ETHIOPIAN KAIZEN INSTITUTE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

THE ADDITIONAL PREPARATORY SURVEY FOR THE PROJECT ON CONSTRUCTION OF TICAD HUMAN RESOURCE DEVELOPMENT CENTER FOR BUSINESS AND INDUSTRY IN FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

DECEMBER 2017

JAPAN INTERNATIONAL COOPERATION AGENCY

NIPPON KOEI CO., LTD. KOEI RESEARCH & CONSULTING INC.



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PREFACE

Japan International Cooperation Agency (JICA) decided to conduct the additional preparatory survey and entrust the survey to the Consortium consist of Nippon Koei Co., Ltd. and Koei Research & Consulting Inc.

The survey team held a series of discussions with the concerned officials of the Government of Federal Democratic Republic of Ethiopia, and conducted field investigations. As a result of further studies in Japan, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

Finally, I express my sincere appreciation to the concerned officials of the Government of Federal Democratic Republic of Ethiopia for their close cooperation extended to the survey team.

December, 2017

Toshiyuki Nakamura Director General, Industrial Development and Public Policy Department Japan International Cooperation Agency

SUMMARY

1. Outline of the Country

(1) National Land and Nature

Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia") has a population of 102.4 million (It is a landlocked country surrounded by six countries, namely, Djibouti, Eritrea, Sudan, South Sudan, Kenya and Somalia. Ethiopia's land area is 1,097,000 km². The capital is Addis Ababa, which is located in the central area. It has approximately 310 million of population, and is the center of economy, social activities and administration. The project site of TICAD Human Resource Development Center for Business and Industry, and the headquarter of the counterpart, Ethiopian kaizen Institute (hereinafter referred to as "EKI"), are located 6 km west-northwest of Addis Ababa International Airport.



Figure1 Ethiopia Country and Addis Ababa City Map

(2) National Economy

For continuous 8 years, from 2004 to 2011, economic growth has reached over 10%. Then 10.30% in 2014 and 10.41% in 2015, it has reached over 10% again. In 2017, it is expected 8.46% growth. (2017, IMF)

Gross National Income (GNI) of Ethiopia is USD67,500 million and per-capita GNI is USD660 (2016, World Bank). According to composition of GDP, Ethiopian industry consists of 37.9% in Agriculture and Fishery, 1.1% in Mine, Electric, Gas, Water, Thermal industry, 3.8% in Manufacturing, 10.1% in Construction, 18.1% in Merchandise, Restaurant, Hotel and 4.3% in Transport, Warehouse, Communication and 18.3% in others. (2015, UN National Accounts DB)

Government of Ethiopia targets to become a middle-income country by shifting their economic structure to manufacturing-based economic with raising agriculture. On the other hand, per-capita GNI in Ethiopia is USD660 and it is level of poorest countries. In addition to chronic food shortage, high economic growth caused inflation (inflation ratio: 9.5%, 2016). World financial crisis also influences the economy obviously.

2. Background and Outline of the Project

(1) Upper Level Plan

In Federal Democratic Republic of Ethiopia, the economic growth during 2007-2016 has been remarked average 10.2 %. It is quite obvious growth but its poor industrial structure due to the delay of the private sector development makes the country poor competitiveness. The weakness of the economic structure is seen in the fact that the second industry's proportion in GDP is 16.3%. (UN National Accounts DB, 2015) To solve the issue, the government of Ethiopia expressed in the Growth and Transformation Plan (GTP: 2010-2014, GTP2: 2015-2020) that they will shift from the Agriculture based economic to the manufacturing based economic. As the concrete policy, the Ethiopian government focus on the human development through

"KAIZEN (Japanese method and policy to the quality and productivity upgrade), in addition to the implementation of the economic infrastructure and promotion of Foreign Direct Investment.

In the country assistance strategy paper to Ethiopia (April 2012) mentions the importance of the private sector development and it says that "To realize the Ethiopian five-year development plan, it is necessary to reinforce the related policy framework, upgrade the private manufacturing competitiveness, job creation and foreign direct investment. In such point of view, execution of the policy dialogue and cooperation to the private sector development through the spread of KAIZEN." This project matches the policy.

(2) Current Condition and Problem Related to the Project

Ethiopian Kaizen Institute (hereinafter referred to as "EKI") was established in 2011 and it has its head office in private buildings for rent in the west Lideta Sub-city, which consists of two buildings; the main building (Total floor area: $1,354 \text{ m}^2$) has five above-ground and one underground stories and the annex building (Total floor area: 278 m^2) has two above-ground and one underground stories. The use of the buildings had been changed from an apartment, the original use, to EKI's office and the area of a floor is as small as 150 m^2 for the office use. The main building has 6 multiple stories but the only elevator installed in the building is out of order, that causes the inconvenience for going up and down in the building. Furthermore, the plan of the buildings is designed based on the use for EKI's head office and work space for trainers. The buildings have a conference room which can seat around 100 people but no other room for training or holding seminars.

Trainers has ever visited target organizations and companies to hold trainings and most of them have been held around Addis Ababa, that has been an obstacle for it to promote Kaizen training to all over Ethiopia in accordance with Growth and Transformation Plan II (2016-2020) (GTPII). In addition, the number of staffs is assumed to increase due to expansion of Kaizen activities and function of EKI's Head office, that results in demand for construction of new building for them.

Under such conditions, EKI requested for construction of its new head office building composed of functions for training center and head office by means of Japanese Grant Aid based on the decision by Ethiopian Government, that allocates 200-meter distant and governmentally –owned area (Total area: approximately 3,700 m²) in southwest of EKI's current office as the site for construction of EKI's new building.

A technical assistance project for EKI was launched in 2009 and it is currently being conducted. In this project, EKI published "Past Record and Future Plan prepared for JICA Mission" in cooperation with experts in 2015, that includes EKI's activity plan for the period till 2020. The Project concerned is also planned based on the technical assistance project.

3. Outline of the Survey / Contents of the Project

(1) Period of Dispatch

Study Team was dispatched to Site survey from 23rd July 2017 to 18th August. And from 17th November 2017 to 24th November, Study team was dispatched to explain outline design and present draft report.

