

(2) Equipment Plan

a. Vocational Rehabilitation Centre

The equipment plan for each course (business course, woodworking course, sewing course, knitting course, electric maintenance course, capability development course for the mentally impaired) was formulated on the basis of the basic project concept set out in section 2.2, the course plan and the curriculum plan. The equipment plan is as indicated in Table 2.7. In addition, the following study was carried.

1) Business Course

The business course is targeted at the training of students in office administrative tasks including accounting, data processing and general processing of office information, centering on PC use. Since this course offers high employment potential for graduates, a relatively high number of applicants is envisioned. Accordingly, number of trainees per each course year is to be 10, for a total of 20 students. Course duration is set at 2 years given the wide range of curriculum content.

Educational equipment to be provided in this regard will include one unit of computer for each student, given consideration to differing levels of trainee disability. Two instructors are planned for the course, and each will be provided with a PC with network server capability. Printers to be supplied will comprise the laser printer type now generally in use in Syria as well as the dot-matrix type which features a lesser running cost. These will be connected to the instructors' computers with print-out from the individual student work station made possible by LAN connection. Software to be provided will be Microsoft Windows 95 and Office, capable of handling Arabic language fonts. All computers will be equipped with stabilizer and UPS to respond to voltage fluctuations and blackouts.

Desks on which PCs are to be mounted will be such as to enable easy operability by trainees in wheel chairs, be of strong construction and capable of horizontal and vertical adjustment.

2) Woodworking Course

In light of the wide range of curriculum content, course length is to be the present 2 year period. The said course comprises a furniture fabrication component and a wood handicraft component. The students under both components are to be unified in a single class, given the overall common use of almost all wood working equipment with the exception of very specialized machines and tools. At present, trainees in the woodworking course are only persons with hearing disabilities; however inclusion of the wood handicraft component and supply of related equipment will enable the participation of those with lower body disability as well. As a result, it is anticipated that the number of applicants will be greater

than the present number, and to accommodate this the number of students is to be increased from 5 to 10 per course year.

Basic woodworking equipment for both furniture fabrication and wood handicraft (band saw, circular saw, plane, woodworking press, router, corner chisel, woodworking lathe) are to be provided one each per student. Blade sharpening equipment is also to be supplied for maintenance of band saw and plane blades. Machinery layout is to allow for passage by trainees in wheelchairs. One work table is to be provided per 2~3 trainees to allow for ample space in consideration of the fact that some trainees will be in wheelchairs. Work tables will be equipped with wagons for storing handicraft tools to facilitate moving. Heavier equipment utilized primarily on top of work tables, equipment subject to high frequency of use (bench drill, pedal grinder, power drill, power grinder, power sander, power saws (circular saw, jigsaw) and painting equipment will be supplied in quantities of one unit/set each per course year (total of two units/sets per 2 year course). Handicraft tools will be supplied in quantities of 1 set per each student (10) and each teacher (2) for a total of 12 sets. Assist equipment will be provided on an as-need basis in response to degree of individual disability. Hand saw and plane will be the push type.

3) Sewing Course

In light of the wide range of curriculum content, course length is to be the present 2 year period. The current sewing course is highly popular, and features the largest number of students. Given even greater enrollment expected following equipment supply under the Project, the number of student per course year is to be 20, for a total of 40 trainees in the course.

Main equipment to be provided will comprise the pedal-type sewing machine suitable for beginners, the electric sewing machine which can be operated by trainees with more severe disabilities, and the industrial sewing machine which is advantageous for vocational oriented training. Since in the case of these basic machines they are often utilized in tandem with special machines, they are to be supplied in quantities of one number per 2 students. In the case of special machines for added-value to content of technical training (lock sewing machine, button holing machine, buttoning machine, embroidering machine, double stitching machine, zigzag machine, cutting machine), these in principal are to be supplied in quantities of one each per course year; however, where necessary this equipment would be used freely between the two course year students.

Work tables would be used primarily for pattern making. Since most other work would be done at the sewing machines, work tables are to be provided in a quantity of one number per course year. One set of pattern making tools would be included with each table. Hand sewing tools would be allocated in quantities of one set for each student and teacher. Assist equipment would be provided on an as-need basis in response to degree of individual disability. Tool wagons for temporary storage of hand sewing tools are to be supplied in 4 numbers, one on each side of each the two work tables.

Machinery and equipment layout is to allow for passage by trainees in wheelchairs.

4) Knitting Course

In light of the wide range of curriculum content, including handicraft skills, etc., course length is to be a 2 year period. Number of students per course year is to be 10, for a total of 20 trainees under the 2 year course. This represents a moderate increase over the present number of enrollees of 7 persons per course year. Number of trainees is small in light of the fact that most will take the avenue of self employment after graduation.

The basic knitting machine upon which most class work will center is to be supplied in quantities of one machine per student. In addition, one number of overlock sewing machine is to be provided. Knitting tool sets and embroidery tool sets are to be provided to students (1 set each of one or the other) after students have been grouped according to training specialty. Sets will likewise be provided to the instructors. Assist equipment would be provided on an as-need basis in response to degree of individual disability.

Machinery and equipment layout is to allow for passage by trainees in wheelchairs.

5) Electrical Maintenance Course

In light of the wide range of curriculum content, ranging from electrical theory to practical skills, course length is to be a 2 year period. Number of students per course year is to be 5, for a total of 10 trainees under the 2 year course (this is roughly equivalent to the present number of students).

Basic gauging equipment, power source and work table (voltmeter, galvanometer, tester, electric circuit training set, alternating current power source, wattmeter, clamp meter, photometer, soldering iron, work table, tool wagon) are to be provided in numbers of two each for each course year. Tools (power drill, power grinder) are to be provided in quantities of one each per course year. LCR meter and oscilloscope are to be provided in quantities of one per entire course given the sophisticated nature of these. Motor repair sets will be provided in quantities of one set of the power type, and one set of the hand type in order to respond to varying degrees of disability.

6) Capability Development for the Mentally Impaired

Course period is to be the present 2 years. Number of students is to be 10 per course year for a total of 20 trainees under the 2 year course (this is roughly equivalent to the present number of students). Number of instructors is to be 1 per 5 students, for a total of four instructors.

The equipment plan for the course is aimed at joint work operations, given the course targets of training in ability to work with others and persistence in work tasks. The equipment for simulating a general work line, i.e. roller conveyor, scales, trays, assembly and disassembly tools, etc., are to be provided in sufficient quantity to enable joint work by all trainees. Also, a weaving loom is to be provided for training in work persistence. Vocational evaluation equipment (for course assessment at the time of enrollment) and musical instruments for emotional training, which can be used outside this course as well, will be provided given their effectivity under the targeted capability development for the mentally impaired. Musical instruments will be provided in a quantity sufficient for 20 students to enable ensemble playing; however, these will be limited to keyboard and percussion instruments for which instruction is relatively easier.

General Equipment:

The Center is situated partially on inclined land, and some students will need to use wheelchairs. Given the increased future enrollment anticipated at the Center, it is planned to supply 20 nos. of wheelchair under the Project. In light of the need for electrical wheelchairs for students with impaired arm strength due to upper body disability, these will be provided in 10 nos. as requested.

Although not contained in the original request, one copy machine will be provided for preparation of teaching materials.

The two commuter busses presently used by the Center are superannuated. Present study body at the Center comprises 105 students, of which 54 live in the facility's dormitory and 51 commute. The present travel route of commuter busses is indicated in Figure 3.4; and the distances traveled by each bus during a single commute run are 28 km and 30 km, respectively. In light of the condition of commuter busses presently on hand, and increased enrollment in the future, it is concluded that at least one additional bus with passenger capacity of 36 is necessary under the Project.

Sports equipment is planned as an important item under the Project for the sports therapy program to be incorporated into each curriculum. However, this equipment is to be limited to items which are suited to use by the disabled, and which are appropriate given the available space at the center. The readily usable ping-pong set and walking balance block set are to be provided in two numbers each; the remaining items are to be supplied in quantities of one set each. Wheelchairs for basketball play are to be provided in 10 numbers, sufficient for game play. Wheelchairs for track and field practice are to be provided in 10 numbers suitable for indoor slalom workouts.

Table 2.7 Planned Equipment for the Vocational Rehabilitation Center

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment		
				Good	Poor			
A. Vocational Rehabilitation Center in Damascus								
a.1 Business course								
2 year course; 10 students planned per course year								
a.1.1	Manual typewriter (Arabic)	5	5	9	7		0	Typewriters are considered a thing of the past. Word processing from now on will be done mainly by PC. Accordingly, typewriters are not planned under the Project.
a.1.2	Manual typewriter (English)	5	5				0	
a.1.3	Electric typewriter (Arabic)	10	10				0	
a.1.4	Electric typewriter (English)	10	10				0	
a.1.5	Personal computer with word processing software	2	5 sets				22	
22 (Nos. for 10 students + 1 teacher per course year) x 2 course years								
a.2 Wood working course								
2 year course; 5 students planned per course year								
a.2.1	Band saw	1	1 set	1	1		1	For straight and curved line cutting
a.2.2	Wood working bench with vise	2	2	3	1		4	2 nos. for each course year
a.2.3	Circular saw	1	1	1	1		1	For straight line cutting
a.2.4	Planner	1	1	1	1		1	For surface planing
a.2.5	Bench drilling machine	2	2				2	For drilling; 2 nos. due to general use
a.2.6	Pedestal grinder	2	2				2	For surface polishing; 2 nos. due to general use
a.2.7	Wood working press	1	1				1	For binding pieces of wood together
a.2.8	Router	1	1				1	For groove cutting
a.2.9	Electric hand drill	2	2				2	Hand drill; 2 nos. due to general use
a.2.10	Electric hand grinder	2	2				2	Hand grinder; 2 nos. due to general use
a.2.11	Electric sander	2	2				2	Hand sander; 2 nos due to general use
a.2.12	Electric hand planner	2	2				2	Hand planer; 2 nos. due to general use
a.2.13	Electric hand circular saw	2	2				2	Hand held circular saw; 2 nos. due to general use
a.2.14	Electric jig saw	2	2				2	Hand held jig saw; 2 nos. due to general use

Table 2.7 Planned Equipment for the Vocational Rehab/Ilitration Centre

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.				Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment			
				Good	Poor	Non-functional	Replacement		
a.2.15	Air compressor	2	2					2	For painting
a.2.16	Dust collector	1	1					1	For preventing dust buildup on equipment
a.2.17	Spray gun	1	1					2	For painting
a.2.18	Tool wagon	4	4					4	2 nos. for each course year
a.2.19	Wood working hand tool set	10	10					10	1 set for each student
a.2.20	Chisel	0	1					1	wood handicrafting
a.2.21	Lathe	0	1					1	For making dowels, etc.
a.3	Sewing course								
a.3.1	Sewing machine	10	10		4		4	6	10 1 no. per 2 students
a.3.2	Industrial sewing machine	10	10	2	3		3	7	10 1 no. per 2 students
a.3.3	Vacuum press	1	1					1	For finishing
a.3.4	Electric cutting machine	2	2					2	2 1 no. for each course year
a.3.5	Steam iron and iron table	5	5	1	1		1	3	4 1 no. per 5 students
a.3.6	Drawing set	2	2					2	2 1 no. per course year
a.3.7	Working bench	2	2					2	2 2 no. per course year
a.3.8	Tool wagon	5	5					4	4 1 no. per 5 students
a.3.9	Tool set for tailoring	10	10					25	25 1 no. per each student and instructor; 2 nos. in reserve
a.3.10	Lock machine	0	2	1	1		1	1	2 1 no. for each course year, shared use where necessary
a.3.11	Button holing machine	0	2					2	2 -ditto-
a.3.12	Button sewing machine	0	2					2	2 -ditto-
a.3.13	Embroidery	0	2					2	2 -ditto-
a.3.14	Double stitch machine	0	2					2	2 -ditto-
a.3.15	Zigzag machine	0	2					2	2 -ditto-

Table 2.7 Planned Equipment for the Vocational Rehabilitation Centre

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project		Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment		Project	
				Good	Poor	Non-functional	Replacements		
a. 4									
Knitting course									
a.4.1	Knitting machine (electric)	5	5					5	5 nos. for second year students
a.4.2	Tool wagon	2	2					2	For storing and moving tools
a.4.3	Tool set for knitting	10	10					12	1 set for each weaving machine; 2 sets for instructor use
a.4.4	Manual knitting machine	0	15	9	4	13	2	15	10 nos. for first year students; 5 nos. for second year students
a.4.5	Collar fitting machine	0	1					0	This is eliminated as equipment in a.4.6 has collar attaching function
a.4.6	Binding machine	0	1					1	For darning practice
a.4.7	Embroidery machine	0	2					2	2 1 no. per course year
a.4.8	Embroidery set	0	5					11	10 sets for student use; 1 set for instructor use
a. 5									
Electric maintenance course									
a.5.1	Voltmeter	5	5					4	4 2 nos. for each course year
a.5.2	Ammeter	5	5					4	4 2 nos. for each course year
a.5.3	LCR meter	5	5					1	1 Minimal requirement for electronic theory training
a.5.4	Oscilloscope	5	5					1	1 -dnto-
a.5.5	Digital multimeter	5	5					0	Analog type is appropriate for training purposes
a.5.6	Circuit tester	5	5					4	4 2 nos. for each course year
a.5.7	Electric circuit training kit	5	5					4	4 2 nos. for each course year
a.5.8	AM/FM signal generator	5	5					0	Not included as this is for electronics training
a.5.9	Function generator	5	5					1	To be used together with oscilloscope
a.5.10	AC/DC power supply	5	5					4	4 2 nos. for each course year
a.5.11	Battery tester	5	5					0	Need for this item is low
a.5.12	Watt meter	5	5					4	4 2 nos. for each course year

