EACH SCHOOL			Terminate 84 classrooms and 84 each month thereafter		
Engineer and Community workers	Total Classrooms Under construction	Six classrooms each School	Schools Assigned Each Engineer each 5 Mos.	School Sites Assigned Community Development Worker	
	First 5 Months	Total Schools			
Zone A 4 Engineers 3 Com.Dev.Work	150	25	6 Schools-25 class. rooms	8	
Zone B 4 engineers 3 ComDev.Work	150	25	6 Schools- 25 class rooms	8	
Zone C 3 Engineers 2 Com.Dev.Work	120	20	6 Schools-36 class-rooms	12	

DATA ON CHARACTERISTICS OF THE VILLAGE

Province ----- Canton ----- Suburb -----

Settlement ----- Farm ----- Parish -----

I. INFORMATION ON THE LOCAL AREA

(Place YES within the parenthesis or fill in the requested information)

a) Climate: 1. hot (), 2. cold (), 3. warm ().

b) Materials existing in the area:

1. cement (), 2. stone (), 3. wood (), 4. brick (),
5. sand (), 6. clay (), 7. lime ().

Other materials (describe) -----

c) Is there sufficient labor in the area? 1. masons (), 2.

2. carpenters (), 3. day laborers (). Other (enumerate) -----

d) Is there a map of the area? (). In what year was it made? (). (If there is a map, locate the schools and insert the names of the schools) (Attach the plan to this form).

e) Is there a plan that anticipates growth of the population? In what year was it made? ().

f) Is there electric power service? ().

g) Is there water? Well (), aqueduct (), carried (), potable ().

II. TYPE OF POPULATION

a) Sierra? () Coast? () Oriente? ().

b) Concentrated? () Disseminated? ().

(Consider "Concentrated", when houses are placed close together. "Disseminated" when houses are separated by open land or many vacant lots).

c) Tendency of community: 1. increasing (), decreasing (),
2. stable (), unstable ().

circumstance which would lead to gradual movement of the population to other areas).

Reasons for this evaluation: -----

III. RELATION WITH OTHER POPULATION CENTER

a) approximate distance to the nearest village when, if necessary, the children could attend school

Village ----- (distance km.) -----

b) What type of communication is there between this village and the aforementioned.

1. Good (), 2. Regular (), 3. Bad ().

(Check Good, Regular or Bad in relation with the facilities and security available to children walking to school).

IV. ECONOMIC CONDITIONS. (Place "YES" within the parenthesis or give an explanation).

a) Is there a stable labor force ().

1. Due to government re-sources (), Due to private organizations or companies.

2. In the village? () near the village? ().

3. Please, give a brief explanation -----

b) Could these factors lead to an increase or a decrease of the population?

c) Could the village give land for a school building? ().

d) Is there the possibility that the population could contribute in other ways? (). Please, give a brief explanation -----

e) Locate this town or village on the county map. (Attach the plan).

V. THE CANTON'S BUDGET

When possible, this information will be directly investigated:

VI. PROVINCIAL COUNCIL BUDGET

When possible, this information will be directly investigated:

(x) From the Primary Education Budget, indicate what has been spent in school construction. (Past year () Past five years ())

VII. AVAILABILITY OF MATERIALS

The following materials exist in the village or in the vicinity

river sand () yellow sand () white sand () stone () pebbles ()
gravel ().

The community manufactures:

adobe () brick () blocks () clay tile () lumber ()

Existing industries:

The Municipality sponsors production of:

adobe () tile () concrete block ()

Are there carpenters? () blacksmiths? () sawmills? () Other ()

Labor availability:

(Within the Municipality)

Are there carpenters? () are there masons? ()

Daily salary of these people is \$/ -----

Is there a responsible person who could be given the construction contract for the school? Yes () No ()

VIII. MEANS OF TRANSPORTATION EXISTING IN THE LOCALITY.

Are there wheelbarrows?	Yes ()	No ()
Are there ox-carts?	Yes ()	No ()
Are there beasts of burden?	Yes ()	No ()
Are there trucks, pick-ups, etc.?	Yes ()	No ()

IX. CONTRIBUTION TO THE CONSTRUCTION PROJECT

	<u>Municipality</u>	<u>Province</u>	<u>People</u>
Land -----			
Cash -----			
Labor -----			

The community can give the following materials:

Description	Quantity	Price
Stone	m3.	\$/ m3.
Yellow sand	m3.	" m3.
White sand	m3.	" m3.
River sand	m3.	" m3.
Gravel	m3.	" m3.
Adobe		" millar
Tiles		" millar
Erick		" millar
Wood	ft.	" ft.
Lime	qq.	" qq.

The Municipality will give:

Stone	m3.	S/	m3.
Yellow sand	m3.	"	m3.
White sand	m3.	"	m3.
River sand	m3.	"	m3.
Gravel	m3.	"	m3.
Adobe		"	millar
Tiles		"	millar
Erick		"	millar
Wood	ft.	"	ft.
Lime	qq.	"	qq.