(2) Requested Item and Studied Item

Ethiopia's initial request was as listed in the following Table;

Item	Quantity
①TICAD Human Resource Development Center for Business and Industry	1 set
(Office room, Lodging room, Library, Conference room, Hall)	1 set
②Equipment	1 set
Desk	1 set
Chair	1 set
AV Equipment	1 set
Photocopy machine	1 set
LAN system	1 set
Video conference system	1 set
3Consulting service	1 set
(4)Soft component	1 set

Table1	Req	uested	Item	by	Ethiop	ia
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Source: JICA Study Team

The result of discussion with Ethiopia at site, the scope of the Project is as follows;

1) TICAD Human Resource Development Center for Business and Industry (hereinafter referred to as "the center")

Outline of buildings that compose the center is as shown in the following Table.

	Training & Administration Bld.	Accommodation Bld.
Function/ blocks	Training, administration, welfare (first aid), public (entrance lobby, exhibition), service/car parking (car parking, garbage stock, electrical room), common space	Accommodation, welfare (cafeteria, kitchen), public (reception, entrance hall), service/car parking (car parking, laundry, machine room), common space
No. of stories	Basement 1F, G+5 stories	Basement 1F, G+5 stories
Building area (ground floor)	910.50 m ²	569.28 m ²
Total floor area	5,516,30 m ²	2,979.33 m ²

Table2	Outline	of Planned	Buildings

Source: JICA Study Team

2) Equipment

Outline of equipment is as shown in the following Table.

No,	Equipment	Q'ty	Intended Use
1	Electrical Display for Exhibition	2	To use display and public information of KAIZEN training at entrance hall
2	Computer Server	1	To use for exchange of data and information with network connection of PC
3	UPS for Computer Server	1	To use for power backup of Computer Server
4	(Vacant Number)		
5	Video Conference System	1	To use for training with connecting between EKI and regional human resource center
6	Presentation System for Auditorium	1	To use for training with displaying teaching material and others at Auditorium
7	Printing machine	2	To use for prepare teaching materials of training
8	Photocopy Machine	3	To use for copy of teaching document of training
9	Presentation Equipment for Training room	46	Trainees and staffs use at raining room
10	(Vacant number)		
11	Maid Wagon	3	To use cleaning of the accommodation room
12	Linen cart	3	To use laundry
13	Desk with drawers on both sides	5	Desk for high class staff
14	Chair with arm rest	5	Ditto
15	Desk with drawers on one side	155	Desk for staff
16	Chair	155	Ditto
17	File Cabinet	31	To use store documents of office
18	Browsing Table	2	To use the table for reading books in library corner
19	Chair for browsing	8	Ditto
20	Book Shelf	6	To use at the library corner
21	Magazine rack	1	ditto
22	Folding table for Auditorium	40	To use at the Auditorium
23	Chair for Auditorium	120	Ditto
24	Table for training room	284	To use training of Trainees
25	Chair for training room	284	Ditto
26	File cabinet for training room	24	To use store equipment and documents of training room
27	Meeting table for TV meeting room	8	To use at the TV conference room
28	Chair for TV meeting room	16	Ditto
29	Meeting table	14	To use at the meeting room
30	Chair for meeting room	28	Ditto
31	Dining table	20	To use at the cafeteria
32	Dining chair	80	Ditto
33	Single bed	60	To use at the accommodation room
34	Desk for logging room	57	Ditto
35	Chair for logging room	57	Ditto
36	Wardrobe	57	Ditto
37	Chest	57	Ditto
38	Chair carrier	4	To use the storage of chairs

Table3	Outline	of Planned	Equi	pment
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Source: JICA Study Team

(3) Position of the Project

Scope of the Japanese assistance are construction of EKI's Head office, training center and accommodations, Equipment procurement and Soft component. Construction site was allocated by Ethiopian Government in response to EKI's request. The site is suitable location because the accessibility and the infrastructures are good conditions. On the other hand, the land area is narrow and the ground condition is poor. Those weakness need to be covered by technical solution. Volume of the building will be designed by the onsite survey based on the Growth Transformation Plan 2(GTP2) and Past Records and Future Plan for JICA Mission prepared by EKI.

1) Policy to the volume setting

By examining EKI's training plan carefully, training rooms and lodging rooms for trainees shall be determined in accordance with the size of facility necessary to accommodate training to be provided. For a workplace of the EKI staff members, an office room and other required rooms shall be determined based on the number of planned sections and staff members. The facility plan assumes the commencement of operation in 2020, with an estimate of the facility size to meet a capacity required in 2023.

2) Detailed facility planning policies

The facility is designed in accordance with the following policies.

- Tailored to the local circumstances and pursuant to the standards for a facility design in Ethiopia, EU Standards, British Standards, and the design standards in Japan shall be applied, where appropriate.
- A foundation structure shall be designed based on findings of the ground survey.
- The design shall incorporate a construction method that is appropriate to the local circumstances related to construction in Ethiopia.
- The design shall be suitable to highlands of 2,300 meters above the sea level and a relatively arid climate condition. It should be also noted that the rainy season may have a monthly precipitation of more than 300 mm.
- Parking space shall be provided in accordance with the architectural standards in Ethiopia.
- The design shall take into account of the fact that the project site is located on the sloping ground with a notable difference of elevation (4 meters in the north-south direction and 2.5 meters in the east-west direction).
- The difference in level along the site boundary shall be provided with retaining walls and slope protection.
- Traffic safety shall be ensured at entrance for persons and vehicles.
- · Access of disabled people to the facility shall be ensured.
- Rooms shall be designed in line with how Kaizen training is implemented.
- The facility shall be planned to serve broadly for citizens.
- The facility shall be designed taking its maintenance into account.
- The facility shall be designed taking into account of energy saving and environment to reduce the costs of operations and maintenance.
 - 3) Policy of selecting equipment

Equipment is selected in accordance with the following policies.

- Equipment shall meet the objective of the Project.
- Equipment shall meet the purposes of training at EKI.
- Equipment requires low maintenance.
- Specifications shall be appropriate for the objective of the Project.
- Specifications shall be suitable for technical levels maintained in Ethiopia.
- · Specifications shall be cost-effective and have competitiveness in procurement.

- The quantity of equipment shall meet the minimum requirements.
- Equipment shall be easily procured.

