

2.5.2 Outline of the Project Sector

The project area of Shashemene and Dire Dawa Road Districts are shown in the attached figure, and each district has the road management sections. The main roads under maintenance by both districts are as follows:

Category of Road	Total	Asphalted Road	Gravel Road
Road Length in Ethiopia (km)	11,524 (100%)	3,633 (100%)	7,891 (100%)
Road Length in Shashemene Dist. (km)	1,747 (15%)	682 (19%)	1,065 (13%)
Road Length in Dire Dawa Dist. (km)	1,630 (14%)	391 (11%)	1,239 (16%)

The main roads in Shashemene and Dire Dawa Districts are shown in details by the road section as per Table 2.5.1 and 2.5.2.

Table 2.5.1 Main roads in Shashemene District

No.	Road Section	Length (km)	Pavement Type	Periodic (km)	Betterment (km)
1.	Wando Section	204			
	• Awasa-Dilla	86	Asphalt	30	-
	• Aposto-Yirgalem	8	"	8	-
	• Awasa Dilla Junc-Wando	17	Gravel	17	-
	• Wondo Dilla	32	"	32	-
	• Wondo Burie	61	"	61	-
2.	Kibremengist Section	121			
	• Burie-K/mengist	73	Gravel	53	20
	• K/mengist-Wadara	48	"	38	10
3.	Negele Section	86			
	• Wadara-negele	86	Gravel	86	-
4.	Fessehagenet Section	213			
	• Dilla-Yabello	208	Asphalt	30	-
	• Access Rd.to/wave	7	Gravel	-	-
5.	Goba (Robe) Section	64			
	• Adaba-Goba	64	Gravel	44	20
6.	Dodola Section	102			
	• Shasheme-Adaba	102	Gravel	82	20
7.	Sodo (Wollayta) Section	177			
	• Alba-Hosana.Junc	73	Gravel	73	-
	• Hosana Junc-	41	"	41	-
	• Hosana Junc-Wajefo	63	"	55	-
8.	Arbamich Section	56			
	• Wajefo-Arbaminch	56	Gravel	46	10
9.	Shashemene Section	232			
	• Zuway-Awasa	117	Asphalt	107	10
	• Shash-Wondogenet	22	Gravel	22	-
	• Shash-Alaba	56	Asphalt	-	-
	• Access Rd.-to Alabat	5	Gravel	5	-
	• Bulbula - Meto	32	"	-	-
10.	Mega Section	214			
	• Yabello-Mayale	207	Asphalt	40	-
	• Access Rd. to M/wave	7	Gravel	-	-
11.	Sodo Bulki Section	132			
	• Sodo-Felegenuway	132	Gravel	-	-
12.	Bekoji Section	146			
	• Assela-Dodola	123	Gravel	30	-
	• Access Rd. to Melkla	23	"	-	-
	Total	1,747		900	90
	Asphalted Road	682		215	-
	Gravel Road	1,065		685	90

Table 2.5.2 Main roads in Dire Dawa District

No.	Name of section	Length (km)	Pavement Type	Periodic (km)	Betterment (km)
1.	Dire Dawa Section	138			
	• Dire Dawa-Dengego	20	Asphalt	-	-
	• Kalubi-Dengego	31	"	31	-
	• Dengego-Harrar	31	"	31	-
	• Harrar-Babile	31	Gravel	31	-
	• Diredawa-Hurssso	25	"	25	-
2.	Hirna Section	140			
	• Arbretie-Kulbi	128	Gravel	70	-
	• Kobo - Deder	12	"	12	-
3.	Glemso Section	132			
	• Meso-Arbreketie	34	Gravel	34	-
	• Abreketie-Glemso	60	"	60	-
	• Gelmso-Mechara	38	"	38	-
4.	Awash Section	386			
	• Metahard-Adaitu	309	Asphalt	309	-
	• Awash - Meso	77	Gravel	77	-
5.	Jijiga Section	110			
	• Babile - Jijiga	71	Gravel	71	-
	• Jijiga - Kebribeya	39	"	39	-
6.	Degahabur Section	191			
	• Kebribeya-Degahabur	111	Gravel	111	-
	• Degahabur-Shekosh	80	"	80	-
7.	Kebridehar Section	360			
	• Shekosh - Shilbo	360	Gravel	360	-
8.	Gode Section	173			
	• Kebridahar-Gode	173	Gravel	173	-
	Total	1,630		1,552	
	Asphalted Road	391		371	
	Gravel Road	1,239		1,181	