Transportation of materials

X. STATISTICS SCHOOL DATUM

The total school population is ----- children
 The school enrollment is ----- children.
 The number of teachers assigned is -----
 Directors name -----
 Teachers names -----

XI. COMMUNAL ORGANIZATION

There are: Committee For-Community Improvement Yes () No ()
 For-Construction and Maintenance of the school Yes () No ()
 Parents Committee Yes () No ()
 Other Organizations that could help: Yes () No ()

Place the Presidents, Coairmen, etc. names on the back of this sheet.

Assistance to the Community

a) Municipal assistance Yes () No ()

cash () labor () materials () transportation ()

Has the Municipality funds in the Municipal Institute? Yes () No ()

if your answer is YES, how much could it dispose for the construction? ----

Mayor's name -----

Secretary's name -----

c) Private assistance

Is there private assistance? Yes () No ()

Name of the person or Entity -----

cash () labor () materials () transportation ()

OTHER DATA:

WE /icy.

SOURCES AND USES OF FUNDS FOR SCHOOL CONSTRUCTION PROGRAM
(In 1,000's of U.S. Dollars or Equivalent)

	A I D		G.O.E.	Communities	Total
	US Dollar Costs	Sucre Costs	Sucre Costs	Sucre Costs	
<u>SUB-PROGRAM</u>					
a. Land for Primary and Normal Schools	-	-	188 ⁽¹⁾	1,352	1,540
b. Primary Schools and Lodging	1,515	1,761	966	1,818	6,060
c. Normal Schools	78	170	-	-	248
d. Construction Con- tingency	50	266	-	-	316
e. Transportation and Construction Equip- ment	150	-	-	-	150
f. Vehicle Maintenance	-	-	120	-	120
g. Equipment Rental	-	-	67	-	67
h. Consulting Super- vising Engineering	570 ⁽²⁾	-	-	-	570
i. CPSCA Administration	-	-	697	-	697
T O T A L S	2,363	2,197	2,038	3,170	9,763

Notes: (1) This amount represents estimated value of land for normal schools.

(2) This amount includes \$30,000 to be provided from AID grant funds for two consulting engineers.

Site Planning

Criteria in the Selection of Building Sites for Schools

An Architect/Engineer in approving the site selection should determine that:

1. The site is functionally suitable to the purpose for which the project is being carried out.
2. It is preferable that the land be reasonably flat, so as to prevent excessive terracing or dirt removal.
3. There are no open sewers, cesspools ditches or drainage on or near the site as well as garbage dumps and incinerators.
4. That the site is acceptable for transportation of materials and construction equipment.
5. That the soil bearing value has been satisfactorily determined and is suitable for building foundations without unreasonable expense.
6. There are no serious rock conditions which would require expensive removal.
7. The nature and extent of filled areas, if any, have been identified.
8. Encroachments of every character including buildings, fences, hedges are clearly shown.
9. There are no sub-surface obstruction, such as tanks, foundations or buildings, or if present, they are clearly defined.

10. The site has sufficient slope to drain properly.
11. The site is free from swamps, freshets and exposure to floods, erosion, landslides and other natural hazards.
12. The building to be constructed is properly oriented to climatic conditions.
13. There are no excessive noises, such as railroads, switching yards, foundry or industry that are causing unnecessary noises.

))

ANNEX IV - EXHIBIT A

TEACHER TRAINING PROGRAM

Equipment, Materials and Supplies Imports from the U.S.

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Cost</u>
1.	Units of Equipment for Physics Chemistry and Biological Laboratories	2 each	\$ 6,600
2.	Units of Projector Equipment: Projector for Steady, viewing and Opaque projector	2 each	1,000
3.	Microscopic Projector	2 each	300
4.	Tape recorder	2 each	400
5.	Units of Geographical Equipment	2 each	300
6.	Mimeograph (electric)	1 only	1,000
7.	Units of equipment for Industrial Handicrafts	2 each	13,000
8.	Material for Equipment Units		10,000
9.	Miscellaneous supplies		9,000
10.	Transportation, Insurance, etc.		<u>7,000</u>
		TOTAL:	\$48,600

ANNEX IV - EXHIBIT B

SOURCES AND USES OF FUNDS FOR TEACHER TRAINING PROGRAM
(In 1,000's of U.S. Dollars or Equivalent)

SUB-PROGRAM	A.I.D.		G.O.E.	Total
	US Dollar Costs	Sucre Costs	Sucre Costs	
a. Training Scholarships and Salaries	-	27	45 ⁽²⁾	72
b. US Training of Professors and Salaries	60 ⁽¹⁾	-	16 ⁽²⁾	76
c. Three Technical Advisors	270 ⁽¹⁾	-	-	270
d. Equipment, Supplies and Furniture for Normal Schools	49 ⁽³⁾	24		73
T O T A L S	379	51	61	491

- (1) These amounts will be provided by AID grant funds.
- (2) These amounts will be contributed by the GOE as the total salaries of participants during their training period.
- (3) This amount includes approximately \$6,600 for library books for the two normal schools.

