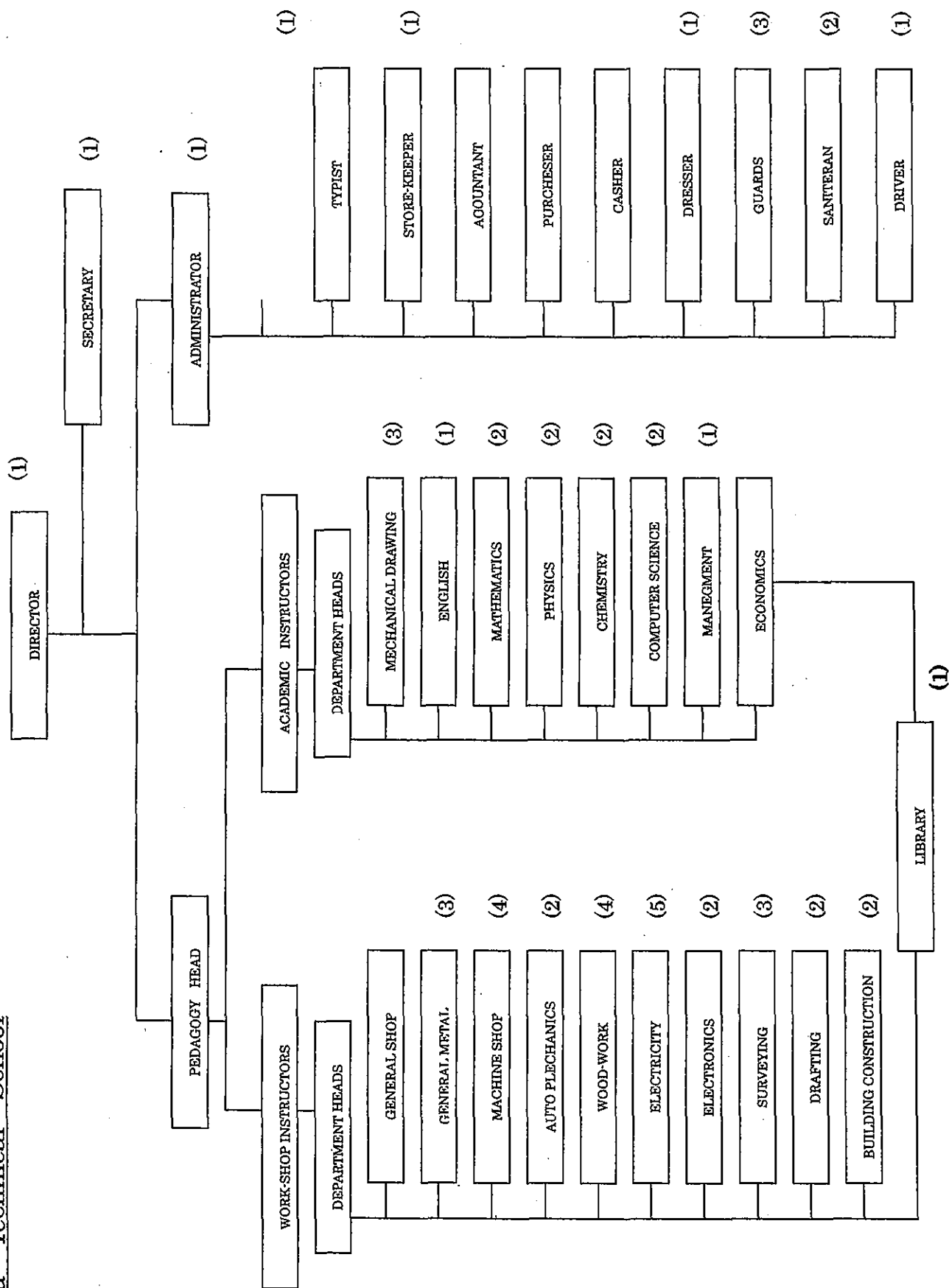


添付資料

1. ATS の組織図

Organization Chart of Asmara Technical School

別添—1



添付資料

2. エリトリアの技術学校一覧

Intermediate Level Enrolment by school, shop and Year

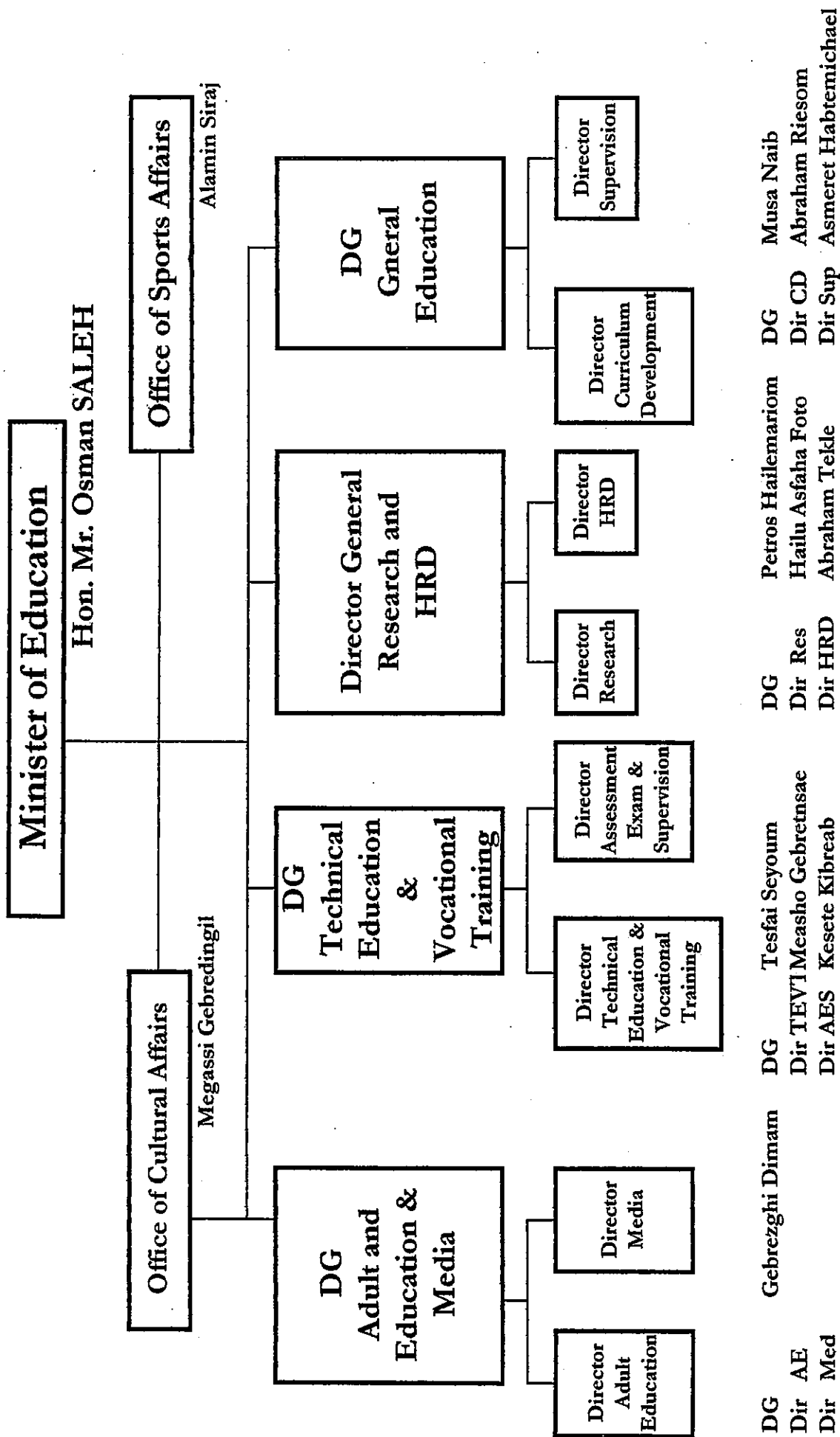
Shops/Trade	Year	SCHOOLS																	
		asmera I.S.		Winna I.S.		Mai habar I.S.		Dombosco I.S.		Hamelalo Ag.S.		Hagaz Ag.S.		asmera Mu.S.		asmera S FA		Total	
		Tot	Fe	Tot	Fe	Tot	Fe	Tot	Fe	Tot	Fe	Tot	Fe	Tot	Fe	Tot	Fe	Tot	Fe
General shop Auto Mechanics	1	163	58	103	27	116	32	44	17									426	134
	2	16	2			22	0											38	2
	3	14	1	15	0	15	1											44	2
	Tot	30	3	15	0	37	1	0	0	0	0	0	0	0	0	0	0	82	4
		14	3			21	2											35	5
Electricity	3	18	3	19	3	19	6											56	12
	Tot	32	6	19	3	40	8	0	0	0	0	0	0	0	0	0	0	91	17
		2	11	5		20	2											31	7
Electronics	3	12	7			19	7											31	14
	Tot	23	12	0	0	39	9	0	0	0	0	0	0	0	0	0	0	62	21
		16	3															16	3
surveying	3	17	4															17	4
	Tot	33	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	7
		16	2			17	0											33	2
Wood Work	3	7	2	14	1	16	1											37	4
	Tot	23	4	14	1	33	1	0	0	0	0	0	0	0	0	0	0	70	6
		14	1			19	0											33	1
Metal Work	2	15	2	15	1	11	0											41	3
	3	29	3	15	1	30	0	0	0	0	0	0	0	0	0	0	0	74	4
	Tot	16	2			21	1	22	3									59	6
Building Const	3	17	4			17	3											34	7
	Tot	33	6	0	0	38	4	22	3	0	0	0	0	0	0	0	0	93	13
		14	3	12	2			20	2									46	7
machine Shop	3	12	4															12	4
	Tot	26	7	12	2	0	0	20	2	0	0	0	0	0	0	0	0	58	11
		14	4															14	4
Drafting	3	11	7															11	7
	Tot	25	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	11
										96	26	56	15					152	41
General Agriculture	1																		
Agro-Mechanics	2																		
Animal Science	2																		
Plant Science	2																		
Art	1																		
	2																		
	Tot																		
Music	1																		
	2																		
	Tot																		
Grand Total	1	163	58	103	27	116	32	44	17	96	26	56	15	77	29	0	0	77	29
	2	131	25	12	2	120	5	42	5	95	15	45	7	31	12	23	9	632	196
	3	123	34	63	5	97	18	0	0	0	0	0	0	46	17	28	8	519	84
	Tot	417	117	178	34	333	55	86	22	191	41	101	22	77	29	51	17	1434	337