PROJECT AREA - SHASHEMENE & DIRE DAWA DISTRICTS

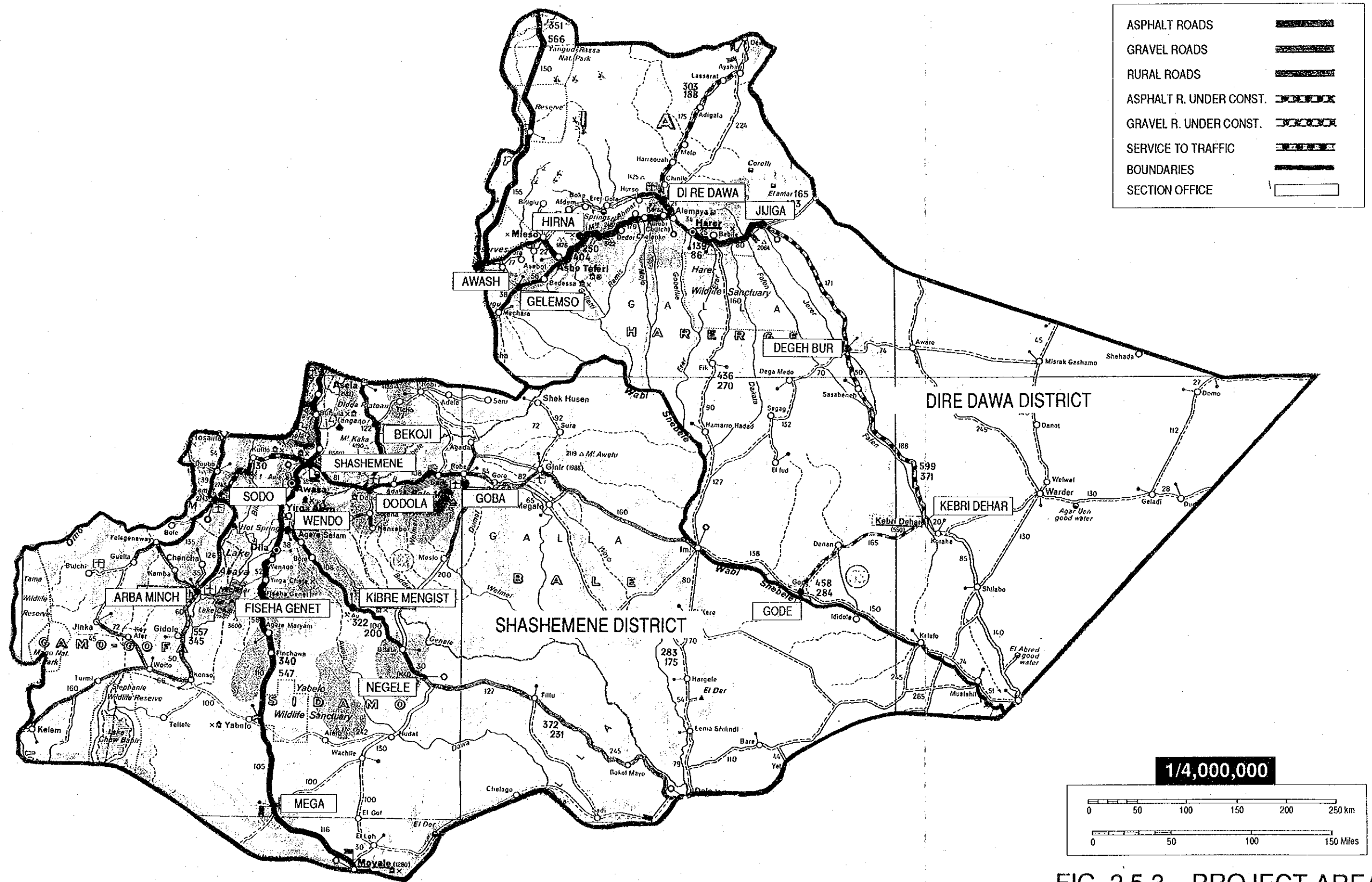


FIG. 2.5.3 PROJECT AREA

PROJECT AREA - SHASHEMENE & DIRE DAWA DISTRICTS

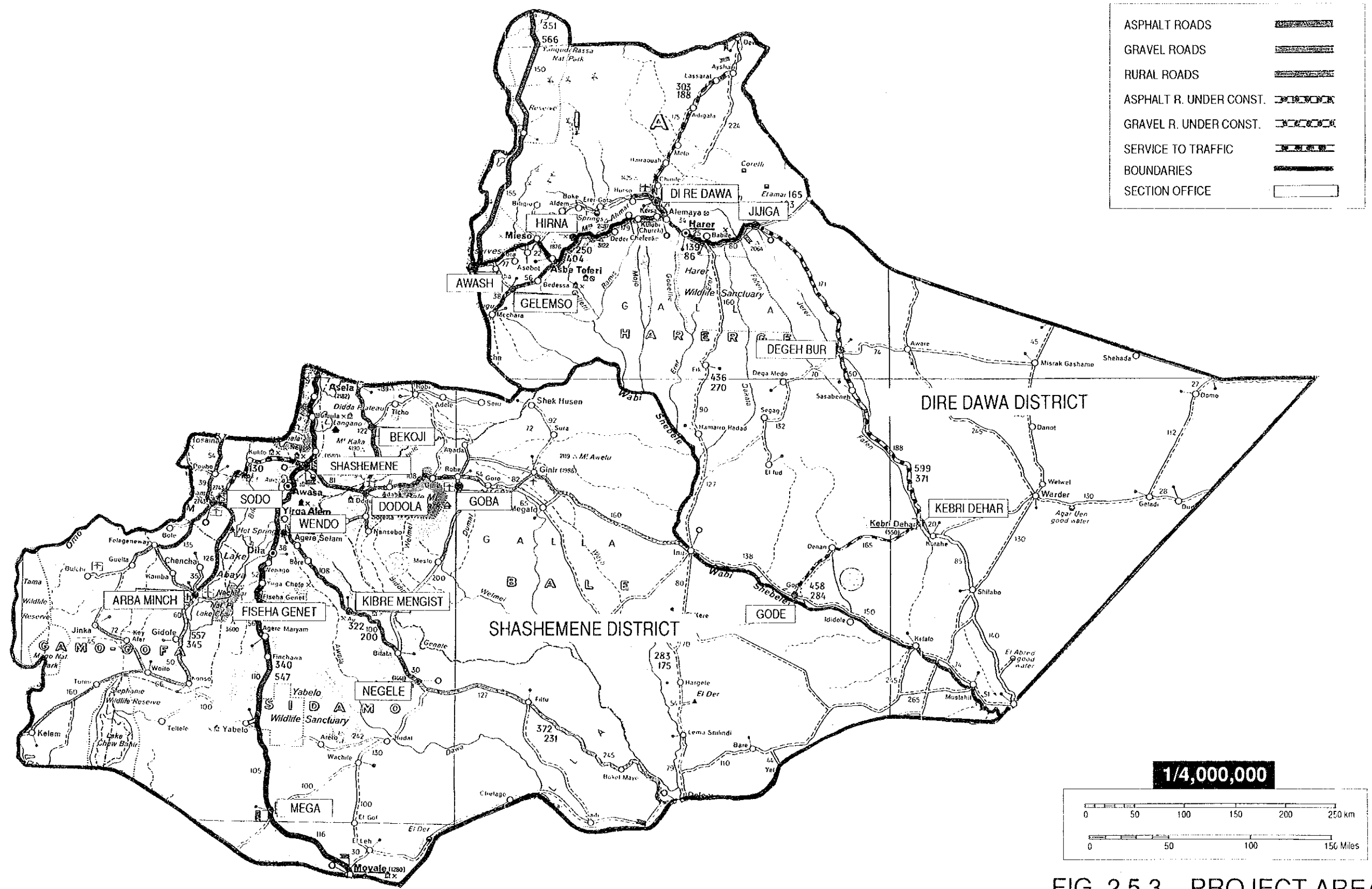


FIG. 2.5.3 PROJECT AREA

CHAPTER 3
OUTLINE OF THE PROJECT



CHAPTER 3 OUTLINE OF THE PROJECT

3.1 Objective

The objective of this project is to strengthen and upgrade the road maintenance/rehabilitation functions in Shashemene and Dire Dawa road Districts by providing the road maintenance equipment.

3.2 Study and Examination on the Request

3.2.1 Justification of the Project

This project area, Shashemene and Dire Dawa Districts, occupies 48% of the whole area of Ethiopia and 25% of the population of Ethiopia. The coffee production in Shashemene is 37% of the total in the country, and there are also opportunities for the production of commercial crops including cotton, fruits, sugar cane as well as food crops. Furthermore, the cattle population in Shashemene is about 19% of the total in Ethiopia. These mean Shashemene is the very important agricultural potential area.

The coffee in Dire Dawa District is the best quality in Ethiopia, and there are possible markets for citrus fruits, avocado butter, and beef in Europe, and Middle East which will increase foreign exchange earnings. Especially Dire Dawa has the advantage of proximity to cheap export route - Djiboutti. On the other hand, some of the areas in both districts are affected by drought, and the delivery of relief cargo to these areas or the recovery is hindered due to poor road condition.

The improvement of serviceability of the road network in both districts will improve the transport of agricultural products, increase the production and earnings, promote the recovery project, recover the national economy, upgrade the living standard, and make great benefits to many people. Therefore, Japan's Grant Aid is urgently necessary for this project.

3.2.2 Review of the Operation Plan of the Project

(1) Plan for Manpower and Budget

ERA is planning to provide the standard crew for each unit of asphalted and gravel road to execute the project as follows;

<u>Standard Crew</u>		<u>Main Equipment</u>
Section Foreman	1	Bulldozer
Labourer F/M	1	Motor Grader
Clerk	1	Wheel Loader
Clerical Aide	1	Roller
Operator	13	Dump Truck
Stat Equip. Operator	3	Asphalt Distributor
Tyre Repairman	1	Water Truck
Guard	13	Asphalt Kettle
Messenger	1	Broom
Janitor	2	Stationary Heater
Helper	10	Aggregate Spreader
Labourer	(As required)	
Carpenter	2	
Mechanic	1	
Mason	3	
Service man	1	
Driver	<u>1</u>	
	59	

ERA is also planning the standard crew for quarry plant equipment unit as follows;