Table 2.7 Planned Equipment for the Vocational Rehabilitation Centre

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project	Remarks	
		In request doc.	At field survey stage	Status of existing equipment					
				Good	Poor	Non-functional			Replacement
a.5.13	Clamp meter	5	5				4	4/2 nos. for each course year	
a.5.14	Radio teaching kit	10	1 lot					0 Not included as this is for electronics training	
a.5.15	TV teaching kit	10	1 lot					0 Not included as this is for electronics training	
a.5.16	Lux meter	5	5				4	4/2 nos. for each course year	
a.5.17	Lighting stand	5	5				4	4/2 nos. for each course year	
a.5.18	Electric hand drill	2	2				2	2/1 no. for each course year	
a.5.19	Electric hand grinder	2	2				2	2/1 no. for each course year	
a.5.20	Tool wagon	5	5				4	4/2 nos. for each course year	
a.5.21	Working bench	2	2				4	4/2 nos. for each course year	
a.5.22	Soldering iron	10	10				4	4/2 nos. for each course year	
a.5.23	Electric motor repair set	0	1 lot				1	1 Coil winder, etc.	
a.8	<i>Wheel chairs</i>								
a.8.1	Wheel chairs	50	13	6			6	14	The 13 nos. requested are the quantity needed at present. Quantity under the Project is 20 nos. given future increase in students.
a.8.2	Electric wheel chairs	10	10					10	The facility complex is located on land with inclines. This item is necessary for disabled with diminished arm strength.
a.9	Auditorium equipment	1 lot	1 lot						This is eliminated from consideration under the Project in light of the fact that film on hand and the Ministry of Education is not aimed at the disabled.
a.10	Copy machine	0	1	1				1	To be used for preparation of educational materials
a.11	Transportation busses (large)	2	2	2					(quantity required is to be re-examined)
a.12	<i>Sports instruments</i>								
a.12.1	Trampoline	0	1					1	For sports therapy
a.12.2	Vaulting horse	2	2 sets					1	-ditto-
a.12.3	Mat for wrestling	5	1					1	-ditto-

Table 2.7 Planned Equipment for the Vocational Rehabilitation/Institution Centre

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.				Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment			
				Good	Poor	Non-functional	Replacement		
a.12.4	Pommel horse	0	1					0	Not suitable for the disabled
a.12.5	Bar for high jump	0	1					0	Not suitable for the disabled
a.12.6	Balance beam	0	1 set					1	For sports therapy
a.12.7	Ping-pong set	0	2 sets		1	1		2	-ditto-
a.12.8	Balance brook	0	2 sets					2	-ditto-
a.12.9	Wheel chairs for basket ball	0	10					10	No. necessary for competitive matches
a.12.10	Wheel chairs for athletics	0	10					10	For slalom
a.12.11	Muscular strength training instruments	0	1 set		1	1		1	For sports therapy
a.12.12	Balance beam	1	1 set					0	Not suitable for the disabled
a.12.13	Athletics instruments for disabled	0	1 set					0	-ditto-
a.12.13.1	Javelin	2	2 sets					0	-ditto-
a.12.13.2	Shotput	2	2 sets					0	-ditto-
a.12.13.3	Hammer throw	2	2 sets					0	-ditto-
a.12.14	Medical ball	0	10					10	For sports therapy
a.12.15	Basket ball instrument	1	1 set					1	For sports therapy
a.14	Training instrument for Mental Development								2 year course; 10 students per course year
a.14.1	Roller conveyer with stand	0	5 set					5	For line work practice
a.14.2	Various type of weigh	0	2 set					2	For inspection
a.14.3	Trays	0	50					50	To hold small parts; for separation works
a.14.4	Assemble & disassemble kit	0	1 set					1	For component assembly/disassembly practice
a.14.5	Tool set	0	10 set					10	For parts disassembly
a.14.6	Hand weaving machine	0	1 set					1	To upgrade weaving capabilities

Table 2.7 Planned Equipment for the Vocational Rehab/ilitation Centre

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment				
				Good	Poor	Non-functional		
				Replacement	Augmentation	New		
a.14.7	Vocational evaluation tools	0	1 set				1	1 For vocational aptitude testing
a.14.8	Musical instrument							
a.14.8.1	Keyboard	0	1				1	1 For melody
a.14.8.2	Drum (Small size)	0	1				4	4 For rhythm
a.14.8.3	Drum (large size)	0	2				1	1 -ditto-
a.14.8.4	Cymbals	0	10				2	2 -ditto-
a.14.8.5	Hand castanets	0	2				10	10 -ditto-
a.14.8.6	Triangle	0	2				2	2 -ditto-

b. School for the Blind in Damascus

In the case of the School for the Blind in Damascus, 37 types of equipment have been requested. The equipment plan for the school assumes 20 students per class. Results of study on main equipment items is as follows.

- 1) The existing zinc plate, Braille printer is obsolete and requires excessive time for printing to be suitable for the preparation of educational materials requiring some 100 copies. The new Braille printer will be more appropriate to preparation of materials responsive to student needs.
- 2) Educational materials for each course year are recorded on tape. The tape recorder and headphones will be used to listen to these tapes. Since the student will perform school work utilizing a Braille typewriter while listening to the tape recorder, an equivalent number of Braille typewriters are to be provided. A total of 100 taper recorder and headphone sets are planned for the 5 middle and secondary school level classes.
- 3) String musical instruments including violin, etc. have been requested. However, string instruments were totally eliminated from consideration under the Project due to the technical difficulty in practicing such instruments. Instead accordion, keyboard and percussion instruments which are relatively easy to play are to be supplied in one set sufficient for 20 students.
- 4) The tape dubbing machine is used to make copies of tapes to be distributed to the individual student. Given the number of students at the facility, a machine with the capacity to dub 20 cassettes per hour is considered necessary. Since the materials to be dubbed are originally produced at the school, copyrights are not an issue.
- 5) Daily life training equipment are essentially for he blind to acquire daily living skills. Accordingly, electric range, pressure cooker and other basic equipment are to be provided in numbers equivalent to 1 unit per 5 students. As a result, the numbers to be actually provided under the Project are more than contained in the original request. However, dryers have not been included under the Project due to the fact that Syria has a very dry climate and dryers are therefore not commonly used in the average household.
- 6) The Braille board is a simple device for writing Braille, and is utilized by the student for note taking in the absence of a typewriter. One board per student is deemed necessary, and finally determined number to be provided under the Project is 200 taking into consideration future increase in students at the facility.
- 7) Computers (with voice recognition capability) have been requested in light of the fact that PCs have been designated from this fiscal year by the Syrian government as standard educational equipment in the nation's schools.

However, computers has of yet not been distributed to the average school, and no curriculum has been prepared. As a result, this item was eliminated from consideration under the Project as being premature.

- 8) Under the category of sports equipment, the standard goal ball set and ping-pong set for the blind are to be supplied. Also, chess is pursued at the school, and matches with other area schools are held. However, the school presently has only 1 chess set on hand which is insufficient to teach the game to all students. In light of the high educational impact achieved, chess equipment is to be provided under the Project.
- 9) As educational equipment for the blind, models of various parts of the human body, models of animals · vehicles, etc., compasses, barometers, etc. have been requested. The models have been subsequently included under the Project as educational impact is high (the student can directly touch these items and learn of their shape and nature). The compass, barometer items, etc. have not been included, as these are not considered suitable for the blind students.

Planned quantities of equipment for the School for the Blind in Damascus are indicated in Table 2.8.

Table 2.8 Planned Equipment for the School for the Blind in Damascus

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.				Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment			
				Good	Poor	Non-functional	Replacement		
B. School for the Blind in Damascus									
b.1	Printing machine for braille	0	1				1	1	For preparation of educational materials (capability of existing equipment is insufficient)
b.2	Tape recorder with headphones	100	100	15	100			100	For middle and secondary grade level use
b.3	Braille typewriter	100	100	14	150	100		100	-ditto- (manual: 90 nos.; electric: 10 nos.)
b.4	Music instruments	1 lot	1 lot						
b.4.1	Violin	-	10					0	String instrument practice is considered difficult
b.4.2	Accordion	-	5					5	For music class
b.4.3	Lute	-	3					0	String instrument practice is considered difficult
b.4.4	Tambourine	-	2					2	For music class
b.4.5	Guitar	-	2					0	String instrument practice is considered difficult
b.4.6	Keyboard	-	3					3	For music class
Supplemental item	Drum (Small size)							2	-ditto-
Supplemental item	Drum (large size)							1	-ditto-
Supplemental item	Cymbals							1	-ditto-
Supplemental item	Hand castanets							5	-ditto-
Supplemental item	Triangle							1	-ditto-
b.5	Audio library set	1 lot	1 lot					1	For preparation of educational materials
b.6	Homemaking instruments	1 lot	1 lot						For homemaking class: 20 students per class
b.6.1	Electric heater	-	1					4	1 no. per 5 students
b.6.2	Meat mincer	-	2					1	1 no. per class
b.6.3	Electric juicer mixer	-	2					1	1 no. per class
b.6.4	Refrigerator	-	2					2	2 no. per class
b.6.5	Pressure cooker	-	2					4	4/20 student per class: 1 no. per 5 students
b.6.6	Washing machine	2	2					2	2/For homemaking class: 20 students per class: 1 no. per 10 students
b.6.7	Drying machine	2	2					0	Not considered necessary as project site is dry climate
b.7	Transportation buses	2	2	3					(quantity required is being re-examined)

Table 2.8 Planned Equipment for the School for the Blind in Damascus

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.				Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment			
				Good	Non-functional	Replacement	Augmentation		
b.8	Braille board	0	70					200	1 no. per student (for note taking). Present no. of students is 185; no. to be supplied under Project is 200 taking into consideration future increase in students.
b.9	Computer with voice instruction	10	10					11	11 no. for instructor use; 10 nos. for student use (1 unit per 2 students)
b.10	Sports instrument	0	1 lot						For physical education class; 20 students per class
b.10.1	Goal ball set	0	1 lot						
b.10.1.1	Goal ball	-	25	1			9	1	10 For goal ball play
b.10.1.2	Goal	-	2					2	2 For goal ball play (for one court)
b.10.1.3	Eyemask	-	10					10	10 For goal ball play
b.10.2	Chess (for the blind)	0	25 lot	1				10	10 no. per 2 students
b.10.3	Ping-pong set for the Blind	0	4 sets					4	4 no. per 5 students (4 doubles players and 1 referee)
b.11	Education kit for the blind	0	1 lot						
b.11.1	Model of human body	-	1						1 For learning by direct feel
b.11.2	Model of human skeleton	-	1					1	-ditto-
b.11.3	Eye model	-	1					1	-ditto-
b.11.4	Ear model	-	1					1	-ditto-
b.11.5	Capillary tubes	-	1					0	Not considered applicable for education for the blind
b.11.6	Geometric tools	-	1					1	1 set
b.11.7	Kit doe different animal pictures	-	1					0	Not considered applicable for education for the blind
b.11.8	Kit of pictures for the environment	-	1					0	-ditto-
b.11.9	Toys o different animals	-	1					1	1 set of animal models
b.11.10	Toys o different transportation means	-	1					1	1 set of vehicle models
b.11.11	Compass	-	1					0	Not considered applicable for education for the blind
b.11.12	Measures units	-	1					1	1 set of models of clock, etc.
b.11.13	Geometric forms	-	1					0	Not considered applicable for education for the blind
b.11.14	Barometer	-	1					0	-ditto-

c. School for the Deaf in Damascus

In the case of the School for the Deaf in Damascus, 48 types of equipment have been requested. The equipment plan (with the exception of one portion of equipment) for the school assumes 20 students per class. Results of study on main equipment items is as follows.

- 1) The language laboratory for listening training makes possible direct conversation between the teacher and the students by means of microphone and headphones. In contrast to the conventional language laboratory, tape recorders are not necessary; however, it is necessary that the headphone amplifier be capable of volume adjustment by each individual student. Also, since the teacher must be capable of communicating either with the individual student privately or with the class as a whole, an amp system with controller is necessary. Also, the envisioned system assumes a maximum class size of 10, and is planned in quantities sufficient to equip 4 classrooms.

Audiometer and impedance meter are necessary for measuring the hearing ability of the student, and are accordingly included for supply under the Project.

The noise meter is used to measure noise in the classroom as well as outside noise. However, this equipment is concluded to be unnecessary due to the fact that the subject school is preparing a sound proof hearing test room.

Hearing aids are to be used by the student for a set trial period following hearing testing as a means of improving student potential performance, and in this light are to be included for supply under the Project.

- 2) The speech correction equipment enables the student to observe the teacher's voice in terms of wave pattern on an oscilloscope and indication on a level meter. The student then attempts to reproduce the same wave pattern and noise level. However, speech training is not effective unless begun from around the age of 2 or 3, and for children of such age wave pattern a noise level interpretation from the equipment indicators is difficult. As a result, this equipment was deemed as unsuitable for supply under the Project.
- 3) The requested PCs were eliminated from consideration under this Project for the same reason as applied to the School for the Blind.
- 4) Rhythm instruments are to be adopted for musical therapy, and the beneficial impact from this type of therapy is considered to be major. Floor-boarding is to be used in the classroom to facilitate sensory perception of vibration by the student, and this construction work is to be done by the Syrian side. Musical training will center on scale by the keyboard and rhythm via percussion instruments. Ten nos. of musical instrument are to be supplied under the Project sufficient for use by a class of 10 students.

- 5) Requested educational materials comprise mainly wall charts. These are almost all standard materials and it is concluded that these should be procured from the Ministry of Education. However, models of the human ear and brain are deemed in line with educational objectives at the school and these two items are to be included under the Project.
- 6) Sports equipment is considered of high beneficial impact under the sports therapy program, and is deemed appropriate under the Project with the exception of the pommel horse which requires a special degree of capability.
- 7) Video camera and video equipment are intended for the purpose of preparing videos to enable the student to practice speech training at home. Proliferation rate for video viewing systems in the home in Damascus is reported at around 60%, and the said video equipment is thus deemed an effective educational tool.

Planned quantities of equipment for the School for the Deaf in Damascus are indicated in Table 2.9.