添付資料

3. 教育省組織図

Organization Structure Ministry of Education Eritrea

2003.3.26



添付資料

4. ATS2001 年の予算実績

APPROVED
APPROVED RECURRENT EXPENDITURE FOR 2001

Ministry: EDUCATION
Department: Boarding and Technical Schools
Region: Central
School: Asmara Technical

Head: 31
Sub-Head: 0
Region: 1
School: 0

Exp. Code	Description	Amount in Nakfa
6100	Personal Services	850,350
6101	Civil Salaries	850,350
6102	Civil Allowances	-
6103	Military & Police Pay	-
6104	Military & Police Allowances	-
6200	NonPersonal & Contractual Services	104,900
6201	Public Utilities Services	34,000
6201/1	Telephone & Postage	4,000
6201/2	Water & Electricity	30,000
6202	Travelling, Subsistence & Transportation	3,000
6202/1	Domestic Travel	3,000
6202/2	Foreign Travel	-
6203	Printing & Advertising	9,250
6204	Repairs & Maintenance of Premises & Equipment	30,650
6205	Repairs & Maintenance of Motor Vehicles	16,000
6206	Rentals	-
6206/1	Premises	-
6206/2	Vehicles	-
6207	Taxes & Duties	6,000
6210	Miscellaneous Contractual Services	6,000
6210/1	Insurance	6,000
6210/2	Others	-
6300	Materials & Supplies	158,660
6301	Food Stuffs	-
6302	Medical Supplies	17,000
6303	Educational Supplies	68,770
6304	Uniform, Clothing & Bedding	24,510
6305	Petrol & Lubricants	25,000
6306	Office Supplies	18,080
6307	Other Material & Supplies	5,300
6400	Grants Contributions & Other Current Transfers	-
6401	Grants to Individuals	-
6402	Grants to Institutions	-
6403	Contributions of International Organisations	-
6500	Purchase of Motor Vehicles & Equipment	7,000
6501	Purchase of Motor Vehicles	-
6502	Purchase of Equipment	7,000
TOTAL		1,209,910

添付資料

5. エリトリアの職業教育及び訓練機関

エリトリアの職業教育・訓練機関

Advanced Level

- | | |
|--|--------|
| 1) Asmara Business & Commerce Institute. | Asmara |
| 2) Halay Business & Commerce Institute | Halay |
| 3) Pavoni Technical Institute | Asmara |

Intermediate Level

- | | |
|----------------------------------|------------------------------|
| 1) Asmara Technical School | Asmara |
| 2) Winna Technical School | Nakfa |
| 3) Maihabar | Near Nefasit |
| 4) Donbosco | Dekemhare |
| 5) Hamelmalo Agricultural School | Near Keren |
| 6) Hagazi Agricultural School | Hagezi near Keren |
| 7) Asmara School of Fine Arts | Asmara |
| 8) Asmara School of Music | Asmara |
| 9) Massawa Technical School | Massawa (under construction) |

Basic Level

- | | |
|--------------|------------------|
| 1) Mendefare | Mendefare |
| 2) AdiKeyh | Adikeyh |
| 3) Agrodat | |
| 4) Maiatal | Near Nakfa |
| 5) Haicota | |
| 6) Asmara | Secondary School |
| 7) Asmara | Secondary School |
| 8) Assab | Secondary School |
| 9) Mendefare | Secondary School |

添付資料

6. ATS の 2003 年の予算案

APPROVED RECURRENT EXPENDITURE FOR 2002

Region: 10 HEAD OFFICE (ASMARA)
 Ministry: 311 MINISTRY OF EDUCATION
 Department: 05 BOARDING AND TECHNICAL SCHOOLS
 Division: 01 Asmara Technical