<u>Standard Crew</u>		<u>Main Equipment</u>
Section Foreman	1	Dump Truck
Labourer Foreman	1	Wheel Loader
Operator	6	Tractor Shovel
Stat Equip. Operator	2	Bulldozer
Labourer	<u>20</u>	Rock Crusher
	30	Air Compressor
		Jack Hammer
		Crawler Drill
		Blasting Machine

Annual budget is estimated as follows;

<u>Shashemene District</u>		<u>Dire Dawa District</u>	
Labour cost	2.89 m. Birr	Labour cost	1.57 m Birr
Material cost	3.86	Material cost	2.54
Equipment cost	<u>10.69</u>	Equipment cost	<u>9.30</u>
	17.44 m. Birr		13.41 m. Birr

3.2.3 Similar Project and Other Assistance Project

The World Bank has financed consultancy services to develop an equipment management system, a maintenance management system, a fiscal information system and construction system and improve quality control. With recognition of the road maintenance and rehabilitation programme, the African Development Bank has financed the procurement of maintenance equipment for Alemgena and Jimma Districts. Further it has also committed to finance the Semera - Elidar 134 km Section (Part of the Mille - Assab road rehabilitation programme) and the remaining part 196 km would be financed by the International Development Association. Furthermore, the World Bank with other multi-lateral financer is ready to finance Road Component under the Emergency Reconstruction and Rehabilitation Project (ERRP).

Finnish International Development Agency (FINNIDA) has supported road maintenance activities in Ethiopia since 1989, through the on-going Road Maintenance Assistance Project.

3.2.4 Verification of the Requested Road Maintenance Equipment

The Table 3.2.1 shows the road equipment numbers required for each road work. Based on this table and current fleet, the quantity and kind of equipment for each unit were selected.

- **Asphalted Road Equipment Unit**

Main works are the codes 11, 12, 41, 42, 46 and 48, and the following major equipment will be required to cover these works.

Motor grader (1), Wheel loader (1), Asphalt distributor (1), Vibratory roller (2), Tyre roller (1), Dump truck (5), Water truck (1).

Since they may substitute the vibratory roller for the tyre roller, this is omitted from requested equipment. In addition, the assistance equipment such as pick-up truck and grease unit are in shortage, so the requested quantities should be selected.

- **Gravel Road Equipment Unit**

Main works are the codes 13, 23, 45 and 63 and the following major equipment will be required to cover these works.

Bulldozer (1), Motor grader (3), Wheel loader (1), Vibratory roller (1), Dump truck (5), Water truck (1).