Table 2.9 Planned Equipment for the School for the Deaf in Damascus

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment		
				Good	Poor			
C. School for the Deaf in Damascus								
c.1	Hearing measuring and training instrument	1	1 lot					
c.1.1	Language laboratory	2	4 sets				4	4 For language training (1 set per 10 persons x 4 classes)
c.1.2	Audiometer	2	2 sets	1		1		2 For measurement of hearing capability within each frequency range
c.1.3	Noisemeter	2	2 sets			1		0 For measurement of outside noise; not deemed necessary
c.1.4	Impedance meter	2	2 sets				2	2 For measurement of hearing capability
c.1.5	Hearing apparatus	100	20				20	20 For trial adjustment of hearing aid
c.2	Speech correction instrument	5	1 lot					
c.2.1	Voice wave indicator instrument	10	5 sets					0 Speech training needs to commenced from around the age of 2-3; however, children of such age are not capable of interpreting wave form
c.2.2	Sound level meter	5	5 sets					0 -ditto-
c.3	Personal computer set for teaching	2 sets	1 lot					
c.3.1	Personal computer main set	-	15	1				0 Eliminated from consideration due to the fact that PCs have as yet not been distributed to the average school
c.3.2	Scanner	-	2					0 -ditto-
c.3.3	Color printer	-	5					0 -ditto-
c.4	Musical instrument for rhythm education	0	1 lot					For music education; 10 students per class
c.4.1	Keyboard	0	2				2	2 For music class use
c.4.2	Drum (small size)	0	3				4	4 -ditto-
c.4.3	Drum (large size)	0	3				4	4 -ditto-
c.5	Education kit for deaf	0	1 lot					
c.5.1	Fruits, vegetable, various kinds of food		4					0 Not specifically relevant as educational item for the deaf
c.5.2	Clothing, school and classroom tools		4					0 -ditto-
c.5.3	Means of transportation		4					0 -ditto-
c.5.4	Colors		4					0 -ditto-
c.5.5	Teeth, tooth-brush, dentist's tools		4					0 -ditto-
c.5.6	Physician's tools		4					0 -ditto-
c.5.7	Time (i.e. watch, clock)		4					0 -ditto-
c.5.8	Mathematics		4					0 -ditto-

Table 2.9 Planned Equipment for the School for the Deaf in Damascus

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment				
				Cool	Poor	Non-functional		
c.5.9	Opposites (i.e. long/short, thick/thin)		4				0	-ditto-
c.5.10	Plant earth		4				0	-ditto-
c.5.11	Solar system, planets		4				0	-ditto-
c.5.12	Animals		4				0	-ditto-
c.5.13	Birds		4				0	-ditto-
c.5.14	Various type of toys (esp. for deaf & mute children)		4				0	-ditto-
c.5.15	The ear, eye, nose, mouth, (tong)		4				1	1 no. of model of the human ear
c.5.16	The respiratory system		4				0	Not specifically relevant as educational item for the deaf
c.5.17	The blood circulation system		4				0	-ditto-
c.5.18	The Digestive system		4				0	-ditto-
c.5.19	Kidneys		4				0	-ditto-
c.5.20	Heart		4				0	-ditto-
c.5.21	Muscles		4				0	-ditto-
c.5.22	Skeleton & the motor system		4				0	-ditto-
c.5.23	The brain		4				1	1 no. of model of the human head
c.5.24	Insects		4				0	Not specifically relevant as educational item for the deaf
c.5.25	types of professions		4				0	-ditto-
c.6	Sports instrument	0	1 lot					
c.6.1	Trampoline	0	1				1	For physical education class use
c.6.2	Vaulting horse	0	2 sets				1	-ditto-
c.6.3	Mat for wrestling	0	1				1	-ditto-
c.6.4	Pommel horse	0	1				0	Not suitable for physical education class use
c.6.5	Bar for high jump	0	1				1	For physical education class use
c.6.6	Protection mat	0	4				1	-ditto- (mat for high jump use)
c.6.7	Balance beam	0	1 set				1	For physical education class use
c.6.8	Ping pong set	0	2 sets				2	Local products are not of satisfactory quality
c.6.9	Balance Block	0	2 sets				2	For physical education class use
c.7	Studio equipment for video editing	1 lot	1 set (1)				1	For filming of speech training in the classroom, to enable the student to take the prepared video home for speech training practice at home as well
c.8	Transportation buses	2	2					(Required quantity to be re-examined)

d. Al-Amal School for the Disabled

In the case of the Al-Amal School for the Disabled, 44 types of equipment have been requested. The equipment plan (with the exception of one portion of equipment) for the school assumes 20 students per class. Results of study on main equipment items is as follows.

- 1) Wheelchairs in use at the Al-Amal School for the Disabled are in poor condition, with broken down equipment being repaired for re-use. In light of this dangerous situation for the wheelchair user, a necessary number of new wheel chairs are to be provided under the Project. Also, 5 numbers of electric wheelchairs are to be supplied to service the 5 students at the school which need the same.
- 2) The physical therapy equipment in the original request is to be included under the Project. There are two well recommended physical therapists on the Al-Amal School staff, and this coupled with the fact that the director in charge of the school operations at MASL (a physician as well) assures that physical therapy will be carried out under the supervision of a qualified doctor provides the justification for supplying the said equipment as per the original request.
- 3) Educational use PCs have been eliminated from consideration under the Project due to excessively early timing, as is the case with the School for the Blind.
- 4) Education equipment are mainly items related to physical training, and with one portion of equipment not considered directly relevant for training of disabled children, are considered appropriate under the Project. Equipment excluded from consideration included an overhead projector, the purpose of which was unclear, and skeletal models of fish, etc. which were deemed not of direct relevance to training of disabled children.
- 5) Video camera and video are included as equipment with good educational impact. Appropriate physiotherapy techniques can be filmed for each individual student for subsequent practice at home.
- 6) The requested musical instruments are for musical therapy. Relatively easy to play instruments such as accordion, keyboard and percussion have been included, and the difficult string and wind instruments have been eliminated. Quantity is to be sufficient for 20 students.
- 7) Sports equipment is anticipated to provide good results under the sports therapy program, and is to be procured under the Project with the exception of those items deemed unsuitable for disabled children.

Planned quantities of equipment for the Al-Amal School for the Physically Disabled are indicated in Table 3.10.

Table 2.10 Planned Equipment for Al-Amal School for the Physically Disabled

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment				
				Good	Poor	Non-functional		
		Category of requested equipment			Replacement	Augmentation	New	
D. Al-Amal School for the Physically Handicapped in Damascus								
d.1	Wheel chairs	30	50	10	10	10	40	50 The school at present has no wheel chairs on hand which are in good condition. 50 nos. are considered necessary (15 small size, 35 standard size).
d.2	Mobile wheel chairs	20	5				5	5 nos. are presently necessary
d.3	Physical therapy instrument		1 lot				-	
d.3.1	Shortwave therapy apparatus	1	1				1	1 Disabled parts of the body are heated by micro-wave to improve circulation.
d.3.2	Frequency stimulator	1	2				-	
d.3.2.1	EMG feedback therapy						1	1 Electric signal measurement device to assess nerve function and prepare electromyogram
d.3.2.2	Inertial therapy						1	1 Interference waves are used to ease pain and improve circulation
d.3.3	Laser unit	0	1				1	1 Infra-red radiation is used to alleviate congestion of blood and pain.
d.3.4	Infrared ultraviolet lamp	1	2 lot				2	2 For heating the entire body; has disinfectant effect
d.3.5	Goniometer kit	2	2				2	2 For gauging joint angle for elbows, knees, fingers, etc.
d.3.6	Hydrotherapy set	0	1 lot				-	
d.3.6.1	Whirlpool bath for full body					3	1	1 For heat therapy
d.3.6.2	Whirlpool bath for arms						1	1 -ditto-
d.3.6.3	Whirlpool bath for legs						1	1 -ditto-
d.3.6.4	Ultrasound therapy						1	1 Supersonic waves are used to induce vibration in the body and improve circulation.
d.3.6.5	Pack heater and hot pack						1	1 For heat therapy
d.3.7	Rotary exerciser	1	2 sets				-	
d.3.7.1	Ergometer			2		1	1	1 For strengthening abdominals and lower body muscles, and improving body stamina
d.3.7.2	Pedal apparatus						2	2 -ditto-

Table 2.10 Planned Equipment for Al-Amal School for the Physically Disabled

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.				Qty under Project	Remarks
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment			
				Good	Poor	Non-functional	Replacement		
d.3.8	Overhead suspension exerciser	1	1						
d.3.8.1	Quadriceps bench							1	For training to recover function of thigh muscles
d.3.8.2	Universal traction unit							1	For extension of the neck and spine to correct deformity
d.3.9	Tilting table	1	2	(1)					
d.3.9.1	Tilt table							1	To prevent blood pressure drop in the standing position, and for practice in standing
d.3.9.2	Treatment table							2	Bed for carrying out physiotherapy
d.4	Transportation buses	2	2	1	2				(necessary quantity is to be re-examined)
d.5	Personal computer set for teaching	2	2					0	Eliminated from consideration due to the fact that PCs have not been provided to schools in general as of yet.
d.6	Educational kit for physically disabled	-	1 lot					-	
d.6.1	Model of human skeleton	-	2					1	To enable the disabled to learn about body structure and function
d.6.2	Overhead projector	-	1					0	Eliminated from consideration due to low frequency of use.
d.6.3	Microscope	-	2					2	For use in science course ٤١٢٢
d.6.4	Models of fishes, animals and birds etc.	-	1 set					0	Not directly relevant to training of the disabled
d.6.5	Model of human body	-	1					1	To enable the disabled to learn about body structure and function
d.6.6	Eye model	-	1					1	-ditto-
d.6.7	Spine model	-	1					1	-ditto-
d.6.8	Heart model	-	1					1	-ditto-
d.6.9	Ear model	-	1					1	-ditto-
d.6.10	Brain model	-	1					1	-ditto-
d.7	TV and video camera set	1	1					1	
d.8	Music instruments	0	1 lot					-	For use in music class
d.8.1	Accordion	0	4	1				3	For use in music class
d.8.2	Keyboard	0	2					2	For use in music class
d.8.3	Guitar	0	4	1				0	String and wind instruments eliminated from consideration
d.8.4	Lute	0	1	1				0	String and wind instruments eliminated from consideration

Table 2.10 Planned Equipment for Al-Amal School for the Physically Disabled

Item No.	Name of Equipment	Requested Qty		Relationship to existing equip.			Qty under Project	Remarks	
		In request doc.	At field survey stage	Status of existing equipment		Category of requested equipment			
				Good	Non-functional	Replacement			Augmentation
d.8.5	Violin	0	4	1			0	String and wind instruments eliminated from consideration	
d.8.6	Trumpet	0	4				0	String and wind instruments eliminated from consideration	
d.8.7	Others	0	1 lot				-		
d.8.7.1	Drum (Small size)	0					4	For use in music class	
d.8.7.2	Drum (large size)	0					1	-ditto-	
d.8.7.3	Cymbals	0					2	-ditto-	
d.8.7.4	Hand castanets	0					6	-ditto-	
d.8.7.5	Triangle	0					2	-ditto-	
d.9	Sports instruments	1 lot	1 lot				-	For use in physical education class	
d.9.1	Wheel chairs for basket ball	-	10				10	For use in physical education class	
d.9.2	Wheel chairs for athletics	-	10				10	For use in physical education class	
d.9.3	Muscular strength training instrument	-	1 set				1	For use in physical education class	
d.9.4	Ping-pong set	-	2 sets				2	For use in physical education class	
d.9.5	Balance beam	-	1 set				0	Not directly relevant to training of the disabled	
d.9.6	Athletics instruments for disabled	-	1 set				0	Not directly relevant to training of the disabled	
d.9.6.1	Javelin	-	2 sets				0	Not directly relevant to training of the disabled	
d.9.6.2	Shotput	-	2 sets				0	Not directly relevant to training of the disabled	
d.9.6.3	Hammer throw	-	2 sets				0	Not directly relevant to training of the disabled	
d.9.7	Medical ball	-	10				10	For use in physical education class	
d.9.8	Mat for wrestling	-	1				1	For use in physical education class	
d.9.9	Basket ball instrument	-	1 set	(2)	ball only		1	For use in physical education class	

(3) Drawings

Layout plan for the Vocational Rehabilitation Centre is shown in Figure 2.4 and model layout plans for the knitting course, sewing course, electric maintenance course, woodworking course, and business course are shown in Figures 2.5 (1)~(5).