Exp.Code	Description	Amount in Nakfa
6100	PERSONAL SERVICES	728,910
6101	CIVIL SALARIES	711,270
6102	CIVIL ALLOWANCES	17,640
6103	MILITARY & POLICE PAY	-
6104	MILITARY & POLICE ALLOWANCES	-
6200	NON-PERSONAL & CONTRACTUAL SERVICES	208,000
6201	PUBLIC UTILITIES SERVICES	66,000
✓ 6201/1	TELEPHONE & POSTAGE <i>fax, Internet</i>	6,000
✓ 6201/2	WATER & ELECTRICITY	60,000
6202	TRAVELLING, SUBSISTANCE & TRANSPORTATION	5,000
6202/1	DOMESTIC TRAVEL	5,000
X 6202/2	FOREIGN TRAVEL	-
✓ 6203	PRINTING & ADVERTISING	15,000
✓ 6204	REPAIRS & MAINTENANCE OF PREMISES & EQUIPMENT	62,000
✓ 6205	REPAIRS & MAINTENANCE OF MOTOR VEHICLES <i>(8492-4451)</i>	20,000
6206	RENTALS	5,000
✓ 6206/1	PREMISES	-
6206/2	VEHICLES	5,000
✓ 6207	TAXES & DUTIES	-
✓ 6210	MISCELLANEOUS CONTRACTUAL SERVICES	35,000
✓ 6210/1	INSURANCE	10,000
✓ 6210/2	OTHERS	25,000
6300	MATERIALS & SUPPLIES	430,280
6301	FOOD STUFFS	-
✓ 6302	MEDICAL SUPPLIES	25,000
✓ 6303	EDUCATIONAL SUPPLIES <i>Textbooks</i>	300,000
✓ 6304	UNIFORM, CLOTHING & BEDDING	26,280
✓ 6305	PETROL & LUBRICANTS	35,000
✓ 6306	OFFICE SUPPLIES	36,000
✓ 6307	OTHER MATERIALS & SUPPLIES	8,000
6400	GRANTS, CONTRIBUTIONS & OTHER CURRENT TRANSFERS	-
X 6401	GRANTS TO INDIVIDUALS	-
X 6402	GRANTS TO INSTITUTIONS	-
6403	CONTRIBUTIONS OF INTERNATIONAL ORGANISATIONS	-
6500	PURCHASE OF MOTOR VEHICLES & EQUIPMENT	9,000
6501	PURCHASE OF MOTOR VEHICLES	-
6502	PURCHASE OF EQUIPMENT	9,000
TOTAL		1,376,190

添付資料

7. ATS3 ヲ年(2003-2005 年)の予算計画

Asmara Technical School

Capital Budget Proposals for the years 2003 – 2005

Section 2 Project Profile

2.1 Background

Asmara Technical School is the senior and leading member of the 3 Intermediate Technical Schools in Eritrea. It's aim is to train skilled technicians for industry and it consequently plays a central role in Eritrea's long term plan to produce an expanding industrial economy based on a highly skilled labour force.

The school offers 3 year courses which are made up of a general first year followed by 2 years in a specialised technical field. There are currently 9 specialised shops: Electricity, Electronics, Auto Mechanics, Wood Technology, Machine Shop, General Metal, Surveying, Drafting and Building Construction. About 150 students graduate each year.

The school was largely built at the beginning of the 1950's on an attractive site on the outskirts of Asmara, the capital city. Since it's establishment the number of courses has been expanded from the original 4 to 9 and the school is planning to expand the number of students from the current 450 to around 600. There are also plans to reintroduce evening classes if the teaching staff can be found.

The school, though fairly equipped, is suffering from overcrowded, aged and inadequate buildings and is badly in need of investment for new workshops and

classrooms. It has recently acquired a significant parcel of land from the neighboring military camp and would like to use this land for its expansion and renovation plans.

2.2 Objectives of the Project.

The objectives are:

- The construction of a boundary wall for the students dormitory area
- The construction of 4 new workshops, including a classroom, office and store in each workshop
- The construction of a library block which, besides a library includes 3 drafting rooms and 2 classrooms
- The construction of a new store room and office
- The refurbishment of the existing building construction workshop to serve as the production unit
- The refurbishment and conversion of the currently used locations for use either as classrooms or classroom/ workshops.
- The refurbishment of the existing tea shop and it's conversion to a staff room and canteen
- The construction of a tea shop and rest area for students

See: appendix 1 for more details and costings of the proposed building works.
appendix 2 gives a breakdown of the costs of re-equipping the existing workshops and
equipping the new shops.

2.3 Justification and Need.

The students dormitory area is, at present, open from 3 sides. The existing fence is in a bad state of disrepair and needs to be completely replaced. Anybody can enter the site without being controlled and security is, accordingly, non-existent. It is proposed to build a perimeter wall, 2m high, out of hollow concrete blocks and completely wall off the site.

At the moment there are no workshops for the first year electricity and woodwork courses, which form 2 of the 3 core units for the general first year. Training takes place in converted classrooms, which are poorly equipped and inadequate in size for this function. It is proposed to build 2 new workshops, one for each course. The presently used classrooms would then be refurbished and returned to their original purpose.

The General Metal workshop is too small to work effectively. It is proposed that the existing shop be given for the expansion of the Auto Mechanics workshop, which is also suffering from a lack of space, and a new workshop be built.

The Building Construction course now makes use of a small workshop that was constructed as a practical project for the evening class. It is proposed that this building be converted for use as the production unit and that a new workshop be constructed for building construction.

The existing library is too small, being able to accommodate only some 40 students at any one time. The currently used drafting and surveying rooms are situated in some of the older buildings and are also too small and poorly lit. All are badly in need of refurbishment. It is proposed that a ground plus one building be constructed to house the library, drafting and surveying departments and that this include 2 classrooms to ease the congestion of the academic classes.

The existing store makes use of 2 different locations, neither of which was purpose built nor is easily accessible. It is proposed that a new storeroom and office be built close to the new entrance of the school and that the old locations be converted to other use. The larger store will be used as an extension workshop for first year metalwork, which suffers from too little space. The smaller storeroom, which is situated next to the library, would be refurbished for use as a classroom/ workshop again for first year.

The existing tea shop serves for both staff and students. It is small and in a state of some disrepair. A combined staff room and canteen would encourage the social interaction of the teaching staff and allow the development of informal contacts which are often more productive than the formal networks. It is proposed to refurbish and expand the existing tea shop with a veranda and to build a new tea shop and rest area for the students who would also benefit from the socialising this would encourage.

2.4 Benefits and Beneficiaries

The main benefit will be the expanded number of graduate technical school students and the improved quality of the training. There is a general feeling on all sides of industry that there exists a severe shortage of technical personnel and that this will increasingly hamper the economic growth of the country unless steps are taken to remedy it.

The beneficiaries will be:

- the students and teaching staff of the technical school because of the improved learning and working environment

- the industries and ministries which are waiting to employ the graduates because of the increase in supply and the improvement in quality of these graduates
- the country as a whole as the skilled labour force is enlarged. This enables industry to expand, to become more efficient and to employ more people, which, in turn, acts as the driving force for expanding the economy.

Part Three – Capital Budget for the building programme

This is a 3 year programme. The work will be prioritized and built in stages, with the final stage reaching completion at the end of year 2005.

YEAR 1	PROJECT
1	Boundary wall for student dormitory area, 4 workshops Library block
2	Staff room and student tea room Store and office Refurbishment of vacated locations
3	Completion of building works and installations. Landscaping of grounds

The total building costs are 4,789,500 Nakfa (see appendix)

The yearly and quarterly costs are broken down as follows:

YEAR	Money required as a % of total budget	Yearly Expenditure in Nakfa	Quarterly Expenditure in Nakfa
1	50	2,394,750	598,688
2	45	2,155,275	535,819
3	5	239,475	59,869
TOTAL		4,789,500	1,194,376

Appendix 1: Details and Estimated Costs of Building Works

Costs are estimated on the basis of 1000 Nakfa per m² for single storey building. This is taken as an average price for the coming 5 years and allows for the increasing cost of labour and materials. This price also includes the electrical installations and washing facilities.

The cost of equipping the buildings with furniture, shelving etc. is also given, but the cost of tools, technical equipment, teaching aids and materials are to be included in the budgets for the respective shops.