4. Construction period and Cost Estimation of the Project

Necessary period for implementation of the Project are 8.0 months for detailed design and Tendering, 20.0 months for construction of the center and installation of equipment. Including soft components required period is 34.5 months in total. Project cost of Ethiopian side is estimated ETB 8,140,000.

5. Project Evaluation

(1) Relevance

In view of the above, it is judged that the project is appropriate for technical assistance project, by using Japanese grant aid.

1) Object suitability

This project aims to construct the new building and procure equipment which can follow EKI's future expansion of its Kaizen activities.

The construction of new building and improvement of EKI's function such as its head office and training center have high suitability in view of contribution to improvement of quality and productivity and human resource development in Ethiopia.

2) Benefit target

EKI is only an organization which conducts and promotes Kaizen activities in Ethiopia. The construction of the new building and procurement of equipment supports expansion of its activities and provides benefits human resource development in the future in Ethiopia.

3) Purpose of the project

EKI has currently its head office in private buildings for rent in Addis Ababa City. The use of the buildings had been changed from an apartment, the original use, to EKI's office and the area is not enough for the office use. Furthermore, the plan of the buildings is designed based on the use for EKI's head office and work space for trainers. The buildings do not have enough rooms for training or holding seminars. In addition, the number of staffs is currently assumed to increase due to expansion of Kaizen activities and function of EKI's Head office, that results in demand for construction of new building for them.

This project aims to contribute improvement of EKI's function such as its head office and training center to development of human resource in Ethiopia by construction of the new building and procurement of equipment which can follow EKI's future expansion of its Kaizen activities.

4) Mid- and Long-term Policies to Ethiopia

The Ethiopian government supports the necessity to improve quality and productivity in the 2nd Growth and Transformation Plan (GTP2). EKI, as the implementation organization, submitted "the Past Record and Future Plan prepared for JICA Mission" to JICA, which consists of its future plan regarding content of activity and organization system. This project corresponds to these policies.

The "Country Assistant Policy to Ethiopia" decides that the development of private sector, including promoting Kaizen activities, is one of priorities. This project corresponds to the policy.

(2) Effectiveness

1) Quantitative Effect Indicators

The quantitative effect indicators' target year is settled in 2023; three years after completion of the construction. By the social, economic, and technical results of this survey, the quantitative effect indicators are shown in the following Table.

In the upper row in the following table shows the direct effect which will be achieved by training for keypersons at EKI head office and in the lower row shows overall effect which will be achieved by those activities in whole country.

Indicator	Base (2017)	Target (2023) (3 years after completion of construction)
Number of trainees at EKI Center	0	660
Number of trainees at EKI Center and the whole region	28,593	50,600

Table4 Quantitative Effect Indicators

Source: JICA Study Team

2) Qualitative Effect Indicators

The qualitative effect indicator of the project is shown below:

- · Improve EKI's capacity for human resource development.
- Contribute the improvement of quality and productivity in Ethiopia.

Preface

Summary

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Location Map of Construction Site for TICAD Human Resource Development Center for Business and Industry



Visuals of TICAD Human Resource Development Center for Business and Industry

Photo (1 / 2)



Photo-1 : Appearance of EKI Headquarter Building It has one underground and six above-ground stories. The structure is reinforced concrete.



Photo-2 : Office Room for DG, EKI Headquarter A desk, a chair, book shelves, a printer and sofa set are equipped.



Photo-3 : EKI Headquarter 3rd floor. Office Room for Capacity Building Sector. Office desks, chairs, printers, etc. are equipped.



Photo-4 : Training Room, EKI Headquarter, 5th floor Desks and chairs for trainees, a projector and a screen are equipped.



Photo-5 : Cafeteria (Roof Floor), EKI Headquarter Space on the roof floor is used as a cafeteria. Tables and chairs are equipped.



写真-6: EKI Headquarter Entrance Hall. Photo of Kaizen activities and posters are exhibited.

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Photo-7: Photo form north side there is high way with heavy traffic on south side.



Photo-8 : Construction site after removal of former warehouse. Partially remains concrete foundation and debris



Photo-9 : Construction site view from opposite side of the road. Project site has a gap of level with the sidewalk.



Photo-10 : East View from south of construction site. There are Hotel and residence in east.



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Abbreviations (1 / 4)

Abbreviation	Meaning
AASHTO	American Association of State highway and Transportation Officials
A/P	Authorization to Pay
AAEPA	Addis Ababa Environmental Protection Authority
AAiT	Addis Ababa Institute of Technology
AAU	Addis Ababa University
AAWSA	Addis Ababa Water and Sewage Authority
AC	Alternating Current
ADD	Addis Ababa Airport
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASTM	American Society for Testing/Material
B/A	Banking Arrangement
BD	Basic Design
ВН	Borehole
BS	British Standard
BS EN	British European Standard
CIP	Carriage and Insurance Paid to
C/RKI	City and Regional KAIZEN Institute
CRT	Class Room Training
CSA	Central Statistical Agency of Ethiopia
CSU	Ethiopian Civil Service University
DAC	Development Assistance Committee
DD	Detail Design
DDG	Deputy Direcor General
DG	Director General
DRMTI	Disaster Risk Management Training Institute
EC	Ethiopian Calendar Year
E/N	Exchange of Note
EBSC	Ethiopian Building Code Standard
EELPA	Ethiopia Electrical Light and Power Authority
EIA	Environmental Impact Assessment
EKI	Ethiopian KAIZEN Institute
EMI	Ethiopian Management Institute
EMoP	Environmental Monitoring Plan
EMP	Environmental Management Plan
EoJ	Embassy of Japan in Ethiopia
ERA	Ethiopian Road Transport Authority

Abbreviations (2 / 4)