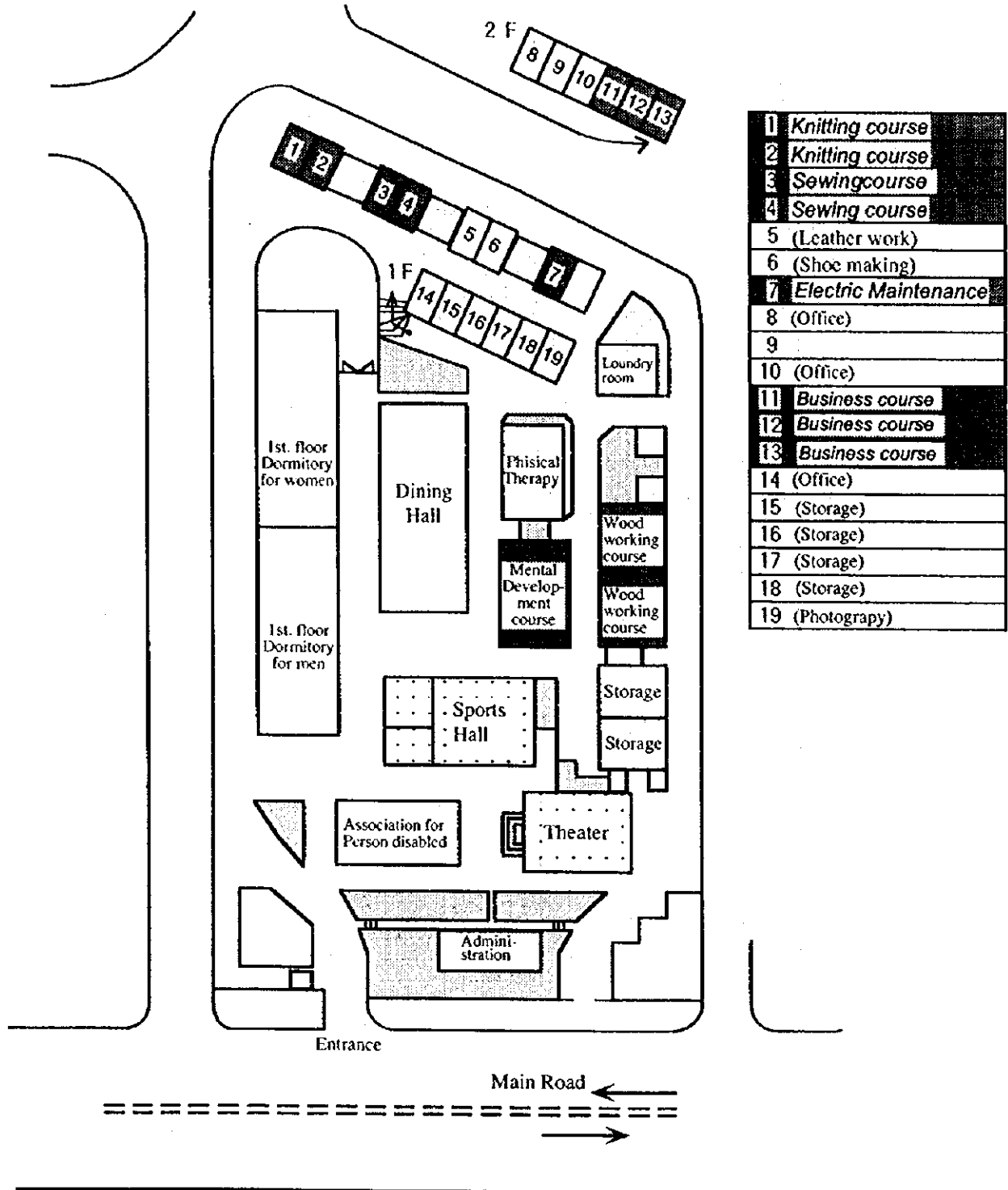
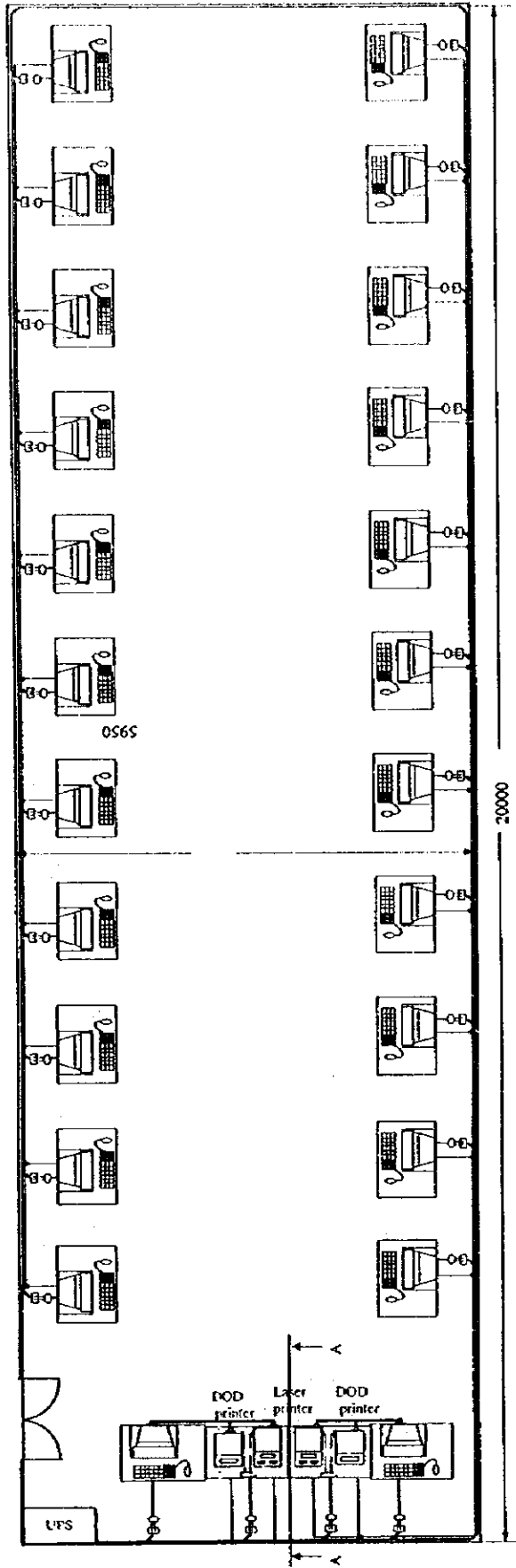


Fig. 2.4 Layout plan for the Vocational Rehabilitation Center



unit: mm

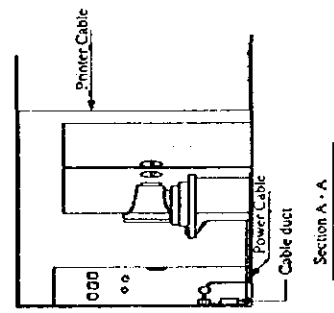
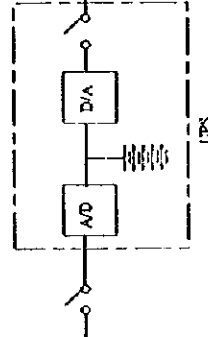
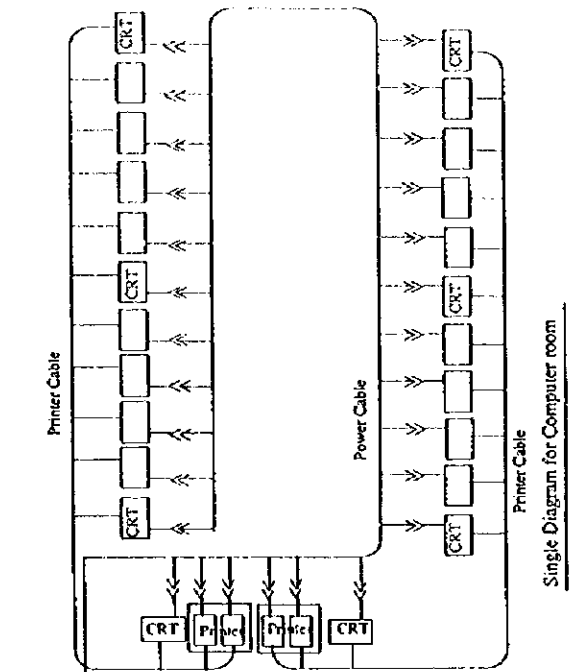