DETAILED DESCRIPTION OF TEXTBOOK PROGRAM

I. NATIONAL TEXTBOOK REQUIREMENTS

Statistical data for 1962-1963 estimates the school enrollment in primary schools, grades 1 through 6, at close to half million. Textbooks are not provided for elementary school children although those who can afford it may purchase books from private concerns or rent one for a specified fee depending on the grade and subject matter. Generally, the typical teaching method is for the teacher to write the lesson on the blackboard while the pupils copy it in their notebooks for later memorization. This method is generally applicable throughout the educational system even up to the University level where lecturers are practically copied word for word by the student for memorization and examination purposes. The Ministry of Education wishes to prepare, produce and distribute primary textbooks in reading and arithmetic for grades one through six and in natural sciences for grades four through six with accompanying teacher's guides.

This textbook program has been devised to furnish practically every student at the primary level with the necessary readers, arithmetical and natural science textbooks through the preparation, publication and distribution of over a million textbooks during the three to four year period of this program. Thus, there will be sufficient textbooks produced to fill the needs of the 3,000 classrooms to be constructed under this project

as well as the other existing primary schools. Naturally, as population increases and matures there will be need to increase the number of textbooks accordingly. However, once this textbook program is installed and carried out, the only additional expenses that will be incurred in the reproduction of additional texts will be principally printing paper, ink, metal plates and labor.

The total cost of this projected program is \$869,000. Of this, approximately \$676,000 will be used to finance dollar costs to cover the purchase of U.S. equipment and pay for U.S. technical Advisory services. (See Annex II, Exhibit A.).

II. PRODUCTION REQUIREMENTS

A total of fifteen different titled textbooks, varying from 128 to 256 total pages have been projected for this development activity. Quantities to be produced vary from 45,000 to 300,000 for each title. The project has been planned to produce a total of approximately 1,867,500 books.

A total of 3,168 pages of original material must be prepared. This includes writing by authors and artist's illustrations.

Selected groups of authors will be working separately each in a different subject area. Depending upon the talents, interests, and compatibility of authors, it is contemplated that manuscripts will first be completed for the first title in each of the three series, reading, arithmetic, and natural sciences.

Target dates for the completion of manuscripts will be matched to the schedules that can be maintained by the graphic arts shop that will be responsible for overall production. All publications will be produced in Ecuador.

In order to produce the volume of books projected for this activity, a total of 340,620,000 textbook pages must be produced by the offset process. Based upon the estimated production capacity of the Ministry's ATF Chief Offset press delivering 4,000 sheets per hour, 8 pages per sheet, approximately 8,515 press-hour will be required to print, in one color only, the total number of impressions needed. Since a reasonable proportion of two-color is contemplated, it would be impossible to do all of the required printing in the $3\frac{1}{2}$ years estimated for this project.

In order to accomplish the above and since the printing requirements of this project must be added to the normal work load of the Ministry's shop, it will be necessary to procure the additional equipment listed in Annex V, Exhibit "B" for the successful execution of this program. The availability of this new equipment will facilitate the normal replacement of texts and the reproduction of textbooks in future years to supply new primary schools as they are constructed.

Experience with similar book production programs in other USAID Missions has been utilized for estimating costs and other unknown factors that may prevail in this proposed sub-project. For example, six reading textbooks were produced in Guatemala under similar conditions, except the method of financing. These six readers were evaluated and accepted for reprinting, with minor revisions, for Central American Countries under the direction of ROCAP, Guatemala.

USAID/Bolivia is presently engaged in executing a textbook production program funded in the amount of \$380,000.00.

As of October 6, 1964, a total of 1,073,559 school readers, 26,500 guides for teachers, and 1,000 sets of flipcharts have been published. To-date, this activity has produced a reading book for every pupil, grades one to six, in Bolivia's national elementary schools. The project is continuing with development and publication of a series of natural sciences textbooks, also for elementary schools.

The Bolivia project, thus far, has produced some 90,000,000 book pages (or equivalent) during an eighteen month period at costs of some \$87,000.00 for materials and \$73,000.00 for contract services. Expenditures that have been made have resulted in somewhat larger production volume than had been estimated.

III. TECHNICAL ADVISORY SERVICES REQUIREMENTS

It is proposed, and this program requires, the services of five U.S. technicians to assist the Ministry in implementation of the textbook program. One technician will serve full time for three years assisting authors and editorial personnel with writing and book planning activities. Three specialists for a total of nine man-months will assist Ecuadorean authors and teachers in the areas of reading, arithmetic, and natural science with solution of problems related to the nature and accuracy of content, grade placement of skills, and appropriateness of text presentation. One expert experienced in all techniques of offset reproduction as well as general shop operation, including preparation of production schedules, is required for a six-month period. The above detailed advisory services are considered essential to the successful completion of this program.