Abbreviation	Meaning
ERCA	Ethiopian Revenues and Customs Authority
ETB	Ethiopia Birr
ETC	Ethiopia Telecommunication Corporation
EU	European Union
EUR	Euro
EV	Elevator
EVS	Elevator Shaft
FDI	Foreign Direct Investment
FEPA	Federal Environmental Protection Authority
FEPRA	Fire and Emergency Prevention and Rescue Authority
FOB	Free on Board
FRP	Fiber-Reinforced Plastics
FY	Fiscal Year (Japanese)
G.C	Grobal Calender
G/A	Grant Agreement
GDP	Gross Domestic Product
GTP	Growth and Transformation Plan
GTP 2	2nd Growth and Transformation Plan
HND	Haneda Airport
HQ	Headquarter
ICT	In Company Training
IDF	Intermediate Distribution Frame
IEC	International Electrotechnical Commission
IGSSA	Institute of Geophysics, Space Science and Astronomy
IMF	International Monetary Fund
IPDC	Industrial Parks Development Corporarion
IT	Information Technology
JASS	Japanese Architectural Standard Specification
ЛСА	Japan International Cooperation Agency
ЛS	Japanese Industrial Standard
JPY	Japanese Yen
KHz	Kilo Hertz
KOICA	Korea International Cooperation Agency
КРТ	Kaizen Promotion Team
LAN	Local Area Network
LED	Light Emitting Diode

Abbreviations (3 / 4)

Abbreviation	Meaning						
LGS	Light Gauge Steel						
LME (s)	Large and Medium-sized Enterprises						
LPG	Liquefied Petroleum Gas						
M/D	Minutes of Discussion						
M/M	Man-month						
MDF	Main Distributing Frame						
MDG(s)	Millennium Developmet Goal(s)						
MHz	Aega Hertz						
MoE	Ministry of Education						
MoFEC	Minister of Finance and Economic Cooperation						
MoFED	Ministry of Finance and Economic Development						
MoI	Ministry of Industry						
MoPSHRD	Ministry of Public Service and Human Resource Development						
MoUDHC	Ministry of Urban Development Housing & and Construction						
MoWCYA	Ministry of Women, Children and Youth Affairs						
MSc	Master of Science						
MSE (s)	Micro and Small-sized Enterprises						
N/A	Not applicable						
NFPA	National Fire Protection Association						
NGO	Non Government Organization						
NMAE	National Meteorology Agency of Ethiopia						
NRT	Narita Airport						
OA	Office Automation						
ODA	Official Development Assistance						
OECD	Organisation for Economic Co-operation and Development						
OJT	On the Job Training						
PC	Personal Computer						
РН	Penthouse						
PhD	Doctor of Philosophy						
PPE	Public Procurement Enterprise						
PS	Pipe Space						
QC	Quality Control						
R/D	Record of Discussion						
SME (s)	Small and Medium-sized Enterprise						
SNNPR	Southern Nations, Nationalities, and Peoples' Region						
SPT	Standard Penetration Test						

Abbreviations (4 / 4)

Abbreviation	Meaning
T/M	Technical Memorandum
TICAD V	Tokyo International Conference on African Development V
TOR	Terms of Reference
TV	Television
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
UPS	Uninterruptible Power Supply System
USA	United States of America
USAID	United States Agency for International Development
USCS	Unified Soil Classification System
USD	United States Dollar
VAT	Value Added Tax
WHO	World Health Organization
WTO	World Trade Organization

In this report, Gregorian calendar year and the Ethiopian year are written in correspondence as follows. Description of "2017", it means Gregorian calendar year. When it is written" 2010EC " it means Ethiopian year which is start form September 11th to September 10th in normal year. If it is necessary to describe Gregorian calendar year in consideration of Ethiopian Calendar, it is expressed as "2017/2018". "FY" means Japanese Fiscal Year. The Ethiopian fiscal year begins July 8 and end July 7.

-		-		
Gregoria	ın caler	ndar year	Ethiopian year	Description of Gregorian calendar year
September 11, 2012	-	September 10, 2013	2005EC	2012/2013
September 11, 2013	-	September 10, 2014	2006EC	2013/2014
September 11, 2014	-	September 11, 2015	2007EC	2014/2015
September 12, 2015	-	September 10, 2016	2008EC	2015/2016
September 11, 2016	-	September 10, 2017	2009EC	2016/2017
September 11, 2017	-	September 10, 2018	2010EC	2017/2018
September 11, 2018	-	September 11, 2019	2011EC	2018/2019
September 12, 2019	-	September 10, 2020	2012EC	2019/2020
September 11, 2020	-	September 10, 2021	2013EC	2020/2021
September 11, 2021	-	September 10, 2022	2014EC	2021/2022
September 11, 2022	-	September 11, 2023	2015EC	2022/2023
September 12, 2023	-	September 10, 2024	2016EC	2023/2024
September 11, 2024	-	September 10, 2025	2017EC	2024/2025

Correspondence table between Gregorian calendar year and Ethiopian year

Source: JICA Study Team

CHAPTER 1 BACKGROUND OF THE PROJECT

CHAPTER 1: BACKGROUND OF THE PROJECT

1.1 Background of Request for Grant Aid

Ethiopian Kaizen Institute (hereinafter referred to as "EKI") was established in 2011 and it has its head office in private buildings for rent in the west Lideta Sub-city, which consists of two buildings; the main building (Total floor area: 1,354 nf) has five above-ground and one underground stories and the annex building (Total floor area: 278 nf) has two above-ground and one underground stories. The use of the buildings had been changed from an apartment, the original use, to EKI's office and the area of a floor is as small as 150 m^2 for the office use. The main building has 6 multiple stories but the only elevator installed in the building is out of order, that causes the inconvenience for going up and down in the building. Furthermore, the plan of the buildings is designed based on the use for EKI's head office and work space for trainers. The buildings have a conference room which can seat around 100 people but no other room for training or holding seminars.

Trainers has ever visited target organizations and companies to hold trainings and most of them have been held around Addis Ababa, that has been an obstacle for it to promote Kaizen training to all over Ethiopia in accordance with Growth and Transformation Plan II (2016-2020) (GTPII). In addition, the number of staffs is assumed to increase due to expansion of Kaizen activities and function of EKI's Head office, that results in demand for construction of new building for them.

Under such conditions, EKI requested for construction of its new head office building composed of functions for training center and head office by means of Japanese Grant Aid based on the decision by Ethiopian Government, that allocates 200m distant and governmentally –owned area (Total area: approximately 3,700 m²) in southwest of EKI's current office as the site for construction of EKI's new building.

A technical assistance project for EKI was launched in 2009 and it is currently being conducted. In this project, EKI published "Past Record and Future Plan prepared for JICA Mission" in cooperation with experts in 2015 that includes EKI's activity plan for the period till 2020. The Project concerned is also planned based on the technical assistance project.