Fig. 2.5 (1) Model Layout for Business course

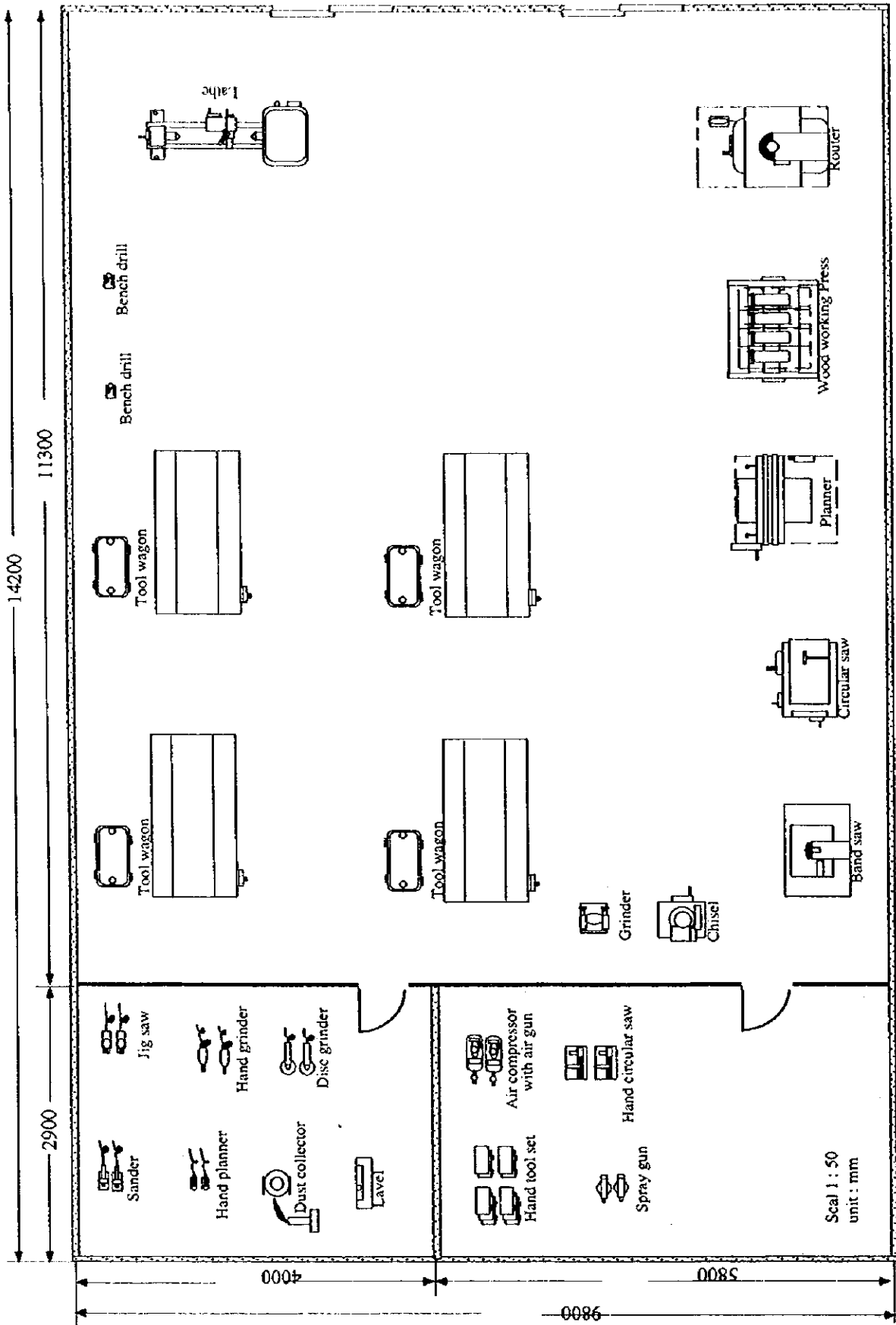


Fig. 2.5 (2) Model Layout for Wood working course

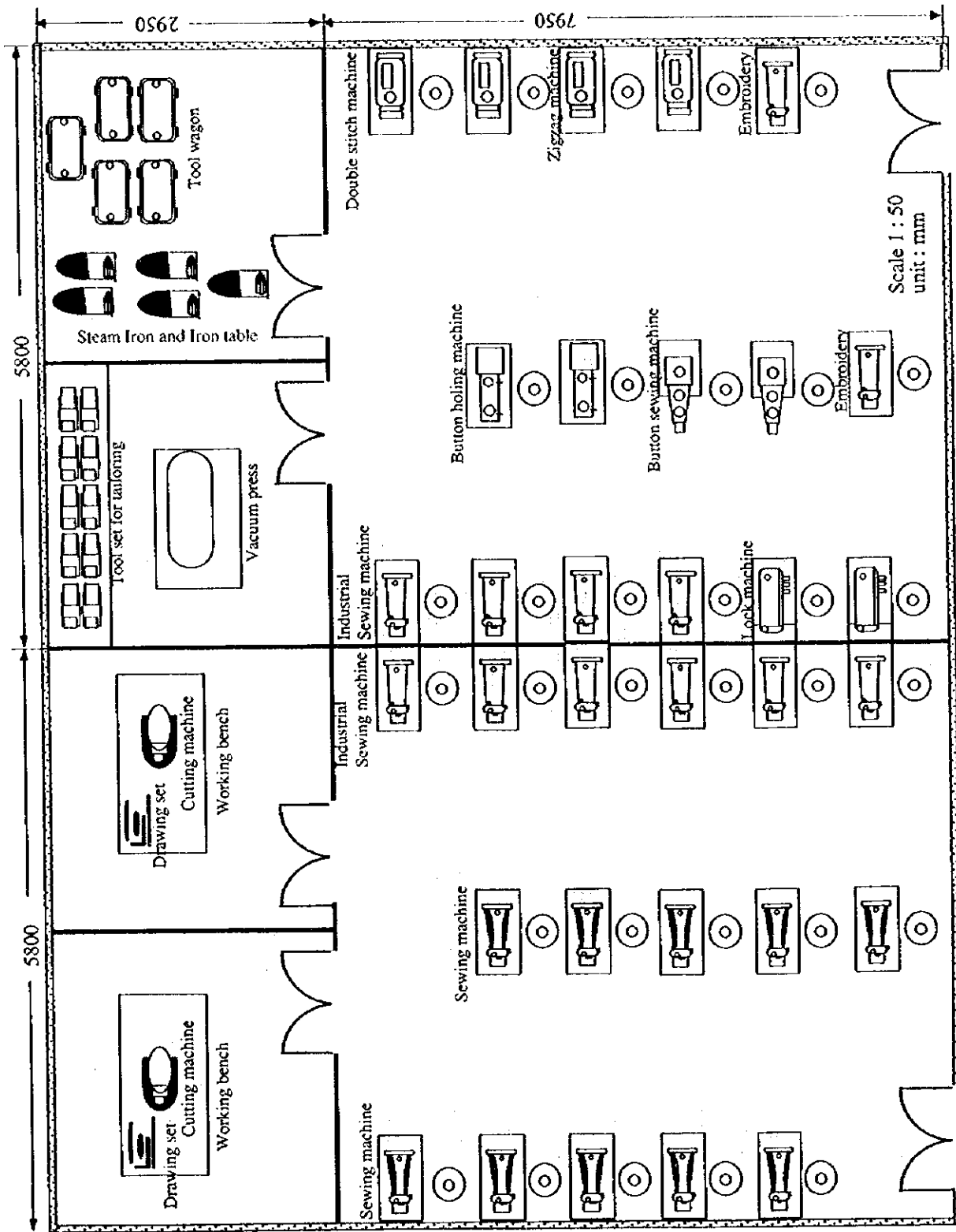


Fig. 2.5 (3) Model Layout for Sewing course

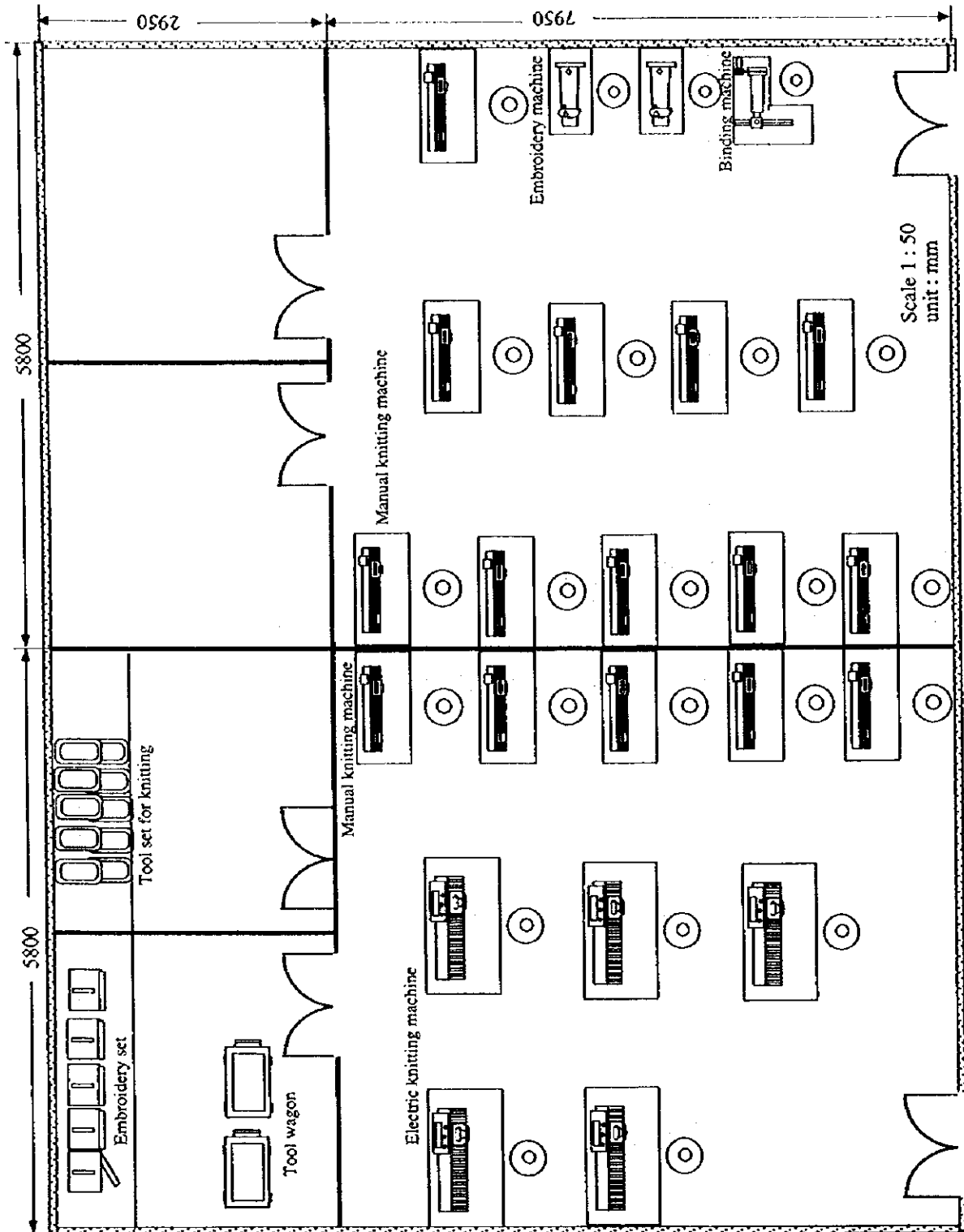


Fig. 2.5 (4) Model Layout for Knitting course

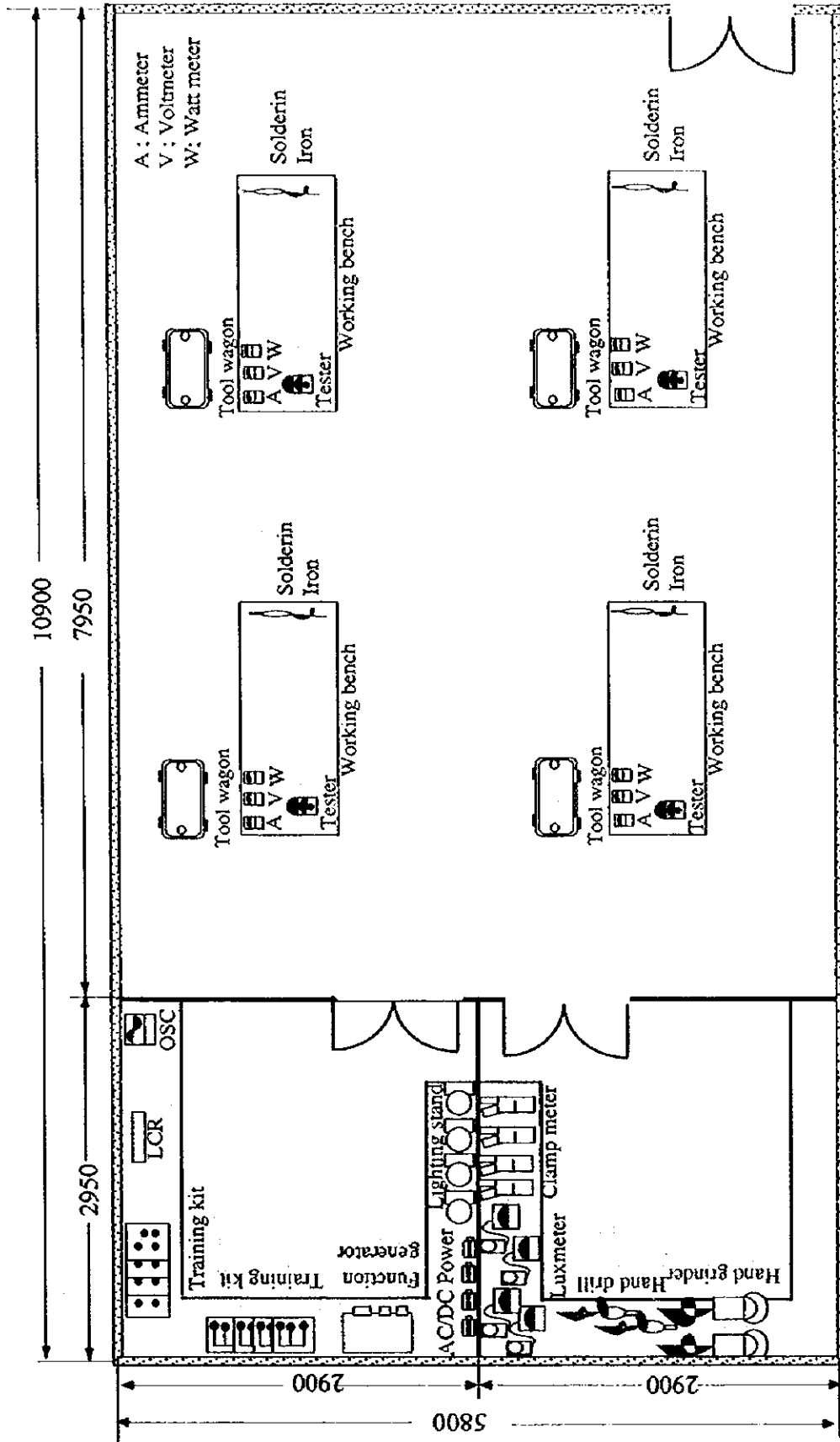


Fig. 2.5 (5) Model Layout for Electric maintenance course

2.4 Project Implementation Structure

2.4.1 Organization

(1) Ministry of Social Affairs and Labor

The executing agency for the Project is the Ministry of Social Affairs and Labor.

Specifically, the Social Services Department of MSAL will be responsible for the Project. The four target facilities (Vocational Rehabilitation Centre, School for the Blind in Damascus, School for the Deaf in Damascus and the Al-Amal School for the Physically Disabled) are under the jurisdiction of the Handicapped Care Office within the Social Services Department of MSAL.

(2) Vocational Rehabilitation Centre

There are a total of 5 departments under the supervision of the center director, i.e. a Vocational Rehabilitation and Training Department, Department for Capability Development for the Mentally Impaired, Department for Instruction in Daily Life Activities, Medical Rehabilitation and Physiotherapy Department, and Administrative Department. Vocational rehabilitation is the responsibility of the Vocational Rehabilitation and Training Department.

(3) School for the Blind in Damascus

This comprises a primary school, middle school and secondary school, as well as a vocational training program for persons with eye disability between the ages of 14 and 45.

(4) School for the Deaf in Damascus

This facility was established by government decree on November 10, 1970, and contains the following departments.

a) Administrative Department

This department is responsible for facility management and administration.

b) Education Department

b-1) Primary school level education is carried out for deaf and mute children of school age in line with the curriculum determined by the Ministry of Education and the learning capability of the student. Pre-school training (aimed at 4 and 5 year olds) is also provided given the importance of starting training of the deaf as early as possible.

b-2) This department is also intended to provide reading and writing training for adult deaf-mute individuals who are illiterate; however, due to various circumstances this is not being carried out at present.

c) Internal Care Department

Dormitory facilities are provided for students for whom commuting is not practical. This department is responsible for providing to such students the required clothing, lodging, meals, medical check-up and medicine prescription where necessary, hair cutting services, bathing facilities, etc.

d) Private Tutoring Department

For those children who cannot keep up with the group class format, private tutorial instruction is provided in speech training.

e) Audiography Department

This department is responsible for measuring the residual hearing capability of hearing impaired children as a basis for grouping into classes.

(5) Al-Amal School for the Physically Disabled

This facility comprises a primary school department, middle school department and secondary school department.

The above four facilities are under the direct jurisdiction of the Social Services Department of MSAL. However, in the selection and maintenance of equipment to be supplied under the Project, the support of the Technical Department of MSAL will also be elicited.

2.4.2 Budget

(1) Ministry of Social Affairs and Labor

The budget of MSAL and the national budget over the last 3 years is indicated in the table below. The proportion of MSAL budget out of the total national budget is a small 0.2%; however, growth in MSAL budget is on a par with that of the total national budget.

Year	MSAL budget (SP million)	Rate of budget increase (1995 as 100)	National budget (SP million)	Rate of budget increase (1995 as 100)
1995	325	100	161,770	100
1996	384	118	188,050	116
1997	388	119	211,125	130

(2) Vocational Rehabilitation Center

The budget of the Vocational Rehabilitation Center is over the past 3 years is indicated in Table 3.11 in comparison with the overall budget of MSAL. The proportion of Center budget out of the total MSAL budget is 3.5%; and growth in Centre budget is on a par with that of the total MSAL budget.

Year	Centre budget (SP million)	Rate of budget increase (1995 as 100)	Total MSAL budget (SP million)	Rate of budget increase (1995 as 100)
1995	11	100	325	100
1996	14	122	384	118
1997	15	134	388	119

2.4.3 Staff and Technical Level

(1) Vocational Rehabilitation Level

As indicated in the organigram for the Center, present staff is 54. Ten course instructors are currently assigned to the Vocational Rehabilitation Department. In addition, one support instructional staff is assigned to the knitting course. Three instructors are also assigned to the Department of Capability Development of the Mentally Impaired.

A course-wise description of present technical levels of instructional personnel is given below.

Typing course

The instructor is female, 45 years old, a graduate of a secondary level technical school, and has 10 years of work experience at the facility. A textbook is utilized for the course, and the curriculum is formulated in line with the text. Detailed instruction is provided on an individual student-wise basis. The said instructor is not capable at present of instruction in PC use and English typing skill; however, she would be able to provide instruction in PC word processing skills following a short training course.

Table 2.11 Budget (expenditure) of Vocational Rehabilitation Center in Damascus

Category	Article		1995 Amount Unit: 1000 SP	1996 Amount Unit: 1000 SP	1997 Amount Unit: 1000 SP
1	11	Employees salaries (pension)	2,525	3,200	3,200
1	11	Employees salaries (social security)	900	1,100	1,100
1	11	Temporary employees salaries	615	700	700
1	13	Contracting employees salaries	150	150	150
1	15	Work compensations	75	75	175
1	16	Overtime compensations	175	175	275
1	17	Other compensations	25	25	55
1	18	Bonuses	15	15	15
Total expenditures of category 1			4,480	5,440	5,670
2	211	Transportation	20	20	40
2	212	Tel, Mail, Water, Electric	450	500	600
2	213	Fuel	500	650	800
2	214	Medication requisites	200	250	350
2	215	Apparels	300	400	600
2	216	Stationary, school books, prints	275	300	300
2	217	Maintenance costs	300	325	350
2	220	Entertainment costs	10	10	10
2	221	Rations & accommodations	175	5,360	5,375
2	222	Administration costs	4,100	200	200
2	224	Fixed administrative fixtures	150	175	500
2	226	Repairing & renovating costs	450	400	500
Total expenditures of category 2			6,930	8,590	9,625
Grand Total			11,410	14,030	15,295

Wood working course

The instructor is male, 35 years old, and has 4 years of work experience at the facility. A cursory examination of the course classroom, however, indicates that basic factors of safety and equipment order from the standpoint of use by the disabled need to be upgraded. Also, instruction in basic equipment care should be more actively pursued. This current situation, however, is due in part to the result of practices established by the current instructor's predecessor. In terms of basic wood working skills instruction as well, there is a perceived need to coach the present instructor in more effective means of imparting these to the student.

Tailor course for men's dress clothing

The instructor is male, 50 years old, and has 12 years of work experience at the facility. Due to lack of equipment and materials for training, students were not engaged in any fabrication tasks when the facility was visited by the Study Team. This may have been in part due to placement of sewing machine equipment in another location due to classroom renovation works; however, it appeared that the course required more effort in devising fabrication tasks for the trainees.

Supply of new equipment is premised on the need for a basic teaching methodology. Also, there is no set curriculum for the course. Since the equipment to be supplied under the Project comprises industrial use sewing machinery, thorough training in equipment use must be provided at the time of equipment supply.

Tailor course for women's clothing

The instructor is female, 60 years old, and has 12 years of work experience at the facility. Instructional environment is good. Also, training equipment is still in relatively good condition despite many years of use. Equipment presently being used is vocational use equipment; since the equipment to be supplied under the Project comprises industrial use sewing machinery, thorough training in equipment use must be provided at the time of equipment supply. Also, as the present instructor is approaching retirement age, it will be necessary in the relatively near future to recruit a new teacher capable of instruction in industrial sewing machine use, adjustment and repair.

Knitting course

The instructor is female, 45 years old, and has 18 years of work experience at the facility. She is a graduate of a handicraft technical school. She manages to perform very innovative instruction despite the lack of teaching equipment. Samples of various types of knitting technique are available for students to see, and the course features a somewhat set curriculum. The instructor does a professional job teaching a class of 18 students, many of whom are severely disabled. However, there appears to be lack in up-to-date fashionability of fabricated items, and in this regard it is recommended that periodic instructor training be carried out. It is assumed that there will be no problem in use of the equipment to be supplied under the Project; however,

in the case of the embroidery related equipment it is necessary that training in the use thereof be provided to the instructor.