In order to further guarantee the execution of this program, the USAID anticipates making an official request that the Regional Educational Materials Advisor, Lima, Peru provide his services toward the implementation of this textbook program on the basis of three months out of each year. This assistance (not including intensive subject matter authorship training) would involve

advisory service and guidance to Ecuadorean authors, training in editorial processes, preparation of production schedules, and improvement of distribution activities.

IV. SCOPE OF WORK AND RESPONSIBILITIES OF THE U.S. ADVISORS AND TECHNICIANS AS WELL AS OF THE AUTHORITY OF THEIR GOE COUNTER-PARTS.

This program requires the services of five U.S. technicians, whose scope of work and responsibilities are as follows:

- A. One technician, full time, three years.
 1. Serves as the official USAID/Ecuador representative for U.S. interests.
 2. Serves with local counterpart, Chief of Cultural Extension, Publications and Publishing Department of the Ministry of Education, to coordinate the activity which involves the following responsibilities:
 - 1.) Assure adherence by all contributing parties to the overall time schedule established for this sub-project; for example, encourage completion of manuscripts as scheduled in order to guarantee maintenance of full production output by all segments of the print shop.
 - 2.) Assure proper accounting for all equipment and commodities that are charged to this activity.
 - 3.) Selection and grouping of writers.
 - 4.) Assist editorial personnel with book planning activities.
 - 5.) Assist print shop personnel with preparation of production schedules.

- 6.) Technical guidance to authors during preparation of manuscripts; for example, selection and appraisal of CONTENT for meeting curriculum requirements.
 - 7.) Supervision of four short term specialists;
 - a. Offset reproduction expert
 - b. Reading specialist
 - c. Arithmetic specialist
 - d. Natural Sciences specialist
 - 8.) Prepare requisition for publications needed for Specialized Library.
 - 9.) Especially responsible for editorial guidance that will assure essential coordination between the writing, composition, and illustration activities.
- B. One offset reproduction expert, short term, six months.
- 1.) Advisory service to the Ministry for remodeling and renovation of the print shop.
 - 2.) Supervising installation of new equipment and relocation of existing equipment to establish efficient flow of work that will be necessary to guarantee the production volume that is planned for this sub-project.
 - 3.) Train and upgrade local print shop employees in the offset reproduction skills required for photomechanics, printing, and binding.
- C. One Reading Specialist, short term, three months.

- 1.) Leads authors to satisfactory conclusions relative to theories of teaching reading prior to the beginning of manuscript writing.
 - 2.) Approves content, gradation of difficulty, and recognition of curriculum requirements.
 - 3.) Provides technical advice to authors in the basic skills and mechanics that are required for acceptable textbook writing. Time permitting, this assistance should be given, also, to authors preparing manuscripts in arithmetic and natural sciences.
- D. One Arithmetic Specialist, short term, three months.
- 1.) Establish general agreement among authors with respect to educational objectives of Arithmetic instruction at the elementary school level.
 - 2.) Assists authors in preparation of "blueprint" outline showing the graded location of each arithmetic skill that will appear in the six book series planned for production.
 - 3.) Stimulates authors to select appropriate theme for presentation of subject matter, then constantly evaluates manuscripts to assure uniform adherence to the chosen technique. This exercise will involve frequent use of the Specialized Library.
 - 4.) During the brief period of three months time, this specialist must establish work patterns for the writers that will include regularly scheduled evaluation sessions for authors

representing each one of the six grade levels.

- E. One Specialist for the Natural Sciences, short term, three months.
- 1.) Directs a^r research type effort by writers to establish an acceptable philosophy for the teaching of science in elementary grades.
 - 2.) Assists authors in choosing basic science principles that are appropriate for presentation in the first six grades, then helps prepare outline showing grade placement of each in proper sequence.
 - 3.) Encourage authors, as well as illustrators to give special thought to selection of items that need to be illustrated. Limited reading abilities, especially in the lower grades, require special simplicity and clarity of illustration.
 - 4.) During the ninety days scheduled, this specialist may not be able to accomplish more than to reach common agreement on the subject matter to be presented in the three book series grades 4, 5 and 6 and the preparation of a master chart that will show grade placement of principles in proper sequence. Outlines only will be prepared for grades 1, 2 and 3. Additional consultant services may be requested during implementation of this sub-project.

Writing teams will be supervised by group leaders who will function as counterparts, or associates, for the three U. S. subject matter specialists. These associates will have full responsibility for directing the completion of manuscripts after the U.S. specialists have departed.