The assistance equipment such as station wagon, pick-up truck and grease unit are also in shortage, so the requested quantities should be selected.

- **Quarry Plant Equipment Unit**

The standard work requires the following equipment.

Wheel loader (1), Dump truck (3), Rock crusher (1), Traxcavator (1), Drill wagon (1), Air compressor (1).

The assistance equipment such as pick-up truck, grease unit and blasting machine are also in shortage, so the requested quantities should be selected.

Table 3.2.1 Road Maintenance Works and Required Equipment

Code	Road Works	Bulldozer	Motor Grader	Wheel Loader	A. Dist ributor	Vibratory Roller	Tyre Roller	Dump Truck	A. Kettle	Water Truck	Aggregate Spreader	Stat Heater
Asphalted Road												
11	Asphalt Patching		1	1		1		1	1			
12	Base Failure Repair		1			1		2		1		
31	Shoulder Blading		1									
41	Base Preparation	1	1	1		2		4		1		
42	Single Surface Treatment			1	1	1	1	3			1	2
44	Road Mix Overlay		2	1	1	1	1	5		1		2
46	Should Rehabilitation		1	1		1		3		1		
48	Double Surface Treatment			1	1	1	1	3			1	2
	Basic Design Unit	-	1	1	1	2	-	4	-	1	-	-
Gravel Road												
13	Blading Gravel Road		1									
14	Spot Repair of Gravel Road			1				1				
23	Ditch Cleaning (M)		1					1				
45	Gravel Resurfacing		1	1		2		6		1		
63	Select Material Production	1						1				
	Basic Design Unit	1	3	1	-	1	-	5	-	1	-	-
Quarry Plant												
62	Crushing	1		1				3	Crusher	Air Comp.	Drill Wagon	Traxcator
	Basic Design Unit	-	-	1	-	-	-	2	1	1	1	1

3.3 Outline of the Project

3.3.1 Executing Agency and Operation Structure

The executing agency of this project is the ERA under the Ministry of Public Works and urban Development of which organization and role is previously stated, and the road maintenance works are carried out by the Road District Offices of Shashemene and Dire Dawa.

3.3.2 Plan of the Project

Shashemene District will carry out the scheduled road maintenance and repair of asphalted roads 682 km in 4 sections out of 12 sections and gravel roads 1,065 km in 12 sections. Dire Dawa District will carry out the scheduled road maintenance and repair of asphalted roads 391 km in 2 sections out of 8 sections and gravel roads 1,239 km in 8 sections.

3.3.3 Outline of the Required Equipment

Road Maintenance Works	Project Equipment
Asphalted Road Unit	
<ul style="list-style-type: none">• Patching of holes, dips, edge failures or severely raveled sections• Replacement of base and subbase materials on small failed areas• Reshaping of shoulders to correct surface irregularities, drip-offs and erosion damage• Preparation for resurfacing or sealing by filling holes, realigning or raising the grade• Single application of bituminous binder and aggregate• Paving process utilizing on-site grader mixing of paving material• Reshaping, patching and improvement of deteriorated shoulders• Multiple application of bituminous binder and aggregate	<ul style="list-style-type: none">• Motor Grader• Wheel Loader• Asphalt Distributor• Vibratory Roller• Dump Truck• Water Truck• Pick-up Truck• Grease Unit• Tool Set (Heavy Duty)

Road Maintenance Works	Project Equipment
Gravel Road Unit	
<ul style="list-style-type: none"> • Mechanical grading to restore a crown and smooth-riding surface • Patching of holes, ruts and edge failures • Mechanical cleaning and reshaping of roadside ditches • Reconditioning of deteriorated or badly corrugated gravel roads by reworking and adding new aggregate material • Quarrying of selected material from natural deposits for road maintenance needs 	<ul style="list-style-type: none"> • Bulldozer • Motor Grader • Wheel Loader • Vibratory Roller • Dump Truck • Water Truck • Station Wagon • Pick-up Truck • Grease Unit • Tool Set (Heavy Duty)

Road Maintenance Works	Project Equipment
Quarry Plant Unit	
<ul style="list-style-type: none"> • Quarrying and crushing of suitable rock from natural deposits for use in road maintenance <p>Size of crushed stone</p> <p>0 ~ 5 mm</p> <p>5 ~ 10</p> <p>10 ~ 20</p> <p>20 ~ 50</p>	<ul style="list-style-type: none"> • Bulldozer • Dump Truck • Rock Crusher • Air Compressor • Drill Wagon • Traxcavator • Blasting Machine • Pick-up Truck • Grease Unit • Tool Set (Heavy Duty)

3.3.4 Maintenance and Management Plan of the Equipment

The maintenance and management system of the road maintenance equipment introduced under this Project is considered well established in Shashemene and Dire Dawa Districts. The project intends to provide enough spare parts (approx. 2 years service amount) for aided equipment for the future maintenance and repair works including expendable supplies.

3.3.5 Necessity of Technical Cooperation

As a result of the study, the study team observed that the technical capability of staff and mechanics of districts and central garages is fairly appreciable, and concludes no particular technical cooperation will be required for this project.

3.4.6 Basic Policy of Aid

The study team recommends that the Project could be implemented within Japan's Grant Aid because the positive impact accrued and viability of the Project have been duly ascertained and the executing capacity of the recipient country has been also assured which is satisfying the institutional conditions required for the introduction of Japan's Grant Aid.

Consequently, the outline of the Project will be determined and the basic design will be followed.

CHAPTER 4
BASIC DESIGN



CHAPTER 4 BASIC DESIGN

4.1 Design Policy

4.1.1 Natural Condition

It will be necessary to consider the rainy season and the altitude from sea level of more than 2,000m. Therefore, the specifications of high altitude and operating cabin/roof shall be provided.