Electric maintenance course

The instructor is male, 43 years old, and has 9 years of work experience at the facility. He is a graduate of a technical school. Almost no training equipment / tools are on hand, and no set curriculum is being pursued. With the shift in emphasis of course content from electronic related to electric maintenance related, it is judged that the present instructor will be capable of teaching the course if provided with some minor training at the time of equipment supply.

Leather working course

The instructor is male, 45 years old, and has 15 years of work experience at the facility. Instructor training was gained via OJT. The course suffers from no set curriculum or methodology.

Shoe making course

The instructor is male, 40 years old, and has 8 years of work experience at the facility. Instructor training was gained via OJT. At the time of facility inspection by the Study Team, classroom renovation made it impossible to identify conditions of instruction. However, training equipment is almost totally lacking with only one pair of wooden forms for shoe fabrication. In course preparation there appears to be need for more in-depth understanding of the shoe industry and shoe fabrication processes.

Photography course

The instructor is male, 50 years old, and has 7 years of work experience at the facility. Training equipment is lacking, and the instructional environment thus needs to be improved. In the case of finished products, the quality of film negative plate correction needs improvement. Course content is judged to be outdated in light of the prevalence now of automatic film development equipment.

Watch repair course

The instructor is male, 60 years old, and has 23 years of work experience at the facility. Instructional environment is deemed to require improvement. Present training activities comprise watch disassembly and assembly. As with the photography course, course content is considered outdated given the prevalence now of quartz watches which require almost no repair.

Capability development course for the mentally impaired

Course instructors are 3 males. Training comprises the drawing of circles, triangles and squares using templates, and then filling in the drawn object with color. In addition, various sports and games are pursued. However, training does not appear to have any set orientation beyond these tasks. The instructor indicates a desire to apply the foregoing to silk-screening, but it is not considered that this type of work would be suitable for the mentally impaired.

Overall, female instructors show good care of training equipment, maintenance of a clean and orderly instructional environment, and the ability to draw out the talents of the individual trainee. On the other hand, male instructors evidence a less orderly equipment maintenance and instructional environment. In total, there is a perceived need to provide thorough basic training to instructors in teaching methodology and vocational rehabilitation techniques for the disabled.

Training courses at the Center subject to equipment supply under the Project are indicated in Table 1.4. In line with this improvement plan, it is necessary to upgrade the technical levels of present instructors, as well as employ qualified new instructors. The executing agency is well aware of this necessity, and has expressed its understanding of imperative to strengthen and expand the Center instructor staff.

(2) School for the Blind in Damascus

Staff comprises 73 persons, including 1 school principal, 33 instructors, 2 social welfare specialists, 2 nurses, 3 drivers, 5 course supervisory personnel, 5 administrative office staff, and 30 persons engaged in various facility upkeep activities. Half of the facility instructors are persons with sight disability themselves. Although the facility itself is under the jurisdiction of the MSAL, appointment of instructors and payment to the same is the responsibility of the Ministry of Education.

(3) School for the Deaf in Damascus

Staff comprises 67 persons, including 1 school principal, 36 instructors, 1 social welfare specialists, 1 instructor supervisor, 4 drivers, 5 course supervisory personnel, and 24 persons engaged in various facility upkeep activities. Although the facility itself is under the jurisdiction of the MSAL, appointment of instructors and payment to the same is the responsibility of the Ministry of Education as is the case with the School for the Blind.

(4) Al-Amal School for the Physically Disabled

Staff comprises 44 persons, including 1 school principal, 24 instructors, 5 course supervisory personnel, 2 nurses, 2 drivers and 8 persons engaged in various facility upkeep activities. Although the facility itself is under the jurisdiction of the MSAL, appointment of instructors and payment to the same is the responsibility of the

Ministry of Education as is the case with the School for the Blind and the School for the Deaf described above.

2.5 Plan for Improvement of Operation and Training System at the Vocational Rehabilitation Centre

The Vocational Rehabilitation Centre presently provides vocational rehabilitation and medical rehabilitation services to the physically disabled, the deaf and the mentally impaired. However, training toward the goal of "attainment of a stable vocation" as stipulated in governmental decree 54 is only being carried out in a very small part at the Centre. The Vocational Training Department of the facility in particular suffers from obsolescence and lack of training equipment / materials, as well as the need for more in-depth training of instructional staff and the formulation of set course curricula. To address this, the following plan to upgrade operations at the facility is proposed to be carried out in parallel with equipment supply. This plan, however, is premised on the full efforts by the Syrian side in improving the operational and training system at the Centre, including personnel deployment and budget allocation. The Japanese side will provide recommendations and "soft" aspect cooperation described below to render the operational and training structure at the Centre more effective.

The items indicated below represent the minimal required improvement by the Syrian side to enable the Centre to fulfill its originally intended functions with regard to vocational rehabilitation for the disabled.

(1) Improvement of Evaluation System for Vocational Aptitude

Vocational aptitude evaluation is designed to assess the vocational aptitude of the individual trainee on the basis of physical, mental and job skill capability. It comprises perhaps the single-most important task at the outset of formulating the vocational training program for the targeted student. The basis for such a vocational aptitude evaluation system was prepared in the 1970s under guidance by ILO. However, the basic guidelines set out have not been followed in practice. Accordingly, the work sampling method is to be introduced under the Project (whereby a component by component evaluation of work skills under each course is performed) as a basis for reorganizing, improving and systematizing the vocational aptitude testing procedure.

Specifically, the vocational aptitude testing and work sampling procedures used in Japan are to be introduced, with appropriate modification to the Syrian condition on the basis of in-depth discussions with the Syrian side, with the aim to enabling the executing agency to prepare and implement an evaluation system which is both optimally effective and responsive to local requirements.

(2) Formulation of Course Curricula

In the case of present courses taught at the Vocational Rehabilitation Centre, there are essentially no prescribed curricula. Proposed curricula prepared by the Study Team

for the courses subject to equipment supply under the Project are as indicated in Table 3.5. This draft curricula is intended to serve as a reference for the Syrian side in preparing a practical course framework. It is recommended that formulation of course curricula be finalized prior to arrival of the equipment under the Project.

Also, with regard to capability development for the mentally impaired, the executing agency has expressed the desire that actual case studies from Japan be introduced as a basis for formulating a more comprehensive curriculum. Content of training and work skill practice in this regard in Japan based on actual case examples is as follows:

- a. Using roller type conveyor, trays, weighing scales, and devices subject to assembly and disassembly (toys, ball point pens, simple electronic components such as switches, etc., simple mechanical components such as nuts/bolts, washers, etc.), the following operational line works are performed in order to upgrade cooperation skills, punctuality, and patience/stamina:
 - Disassembly - assembly of electrical components, toys, pens, etc.
 - Separating, inspection, categorizing works
 - Boxing and packing works
- b. Simple fabrication works using simple weaving loom as a means of instilling self-confidence in the trainee.
- c. Floor cleaning, car washing works to upgrade cooperation skills, patience/stamina, etc.

On the basis of the above and the draft curriculum as set out in Table 1.5, it is envisioned that the executing agency will formulate the optimum curriculum suited to local conditions.

(3) Text Preparation

At present, there are no texts or other educational materials for use in vocational training at the Centre. Accordingly, it is necessary to examine the possibility of text and other material preparation centering on the initiative of the present instructional staff. In this regard, samples of texts can be obtained from vocational training agencies in Syria (other vocational training institutes, UNRWA, etc.) as well as from neighboring countries in the region and Japan as a basis for preparation of the optimum text material for the Centre educational objectives. It is recommended that this text preparation be done prior to equipment supply under the Project.

(4) Follow-up Training of Instructors

Examination will be made of a follow-up training program for instructors. Trainers in this regard would conceivably be personnel from other vocational training institutes, UNRWA and public - private enterprises with expertise in the designated

course fields. It is recommended that MSAL be the prime entity in selecting the source of trainers for the envisioned follow-up training program for instructors.

(5) Vocational Adaptability Instruction

Vocational adaptability instruction aims to upgrade basic skills necessary in the productive worker, i.e. motivation, patience/stamina, punctuality, interactive skills, sense of responsibility, self confidence, etc. This is achieved through re-creation of an actual work environment. This approach is particularly effective for vocational training of individuals whose disability is the result of accident or illness later in life. Within the framework of capability development of the mentally impaired, this instructional method will serve to improve personality traits necessary in an effective worker, develop good work habits and instill in the trainee the sense of satisfaction which can be derived from productive work and the awareness of the fulfillment which results from performing as a functioning member of society.

MSAL will be the prime entity in executing the above mentioned vocational adaptability instruction. Implementation could be subcontracted out to the Vocational Rehabilitation Centre (sewing, business word processing, knitting, wood working, motor coil winding, simple device assembly, etc.) which would then effect the practical work environment necessary for the targeted training. At the same time, this implementation would cover a portion of Center operation and maintenance cost. The feasibility of such contracting of works is currently being studied by MSAL.

(6) Individual Training Instruction according to Individual Curriculum

The individual curriculum is targeted at acquirement of 1 skill unit, for example in the case of the sewing course the ability to perform at least one work component (i.e. straight seam sewing) would enable employment of the trainee. The more diverse the division of labor becomes per course content, the finer in scope a single unit of work operation becomes and this increases the variety of skill training range within a single course, as well as the eventual potential for employment. Study on training approach would not only consider (i) vocational training for the individual which would not be limited to a single course content, but rather would be flexible enough to span multiple course boundaries where appropriate, but also (ii) a module approach where one skill unit per category of work task is acquired.

One example would be the case where the student might receive both tailoring and PC training in order to become vocationally independent. Where physically stamina is lacking, the said student might further pursue sports therapy in order to reinforce vocational rehabilitation. Examination would thus be given to this type of cross-disciplinary training in order to best prepare the student for eventual employment.

(7) Work Placement

Work placement would actively be carried out on behalf of the training course graduate. At present, this is not being effectively done. Such work placement would entail establishing employment agreements at the earliest possible with interested employers as a basis for practical OJT training of the graduate in the actual work place. On the part of MASL, this activity would entail labor market survey, as well as guidance and follow-up support to the graduate trainee in the work place (including the case of self employment).

Since the ultimate objective of training at the Centre is to render the disabled individual socially independent, work placement is an extremely important component within the scope of Centre activities. In this regard, it is recommended that MSAL formulate a draft work placement plan and present the same to the Japanese side

CHAPTER 3 PROJECT PLAN

3.1 Implementation Plan

3.1.1 Implementation Strategy

The Project aims to procure and install, within the framework of Japan Grant-Aid, vocational rehabilitation and educational equipment for the disabled at 4 target facilities in Damascus under the jurisdiction of the Ministry of Social Affairs and Labor, i.e. the Vocational Rehabilitation Centre, the School for the Blind, the School for the Deaf, and the Al-Amal School for the Physically Disabled. Implementation of the Project will entail equipment detailed design, tender related works, equipment procurement, and supervision of delivery and installation of equipment at the Project sites. Also, a feature of the Project is support with regards to "soft" aspects in the strengthening of the vocational rehabilitation system at the Vocational Rehabilitation Centre, which goes beyond simply equipment supply. This support will be provided by the consultant in the field during detailed design survey, and supervision of delivery and installation of equipment, and instruction in its use by the contractor.

Implementation sequence will be as follows.

Following Exchange of Notes between the Japanese and Syrian governments, a consulting agreement will be signed between the executing agency, MSAL, and the nominated consultant upon which the consultant will commence detailed design and implementation supervision works. During the tendering stage after completion of detailed design, qualified contractors will be selected and contracted with for equipment procurement, transport, delivery at site, installation and instruction in equipment operation and maintenance. Equipment delivery to the project sites and installation will be performed by local labor under the supervision and instruction (with regard to assembly, wiring, test operation, operation and maintenance) of engineering personnel dispatched by the contractor. Such engineering personnel to be dispatched would be expected to have expertise in the field of vocational training equipment and medical rehabilitation equipment. PC equipment procurement is anticipated to be done locally, with the dispatch of local engineering staff for installation supervision and operational instruction.

3.1.2 Points Requiring Special Attention during Implementation

The Project sites for equipment supply comprise 4 facilities located in the Syrian capital of Damascus. Road access is good, and no problems in equipment delivery is anticipated. However, there are two points of note which will impact on equipment delivery works at the facilities. Firstly is the fact that working hours at the Vocational Rehabilitation Centre are 8:30 to 14:30 (practical working hours being the four hour period from 9:00 to 13:00). Also, working hours in the case of the other target educational facilities is 8:30 to 12:30. Accordingly, equipment delivery works can be performed only during a very limited 4 hour period during the day. Secondly, English is not spoken by local workers and facility staff making it essential that

English~Arabic interpreters be employed in the course of equipment installation works and during sessions where the contractor provides instruction in equipment operation and maintenance.

3.1.3 Implementation Scope

The scope of responsibility of the Japanese side under Project implementation is equipment procurement, transport, delivery, installation, and test operation, as well as instruction to local staff in equipment operation and maintenance. This includes connecting and wiring works for equipment. Also, implementation supervision of the foregoing works falls within the scope of Japanese responsibility. As on part of implementation supervision, cooperation in terms of the "soft" aspect as well is included to support the effective use of supplied equipment. In particular, this entails assistance in improving the system operation of the Vocational Rehabilitation Centre.

Scope of responsibility of the Syrian side under Project implementation is to bear customs costs at ports in Syria for imported equipment, carry out necessary power source and electrical outlet works to accommodate the new equipment at the target facilities, and ready the required space (including removal of unneeded equipment) inside buildings for installation of the equipment in line with layout drawings.

3.1.4 Implementation Supervision Plan

Main implementation supervision works under the Project are as follows:

- Discussions with concerned parties on details of equipment specifications, and drafting of specification documents.
- Study on equipment layout at the facilities, and drafting of facility improvement plan to accommodate equipment (mainly with regard to electrical works).
- Preparation of tender documents, cost calculation and assistance in execution of tendering procedures.
- Pre-shipment inspection of equipment (in Japan, in Syria, and in third countries where necessary)
- Visual inspection and packing check of equipment upon arrival at Syrian ports.
- Supervision of equipment delivery to the Project sites and inspection upon arrival.
- When in the field in the course of carrying out the above works, to provide technical support and instruction to local government staff with regard to "soft" aspects pertaining to improved operations at the Vocational Rehabilitation Centre.