V. DETAIL ANALYSIS PROJECTED SCHEDULE

1. Reading - Grade 1, 128 pages, 300,000 copies

Writing of this manuscript will have been started during September, 1965, and will continue into the 7 month period which follows. Testing of the manuscript, official approval, composition, illustrating, photomechanical processing, and plate making will be completed by the end of September 1966. Printing of the 23,040,000 pages that are required for this volume of books will consume 67 days during March, April and May of 1966. Gathering, binding, trimming and storage or distribution will be carried out during the months of June, July, August, September, October and November, 1966.

2. Reading - Grade 2, 160 pages, 180,000 copies

Reading, testing, revision and approval of the manuscript for this book will begin in October, 1965 and end March 1966. Composition, illustrating, photomechanical processing, and preparation of metal-plates for offset printing will begin April and end middle September 1966. Printing of this title will begin middle September, consume 50 days press time, and end early December 1966. Gathering, binding, trimming and storing or distribution will end April 1967.

3. Reading - Grade 3, 192 pages, 127,500 copies

Writing for this title will begin in October 1965. Testing, necessary revision, and official approval is scheduled for the period November, 1965 to the end of July 1966. Composition, illustration, photomechanical processing, and plating will be completed by middle February 1967. Forty-two days will be required for printing this title and should be completed by middle April 1967. Gathering, binding, storage or distribution will be completed by end of August 1967.

4. Reading - Grade 4, 224 pages, 105,000 copies

Writing will begin in October 1965. Testing, revision, and obtaining official approval is scheduled to be completed by the end of August 1966. Composition, will be started in September 1966, then illustrations will be drawn, photomechanical work will be done, and plating will be completed by middle June 1967. Printing of this title will require 42 days and is scheduled to be completed late August 1967. Collecting, binding, storage or distribution should be completed late December 1967.

5. Reading - Grade 5, 256 pages, 30,000 copies

Writing will begin in October 1965. Testing the material, making necessary revisions, and obtaining official approval is scheduled to be completed by the end of February 1967. Composition, illustrating, photomechanical processing and plating will be completed late December 1967. Thirty days will be required to print this title and printing should be completed by middle February 1968. Gathering, binding, storage or distribution should be completed by end of May 1968.

6. Reading - Grade 6, 256 pages, 45,000 copies

Writing will begin in October 1965. Testing, making necessary revisions, and obtaining official approval for this title will be completed by end of March 1967. Composition, illustrating, photomechanical process and plating should be completed by early February 1968. Printing of this title will require 25 days and should be completed late March 1968. Gathering, binding, storage or distribution should be completed by end June 1968,

It will be noted that production of the series of Six Reading textbooks has been spread throughout a three year period. This is more time than would be required normally to create and print six reading books. However, as will be seen in a review of the schedules for six Arithmetic titles and three Science titles, preparation and printing schedules have been so interwoven that books for the first 3 grades of Reading and Arithmetic will be available on approximately the same dates with books being ready first for grade one, then grade two, then grade three. For the intermediate grades, Reading, Arithmetic and Science texts for the fourth grade will be ready for distribution on approximately the same dates; likewise, the same is true for grades five and six.

For the production of six Arithmetic books, a preparatory period has been scheduled to start in September, and end in December 1965. General orientation for the writing teams who will produce the Arithmetic texts has been scheduled for September. The months of October and November will be devoted to general research and discussion leading to the establishment of firm objectives for teaching Arithmetic in the elementary grades. During the month of December, outlines will be prepared that will show the grade distribution and location of Arithmetic skills in terms of curriculum requirements for Ecuador. It is hoped that actual writing for all six textbooks can begin during December.

1. Arithmetic - Grade 1, 129 pages, 300,000 copies

Starting in January 1966, writing will begin, followed by careful testing, revision, approval, composition, illustration, photomechanical processes and plating. This should be completed by early June 1966. Printing of this title will require 67 days beginning early June and ending middle September 1966.

It will be noted that the printing of this grade one Arithmetic is scheduled to follow printing of the grade one Reading textbook. Then when the grade one Arithmetic is off-press, the grade two Reading title will go on press.

2. Arithmetic - Grade 2, 160 pages, 180,000 copies

Writing will begin in January 1966, testing, revision and approval is scheduled to be completed by October 1966. Composition, illustration, photomechanical process and plating will require approximately 6 months being scheduled for completion middle April 1967. Printing will require 40 days ending late June. Gathering, binding, storage or distribution should be completed late November 1967.

3. Arithmetic - Grade 3, 192 pages, 127,500 copies

Writing will begin in January 1966. Testing, revision and approval will be completed middle June 1966. Composition, illustration, photomechanical work and plating will be completed late November 1966. Printing will require 50 days and is scheduled to end late February 1967. Gathering, binding, storage or distribution is scheduled to end late July 1967.

4. Arithmetic - Grade 4, 224 pages, 105,000 copies

Writing will begin in January 1966. Testing, revision, and obtaining official approval should be completed by November 1966. Composition will start in November. Illustrating, photomechanical processing and plating will continue to middle August 1967. Printing will require 42 days and should be completed by end of October 1967. Gathering, binding, storage or distribution is scheduled to end February 1968.