1.2 Natural Conditions

1.2.1 Climate

The climate conditions in Addis Ababa, the capital of Ethiopia, are shown in the following Table. Addis Ababa is generally dry and featured by a cool highland climate. The dry season lasts from October to May, and the rainy season, from June through September. Four months in the dry season have rainfalls, known as the minor rainy season. The temperature is highest in March, with an average temperature of 26.7°C during 2012-2015. December is marked by the lowest temperature, approximately 8.6°C on average for the last four years. As for precipitation, the rainy season from June through September has 100 to 300mm. Humidity in the rainy season marks highest from 60 to 70% in June through September, and the remaining period has 40 to 60%. Wind velocity is low throughout the year.

Table 1-1Mean Temperature, Humidity, Precipitation, and Wind Velocity in Addis Ababa
(from 2012-2015)

(1011 2012 2010)												
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Mean Max. Temp. (°C)	24.4	26.1	26.7	25.9	25.2	23.8	21.7	21.1	22.6	23.7	24.3	23.9
Mean Min. Temp. (°C)	9.5	10.7	12.2	13.1	13.3	12.6	12.1	12.8	11.8	11.1	9.4	8.6
Mean Humidity (%)	47.1	43.2	45.4	50.5	54.1	62.2	73.1	75.7	68.0	52.2	50.3	47.8
Mean Precipitation (mm)	13.2	11.9	41.6	85.1	76.3	96.4	236.0	305.9	209.7	23.9	7.9	2.5
Mean Max. Wind Velocity (m/s)	7.3	6.7	7.0	7.5	7.7	7.0	5.7	5.7	7.3	7.3	7.0	7.0
Season		Dry		Minor Rainy	Dry		Ra	iny			Dry	

Source: Prepared by JICA Study Team based on the data from National Metrological Agency of Ethiopia Mean Max. Wind Velocity (m/s): From 2010 to 2014 data is introduced

1.2.2 Earthquake

Ethiopia is located over the Great Rift Valley which has a probability of earthquakes. In recent times, however, no major tremor has been experienced resulting from an earthquake. On the other hand, the Ethiopian Building Code Standard indicates seismic zones in the country, incorporating seismological and geological views as well as ground features. Zone 4 is marked by the highest seismic coefficient, whereas Zone 0 is considered seismic free. Addis Ababa is classified in Zone 2, with "bedrock acceleration ratio" a zoning coefficient of 0.05.



Source: Ethiopian Building Code Standard of Ethiopia Figure 1-1 Seismic Hazard Map of Ethiopia

1.2.3 Topographical survey and geotechnical investigation

Topographical survey and geotechnical investigation are re-consignment and conducted by local company in the project site with conditions shown in the following Table.

Category	Period	Objective	Specification	Location
Topographical survey	Sep. 2015	To understand topographical condition of the project site	 Plane table survey Cross sectioning Scale: 1/500 Mesh is divided into 14 Interval of contours is 0.5m 	Project site and its surrounding area
Geotechnical investigation 1	Sep. 2015	To understand geotechnical condition of the project site	 Boring at 4 boreholes with depth of 20m Standard penetration test (SPT) with interval of 1m Ground water level measurement at 4 boreholes Laboratory tests with 4 samples at each borehole (soil classification, specific gravity, natural moisture content, Waterberg limit and free swell) 	4 boreholes in project site (BH1, BH2, BH3, BH4)
Geotechnical investigation 2	Nov. 2015 to Jan. 2016	To understand geotechnical condition of the project site	 Boring at 3 boreholes until exceeding 50-N-Value is observed at over 5m layer, maximal depth is 50m Standard penetration test (SPT) with interval of 1m Laboratory tests with samples from each soil type of layer at each borehole (soil classification, specific gravity, natural moisture content, Waterberg limit and free swell) 	3 boreholes in project site (BH5, BH6, BH7)

 Table 1-2
 Outline of Topographical Survey and Geotechnical Investigation

Source: JICA Study Team

(1) Result of topographical survey

Topographical map of the project site is shown in Figure 1-2. The project site is located on a slope and the level of southern side is lower than that of northern side. The project site has 3 to 4m level gap in itself at the maximum.



Result of geotechnical investigation (2)

Boring is conducted at each location shown in Figure1-3 in the project site and Standard Penetration Test (SPT), Measuring ground water level and laboratory test are conducted. Because drilling at BH7 is stopped due to a core barrel being stuck underground during drilling, missing data at depth deeper than around 27m at BH7 is compensated by boring at BH7, 1m close to BH7.



Figure 1-3 Location of Borehole

1) Standard Penetration Test (SPT) and measuring ground water level

The results of Standard Penetration Test (SPT) and measuring ground water level are as shown in Figure 1-4. Exceeding 50-N-Value, which is planned as the bearing ground layer, is observed through over 5m layer from the depth of 32m at BH5 and BH7A, from the depth of 26m at BH6.

Ground water level varies with the season when the measuring is conducted. Ground water level is observed 2 to 3m below from the present ground level at BH1, 2, 3 and 4 in rainy season but 5 to 6m at BH1, 2, 3, and 4 in November and December, dry season.





2) Laboratory tests

The result of laboratory test conducted by samples from each borehole is as shown in the following Table. In the test for free swell, samples from shallow ground layer at BH2, 4, 5, 6 and 7 show high swelling ratio.