No	BUILDING WORK	Estimated Cost
1	Demolition and removal of existing buildings in west wing of site	25,000
2	Construction of boundary wall for dormitory area	125,750
3	<p>New workshops for: General Metal Electricity 1st year Woodwork 1st year Building Construction</p> <p>Each workshop to be 30 x 15m and to include workshop, classroom, store and office. Total area of each workshop = 450 m² Cost for each workshop = 450,000 Nakfa Total cost of 4 workshops</p> <p>Cost of installing workshops with workbenches and isolated work areas, tables and chairs for classrooms, storage cupboards and racks and office furniture are estimated at 50,000 Nakfa per shop Total cost of furnishing workshops</p>	<p>1,800,000</p> <p>200,000</p>
4	<p>The library block. This is a ground plus one building with reinforced concrete first floor and roof. The plan floor area is 30 x 20m. This includes:</p> <p>Ground floor Library 360 m² 2 classrooms 10 x 10m Entrance and stairwell, passage and store 40 m²</p> <p>1st floor 2 drafting rooms 10 x 20m Surveying room 10 x 14m Office and store, stairwell and passage 60 m² Total cost at 2500 Nakfa per m²</p>	1,500,000

No	BUILDING WORK	Estimated Cost
	Installation costs of shelving, tables and chairs for library and classrooms and drawing tables for drafting and surveying rooms but not including books and shop equipment.	250,000
5	New storeroom and office. 30 x 15m at 1000 Nakfa per m ² Installation costs of shelving, storage units etc.	450,000 25,000
6	Refurbish existing building construction workshop to serve as production unit. 9 x 16m at 250 Nakfa per m ²	26,000
7	Refurbish existing tea shop to serve as staff room and canteen 12 x 6m at 750 Nakfa per m ² Furniture, cooking equipment etc.	54,000 50,000
8	Construct tea shop and rest area for students Kitchen 4 x 5m at 1000 Nakfa per m ² Veranda 75 m ² at 250 Nakfa per m ² Tables and chairs, cooking equipment etc.	20,000 18,750 50,000
9	Refurbish vacated classrooms and localities Approximately 650 m ² at 300 Nakfa per m ²	195,000
	Total Estimated Cost	4,789,500

**Appendix 2: Summary of the Capital Budgets of the Nine Technical
Departments
for the years 2001 - 2005**

NAME OF DEPARTMENT	Total Budget Nakfa
Auto-mechanics	865,000
Building Construction	131,500
Drafting and Mechanical Drawing	1,113,900
Electricity	437,000
General Metal	760,000
Machine Shop	1,560,000
Radio Electronics	290,000
Surveying	886,200
Woodwork	101,000
Total Capital Budget	6,144,600

For details of the individual shop budgets see the following pages.

Woodwork Department.

Capital Budget for years 2001-2005

Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Automatic grinder	1	pc	15000	--	15,000	--
2	Automatic processor	1	pc	20000	--	20,000	--
3	Work bench for 1 st year students	25	pc	2640	--	66,000	
	Total					101,000	--

Signed _____ Department Head

Date _____

CAPITAL BUDGET OF SURVEYING DEPT 2001/05

NO.	DESCRIPTION	QUANTITY	PRICE/UNIT	AMOUNT
1.	Eagle Point	1	50,000	50,000
2.	SR 9500GPS SENSOR WITH SKI SOFTWARE	1	50,000	50,000
3.	PENTIUM COMPUTER 19" SIZE	6	30,000.00	180,000
4.	PLOTTER 350 AO	1	18,000	18,000
5.	PRINTER 650	1	15,000	15,000
6.	SMART UPS 1000	3	34,00	10,200
7.	ELECTRONIC THEODOLITE AND TOTAL STATION TPS SYSTEM 1000	5	60,000	300,000
8	. ELECTRONIC TOTAL STATIONTC 805	2	100,000	200,000
9.	HAND HELD LASER METER DISTOMAT	1	10,000	10,000
10.	WALKIE TALKIE	2	2,000	4,000
11.	NA2/NAK2SIMPLE AUTOMATIC LEVEL	4	5,000	20,000
12.	NA820 SIMPLE AUTOMATIC LEVEL	5	3,800	19,000
13.	PRISIMATIC COMPASS WITH TRIPOD STAND	5	2,000	10,000
			TOTAL	886,200

Department of MACHINE SHOP.

Capital Budget for years 2001-2005

Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Universal Milling Machine with attachments	pc	3	20,000	--	600,000	--
2	Digital Engine Lathe	pc	3	20,000	--	600,000	--
3	Lathe machine	pc	5	70000	--	350,000	--
4	Hardness Testing Machine	pc	2	5000	--	10,000	--
	Total					1,560,000	--

Signed _____ Department Head

Date _____

General Metal Shop.

Capital Budget for years 2001-2005

Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Folding machine	pc	1	100,000	--	100,000	--
2	Seaming machine	pc	1	70,000	--	70,000	--
3	Bending machine	pc	1	80000	--	80,000	--
4	Setting down machine	pc	1	70,000	--	70,000	--
5	Crimping machine	pc	1	40000	--	40,000	--
6	Rolling machine	pc	1	100,000	--	100,000	--
7	Drop forging machine	pc	1	200,000	--	200,000	--
8.	Shearing machine	pcs	1	50,000	--	50,000	--
9.	Electrical sheet metal bender	pc	1	30000	--	30,000	--
	Total					760,000	--

Signed _____ Department Head

Date _____

Electricity Department.

Capital Budget for years 2001-2005

Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Coil winding machine – variable speed type	pc	1	100000	--	100,000	--
2	Coil winding machine – universal type	pc	1	20000	--	20,000	--
3	Electric test bench	pc	1	25000	--	25,000	--
4	3-phase voltage supply unit	pc	2	15,000	--	30,000	--
5	Automatic multi-refrigerant leak detector	pc	1	6000	--	6,000	--
6	Digital insulation tester	pc	2	5000	--	10,000	--
7	Guillotine shear	pc	1	5000	--	5000	--
8	Motor insulation former	pc	2	3000	--	6,000	--
9	Automobile electric systems simulator	pc	1	30000	--	30,000	--
10	Ignition system simulator	pc	2	2500	--	5,000	--
12	Air compressor	pc	1	10000	--	10,000	--
13	Computer pentium III	pcs	2	30,000	--	60,000	--
14	Three phase transformer	pcs	1	50,000	--	50,000	--
15	Generator	pcs	1	80,000	--	80,000	--
	Total					437,000	--

Signed _____ Department Head

Date _____

Department of Drafting and Mechanical Drawing.

Capital Budget for years 2001-2005

Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Drafting machine (mini-drafter)	pc	20	1500	--	30,000	--
2	Parallel rule board	pc	50	550	--	27,500	--
3	Drafting Kit – 17 piece	pc	60	5600	--	336,000	--
4	Rotary trimmer	pc	2	3500	--	7,000	--
5	Trimming board	pc	2	3100	--	6,200	--
6	Two student drawing table	pc	40	12750	--	510,000	--
7	Drawing supply cabinet for 36 students	pc	2	50600	--	101,200	--
8	Plotter for AutoCAD drawing room	pc	2	18000	--	36,000	--
9	Computer pentium III	pcs	2	30,000	--	60,000	--
Total						1,113,900	--

Signed _____ Department Head

Date _____

Auto-mechanics Department.

Capital Budget for years 2001-2005

Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Hydraulic crane type LOE 120 – 2000kg	pc	1	10000	--	10,000	--
2	Hydraulic car lift – 3.5 ton	pc	1	60000	--	60,000	--
3	Engine analyzer – Crypton tuner	pc	1	120000	--	120,000	--
4	Car for driving practice - Toyota	pc	1	75000	--	75,000	--
5	Tractor for training purposes	pc	1	100000	--	100,000	--
	Total					365,000	--

Signed _____ Department Head

Date _____

Department of Radio Electronics.