4.1.2 Management Capability of Executing Agency

The organization and system of MPWUD, ERA and District Office is well established, and the training system for the staff/technicians is also well established. Therefore, it will not be necessary to consider the technical level.

4.1.3 Scope of Equipment

A wide variety of modern equipment have been introduced through private business base or public assistance base, and the equipment model similar to this project have been also introduced. Hence, the project will be designed in accordance with the request.

4.1.4 Procurement of Equipment from the Third Countries

All road maintenance equipment selected for this Project are produced and sold in Japan market. From the viewpoints of performance, price, delivery due date, parts supply, aftercare, etc. for the project equipment, the procurement from the third countries has no advantage over the procurement from Japan. Therefore, the procurement from the third countries should not be considered.

4.1.5 Implementation Schedule

The deployment of the road maintenance equipment will be completed within 20 months by dividing the Project into two phases.

4.2 Basic Plan

As described in 2.4, the road maintenance equipment groups are classified into three type units, and the equipment models, types and quantities are selected in accordance with the work kinds in each unit, transport condition, etc.

The following table shows the major specifications of the road maintenance equipment which will be granted by this Project.

	Equipment	Total Qty	Major Specifications
1.	Bulldozer	3	200 HP, w/ Ripper, Sun roof
2.	Motor Grader	11	135 HP, 3.7m wide blade, w/Cab.
3.	Wheel Loader	6	130 HP, Powershift, BKT not less than 2.0m ³ , w/ Cab.
4.	Vibratory Roller	7	130 HP, 8 ton w/ Sun roof
5.	Dumpt Truck	25	275 HP, not less than 7m ³ , Rear 2 axle 6W•2D
6.	Asphalt Distributor	2	160 HP, Tank capacity, 6,000 L, 4W•2D
7.	Water Truck	5	275 HP, Tank capacity, 13,000L, 4W•2D
8.	Station Wagon	3	140 HP, Gasoline, 4WD, SWB, Seating capacity 5-7
9.	Pick-up Truck	6	80 HP, Gasoline,4WD, w seat, 500kg load
10.	Grease Unit	6	Skid mounted, w/4-6 barrels
11.	Rock Crusher	1	Portable type w/Generator, 50 TPH capacity
12.	Traxcavator	1	200 HP, Powershift, BKT not less than 2.0m ³ , w/ Cab.
13.	Air Compressor	1	Portable type w/ D. Engine, 17m ³ /min, 7.0kg/cm ²
14.	Drill Wagon	1	4.5 ton, w/Air Drill, Hydraulic boom
15.	Blasting Machine	1	Firing tension 1,400V, w/Galvanometer
16.	Tool Set	6	Heavy Duty, more than 278 pcs.
17.	Spare Parts	-	Quantities for approx. 2 years service

4.3 Procurement Plan

4.3.1 Basic Policy

The procurement of road maintenance equipment of this Project under the Grant Aid Programme shall include the construction equipment and related equipment, and related automobiles, and also includes the following items.

- Procurement of the equipment (including spare parts and expendable supplies, and initial guidance for operation and maintenance)
- Supervision of procurement (including detailed design)

4.3.2 Supervision Plan of Procurement

A Japanese consulting firm will supervise the Project commencing from the procurement of equipment to the witness inspection at the project site (Addis Ababa) under the consignment of the Transitional Government of Ethiopia. The initial guidance for operation and maintenance of the delivered equipment will be carried out by the technician sent from the equipment supplier.

4.3.3 Procurement from the Third Countries

No procurement from the third countries is required.

4.3.4 Implementation Schedule

The implementation schedule of this Project is given in Fig 4.3.1.
The equipment to be deployed for each phase is given in Table 4.3.2.