BH No.	No.	Depth (m)	Soil Classificatio n	Specific Gravity	NMC (%)	Atterberg Limit		Free Swell (%)	Remark	
	1	2 10-2 70	A-7-5(20)	2.17	55.00	70.00	38.00	32.00	80	
DIII	2	5 20-5 80	A-7-5(13)	2.26	53.00	52.00	33.00	19.00	10	
BH1	3	9.70-10.15	A-7-5(8)	2.22	44.00	50.00	35.00	15.00	20	
	4	13.15-13.60	A-4(3)	2.18	42.00	-	-	-	0	
	1	1.00-1.60	A-7-5(20)	2.24	46.00	91.00	40.00	51.00	110	Soll Classification is
DU2	2	3.05-3.50	A-4(8)	2.2	44.00	-	-	-	0	measured based on
вп2	3	7.40-7.85	A-4(5)	2.19	43.00	-	-	-	0	ASHTOM (American
	4	15.70-16.15	A-4(3)	2.17	38.00	-	-	-	0	Association of State
BH3	1	1.00-1.60	A-7-5(18)	2.21	55.00	59.00	33.00	26.00	40	Highway and
	2	5.10-5.55	A-7-5(10)	2.18	50.00	54.00	35.00	19.00	10	Transportation Officials) Soil Classification System
	3	10.70-11.15	A-4(4)	2.23	52.00	-	-	-	0	
	4	13.60-14.05	A-4(4)	2.28	48.00	-	-	-	0	
	1	1.00-1.60	A-7-5(20)	2.32	40.00	80.00	35.00	45.00	110	Chassification by stem
BH4	2	3.05-3.50	A-7-5(11)	2.27	47.00	51.00	33.00	18.00	10	
DIT	3	12.75-13.20	A-4(4)	2.2	44.00	-	-	-	0	
	4	17.25-17.70	A-4(3)	2.29	54.00	-	-	-	0	
	1	0.35-0.70	ML	2.45	16.07	78.40	36.50	41.90	120	
BH5	2	10.00-10.45	ML	2.55	52.69	45.30	-	-	20	
	3	31.00-32.55	ML	2.45	42.96	62.90	33.00	29.90	50	
	1	0.70-1.00	ML	2.50	22.00	82.70	36.90	45.80	160	Soil Classification is
BH6	2	1.45-1.75	ML	2.55	21.00	64.00	33.17	30.83	70	measured based on
	3	22.00-22.75	SM	2.45	68.29	55.05	-	-	5	USCS (The Unified Soil
	1	0.40-1.00	ML	2.45	10.71	90.50	38.20	52.30	120	Classification System)
BH7	2	1.60-2.00	ML	2.49	7.58	51.60	23.80	27.80	90	Classification System)
2117	3	5.20-5.65	ML	2.50	42.15	-	-	-	20	
	4	6.00-6.40	SM	2.55	36.43	-	-	-	10	
BH7A	1	33.75-34.55	ML	2.50	22.50	69.10	30.90	38.20	60	

 Table 1-3
 Result of Laboratory Tests

Source: JICA Study Team

1.3 Environmental and Social Considerations

Building construction project is classified into Category B, because it is not included in the environmentally sensitive sectors, characteristics, and areas provided in the Appendix1-3, JICA Guideline for Environmental and Social Considerations (herein after referred to as JICA guideline).

1.3.1 Environmental Impact Assessment

(1) Description of the project component having environmental and social impacts

Outline of the building to be constructed in the Project is summarized as below.

- · Name: TICAD Human Resource Development Center for Business and Industry
- Place: Addis Ababa, Ethiopia
- Covered area: approximately 3,700m²
- Purpose: provision of Kaizen training addressed to employees of private companies, government workers/officers, educators; education and cultivation of teachers for vocational training schools and Kaizen trainers of EKI; research of Kaizen method; and administrational work as the EKI head quarters
- Structure: mainly reinforced concrete structure, partly steel structure
- Composition and area: composed of two buildings, one for training and office work and another for lodging, total floor area 8,495.63 m²
 - Building for training and office work: 1 floor under the ground level and G+four above-ground stories; total floor are $5,516.30m^2$

Building for lodging: 1 floor under the ground level and G+four above-ground stories; total floor area $2,979.33m^2$

(2) Overview of the present environmental and social conditions of the project site

The project site is located approximately 200m from the present EKI HQ and faces a trunk road on the southeast side, roads and a river on the southwest side and low-rise houses on the north side. A lot of buildings are located along the trunk road and two 8 stories buildings have been constructed on the opposite side of the southeast road.

The site was owned by the Public Procurement Enterprise (PPE) under Ministry of Industry and lent to a private company who used warehouse existed on the land. As of August 2017, the warehouse has been removed. The land has been almost cleared although there are remaining crashed concrete debris which used be floor concrete. Regarding the land title transfer to EKI, the procedure has been completed dated 14th August 2017.



VIEW FROM NORTH EAST



VIEW FORM SOUTH WEST



NORTH SIDE OF THE SITE



FRONT PEDESTRIAN AND THE SITE

Source: Taken by JICA study Team Figure 1-5 Present Condition of the Project Site and Surrounding Area

- (3) System of environmental and social considerations in the recipient country
- 1) Responsible institution

Federal Environmental Protection Authority (FEPA) is the administrative agency responsible for environmental and social considerations in Ethiopia. The objective of FEPA is "to formulate policies, strategies, laws and standards, which foster social and economic development in a manner that enhance the welfare of humans and the safety of the environment sustainably, and to spearhead in ensuring the effectiveness of the process of the implantation".

2) Legal system, law and regulations

Article 44 of the Ethiopian Constitution (1995) provides that the environmental rights, all persons are entitled to: living in a clean and healthy environment; compensation including relocation with adequate sate assistance.

Major laws and guidelines relating to environmental and social considerations are Environmental Impact Assessment Proclamation (Proc. No 299/2002), Environmental Impact Assessment Regulation (Reg. No 21/2006), Ethiopian EIA Guideline (2000) and EIA Procedural Guideline (2003). Also, Addis Ababa Municipality has Impact Assessment Guideline for Housing Projects (2010) that regulates construction of multi-story buildings inside the city. Summary of the system of environmental and social considerations in Ethiopia and EIA guideline for housing project are attached at Appendix8-1 and Appendix8-2 relatively.

The major gaps between Ethiopian and JICA guidelines are found at the points of criteria of categorization, stakeholder meeting, information disclosure and detail of monitoring but no serious difference is found (refer to Appendix8-3).

3) EIA process

Figure 1-6 shows the EIA implementation procedure of Ethiopia based on the Environmental Impact Assessment Procedural Guideline Series 1 (2003).