Capital Budget for years 2001-2005

Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Transmission technology unit	pc	2	15000	--	30,000	--
2	Weather satellite receiving system	pc	2	20000	--	40,000	--
3	Automatic control technology unit	pc	2	20000	--	40,000	--
4	Digital exchange technology unit	pc	2	25000	--	50,000	--
5	Television trainer	pc	2	10000	--	20,000	--
6	VCR trainer	pc	2	10000	--	20,000	--
7	Digital technology unit	pc	2	15000	--	30,000	--
8	Television high voltage probe	pc	10	10000	--	10,000	--
9	Pentium computer with Windows '98 software	pc	2	25000	--	50,000	--
	Total					290,000	--

Signed _____ Department Head

Date _____

Building Construction Department

Capital Budget for years 2001-2005

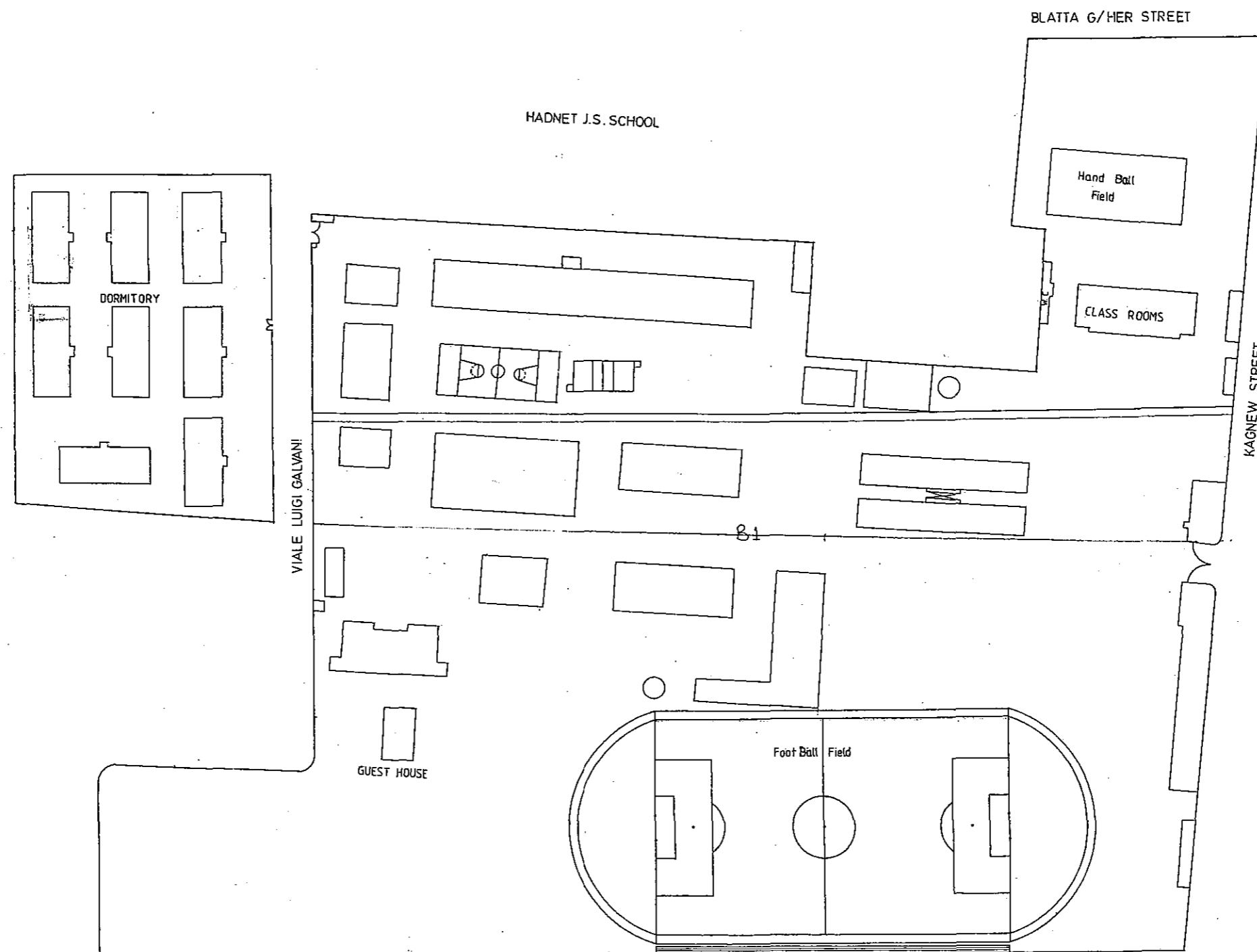
Item no.	Description	Unit	Qty.	Rate		Amount	
				Nakfa	ct.	Nakfa	ct.
1	Pentium computer complete with monitor, keyboard, mouse and AutoCAD R14 software	pc	2	20000	--	40000	--
2	UPS – uninterrupted power supply sysrem	pc	2	1200	--	2400	--
3	Printer – HP DeskJet 670	pc	1	3500	--	3500	--
4	Plotter – HP DesignJet 350	pc	1	18000	--	18000	--
5	HP ScanJet Desktop Scanner	pc	1	5000	--	5000	--
6	Reserve ink cartridge – black and colour	pc	15	500	--	7500	--
7	Table circle saw	pc	1	4500	--	4500	--
8	Concrete block making machine including mixing table and diverse molds	pc	1	10000	--	10000	--
9	Roof tile making machine + molds	pc	1	7500	--	7500	--
10	Smoothing plane – manufacturer Stanley	pc	10	250	--	2500	--
11	Materials testing machine for measuring compressive and tensile strengths	pc	1	10,000	--	10000	--
12	6m high aluminium scaffold tower	pc	1	8,000	--	8,000	--
	Total					118,900	--