5. Arithmetic - Grade 5, 256 pages, 67,500 copies

Writing will begin in January 1966. Testing, revision and obtaining official approval should be accomplished by end of April 1967. Composition will begin in May 1967, with illustrating, photomechanical process and plating being completed by middle March 1968. Printing requires 30 days and should be finished early May 1968. Gathering, binding, storage or distribution should be completed by end of July 1968.

6. Arithmetic - Grade 6, 256 pages, 45,000 copies

Writing will begin in January 1966. Testing, making necessary revisions and obtaining official approval is scheduled to be completed by end of June 1967. Composition will begin in July 1967 with illustrating, photomechanical processing and plating being completed by end of April 1968. Printing will require 25 days and should be completed by middle June. Collection, binding, storage or distribution should be accomplished by end of September 1968.

The preparation of three Science textbooks for the middle grades will require extensive basic research and orientation of writers in an area that is crucial to modern day living. Consequently, a period of 6 months has been scheduled for examination of current philosophies in the teaching of Science at the elementary level and careful appraisal of curriculum problems in this field.

1. Science - Grade 4, 224 pages, 105,000 copies

Writing will begin in February 1966. Testing, revision and obtaining official approval is scheduled to continue to the end of January 1967. Composition, drawing of illustrations, photomechanical processes and plating should be completed by end of October 1967. Printing will require 42 days and should be finished late December 1967. Gathering, binding, storage or distribution should be completed on May 1st, 1968.

2. Science - Grade 5, 256 pages 67,500 copies

Writing will begin in February 1966. Testing, revision, and obtaining official approval is scheduled to be completed by end of July 1967. Composition, illustration, photomechanical processes and plating should be completed by early June 1968. Printing will require 30 days and should be finished late July 1968. Gathering, binding, storage or distribution should be finished late July 1968. Gathering, binding, storage or distribution should be accomplished in November 1968.

3. Science - Grade 6, 256 pages, 45,000 copies

Writing will begin in February 1966. Testing, necessary revision and obtaining official approval is scheduled to be accomplished by October 1967. Composition, illustration, photomechanical processes and plating should be completed by middle June 1968. Printing will require 25 days and should be finished by end of August 1968. Gathering, binding, storage or distribution should be completed by end of December 1968.

TEXTBOOK PROGRAM

EQUIPMENT, MATERIALS AND SUPPLIES

Imports from the U. S.

A. New Equipment for Printing Office

1.	1 offset press, two colors, ROLAND REZ 111 or HARRIS 63 x 94.5 cm.	US\$	41.000
2.	1 Gluing Machine for books		4.325
3.	1 Ream cutter		3.000
4.	1 triple-cut Ream Cutter		2.000
5.	2 Multilith machines, on large, one small .		10.000
6.	1 Machine for obtaining offset proofs, VANDERCOOK 4-T.		2.380
7.	1 Linotype, Model 31, 6 magazines		20.000
8.	1 Densitometer, KODAK DENSOMAT or KODAK ..		826
9.	3 crystal networks, one circular 45 cm. in diameter, 48 lines per cm.; one rectangular, 30 x 40 cm., 36 lines per cm.		1.000
10.	1 Folding machine, HEME TRADE BICKEL		2.600
11.	1 desk for lithographic work and retouching, 60 x 100 cm.		497
12.	1 Developing equipment for Laboratory and Chemicals		1.000
13.	Headline type for hand setting		1.000
14.	1 Stapling machine for books, for 1" thickness		1.000
15.	Electric installation and cost of installing and arranging equipment (own transformer) . .		1.000
16.	1 unit for washing wetting rollers		50
17.	1 Photographic enlarger for negatives up to 9 x 12 cm., ONEGA type 2		500
18.	12 PHOTO COPY lamps, General Electric, for Reproduction Chamber, 1500 W		100
19.	Miscellaneous binding equipment		5.000
	Sub-Total:		<hr/> \$97,278

B. Cost of Paper for Printing the Textbooks and
Teacher's Guides.

1.	Paper for Textbooks 23,800 Reams, white offset, 26" x 34", a/\$9.00 (app.)		214,000
2.	Miscellaneous Materials such as Inks, Paper Stocks, Plates, Film, etc.		
	(1) Textbooks Covers (hard cover)		49.000

(2) Memo paper for Teacher's Guides 2,300 Reams, white 8½ x 11" a/\$1.00	US\$ 2,300	
(3) Covers for Teacher's Guides, White cartulina, 8½ x 11", 60 lb. basis, 70,000 sheets a/\$.01		700
(4) Stencils, for Mimeo, 8½ x 11" 400 a/\$.25		100
(5) Metal plates for Offset Reproduction, 20 1/16" x 24 5/8", sensitized Aluminum 5,000 a/\$.20		10,000
(6) Film for Negatives 17½ x 24", 200 Boxes a/\$75.00 (approx.)		15,000
(7) Inks, Chemicals, Cleaners, etc. (est.)	<u>5,000</u>	\$ 82,100
3. Packing, Ocean Freight, Drayage, etc. (est.)		73,300
4. Add for Contingencies		<u>76,000</u>
	T O T A L:	US \$ 547,670