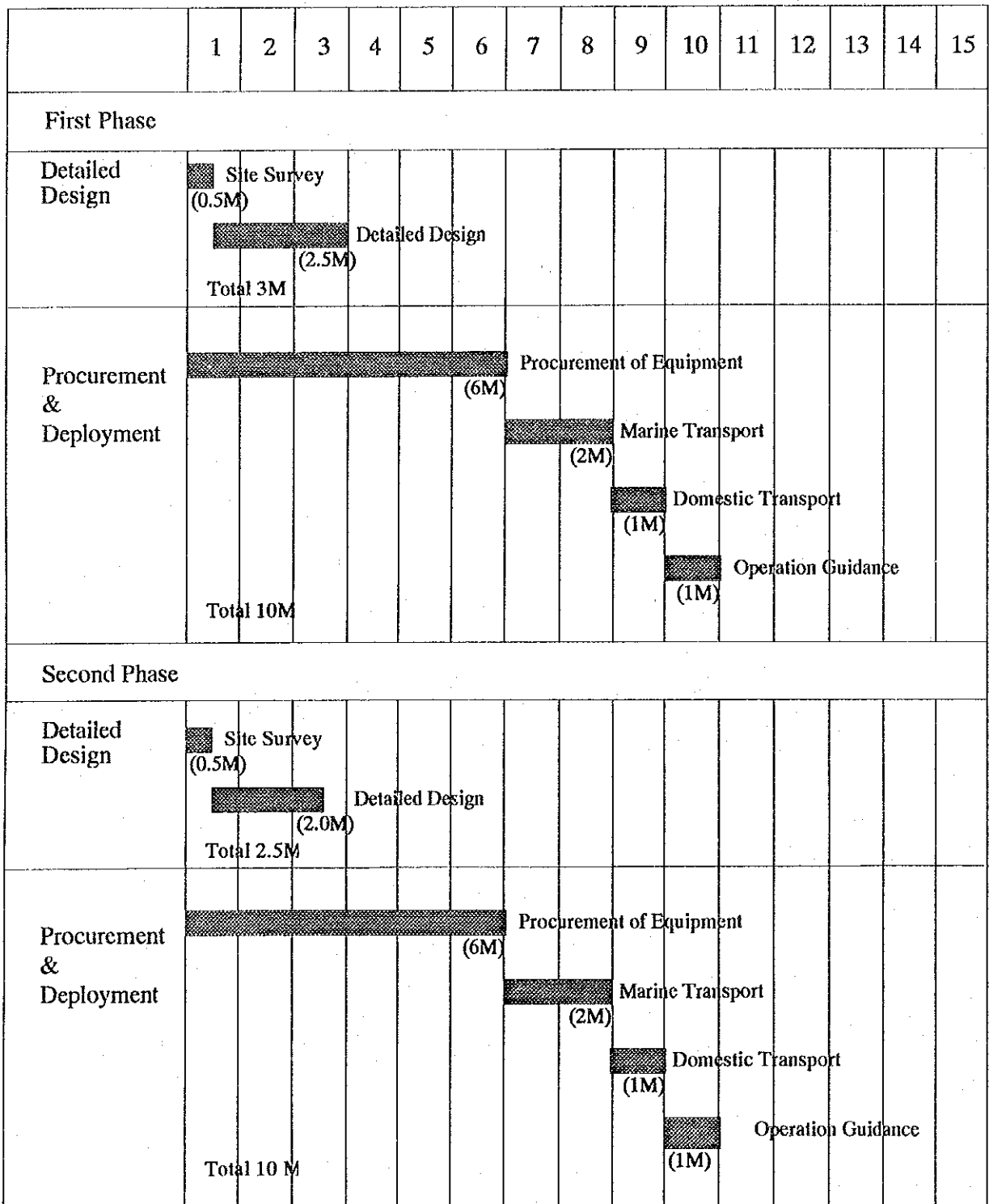


Fig 4.3.1 Implementation Schedule

Table 4.3.2 Equipment to be delivered for each time

Equipment	First Phase	Second Phase	Grand Total
	QTY.	QTY.	QTY.
1. Bulldozer	3	-	3
2. Motor Grader	6	5	11
3. Wheel Loader	2	4	6
4. Vibratory Roller	2	5	7
5. Dump Truck	10	15	25
6. Asphalt Distributor	-	2	2
7. Water Truck	2	3	5
8. Station Wagon	2	1	3
9. Pick-up Truck	2	4	6
10. Grease Unit	2	4	6
11. Rock Crusher	-	1	1
12. Traxcavator	-	1	1
13. Air Compressor	-	1	1
14. Drill Wagon	-	1	1
15. Balsting Machine	-	1	1
16. Tool Set	2	4	6
17. Spare Parts	for 2 years service	For 2 years service	For 2 years service

CHAPTER 5

PROJECT EVALUATION AND CONCLUSION



CHAPTER 5 PROJECT EVALUATION AND CONCLUSION

The ERA under the Ministry of Public Works and Urban Development is carrying out the maintenance and rehabilitation of all national road network (11,524 km), and proceeding the road maintenance project with top priority among the ERRP. The road maintenance in Shashemene and Dire Dawa Road Districts is placed as the urgent project (Asphalted roads 1,073 km, Gravel roads 1,504 km, Total 3,577 km). However, most of the road equipment in these two districts have become obsolete or not repairable due to no spare parts. Thus, this Project by providing the road maintenance equipment is very worthwhile. This will make it possible for both Shashemene and Dire Dawa Road Districts to proceed road maintenance of the total 3,577 km.

The implementation of this Project will promote the road maintenance project in the ERRP, make a smooth transportation of major farm products (Coffee, Beef, etc.) and relief cargo for the draught affected areas.

This Project will make a great effect and contribute to improving the life standard of many people in Ethiopia, the implementation of the Project will be justified and recommended to be executed as soon as possible under the Japan's Grant Aid.

ERA has the sufficient capability of conducting routine and periodic maintenance for the project equipment after introduced, and plans to provide an enough budget and strength for carrying out road maintenance using the project equipment. Therefore, the project will be successfully implemented and the equipment will be effectively used.

APPENDIX



APPENDIX -1

List of members of Survey Team

<u>Name</u>	<u>Designation</u>	<u>Title</u>
Mr. Noriaki KUMAI	Team Leader	Deputy Director General, Construction Machinery Engineering Center, Hokkaido Development Bureau, Hokkaido Development Agency
Mr. Yuki ARATSU	Project Coordinator	Second Basic Design Study Div., Grant Aid Study & Design Dept., Japan International Cooperation Agency (JICA)
Mr. Yoichi HIGAKI	Road Development Planner	Construction Project Consultants, Inc.
Mr. Tsuneo YOSHINO	Construction Equipment Planner (1)	Construction Project Consultants, Inc.
Mr. Takashi ISAKARI	Construction Equipment Planner (2)	Construction Project Consultants, Inc.

APPENDIX -2

Survey Schedule

Date	Place	Description	Attendants (Main)
Aug. 25 (Tue)	A.A. (Addis Ababa)	<ul style="list-style-type: none"> • Courtesy call to Embassy of Japan • JICA • Ministry of External Economic Cooperation (MEEC) • Ministry of Public Works and Urban Development (MPWUD) 	Mr. Takase Mr. Imaya Mr. Sakata Mr. Israel Mr. Geremew Mr. Aragaw Mr. Mengistic
Aug. 26 (Wed)	A.A. (ERA)	<ul style="list-style-type: none"> • Meeting with ERA (Ethiopian Roads Authority) 	Mr. Mengistic Mr. Teferra Mr. Getahun
Aug. 27 (Thu)	Alem Gena	<ul style="list-style-type: none"> • Visiting Alem Gena Dist. Garage, and Training Center 	Mr. Fekachu Mr. Getahun
Aug. 28 (Fri)	AA (ERA)	<ul style="list-style-type: none"> • Meeting with Districts Managers 	Mr. Gebeyehu Mr. Fisseha
Aug. 29 (Sat)	A.A.	<ul style="list-style-type: none"> • Visiting Central Garage 	Mr. Amanuel
Aug. 30 (Sun)	A.A.	<ul style="list-style-type: none"> • Analyzing Data 	
Aug. 31 (Mon)	A.A. (ERA)	<ul style="list-style-type: none"> • Meeting with ERA 	Mr. Getahun Mr. Gebeyehu Mr. Fisseha Mr. Ukgaber
Sept. 1 (Tue)	A.A. (ERA)	<ul style="list-style-type: none"> • Meeting with Districts Manager 	Mr. Getahun Mr. Gebeyehu Mr. Fisseha Mr. Ukgaber
Sept. 2 (Wed)	A.A. (ERA)	<ul style="list-style-type: none"> • Meeting on Minutes of Discussion 	Mr. Mengistic Mr. Tesfaye Mr. Getahun Mr. Ukgaber
	A.A. (MEEC)	<ul style="list-style-type: none"> • Meeting on Minutes of Discussion 	Mr. Geremew Mr. Mengistic