4) Necessity, procedure and timing of EIA

Procedural Guideline (2003) Annex III provides that all project activities is divided into three categories: namely, Schedule 1 projects that require full EIA, Schedule 2 projects that require a preliminary environmental study, and Schedule 3 projects that may not require EIA. Construction of multi-story building is classified into section 13. building and civil engineering industries under major urban projects on the list of Schedule 1. Addis Ababa EPA (AAEPA) suggested that the Project of the Kaizen Center requires EIA according to this guideline. The JICA study team confirmed in the discussion with FEPA that the project proponent (EKI) needs to apply the project to EPA, start screening and scoping after they get land title; implement EIA study after the Basic Design is approved; and, then, receive EIA approval from AAEPA by the time when the bidding process starts¹.

¹ However, AAEPA did not have the list of projects that applied EIA in Addis Ababa when the JICA study tea requested

(4) Comparison of alternatives

The JICA study team considered two alternatives, namely one middle-rise, 10 story Kaizen center building and two low-rise, 5 story Kaizen buildings and compared them from viewpoints of construction technique, construction period, foundation work, cost, and impacts on natural and social environment and neighboring communities. As the result of examination, the team found that the alternative of row-rise, two building alternative has advantage in the construction period, cost and environmental and social impact.

Alternative	One Middle- rise building	Two low-rise buildings			
Cost	Efficient because the building has one foundation;	Not efficient because the foundation is divided;			
	but cost is relatively high because construction	but cost is relatively low because construction			
	period is longer due to the number of stories.	period is shorter due to lower height.			
Construction period	It is relatively long because construction period	It is relatively short because the number of stories			
	depends on the number of stories.	is smaller.			
Foundation work	Number of stakes is fewer.	Number of stakes required is more for two			
		buildings.			
Construction	Relatively high construction technique is required	It is possible to construct by general construction			
technique	to a certain extent.	technique in Ethiopia			
Environmental and	More vacant area inside the premises can be used	Less vacant are inside the premises and plantation			
social impact	for plantation. On the other hand, it gives feeling of	space is limited. On the other hand, feeling of			
	oppression to the surrounding low-rise houses.	oppression of high building is reduced.			
Synthesis	Δ	0			
	Cost is high, construction period is long, and	This option is proper from viewpoints of cost,			
	relatively higher technique is required. Also, ten	construction period and technique. Also, impact			
	story building gives a feeling of oppression to	on surrounding residential area is relatively low.			
	surrounding area.				

 Table 1-4
 Comparison of Alternatives

Source: prepared by JICA Study Team

Construction of the Kaizen Center itself is based on the request of EKI, so are the location of construction site, as well as necessary facility and equipment. Also, the size of the Kaizen Center and the number of equipment were planned based on the function of the Kaizen Center and decided in the meetings between the JIA Study Team and EKI. These facts are the precondition of project implementation. Therefore, the team does not consider Zero Option.

According to the implementation process of EIA in Ethiopia, the project proponent is required to submit project information to FEPA. For the TICAD Kaizen Center Project, the JICA Study Team confirmed that EKI will apply the project implementation to AAEPA after they get land use right, as AAEPA suggested.

(5) Scoping

The JICA Study Team did preliminary scoping of anticipated significant impacts on environment using JICA Environmental Check List 19 "Other Infrastructure Project", reviewed the items of latent negative impact on the list of "Impact Assessment Guideline for Housing Projects", and prepared a draft TOR for EIA. The result of the preliminary scoping indicates that the degree of environmental impact to occur by the Project implementation is limited by considering contents of TICAD Kaizen Center and project site (refer to Appendix8-4 and Appendix8-5). The Team will provide the result of scoping and draft TOR to EKI.

(6) TOR for environmental and social considerations survey

The draft of TOR for environmental and social considerations survey in the Project is as shown in the following Table.

		D			
	Environmental	Eva	luation		
Category	Item	Const- ruction	Operation	Items of Examination	Means of Examination
Pollution Control	(1) Air Quality	B-	C-	 Confirmation of air quality standards of Ethiopia, and, if necessary, WHO. 	Examination of existing documents
				2) Grasp of present condition of air quality.	Survey of existing documents; actual measurement if required
	3) Estimate of degree of contamination caused by increase of vehicles during construction period.			 Estimate of degree of contamination caused by increase of vehicles during construction period. 	Examination of properness: items of construction, construction method, period, type of machinery, place, period and time of operation, number of construction vehicles, moving route
	(2) Water Quality	В-	C-	 Confirmation of water quality standards of Ethiopia, and if necessary, WHO 	Examination of existing documents
				2) Estimate of degree of impact caused by water use by the construction	BD document: quantity of water, construction method, period
(3) Wastes		B-	C-	1) Means of disposal of construction wastes.	BD document, hearing from related agencies
				2) Means of disposal from Kaizen Center	BD document, hearing from EKI
	(4) Soil Contamination	B-	D	1) Measures to avoid oil leaking during the construction period	BD document
	(5) Noise and Vibration	B-	D	1) Confirmation of related standards of noise and vibration of Ethiopia	Examination of existing documents
				2) Estimate of degree of impact caused by construction.	BD report: construction method, kind of machines, period, type of machinery, place, period and time of operation.
Social Environ	(1) Resettlement	C-	D	1) Progress of land title transfer	Hearing from EKI and Addis Ababa Municipality
ment	(2) Living and Livelihood	D	B+	-	-
	(5) Ethnic Minorities and Indigenous Peoples	D	C+	-	-
	(6) Working Conditions	В-	C-	 Confirmation of measures to be taken for work safety during the construction period. 	BD report, hearing from EKI
				2) Confirmation of measures to avoid industrial/labor accident to be taken during operation period	BD report, hearing from EKI
				3) Confirmation of capacity development program to mitigate industrial/labor accident and enhance effectiveness of the Kaizen Center management	BD report, hearing from EKI (soft component for organizational management and facility management is planned)

B + /: Positive/negative impact is expected to some extent.

C+/ : Extent of positive/negative impact is unknown (A further examination is needed and the impact could be clarified as the study progresses.)

D : No impact is expected.

Source: prepared by JICA Study Team

(7) Result of and social considerations survey

Anticipated environmental impacts in construction phase and operation phase in the Project are as shown in line "Anticipated Impacts" in Appendix 8-6.

(8) Impact Assessment

The JICA Study Team confirmed that EKI will hire an environmental consultant being registered to EPA and start EIA process in consideration of abovementioned draft scoping.