Signed _____ Department Head

Date _____

添付資料

8. ATS 敷地図

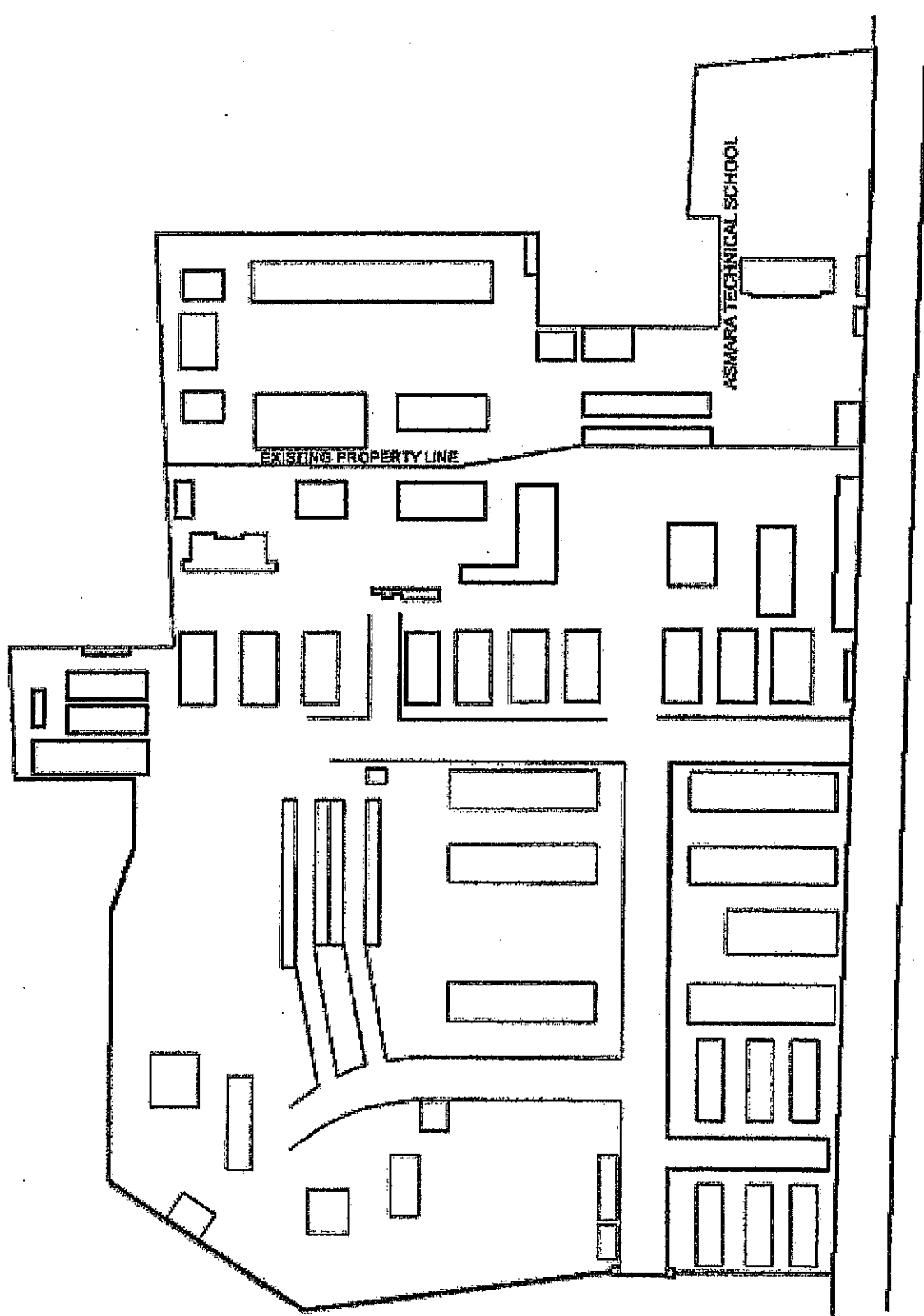


MILITARY CAMP
SITE PLAN scale: 1:500

NB	
APPROVAL	
Project: MODIFICATION AND NEW CONSTRUCTION	
Owner: ASMARA TECHNICAL SCHOOL	Signature: _____
Location: Asmara	
Zone: 5	Sub-Zone: 03
Plot: _____	Parcel: _____
Drawing title: SITE PLAN	Dgn N: _____
Designed by: M-G and M-H	Checked by: _____
Dgn by: M-G and M-H	
Scale: 1:500	
Date: 27-5-95	

添付資料

9. ATS 新規計画敷地図



添付資料

10. ATS 既存施設棟別用途リスト

ASMARA TECHNICAL SCHOOL

Pysical Planning		
S.No.	BLOCKS	ENCLOSURES
1.	Block – 01	Class-rooms: . 1A/1C . Staff Room . 1B/1D . 2D/3D . Toilet (Teachers') . 2B/3A . 2C/3C . Drafting – shop for 2 nd Year. . 2A/3B
2.	Block – 02	. Building construction – shop . Drafting – Shop for 3 rd Year. . General shop (Metal – 1 st year)
3.	Block- 03	. CAD – Room . Radio – electronics – shop . Electricity – Shop . Mechanical drawing room. & room 2 nd . General shop (Electricity 1 st year) . Surveying shop & theory room.
4.	Block – 04	. Building construction (theory room) . electricity (theory room) . Metal (theory room) . Machine (theory room) . Auditorium. . Computer room .
5.	Block – 5	. wood working – shop . General shop (wood work 1 st year) . Display room. . Library . Store-room (small)
6.	Block – 6	. Automechanics – shop . Metal – shop . Machine – shop

S.No.	BLOCKS	ENCLOSURES
7.	Block – 7	<ul style="list-style-type: none"> . Main office . Store (Big) . Chemistry & Physics laboratory . Clinic . Toilet

添付資料

11. コース別要請機材の検証

DIESEL ENGINE TECHNOLOGY コース 要請機材の検証

	機材名	要請数	検 証				
			シラバス	既存無し	レベル	数量	備考
1	Diesel Engine Model with Clutch and Gearbox	2				2	
2	Diesel Engine Cutaway Model	2				2	
3	Diesel Injection Pump Cutaway Model	2				2	
4	Diesel Engine Demonstration Model	2				2	
5	Diesel Fuel Injector	2				2	
6	Diesel Pre-heating System Trainer	2				2	
7	Transmission Jack	2				2	
8	Diesel Engine	4				4	
9	Tool Kit	5				5	
10	Diesel Smoke Tester	2				2	
11	Diesel Analyzer	2				2	
12	Diesel Compression Tester	2				2	
13	Diesel Injection Pump Test Bench	1				1	
14	Pneumatic Training Set	1				1	
15	Oil Hydraulic Training Set	1				1	
16	その他工具消耗品	1				1	

ELECTRICITY コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	Generator	2	○	○	○	2	
2	Transformer (Insulated type)	3	○	○	○	2	数量不要
3-1	Inductance Voltage Regulator	1	○	○	○	1	
3-2	Inductance Voltage Regulator	1	○	○	○	1	
4-1	Rectifier Silicon Rectifiers for Power Supply	2	○	○	○	2	
4-2	Rectifier Silicon Rectifiers for Power Supply	1	○	○	○	1	
5	Portable Kohlrausch Bridge	2	○	○	○	2	
6	Portable Wheatstone Bridge	4	○	○	○	2	数量不要
7	Hydraulic & Air Hydraulic Pipe Bender	2	○	○	○	2	
8	Pipe Threading Machine	2	○	○	○	2	
9	One Axis Servo Control Winding Machine	2	○	○	○	2	既存は故障
10	Electric Drying Oven, programmable control	1	○	○	○	1	
11	ARC Welder	2	○	○	○	2	
12-1	Portable Standard DC Ammeter	5	○	・	○	5	既存は古い
12-2	Portable Standard DC Ammeter	5	○	・	○	5	既存は古い
12-3	Portable Standard DC Ammeter	5	○	・	○	5	既存は古い
12-4	Portable Standard DC Voltmete	4	○	・	○	4	既存は古い
12-5	Portable Standard DC Voltmete	4	○	・	○	4	既存は古い
12-6	Portable Standard AC Ammeter	3	○	・	○	3	既存は古い
12-7	Portable Standard AC Ammeter	5	○	・	○	5	既存は古い
12-8	Portable Standard AC Ammeter	5	○	・	○	5	既存は古い
12-9	Portable Standard AC Voltmete	4	○	・	○	4	既存は古い
12-10	Portable Standard AC Voltmete	3	○	・	○	3	既存は古い
12-11	Portable Standard AC Voltmete	4	○	・	○	4	既存は古い
12-12	Portable Standard AC Voltmete	3	○	・	○	3	既存は古い
13	Watt Meter	10	○	○	○	2	数量不要

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
14	Photometer	2	○	○	○	0	15-1で代替
15-1	Portable LUX Meter	1	○	○	○	2	
15-2	Portable LUX Meter, high sensitivity model	1	○	○	○	1	
16-1	Power Supply High Cost Performance Power Supply, Regulated Power Supply	2	○	○	○	2	
16-2	Power Supply High Cost Performance Power Supply, Regulated Power Supply	2	○	○	○	2	
17	Programmable Controller	2	?	○	○	2	
18	Education Robot	1	?	○	○	1	
19	Oscilloscope 2-Channel 20MHz Oscilloscope	10	○	○	○	10	
20	Low Frequency Signal Generato	1	○	○	○	1	
21	Electric Hand Drill, 13mm (1/	8	○	○	○	8	
22	Tools for Electrician	3	○	○	○	10	要増量
23	Portable Tool Set for Pipe Working	2	○	○	○	2	
	追加機材 *						