Date	Place	Description	Attendants (Main)
Sept. 3 (Thu)	A.A. (MEEC)	• Meeting on Minutes of Discussion	MEEC & ERA concerned
	A.A. (MEEC)	• Signing Minutes of Discussion	(Ethiopian side) Mr. Geremew Mr. Mengistie Mr. Ukgababer Mr. Yeshitila Ms. Abekawerk (Japanese side) Mr. Kumai Mr. Aratsu Mr. Higaki Mr. Yoshino Mr. Isakari Mr. Ohta Mr. Jin
Sept. 4 (Fri)	Mojo	• Visiting Crusher Plant in Mojo	Mr. Solomon
Sept. 5 (Sat)	A.A.	• Visiting Central Warehouse	Mr. Abaye
Sept. 6 (Sun)	A.A.	• Analyzing Data	
Sept. 7 (Mon)	A.A. (ERA)	• Meeting on Equipment Specification and Manual	Mr. Ukgababer Mr. Amha
Sept. 8 (Tue)	A.A. (ERA)	• Meeting on General Data	Mr. Ukgababer
	A.A.	Courtesy call • ERA • Embassy of Japan • JICA Office	Mr. Keleta Mr. Imaya Mr. Jin

APPENDIX -3

List of the Person Interviewed

<u>Name</u>	<u>Title</u>
• Embassy of Japan; Mr. Shoichi TAKASE Mr. Katsuhiro IMAYA Mr. Katsumi KOBAYASHI Mr. Tomio OHTA	Ambassador Councilor First Secretary Second Secretary
• JICA Ethiopia Office; Mr. Takeho SAKATA Mr. Kimiaki JIN	Head Staff
• Ministry of External Economic Cooperation (MEEC); Mr. Israel Kidanemanam Mr. Geremew Getahun Ms. Abebawerk Abebe Mr. Yeshitile Amare	Vice Minister Head, Department of Americas and Asia Junior Officer Officer
• Ministry of Public Works and Urban Development (MPWUD); Mr. Aragawa Triruneh Mr. Haile Assegid Mr. Kebde Tessema Mr. Ediris Hussein	Minister (Predecessor) Minister (Successor) Vice Minister Economist
• Ethiopian Roads Authority (ERA); Mr. Keleta Tesfamichal Mr. Mengiste Gebrehiwot Mr. Teferra Mangasha Mr. Tesfaye Molla Mr. Getahun Tsegaye Mr. Ukbagaber Tesfamichael Branch Mr. Gebeyehu Meseret Mr. Fisseha Tafesse Mr. Fekache Abayneh Mr. Sebsibe Kebede Mr. Major Borgane Mr. Mengitsu Haile Mr. Amha Alem	General manager Acting General Manager Manager, Planning & Programming Div. Manager, Supply & Equipment Div. Manager, Operations Div. Chief, Programming & Budgeting Manager, Dire Dawa District Manager, Shashemene District Manager, Alemgena District Foreman II, Dire Dawa Equipment Foreman II, Shashemene Equipment Engineer, Planning & Programming Engineer, Equipment
(Equipment Branch - Central Garage) Mr. Amanuel Demissie	Supervisor, Component Rebuild Shop
(Alemgena District - Mojo Section) Mr. solomon boloy	Foreman, Quarry, Crusher Plant
(Parts & Supplies Branch - Central Warehouse) Mr. Abaye Teferri Mr. Woldesenbet	Parts & Supplies Chief Stock Supervisor

MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY ON THE PROJECT FOR PROVISION
OF ROAD MAINTENANCE EQUIPMENT FOR SHASHEMENE AND
DIRE DAWA DISTRICTS IN ETHIOPIA

In response to the request from the Transitional Government of Ethiopia, the Government of Japan decided to conduct a basic design study on the Project for providing Road Maintenance Equipment for Shashemene and Dire Dawa Districts (hereinafter referred to as the " Project "), and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Ethiopia a study team, which is headed by Mr. Noriaki KUMAI, Deputy Director General, Construction Machinery Engineering Center, Hokkaido Development Bureau, Hokkaido Development Agency, and is scheduled to study in the country from August 25 to September 8, 1992.

The team held discussions and conducted a field survey. Both parties have confirmed the main items described on attached sheets. The team will proceed to further works and prepare the Basic Design Study report.

Addis Ababa, September 3, 1992



Mr. NORIAKI KUMAI
Leader
Basic Design Study Team
JICA



Ato. GEREMEW GETAHUN
Head, Department of Americas
and Asia
Ministry of External Economic
Cooperation



Ato. MENGISTIE GEBREHIWOT
Acting General Manager
Ethiopian Roads Authority

ATTACHMENT

1. OBJECTIVE

The objective of the Project is to provide necessary road maintenance equipment for Shashemene and Dire Dawa Districts.