Duties of the assigned consultant experts in the course of Project implementation are as follows:

- a) Team leader (spot assignment)
 - Overall consultant activity supervision.
 - Supervision in contracting and discussions with the executing agency.

- Discussions with concerned parties on details of equipment specifications, preparation of specification documents, confirmation of equipment adherence to specifications.
 - Supervision of support for tendering activities.
 - Equipment inspection upon arrival at site and witnessing of handing over.
- b) Equipment design engineer (spot assignment)
- Discussions with concerned parties on details of equipment specifications, preparation of specification documents.
 - Study and preparation of equipment layout plan.
 - Pre-shipment inspection of equipment (equipment procured in Japan, equipment procured in Syria, and where necessary equipment procured in a third country).
 - Inspection of equipment upon off-loading at Syrian ports.
 - Confirmation and inspection of equipment upon delivery to project sites.
 - Equipment inspection upon arrival at site and witnessing of handing over.
- c) Cost estimation and tender document specialist
- Project cost estimation based on detailed design.
 - Support to executing agency in tender document preparation.
- d) Design specialist for vocational rehabilitation system for the disabled (spot assignment)
- Planning with regard to “soft” aspects for upgrading system operations of the Vocational Rehabilitation Centre, and technology transfer of the same to local personnel.
 - Instruction to recipient government staff in the content of the operational improvement plan, with special emphasis on vocational training, following equipment procurement.

In addition to the above personnel, an Arabic language interpreter is necessary (either Japanese or Syrian).

3.1.5 Equipment Procurement Plan

In the case of vocational training equipment, it is essential that consumables, spare parts, and maintenance after-sales service be available through the manufacturer's local agent. With regard to medical rehabilitative related equipment, the presence in locally of agents which deal with third country products opens the possibility to local procurement of such third country products. In the case of educational materials comprising explanatory diagrams and 3-dimensional models, it is necessary that these be accompanied by manuals in Arabic. However, due to the difficulty in achieving this at the ex-factory level, English manuals would be acceptable provided that they later be translated into Arabic. From the standpoint of maintenance, locally procured equipment would comprise PCs, copy machine and cooking equipment. PC and copy

machine equipment in particular require regular maintenance. There are local agents which handle products by the major manufacturers in this regard. The fact that these agents can provide paper, toner, ink cartridge, floppy disks and other consumables as well as after-sales service makes it appropriate that these equipment items be procured locally. Although there are PCs which are assembled locally out of imported parts, equipment quality is insufficient for consideration under the Project.

3.1.6 Cooperation in System Improvement In Terms of "Soft" Aspects

Technology transfer in terms of "soft" aspects is targeted at the Vocational Rehabilitation Centre, and is intended to realize objectives as set out in Section 2.4. Components of this cooperation and implementation period are set out below.

Detailed design stage

- 1) As work evaluation methodology, the "vocational evaluation method" and "job sampling evaluation method" are to be transferred to local personnel. The "vocational evaluation method" is designed to assess individual vocational aptitude. Specifically, this entails adopting that portion of the standard vocational aptitude test method in Japan which is applicable to the Syrian criteria, translating the same into English for briefing to local concerned personnel and subsequent application. The "job sampling evaluation method" assesses course elements individually, and evaluates specific work operations on a sample basis. Specific methodology would be explained for each course. This work would require around 10 days. A draft for the vocational evaluation plan would be prepared by the tender stage (scheduled for 3 months after start of detailed design) for submitted by the Syrian government to the Japanese side.
- 2) Guidance would be provided in formulation of course curricula. On the basis of the curriculum draft prepared by the Japanese side, a curricula best suited to conditions in Syria would be formulated in close collaboration with present instructor staff. Curricula would be prepared for 6 courses, i.e. typing, wood working, sewing, knitting, electrical maintenance and capability development for the mentally impaired. Guidance period for course curricula formulation would be 10 days, with a course curricula draft prepared by the tender stage for submittal by the Syrian government to the Japanese side.
- 3) Guidance would be provided in text preparation. On the basis of the draft curriculum, instruction in textbook preparation methodology would be provided. Appropriate textbooks currently in use in Syria and Japan would be used as samples, and an orientation established for drafting texts which are appropriate to the Centre. Guidance period for text preparation would be 10 days, with a draft for text formulation prepared by the tender stage for submittal by the Syrian government to the Japanese side.
- 4) Instructors would be briefed on the necessity of follow-up training, and methods of for such training as practiced by the Syrian side would be elicited.

Briefing and discussion period would be about 2 days. In the case where an appropriate follow-up training method is not settled upon within the foregoing 2 day period, subsequent report by the Syrian government with regard to the same would be made by the tender stage to the Japanese side.

- 5) Methodology for instruction in vocational adaptability would be provided for a 2 day period. MSAL would subsequently investigate the possibility of outside sources for work to be performed at the Centre to assist students in upgrading vocational adaptability. A report to the Japanese side in this regard would be submitted by the Syrian government by the tender stage.
- 6) Instruction would be provided in the preparation of individual curricula. On the basis of the work in the previous section, explanation would be provided in the preparation of individual curricula from the overall curriculum. Time period for this instruction would be 2 days.
- 7) Use of supporting devices would be examined. These comprise specially designed tools to enable the individual to perform a specific work task that might otherwise be impossible given the nature of that person's disability. For example, a special tool to enable a person with no grip power to still be able to turn a screw. Presentation of specific examples of this would take around 3 days.
- 8) Instruction would be provided on methodology for a work placement program. Case studies from Japan would be introduced, and the effectivity of local methods confirmed. Instructional period in this regard would be 3 days.

Instruction and technology transfer with regard to all of the above "soft" aspects would take around 1.5 months, and would be directed at the entire staff of the Vocational Rehabilitation Centre and concerned personnel of MSAL.

Tendering stage

During the tendering stage, a follow-up check would be made of progress with regard to the above techniques imparted during the detailed design stage, i.e. vocational evaluation methodology, draft curricula, proposal for text preparation, method for follow-up training of instructors, vocational adaptability training, etc. Where necessary, supplementary instruction in this regard would be provided.

During tendering (in the case that tendering is held in Japan), members from the Syrian delegation would be taken on an inspection tour of vocational rehabilitation facilities in Japan.

Inspection stage

- 1) Confirmation is made of the final draft for work evaluation methodology. Also, a sampling of work evaluation would be done for present students. A draft would be formulated for the job sampling methodology.

- 2) Curriculum for each course will be finally determined. As the equipment under the Project will have already arrived at the site by this time, specific adjustments in the draft curriculum can be made to best fit the course equipment.
- 3) Final determination for text format will also be made for each course in line with the new equipment. Finally determined texts will then be prepared in the necessary numbers using the copy machine.
- 4) Confirmation would be obtained from MSAL with regard to the specific methodology for follow-up training of instructors, and the content of the same evaluated.
- 5) The content of outside sources of work under the vocational adaptability instruction program would be confirmed, and this reflected in the above curriculum.
- 6) Prototypes of supporting devices would be fabricated using the new wood working equipment, etc.
- 7) Confirmation would be obtained from MSAL with regard to the specific methodology for work placement activities, and the content of the same evaluated.

The period for this is planned at 1.5 months.

3.1.7 Implementation Schedule

The Project will commence upon signing of the Exchange of Notes for grant-aid cooperation between the Japanese and Syrian governments.

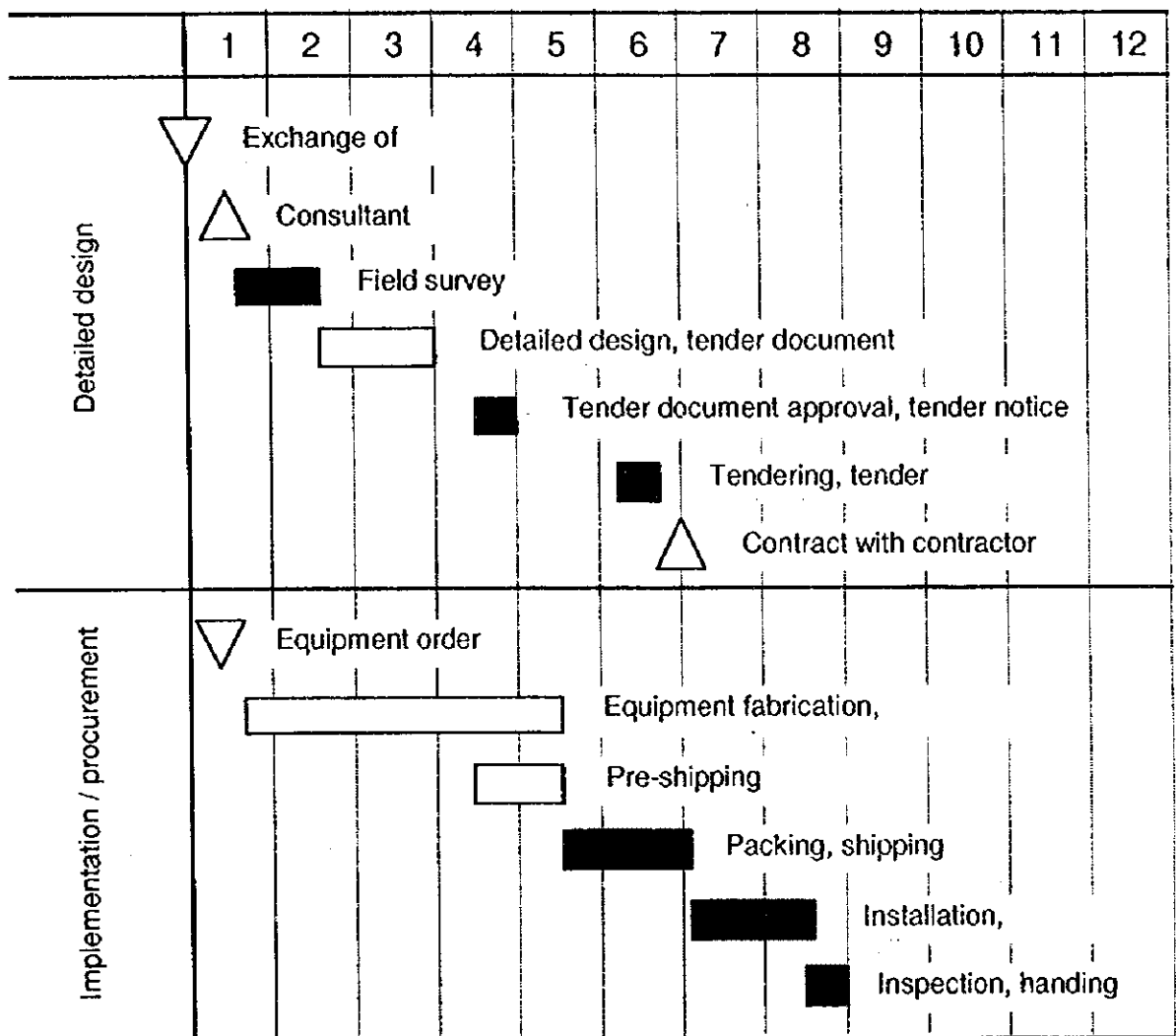
Following signing of the said E/N, it is anticipated that the Syrian government will move quickly to enter into contract with a Japanese consultant for execution of detailed design and implementation supervision works. Upon signing of the consultant services contract, the selected consultant will carry out detailed design, and preparation of tender documents. Following approval of the said tender documents by the Syrian government, tendering for the Project will then be performed. The consultant will then assist the client in tender evaluation and contract proceedings with the nominated contractor. The detailed design period required from signing of the consultant services contract to engaging of the contractor for equipment supply is 5.5 months.

The nominated contractor, following contract signing with the Syrian government and upon contract approval by the Ministry of Foreign Affairs of the Japanese government, will then proceed to order/procure the required equipment. On the basis of the content of the envisioned equipment, equipment fabrication period is anticipated at 4 months. Following this, 2 months will be necessary for transport of

equipment to port of export, packing, lading, marine transport and inland transport after arrival in Syria. A further 1 month is assumed for equipment unpacking after arrival at site, installation, test operation, and instruction to local staff in operation and maintenance of equipment. "Soft" support to the Vocational Rehabilitation Centre would be carried out during the consultant's presence in the field during the detailed design and equipment inspection stages of Project implementation.

On the basis of the above, detailed design and implementation would entail 5.5 months and 8 months, respectively.

Project implementation schedule is indicated in the following table.



3.1.8 Responsibility of the Recipient Government

Responsibility of the Syrian side is as follows:

- (1) Bank commissions (A/P advice commission and payment commission)
- (2) Timely execution of customs procedures and tax exemption measures inside Syria for supplied equipment.
- (3) Removal / trans-location of existing equipment.
- (4) Expediting of entry and stay procedures for Japanese personnel connected with the Project.
- (5) Appropriate utilization of equipment supplied under grant-aid cooperation.
- (6) Proper maintenance of equipment and periodic report on equipment status to the Japanese government.
- (7) Bearing of costs outside the scope of the grant-aid cooperation framework.

3.2 Preliminarily Estimated Project Cost

3.2.1 Estimated Project Cost

In order to execute the Project under the Japan's Grant Aid, the Syrian government needs to shoulder the amount of 1,170,000 Syrian pounds for existing equipment removal, installation of powerline, building modification and etc.

(In addition, a limited amount of bank commission must also be borne at the time of opening of A/P and payment under the Project)

3.2.2 Operation and Maintenance

(1) Vocational Rehabilitation Center

Instructors of the individual course will assume responsibility for maintenance of the supplied equipment. O&M costs for equipment items will become necessary from the 3rd year of the Project. (O&M cost are not needed in the first year since equipment is brand new. In the second year, maintenance requirements will be covered by spare parts provided with the equipment). O&M costs (including repair) are estimated at 1.61 million Syrian pounds in years 3~4, 2.69 million in years 5~6 and 3.76 million in years 7 and after of the Project. Although there is some variation depending on the individual piece of equipment, the average utility life for the equipment to be supplied is considered to be 10 years. In the case of PCs, however, these would be considered outdated after 5 years given the rapid pace of progress in the computer field.

Also, basis materials as indicated below totaling some 340,000 Syrian pounds would be necessary. It is proposed that the cost for these be offset through the marketing of products fabricated at the Centre and by the performance at the Centre of subcontracted works.