* 自動車電気系統、発電・配電・給電関連の機材の要請が無いのでこれを見込む

ELECTRONICS コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	TV Receiver Trainer	2	○	○	○	2	TVは有り
2	Satellite Receiver Trainer	1	○	○	○	1	
3	Digital Oscilloscope	5	○	○	○	5	
4-1	Laboratory μ A meter	10	○	○	○	10	既存は古い
4-2	Laboratory mA meter	10	○	○	○	10	
5	Digital Exchange with Two Subscribers	1	○	○	○	1	
6	Measurement and Sensor Technology	1	?	○	○	1	シラバスに明示無し
7	Sweep Oscillator	2	○	○	○	2	
8	Transceiver Set	1	?	○	○	1	シラバスに明示無し
9	Multimeter (digital)	3	○	○	○	3	
10	Wheatstone Bridge	2	○	○	○	2	
11	Voltmeter	20	○	○	○	10	数量不要
12	Winding Machine	1	○	○	○	1	
13	Laboratory Equipment for Digital Set	1	○	○	○	1	
14	Laboratory Equipment for Optical Fiber Communication	1	○	○	○	1	
15	Tool Set	20	○	○	○	20	
	追加機材*						

* 高周波機材、生産機材を追加

GENERAL METALS コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	Lathe	1	○	○	○	1	
2	Portable Electrical Hand Drill	4	○	○	○	4	
3	Drill Press	1	○	・	○	1	既存は古い
4	Gas Welding with its all accessories (oxyacethyne welding)	1	○	○	○	1	
5	MIG Welding Machine	2	○	・		2	既存は故障
6	TIG Welding Machine	2	○	○	○	2	
7	AC ARC Welding Machine	6	○	・	○	6	既存は4台
8	DC ARC Welding Machine	2	○	○	○	2	
9	Vernier Caliper (metric)	50	○	・	○	25	数量不要
10	Micrometer (metric)	50	○	・	○	25	数量不要
11	Air Compressor	1	?	○	○	1	シラバスに明示無し
12	Resistance Welding Machine (Spot Welding)	1	○	○	○	1	
13	Angle Grinder (Disc Grinder)	4	○	・	○	4	既存2台有り、 使用頻度高し
14	Stock and Dies (Pipe Thread Cutting Tool)	2	○	○	○	2	
15	Tap and Dies for cutting internal thread	3	○	○	○	3	
16	CO2 MAG ARC Welding	2	?	○	○	1	シラバスに明示無し
	追加機材*						

*鍛造鋳造関連機材を追加

BUILDING CONSTRUCTION コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	Levelling instrument	4	○	○	○	4	
2	Levelling instrument	4	○	○	○	4	
3	Pipe threader	2	○	・	○	2	既存は故障
4	Steel formwork	500 m ²	?	○	○	200	シラバスに明示 無し
5	Steel scaffolding	250 m ²	?	○	○	100	シラバスに明示 無し
6	Steel props	100 m ²	○	○	○	100	シラバスに明示 無し
7	Hollow concrete block producing machine	2	?	○	○	2	シラバスに明示 無し
8	Mortar spray (Trayoline)	2	?	○	○	2	シラバスに明示 無し
9	Bar-bender	2	○	○	○	2	
10	Compactor 1.5ton	2	?	○	○	2	シラバスに明示 無し
11	Concrete vibrator	2	○	○	○	2	シラバスに明示 無し
12	Welding machine	2	○	○	○	2	
13	Concrete mixer	3	○	・	○	3	既存は故障
14	Computer with plotter	22				0	コンピュータ ルームで用意
15	LCD projector	2				0	コンピュータ ルームで用意
16	Dumper	2	?	○	○	2	シラバスに明示 無し
17	Jack hammer	2	○	○	○	2	
18	Pulley lift	3	○	○	○	3	
19	Water pump	3	?	○	○	2	シラバスに明示 無し
20	Pipe pressure testing	2	○	○	○	2	
21	Leakage detector	2	○	○	○	2	
22	Vicat apparatus	2	○	○	○	2	
23	Compressive strength test for concrete	2	?	○	○	2	シラバスに明示 無し
24	Slump test	3	○	○	○	3	
25	Sieve analysis for aggregates (apparatus)	2	○	○	○	2	
26	Drill press	2	○	・	○	2	既存は故障
27	Electric percussion hammer	4	○	○	○	4	
28	Paint spray with air compressor	2	○	○	○	2	
29	Tile-cutter	2	○	○	○	2	
30	Stone-cutter	2	○	○	○	2	
31	Mini-excavator	2	?	○	○	1	シラバスに明示 無し
32	Extension ladder	5	○	○	○	5	

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
33	Drawing board with stand and drawers. Also including stool.	25	○	○	○	0	PCで代替

測量機材が要請されていないがSurveying科に譲る

WOOD WORKING コース 要請機材の検証

		要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	Jigsaw Machine Floor / Table mounted	1	○	○	○	1	
2	Wood Workers Bench	40	○	・	○	25	(施設)
3	Horizontal Drilling Machine	1	○	○	○	1	
4	Belt Sander (portable)	3	○	○	○	3	既存は古い
5	Portable Orbital Sander	3	○	○	○	3	
6	Router 1/2hp	3	○	・	○	3	95年製1台のみ
7	Stanely Smooth Up Plane	80	○	○	○	25	数量不要
7	Circular Saw	3	○	・	○	3	95年製1台のみ
8	Planner	3	○	○	○	3	
9	Saber Saw	3	○	○	○	3	
10	Chisels Set	40	○	・	○	25	若干数は有り
11	Tenon Saws	40	○	・	○	25	若干数は有り
12	Dovetail Saws	20	○	・	○	25	若干数は有り
13	Marking Gauges	40	○	・	○	25	若干数は有り
14	Mortise Gauges	40	○	・	○	25	若干数は有り
15	Cutting Gauges	20	○	・	○	25	若干数は有り
16	Magnetic Hammer	2	○	・	○	2	若干数は有り
17	Carpenter Braces	5	○	・	○	5	若干数は有り
18	Auger Bit	5	○	・	○	5	若干数は有り
19	Mortise Chisels	20	○	・	○	25	若干数は有り
20	Sharpening Stone	10	○	・	○	10	若干数は有り
21	Rarps Files	60	○	・	○	25	若干数は有り
	手工具道具の若干の追加					1	

MACHINE SHOP コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	Lathe	15	○	・	○	2	4台は稼動、数量不要
2	Radial drilling machine	2	?	○	?	0	シラバスに明示無し
3	Table drilling machine	2	○	・	○	2	1台は稼動
4	Shaper machine	2	○	・	○	1	1台は稼動、数量不要
5	Shaper machine Hydraulic drive	2	?	○	?	0	シラバスに明示無し
6	Universal milling machine	6	○	○	要検討	1	数量不要
7	Tool and cutter grinder	3	○	○	要検討	1	数量不要
8	Surface grinder	3	○	○	要検討	1	数量不要
9	Computers	3				0	コンピューター
10	Computers projector Accessories and attachments	1				0	タールームで対応
11	Three jaw universal chuck	15	○	○	○	2	数量不要
12	Four jaw independent chuck	10	○	○	○	2	数量不要
13-1	Lathe centres	20	○	○	○	2	数量不要
13-2	Ball centres	20	○	○	○	2	数量不要
13-3	Frictionless centre	20	○	○	○	2	数量不要
13-4	Pipe centres	20	○	○	○	2	数量不要
13-5	Half centre	20	○	○	○	2	数量不要
13-6	Plain centre	20	○	○	○	2	数量不要
14	Lathe carriers Single slotted carrier Double slotted carrier Single pin carrier Double pin carrier Single bent tail carrier Double bent tail carrier	20	○	○	○	2	数量不要
15	Catch plates Single slotted catch plate Double slotted catch plate Single pin catch plate Double pin catch plate	20	○	○	○	2	数量不要
16	Angle plate	10	○	○	○	2	数量不要
17	Face plate Lathe attachments	15	○	○	○	2	数量不要
18	Milling attachments	3	○	○	○	1	数量不要
19	Grinding attachment	3	○	○	○	1	数量不要
20	Gear cutting attachment	3	○	○	○	2	数量不要