2. PROJECT SITES

(1) Shashemene District

(2) Dire Dawa District

(Administration area of both Districts are

shown in Annex-1)

3. RESPONSIBLE ORGANIZATION, EXECUTING ORGANIZATION

(1) Ministry of External Economic Cooperation(MEEC) shall serve as the focal point for facilitating the Project implementation, on condition that the Japan's Grant Aid is extended to the Project.

(2) Ethiopian Roads Authority(ERA) of Ministry of Public Works and Urban Development is responsible for the procurement of the equipment, the use and maintenance thereof procured under the Grant.

4. ITEMS REQUESTED BY THE TRANSITIONAL GOVERNMENT OF ETHIOPIA

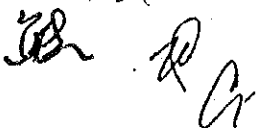
The list of major items requested by the Ethiopian side is shown in Annex-2. Each item was selected based upon the machinery component standard of work unit designed by ERA.

However, the final components of the Project will be decided after further studies in Japan.

5. JAPAN'S GRANT AID SYSTEM

(1) The Transitional Government of Ethiopia has understood Japan's Grant Aid system explained by the team.

(2) The Transitional Government of Ethiopia will, in accordance with the laws and regulations, take necessary measures, described in Annex-3 for smooth implementation of the Project, on condition that the Grant Aid Assistance by the Government of Japan is extended to the Project.



6. SCHEDULE OF THE STUDY

- (1) The consultants will proceed to further study in Ethiopia until September 8, 1992.
- (2) Based on the Minutes of Discussions and technical examination of the study results, JICA will complete the final report and will send it to the Transitional Government of Ethiopia by the end of December, 1992.

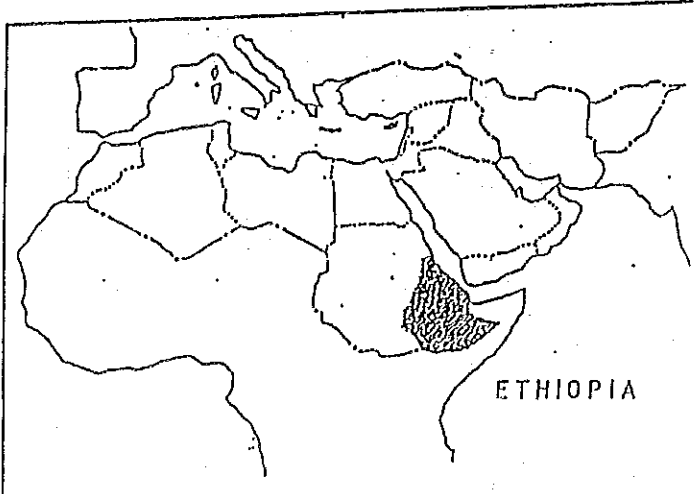
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ANNEX-1 ADMINISTRATION AREA MAP



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ANNEX-2

LIST OF EQUIPMENT REQUESTED BY THE
TRANSITIONAL GOVERNMENT OF ETHIOPIA

No.	Equipment	Gravel Unit		Asphalt Unit		Quarry		Total
		D.Dawa G1	Shashe. G1	D.Dawa G2	Shashe. A1	D.Dawa A1	Shashe. A1	
1.	BULLDOZER, 200HP	0(+1)	0(+1)	0	-	-	-	0(+2)
2.	MOTORGRADER 135 HP	3	3	0(+3)	0	1	-	7(+3)
3.	WHEEL LOADER 130 HP	1	1	0(+1)	0(+1)	1	-	3(+2)
4.	VIBRATORY ROLLER, 8 TON	0	0	0	0(+1)	2	-	2(+1)
5.	DUMP TRUCK, 7M3	5	5	0(+5)	0(+4)	4	2	16(+9)
6.	ASPHALT DISTRI- BUTOR, 6000 L.	-	-	-	0(+1)	1	-	1(+1)
7.	WATER TANK TRUCK 13000 L.	1	1	0(+1)	0	0	-	2(+1)
8.	STATION WAGON S.B.	1	1	0	-	-	-	2
9.	PICK-UP TRUCK W. CABIN	1	1	0(+1)	0(+1)	1	1	4(+2)
10.	GREASE UNIT SKID	1	1	0(+1)	0(+1)	1	1	4(+2)
11.	ROCK CRUSHER 50 T/H	-	-	-	-	-	1	1
12.	TRAXCAVATOR 200 HP	-	-	-	-	-	1	1
13.	AIR COMPRESSOR 17 M3/M	-	-	-	-	-	1	1
14.	WAGON DRILL, 4.5 T	-	-	-	-	-	1	1
15.	BLASTING MACHINE	-	-	-	-	-	1	1
16.	TOOL SET, HD	1	1	1	0(+1)	1	1	5(+1)
17.	SPARE PARTS	20% of units amount						

NOTE: The numbers in (+) mean the additional number of machines necessary for strengthening the road work force for gravel road maintenance in Shashemene and asphalt road maintenance in D.Dawa.

ANNEX-3

The Transitional Government of Ethiopia may, where the laws and regulations permit, take necessary measures as stipulated below in case Japan's Grant Aid is extended to the Project.

1. to ensure prompt unloading and customs clearance at the Port of Asseb in Ethiopia and to bear the cost of internal transportation of the products under the Grant from the Port to the Project sites;
2. to exempt Japanese nationals from or bear the cost of customs duties, internal taxes and other fiscal levies which may be imposed in Ethiopia with respect to the supply of the products and services under the Verified Contracts financed by the Grant Aid;
3. to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts such facilities as may be necessary for their entry into Ethiopia and stay therein for the performance of their work;
4. to ensure that each road maintenance equipment under the Grant be maintained and used properly and effectively; and
5. to bear all the expenses, other than those covered by the Grant, necessary for the Project.

B *R*
G.P.

JICA