Business course	50,000 Syrian pounds
Wood working course	80,000 Syrian pounds
Sewing course	60,000 Syrian pounds
Knitting course	60,000 Syrian pounds
Electric maintenance course	60,000 Syrian pounds
Capability development for the mentally impaired	30,000 Syrian pounds
<u>Total</u>	<u>340,000 Syrian pounds</u>

An increase in teaching staff is also necessary. Three new instructors will be needed in the first year following supply of equipment, and an additional 4 instructors in the second year. Since the average salary for instructors is 5,000 Syrian pounds/month, the increase in budget for new teaching staff will be 180,000 Syrian pounds in the first year and 420,000 Syrian pounds in the second year.

Electricity cost for the new equipment under the Project will be 6,000 Syrian pounds/year.

On the basis of the above, O&M cost increase to be incurred by the Centre as a result of the supply of equipment under the Project is as follows:

Year	O&M cost (Syrian pounds)	Ratio of 1997 budget	Necessary items
1999	626,000	4.4%	Instructor costs, base materials cost, others
2000	866,000	5.8%	Instructor costs, base materials cost, others
2001	2,476,000	16.5%	Instructor costs, base materials cost, repair cost, others
2002	2,476,000	16.5%	Instructor costs, base materials cost, repair cost, others
2003	3,556,000	23.7%	Instructor costs, base materials cost, repair cost, others

(2) School for the Blind in Damascus

O&M of equipment is to be performed by the responsible instructors and administrative staff. O&M costs (including repair) are estimated at 560,000 Syrian pounds in years 3~4, 1.32 million in years 5~6 and 1.32 million in years 7 and after of the Project.

Electricity cost for the new equipment under the Project will be 4,000 Syrian pounds/year.

On the basis of the above, O&M cost increase to be incurred by the School for the Blind as a result of the supply of equipment under the Project is as follows:

Year	O&M cost (Syrian pounds)	Ratio of 1997 budget	Necessary items
1999	292,000	7.0%	Electricity cost, others
2000	292,000	7.0%	Electricity cost, others
2001	852,000	20.4%	Electricity cost, repair cost, others
2002	852,000	20.4%	Electricity cost, repair cost, others
2003	1,232,000	29.6%	Electricity cost, repair cost, others

(3) School for the Deaf in Damascus

O&M of equipment is to be performed by the responsible instructors and administrative staff. O&M costs (including repair) are estimated at 580,000 Syrian pounds in years 3~4, 970,000 Syrian pounds in years 5~6 and 1.35 million in years 7 and after of the Project.

On the basis of the above, O&M cost increase to be incurred by the School for the Deaf as a result of the supply of equipment under the Project is as follows:

Year	O&M cost (Syrian pounds)	Ratio of 1997 budget	Necessary items
1999	210,000	%	Others
2000	210,000	%	Others
2001	790,000	%	Electricity cost, others
2002	790,000	%	Electricity cost, others
2003	1,180,000	%	Electricity cost, others

(4) Al-Amal School for the Physically Disabled

O&M of equipment is to be performed by the responsible instructors and administrative staff. O&M costs (including repair) are estimated at 510,000 Syrian pounds in years 3~4, 850,000 Syrian pounds in years 5~6 and 1.19 million in years 7 and after of the Project.

Electricity cost for the new equipment under the Project will be 4,000 Syrian pounds/year.

On the basis of the above, O&M cost increase to be incurred by the Al-Amal School as a result of the supply of equipment under the Project is as follows:

Year	O&M cost (Syrian pounds)	Ratio of 1997 budget	Necessary items
1999	109,000	%	Electricity cost, others
2000	109,000	%	Electricity cost, others
2001	619,000	%	Electricity cost, repair cost others
2002	619,000	%	Electricity cost, repair cost others
2003	959,000	%	Electricity cost, repair cost others

On the basis of the above, the total O&M budget required at the four target facilities on a year-wise basis is as follows:

Year	Total O&M cost (Syrian pounds)	Ratio of 1997 budget
1999	1,237,000	0.31%
2000	1,477,000	0.38%
2001	4,737,000	1.22%
2002	4,737,000	1.22%
2003	6,927,000	1.78%

3.2.3 Monitoring Plan

The monitoring plan under the Project is targeted at the Vocational Rehabilitation Centre and comprises the following items:

(1) Number of Instructors

Comparison is to be made of the number of instructors at the time of basic design, and the numbers in the 3 years following equipment supply. This number is to be reported to the Japanese embassy in Damascus and the JICA Syrian office by MSAL each September.

(2) Number of Students

Comparison is to be made of the number of instructors at the time of basic design, and the numbers in the 3 years following equipment supply. This number is to be reported to the Japanese embassy in Damascus and the JICA Syrian office by MSAL each September.

(3) Number of Centre Graduates who find Employment

MSAL will confirm the employment status of Centre graduates for FY 1998. The employment status of graduates from the courses targeted under the Project (who will graduate two years from the time of equipment supply) will then be compared with the

FY 1998 figures. The results of this comparison will be reported to the Japanese embassy in Damascus and the JICA Syrian office by MSAL.

(4) Confirmation of Vocational Aptitude Evaluation System

The effectivity of the vocational aptitude evaluation system established at the time of detailed design is to be monitored. Specifically, courses are to be confirmed for which the system is being applied. Effective incorporation of the system would be interpreted as its being applied to all the courses taught at the facility. Confirmation works in this regard would be performed by the expert-in-charge of "soft" aspect cooperation from the Japanese side.

(5) Confirmation of Preparation of Overall and Individual Curricula

The status of overall and individual curricula preparation methods as transferred to the Centre staff at the time if detailed design would be confirmed. Assessment in this regard would be done in terms of the rate of overall and individual curricula preparation vis a vis the number of students at the Centre. The final target is a 100% ratio. Confirmation works in this regard would be performed by the expert-in-charge of "soft" aspect cooperation from the Japanese side.

(6) Confirmation of Numbers of Texts Prepared

The status of text preparation for each course would be confirmed. Full implementation of text preparation would be assumed as texts being appropriately prepared for all the Centre courses. Confirmation works in this regard would be performed by the expert-in-charge of "soft" aspect cooperation from the Japanese side.

(7) Confirmation of Sales of Fabricated Items

Income from items fabricated (woodcraft, knitted, sewn, woven goods) and subcontracted work done (typing, electrical maintenance works) at the Centre would be used to cover a portion of base material costs at the Centre. Total sales of work by the Centre would be reported to the Japanese embassy in Damascus and the JICA Syrian office by MSAL.

(8) Confirmation of Number of Applicants to the Centre

With success of the Project and promotion of employment of the disabled, it can be expected that there will be an increase in the number of disabled who likewise would wish to have access to gainful employment. This impact can be assessed by monitoring the number of new applicants to the Centre each year. MSAL would perform this from FY 1998, and make an annual report on these numbers to the Japanese embassy in Damascus and the JICA Syrian office.

(9) Monitoring of Other Activities

It is recommended that public relations materials be disseminated via all type of media with regard to Centre activities. Other Arab nations in the region have similar issues to face with regard to vocational training of the disabled, and there is an active intra-regional exchange of information and knowledge pertaining to this field. Should the Project have a significant impact as envisioned, it can be anticipated that experts and other concerned persons will visit the Centre from all over the Arab world. It is recommended that MSAI, annually monitor the numbers of such visitors to the Centre, and make an annual report on these numbers to the Japanese embassy in Damascus and the JICA Syrian office.

Chapter 4 Project Evaluation and Recommendations

4.1 Project Justification and Beneficial Impact

Of the at least 500,000 disabled persons assumed in Syria, it is estimated that less than 1% currently avail of the vocational and educational services provided by the target facilities under the Project. Furthermore, equipment at the Vocational Rehabilitation Centre and other educational facilities targeted are obsolete, a fact which significantly constrains the capacity of these to provided the intended and important social services for which they were established. In addition, in the case of the Vocational Rehabilitation Centre, "soft" aspects such as the level of educational staff training and curriculum content has declined.

In this regard it is anticipated that the Project will serve to expand the potential for gainful employment by the disabled under a twofold approach including (i) supply of equipment for vocational rehabilitation and education in order for the targeted facilities to regain and expand their intended functions, and (ii) and extension of cooperation in the strengthening of "soft" aspects of Vocational Rehabilitation Centre operation.

Specifically, the following beneficial impacts are envisioned:

Vocational Rehabilitation Centre

- 1) Vocational rehabilitation services directed at the more severely handicapped will become possible through a revamping of course content and reassessment of course equipment.
- 2) A selection of occupational category with optimum advantage for employment will become possible.
- 3) Vocational rehabilitation for the mentally impaired will become possible (up to this time equipment and curriculum have been lacking).
- 4) Music and sports therapy will be more effective with the provision of musical instruments and sports equipment.
- 5) Training content under each course will become more effective with the provision of new equipment.
- 6) Improvement of the vocational aptitude evaluation system.
- 7) Improved course-wise curriculum, and curriculum texts.
- 8) Upgrading of professional level of instructional staff.
- 9) Introduction of curricula tailored for the individual.

- 10) Improved job placement activities.

Damascus School for the Blind

- 1) Promotion of text preparation for the blind by provision of new Braille printing equipment.
- 2) Improved instructional content through provision of new educational equipment for the blind (Braille typewriters, cassette recorders, general educational materials, etc.)
- 3) Improved music instruction with provision of new musical instruments.
- 4) Improved sports instruction with provision of new sports equipment.
- 5) Improved training in daily living skills through provision of household utensils, appliances and equipment.

Damascus School for the Deaf

- 1) Improved instructional environment and content through provision of hearing training and measurement equipment, video equipment, and general educational equipment.
- 2) Improved musical instruction with provision of rhythm instruments.
- 3) Improved sports instruction with provision of new sports equipment.

Al-Amal School for the Physically Disabled

- 1) Improved support structure for disabled children through provision of new wheel chairs and physiotherapy equipment.
- 2) Improved instructional content through provision of video equipment and general educational equipment.
- 3) Improved music instruction with provision of new musical instruments.
- 4) Improved sports therapy with provision of new sports equipment.

Direct beneficiaries under the Project comprise the 940 trainees and students at the 4 target facilities. In addition, it is expected that the Braille text preparation at the School for the Blind, the audio training program at the School for the Deaf, and the physiotherapy techniques to be introduced at the Al-Amal School will have ripple benefit as well to other facilities for the disabled. Also, it is strongly anticipated that cooperation to be extended in the area of "soft" aspects strengthening at the Vocational Rehabilitation Centre, in addition to equipment supply, will significantly

upgrade training content and contribute to effective job placement activities for the Center graduates. In order to track the impact of "soft" aspect improvements, report with regard to the following monitoring items is to be periodically submitted to the Japanese side by the executing agency. (see Section 2.2.3 for details)

Items to be monitored with regard to the Vocational Rehabilitation Centre are the status of the following:

- 1) No. of instructional staff
- 2) No. of students
- 3) No. of graduates successfully employed
- 4) Vocational aptitude evaluation program
- 5) Overall and individual curricula
- 6) Text preparation activities
- 7) Sales of fabricated items
- 8) No. of applicants to the Centre
- 9) Other relevant Centre activities

The Project is judged to be suitable for Japanese grant-aid on the basis of the following points:

- 1) Targeted beneficiaries are the disabled, who comprise a disadvantaged segment of the general populace.
- 2) Project objective is the education and vocational rehabilitation of the disabled.
- 3) The targeted 4 facilities are operated and maintained by funding, human resources and technology provided by the Syrian side.
- 4) The Project will contribute to achievement of goals under national planning by the Syrian government.
- 5) No adverse environmental impacts will occur under the Project.

4.2 Issues

In addition to the major beneficial impact on the target 4 facilities under the Project as discussed above, the Project is deemed suitable for implementation within the Japanese grant-aid framework in light of the contribution it will make to the education and employment of the disabled in Syria. Furthermore, no problems in Project execution are envisioned due the effective operational structure expected to result from the funding arrangements to be made by the recipient executing agency and the human resources strengthening to occur as a result of the "soft" aspect cooperation to be extended under the Project.

However, with regard to the Vocational Rehabilitation Centre, pursuit of a future and long-term approach centering on the points set out below, and building on further

enhancement of those areas to be improved under cooperation aimed at "soft" aspects under the Project can be expected to result in more effective Project implementation.

- 1) Rehabilitation of the disabled is defined as the recovery of the basic right as a human being to move within the mainstream of society and engage in gainful and meaningful employment. Nevertheless, the primary effort in this regard will remain the responsibility of the disabled person.
- 2) Vocational rehabilitation, while giving careful attention to cost effectiveness and efficiency, is ultimately aimed at enhancing the quality of life by providing the individual with appropriate employment which enables he or she to participate in the mainstream of vocational and social activity.

Specifically, it is recommended that the following be pursued over the future long-term:

- 1) The Vocational Rehabilitation Center should function as the central executing agency for the promotion of vocational rehabilitation services nation-wide.
- 2) A vocational rehabilitation coordinating division should be established within the Ministry of Social Affairs and Labour as a core administrative entity for the Vocational Rehabilitation Centre.
- 3) Further pursuing the employment activities to be promoted under "soft" aspect cooperation, job placement should be commenced as early as possible with employment agreements to be established with receptive employers as a basis for on-the-job training or practical vocational instruction which recreates the work place at the vocational rehabilitation facility (IBR: institution based rehabilitation). Halfway workshops should also be established (facility for practical training and instruction under near-workplace conditions to accommodate those individuals who are essentially trained for employment but still lack the confidence to move directly into a real work situation, persons for whom a bit more practical work place training would be beneficial, persons who desire to be self-employed, etc.).
- 4) Guidance should be provided to prospective employers in measures to effectively acclimate the disabled individual to the workplace.
- 5) Follow-up and tracking studies should be made of graduates of the rehabilitation program under the Project. In the case of the mentally impaired, job adaptability guidance should be provided to foster firm settlement into the targeted job position. Where necessary, a system of volunteer assistance in commuting to work, and a human support structure in the work place itself should be introduced.
- 6) In the above described manner, the Vocational Rehabilitation Center would become a "center of centers" to provide guidance in the active acceptance of the disabled at general vocational training and educational facilities to the

extent possible (normalization and integration), promote CBR (community based rehabilitation) and extend expertise and information on the establishment of vocational rehabilitation services for the disabled.

Implementation methodology for the above is diagrammed in Figure 5.1 "Vocational Rehabilitation System Flow Chart (Future Concept)"

Fig. 4.1 Vocational Rehabilitation System Flow Chart (Future Concept)
(Centro of Centres in Syria)