PRIMARY SCHOOL WORKSHOP PROGRAMEQUIPMENT AND MATERIALS

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Cost</u>
I.	25 Girls' Schools		
A.	<u>Equipment for Sewing</u>		
1.	Sewing machine	75 each	\$5,982
2.	Scissors	150 each	516
3.	Zigzag scissors	75 each	371
4.	Electric or Steam Flatiron	75 each	619
5.	Straight Embroidery Frame	150 each	330
6.	Round Embroidery Frame	450 each	198
7.	Crochet hooks	750 each	41
8.	Table cutting cloth	75 each	825
9.	Measuring tapes	375 each	83
10.	Knitting needles	750 each	83
11.	Ruler sets	75 each	330
12.	Benches	300 each	825
13.	Mirror	75 each	247
14.	Closet	75 each	825
	Sub-Total:		<u>\$11,275</u>
B.	<u>Equipment for Cooking</u>		
1.	Enameled or aluminum kettle	1350 each	495
2.	Enameled or aluminum casserole	1350 each	297

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Cost</u>
3.	Frying pan	900 each	\$ 248
4.	Hard Mill	450 each	495
5.	Kitchen knives	900 each	123
6.	Ladles	150 each	58
7.	Colander	75 each	33
8.	Colander set	75 sets	61
9.	Sieve	150 each	83
10.	Coffee Strainer	75 each	144
11.	Galvanized bucket	75 each	102
12.	Kitchen table	75 each	330
13.	Grater	150 each	29
14.	Dinner sets (6 persons)	75 sets	681
15.	Sets Tablespoon, teaspoon knife and fork	450 sets	83
		Sub-Total:	\$ 3,262
		Grand Total	<u>\$18,900</u>

II. 75 Boys' Schools

A. Equipment for Metal Work

1.	Handvises	1350 each	\$ 3,240
2.	Medium smooth metal file	900 each	270
3.	Medium smooth file 8" convex	450 each	216
4.	Medium smooth file 8" round	450 each	117

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Cost</u>
5.	Medium smooth file, triangular 8"	450 each	153
6.	Hand drill 3/8"	225 each	1,148
7.	Bit set, 1/8", 3/16", 1/4", 5/6", 3/8"	1125 sets	518
8.	Tube spanner	225 each	473
9.	Crescent wrench, 6"	450 each	630
10.	Crescent wrench, 10"	450 each	810
11.	Ball-penhammer, 8 oz.	900 each	693
12.	Ball-penhammer, 12 oz.	450 each	369
13.	Pen hammer, 8 oz.	450 each	630
14.	Metal saw, 10"	900 each	720
15.	Saw blade, No. 24 Teeth	450 doz.	702
16.	Saw blade, No. 18 Teeth	450 doz.	702
17.	Combination tong, 8"	450 each	275
18.	Transfer caliper, 6"	450 each	630
19.	Chisel, 6" x 3/4"	900 each	288
20.	Tinsmith shears, straight 8"	450 each	518
21.	Soldering iron, 1/2 lb.	450 each	338
22.	Plier, 6"	450 each	230
23.	Fellies, round point, 5"	450 each	653
24.	Blowpipe, gasoline, 1/2 liter	225 each	1,733
25.	Anvil	225 each	5,400

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Cost</u>
26.	Tape, 2 meters	450 each	140
27.	Steel square, 8"	900 each	<u>1,440</u>
		Sub-Total	\$22,901

B. Equipment for Carpenter Shop

1.	Hammer, $\frac{1}{2}$ lb.	1350 each	\$ 1,310
2.	Square, 6"	1350 each	2,160
3.	Handsaw, 20"	450 each	1,170
4.	Screwdriver, 4"	450 each	450
5.	Screwdriver, 4"	450 each	432
6.	Jig saw	900 each	369
7.	Jig, saw, blade	1350 doz	270
8.	Rasp file, convex, 8"	900 each	963
9.	Double edge raspfile, 8"	900 each	1,062
10.	T Bevel	225 each	279
11.	Wood shisels, $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ ", and $\frac{3}{4}$ "	225 sets	1,147
12.	Round file	225 each	47
13.	Triangular file	225 each	59
14.	Hone	225 each	180
15.	Hand press, metal, 8"	1350 each	3,645
16.	Hand drill, $\frac{3}{8}$ "	225 each	1,148
17.	Bits, $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{5}{16}$ ", and $\frac{3}{8}$ "	450 sets	2,385
18.	Planes, 10"	675 each	3,949