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
21	Copying attachment Milling machines Attachments/Accessories	3	○	○	○	1	数量不要
22	Vertical milling attachment	3	?	○	?	0	シラバスに 明示無し
23	Rack milling attachments	3	?	○	?	0	シラバスに 明示無し
24	Universal milling attachments	3	?	○	?	0	シラバスに 明示無し
25	Spiral milling attachment	3	?	○	?	0	シラバスに 明示無し
26	Rack indexing attachment	3	?	○	?	0	シラバスに 明示無し
27	Rotary table	3	○	○	○	2	数量不要
28	Differential indexing head	3	?	○	?	0	シラバスに 明示無し
29	Universal indexing head	3	?	○	?	0	シラバスに 明示無し
30	Arbors	10	?	○	○	2	シラバスに 明示無し
31	Collets	5	?	○	○	2	シラバスに 明示無し
32	Universal vices	5	○	○	○	2	数量不要
33	V Blocks	10	?	○	○	2	シラバスに 明示無し
34	Boring head	5	?	○	○	2	シラバスに 明示無し
35	Slotting attachment Milling cutters	5	?	○	?	0	シラバスに 明示無し
36	Plain milling cutters	50	?	○	?	0	シラバスに 明示無し
37	Face milling cutters	50	?	○	?	0	シラバスに 明示無し
38	Side and face milling cutters	50	?	○	?	0	シラバスに 明示無し
39	Single angle milling cutters	50	?	○	?	0	シラバスに 明示無し
40	Double angle milling cutters	50	?	○	?	0	シラバスに 明示無し
41	Dove tail cutters	50	?	○	?	0	シラバスに 明示無し
42	Convex cutters	50	?	○	?	0	シラバスに 明示無し
43	Concave cutters	50	?	○	?	0	シラバスに 明示無し
44	T slot cutters	50	?	○	?	0	シラバスに 明示無し
45	End mills	50	○	○	○	2	数量不要
46	thread milling cutters	50	○	○	○	2	数量不要
47	Gear cutters	50	○	○	○	2	数量不要
48	Outside micrometers	10	○	.	○	2	10台は所 有、数量不 要

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
49	Inside micrometers	10	○	○	○	2	数量不要
50	Depth micrometers	10	○	○	○	2	数量不要
51	Tube micrometer	10	○	○	○	2	数量不要
52	Gear tooth micrometer	10	○	○	○	2	数量不要
53	Vernier micrometer	10	○	○	○	2	数量不要
54	Digital micrometer	10	○	○	○	2	数量不要
55	Vernier caliper 0.02mm	25	○	○	○	2	数量不要
56	Dial vernier 0.02mm	25	○	○	○	2	数量不要
57	Digital vernier 0.02mm	25	○	○	○	2	数量不要
58	Vernier height gauge	3	○	○	○	2	数量不要
59	Master gauge	2	?	○	○	2	シラバスに 明示無し
60	Sine bar	10	○	○	○	2	数量不要
61	Universal bevel protractor	10	○	○	○	2	数量不要
62	Combination set	10	?	○	○	2	シラバスに 明示無し
63	Dial test indicators	10	○	○	○	2	数量不要
64	Dial test indicators	20	○	○	○	2	数量不要
65	Bore dial gauge	10	○	○	○	2	数量不要
66	Gauges	10	○	○	○	2	数量不要
67	Surface table	2	?	○	?	0	シラバスに 明示無し
68	Heat treatment furnace	1	○	○	○	1	1台で可
69	Hardness testing machine Teaching models	2	○	○	○	1	数量不要
70	Models for lathe machine mechanism	1	○	○	×	0	不要
71	Models for shaper machine	1	○	○	×	0	不要
72	Grinding wheels all type	10	○	○	○	2	消耗品
73	Lathe single point cutters	100	○	○	○	2	
74	Single point tools for shaper	50	○	○	○	2	
75	Digital X,Y,Z movement indicators suitable for lathe, Milling Machines - DRO UNITS	10	?	○	?	0	ロータリー テーブルで 代替

SURVEYING コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	GPS Surveying	2	○	○	○	2	
2	Total Station	5	○	・	○	5	2台稼動
3	Digital Theodolite	5	○	○	○	5	
4	Automatic Level	10	○	・	○	10	13台中4台稼動
5	Electronic Digital Level	2	○	○	○	2	
6	Optical Theodolite	5	○	・	○	5	15台中3台稼動
7	Altimeter	5	○	○	○	5	
8	Compass	5	○	・	○	5	3台稼動
9	Surveying Softwares	1	○	○	○	1	特殊ソフト
10	Measuring Tape (steel)	5	○	・	○	5	17個中1台稼動・他は途中から切断
11	Measuring Tape (original fiberglass)	10	○	・	○	10	10個とも途中切断
12-1	Surveying Books	10	○	○	○	10	
12-2	Surveying Books	10	○	○	○	10	
13	GIS and GPS	1	○	○	要検討	0	ソフトのみNo 9 に対応

AUTOMECHANICS コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	Gasoline Engine with EFI Fuel System, metronic type	2	○	○	○	2	EFIは無し
2	Gasoline Engine with EFI Fuel System, K-Jetronic type (CIS fuel system)	2	○	○	○	2	EFIは無し
3	Gasoline Engine with EFI Fuel System, monotronic type	2	○	○	○	2	EFIは無し
4	Diesel Engine	3	○	・	○	0	Diesel科に譲る
5	Spark Tester	5	○	○	○	5	
6	Sectional Automatic Transmission	2	○	○	○	1	
7	Pneumatic Brake System	1	○	○	○	1	
8	Teaching Model of Cooling and Lubricating System of an engine	1	○	○	○	1	
9	Automobile for training four cyliner	2	○	○	要検討	1	運転実習用
10	Transmission Jack	1	○	○	○	1	
11	4 Cylinder Gasoline Engine with transmission, 1.3 liter	1	○	○	○	0	No.3で代替
12	Speedometer and Brake Tester	1	○	○	○	1	
13	Flow Detector	1	○	○	○	1	
14	Tacho Dwell Tester	5	○	○	○	5	
15	Head Light Tester	3	○	○	○	3	

DRAFTING AND DESIGN コース 要請機材の検証

	機材名	要請数	検 証				備考
			シラバス	既存無し	レベル	数量	
1	Drafting Machine Set	60	○	・	○	0	19台有るが予備品無し
2	Drafting Tools Set	60	○	・	○	50	16セット有るが古い
3	Technical Pen (set of 4)	25	○	・	○	25	4セット有るが予備品無し
4	Computer - 19 INCH Monitor Multimedia Kit (52xCD-Drive, Speakers, Sound Card)	15	○	○	○	0	コンピュータールーム で対応
5	Blue Print Machine	2	○	○	○	2	
6	図板					25	
7	T定規					25	
8	T定規ヘッド					25	

* コンピュータで対応しハンドライティングの実習には6～8で対応

COMPUTER LABORATORIES 要請機材の検証

			検 証				
		要請数	シラバス	既存無し	レベル	数量	備考
1	Personal Computer	100				85	
2	Laser Printer	40				6	
3	Plotter	3				3	
4	UPS	50				43	
5	Scanner	4				3	
6	OHP (Projecter)	3				3	Building Constructio n で要請
7	Screen	3				3	
8	Software (Mapinfo)	10				10	
9	Software (GIS Arcview)	10				10	
10	Software (Design Star)	10				10	
11	Software (Pro E)	10				10	