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Cost</u>
19.	Plane, 8"	675 each	\$ 2,227
20.	Tape 2 meter	1350 each	419
21.	Plier, 6"	450 each	563
22.	Monkey wrench, 10"	225 each	313
23.	Monkey wrench, 6"	225 each	205
24.	Hand operated grinder, 4"	225 each	1,429
25.	Half-twist Bitbrace	225 each	1,463
26.	Bits 1/4" to 1"	225 sets	1,516
			Sub-Total: \$ 29,260

C. Equipment for Livestock-Farming

1.	Hoe, No. 4	675 each	\$ 1,188
2.	Spade, garden	675 each	965
3.	Five-point cultivator	675 each	743
4.	Round-point shovel	675 each	1,040
5.	Rake with roller	675 each	2,228
6.	Pruning shear	675 each	990
7.	Wheelbarrow steel	450 each	6,683
			Sub-Total \$13,837

Plus transportation and procurement 15,102
Grand Total 75 Boys' Schools 81,100

GOE FINAL APPLICATION AND RESUME OF DISCUSSIONS

"As a result of a meeting held on February 26th, 1965 between the Minister of Education and USAID/E technicians, concurrence was reached with respect to the following points:

"A. Construction of 3,000 classrooms, 30 Teachers Lodgings and 2 Normal Schools.-

"1. The Ministry of Education, as a result of the cost surveys recently made, would like to indicate that the total cost of this sub-program amounts to \$9,737.800 instead of \$7.216,000 as shown in the last written application from the Ministry. This means an increase in the contribution from the Government of Ecuador and the communities. This increased contribution is shown in the attached table entitled Total Cost of Program and Proposed Financing.

"2. The Ministry of Education has foreseen the necessity of providing adequate financial resources for maintaining the schools completed under this program. Last year and in the current year the necessary allotments have been included in the budget to cover such maintenance, in spite of the fact that such funds will not be required until after three years, when construction of the 3,000 classrooms has been completed.

"3. The Ministry would like to state that there is no conflict between the schools that are presently under construction and the schools to be constructed under this program, inasmuch as the construction of the latter will begin immediately after funds become available under this loan.

"4. The Cooperative Program of School Construction (CPSC), as a recognized agency of the Ministry of Education, has sufficient administrative authority to implement this construction program. Nonetheless, the Ministry will do everything possible to strengthen this authority in accordance with the laws of the country and in a manner satisfactory to USAID.

"B. Textbook Program for Primary Schools

"1. There is mutual agreement with respect to the revised cost of this sub-program and its objectives.

"2. The selling price of textbooks will be sufficiently reasonable so that every primary school student will be able to procure one. The price will be determined through a thorough study analysis and with the approval of the Ministry of Education and AID.

"3. The Ministry has prepared tentative plans for the collection, management and disbursement of the fund to be established through the sale of textbooks. The utilization of this fund will

assure the reproduction of textbooks in the future. The plans will be submitted to USAID as soon as possible.

"C. Workshop Program

"1. In regard to the need for equipment and hand tools for 600 primary schools and sewing equipment for 150, we wish to state that the Ministry of Education has already established a pilot program, and the only thing that is needed is workshop equipment. Therefore, in accordance with the proposed pilot project, tools and equipment will be furnished to 100 schools which are to be selected by mutually agreed criteria between the Ministry of Education and AID. The "pilot schools" will form the basis for later expansion of this program to other schools, as may be decided, using them as demonstration centers.

"2. The Ministry will utilize available Ecuadorean technicians who have been properly trained to meet the requirements stipulated in this program. However, it needs, accepts and appreciates USAID's assistance in the training of technicians in this field of practical activities through its Vocational Education Division.

"D. Total Cost of Program

"The Ministry concurs in the research analysis which as resulted in a revision of the total cost of the program. In order to meet USAID'd Development Loan criteria, the Ministry has increased its contribution by more than one million dollars in comparison to the amount indicated in our previous application. Likewise, the contribution from the communities reflects a significant increase as compared with their previous committed contribution. In addition to these contributions - which represent almost 50% of the total cost of this program - a loan in the amount of \$5,250,000 is required and applied for in order to carry out this project to final completion. The loan will guaranteed by the Central Government.

"E. Conclusion

"Inasmuch as this project has been reviewed and revised on several occasions for more than two years, I earnestly request that USAID give priority to all the actions required in order to obtain a prompt and favorable decision which will make it possible for us to begin as soon as possible in the construction of classrooms, training of teachers, preparation and reproduction of textbooks, the furnishing of workshops for the "pilot schools", all of which are important in order to reach the goals contemplated in our 10-year plan, which relates to the provision of schools for all children of primary school age and to the reduction of illiteracy by at least 50%; all these sub-programs are important and essential to the social, economic and cultural development of Ecuador.

"Needless to say, the Ministry of Education and all its technicians stand ready to work decidedly and enthusiastically toward the successful achievement of this program.

"(Signed) Lic. Humberto Vacas Gómez
Minister of Education."