(9) Mitigation plan and cost for implementing mitigation plan

EKI has no section who works for environmental issues but staff working for receiving EIA approval from EPA is accumulating knowledge of EIA. As the Project plans to implement so-called soft component in the field of facility maintenance and management, EKI plans to request budget for O&M. Also, EKI plans to increase the number of staff members in charge of maintenance and management. By collaborating these matters, EKI will implement mitigation plan following EMP to be approved.

(10) Environmental Management Plan and Environmental Monitoring Plan

Environmental Management Plan (EMP) shall be prepared in response to the result of EIA to avoid or mitigate negative impacts caused by projects or to enhance positive impacts. Impact Assessment Guideline for Housing Project (2010) prescribes that EMP shall be included in EIA report and that mitigation measures and Environmental Monitoring Plan (EMoP) shall be a part of EMP. The JICA study team prepared a preliminary EMP and EMoP focusing on the environmental items that identified in the preliminary scoping likely to give positive and negative impacts (refer to Appendix8-6 and Appendix8-7).

(11) Stakeholder meeting

JICA Guideline provides that JICA encourages project proponents etc. to consult with local stakeholders when necessary in the case of Category B projects. On the other hand, Ethiopian guideline does not prescribe stakeholder meeting.

The Project is not anticipated to cause land acquisition problem in the result of preliminary scoping, but it is anticipated to cause negative impact such as traffic accidents, noise and vibration at the construction period. Therefore, the JICA study team thinks that explanation to and public hearing from concerned organizations and neighboring communities is indispensable. The team suggested EKI to consult AAEPA on the necessity of holding stakeholder meetings and to hold meetings by inviting concerned communities.

1.3.2 Land acquisition and resettlement

No people lives in the site, then resettlement does not occur. EKI has already obtain land use title.
CHAPTER 2 CONTENTS OF THE PROJECT

CHAPTER 2 : CONTENTS OF THE PROJECT

2.1 Basic concept of the Project

2.1.1 Upper Level Plan

In Federal Democratic Republic of Ethiopia, the average economic growth during 2007-2016 has been remarked average 10.2 %. It is quite obvious growth but its poor industrial structure due to the delay of the private sector development makes the country poor competitiveness. The weakness of the economic structure is seen in the fact that the second industry's proportion in GDP is 16.3%. (World Bank, 2015) To solve the issue, the government of Ethiopia expressed in the Growth and Transformation Plan (GTP: 2010-2014, GTP2: 2015-2020) that they will shift from the Agriculture based economic to the manufacturing based economic. (Agriculture 37.9% in GDP, Industry 15.0% in GDP, 2015). As the concrete policy, the Ethiopian government focus on the human development through "KAIZEN (Japanese method and policy to the quality and productivity upgrade), in addition the implementation of the economic infrastructure and promotion of Foreign Direct Investment.

In the country assistance strategy paper to the Ethiopia (April 2012) mentions the importance of the private sector development and it says that "To realize the Ethiopian five years development plan, it is necessary to reinforce the related policy framework, upgrade the private manufacturing competitiveness, job creation and foreign direct investment. In such point of view, execution of the policy dialogue and cooperation to the private sector development through the spread of KAIZEN." This project matches the policy.

2.1.2 Current Condition and Problem of the Sector

Ethiopian Kaizen Institute (EKI) was established by Ministry of Industry in 2011 and has been transferred Ministry of Public Service and Human Resource Development in 2015.EKI has been expanded and strengthen rapidly with Technical Assistance (Quality and Productivity upgrade, spread and development project). When EKI was established the number of staff was only 9 but it increased to 105 staff in 2015, 152 staff in August 2017 and has plan to expand 215 staff in 2023. However, EKI's facility and equipment are very poor compare to its number of staff and activities. It is urgent need to implement and strength EKI's facility and Equipment.

2.1.3 Purpose of the project

This project aims to contribute to realize the Growth and Transformation Plan 2 its target is to shift the manufacturing economy and spread of KAIZEN by executing the construction of EKI's facility and procurement of the equipment.

2.2 Outline Design of the Japanese Assistance

2.2.1 Design Policy

(1) Basic Policy

Scope of the Japanese assistance are construction of EKI's Head office, training center and accommodations, Equipment procurement and Soft component. Construction site was allocated by Ethiopian Government in response to EKI's request. The site is suitable location because the accessibility and the infrastructures are good conditions. On the other hand, the land area is narrow and the ground condition is poor. Those weakness need to be covered by technical solution. Volume of the building will be designed by the onsite survey based on the Growth Transformation Plan 2(GTP2) and Past Records and Future Plan for JICA Mission prepared by EKI.

Basic policy to the Facility design and Equipment procurement are as following below.

1) Policy to the volume setting

By examining EKI's training plan carefully, training rooms and lodging rooms for trainees shall be determined in accordance with the size of facility necessary to accommodate training to be provided. For a workplace of the EKI staff members, an office room and other required rooms shall be determined based on the number of planned sections and staff members. The facility plan assumes the commencement of operation in 2020, with an estimate of the facility size to meet a capacity required in 2023.

2) Detailed facility planning policies

The facility is designed in accordance with the following policies.

- Tailored to the local circumstances and pursuant to the standards for a facility design in Ethiopia, EU Standards, British Standards, and the design standards in Japan shall be applied, where appropriate.
- A foundation structure shall be designed based on findings of the ground survey.
- The design shall incorporate a construction method that is appropriate to the local circumstances related to construction in Ethiopia.
- The design shall be suitable to highlands of 2,300m above the sea level and a relatively arid climate condition. It should be also noted that the rainy season may have a monthly precipitation of more than 300mm.
- Parking space shall be provided in accordance with the architectural standards in Ethiopia.
- The design shall take into account of the fact that the project site is located on the sloping ground with a notable difference of elevation (4m in the north-south direction and 2.5m in the east-west direction).
- The difference in level along the site boundary shall be provided with retaining walls and slope protection.
- Traffic safety shall be ensured at entrance for persons and vehicles.
- · Access of disabled people to the facility shall be ensured.
- Rooms shall be designed in line with how Kaizen training is implemented.
- The facility shall be planned to serve broadly for citizens.
- The facility shall be designed taking its maintenance into account.

- The facility shall be designed taking into account of energy saving and environment to reduce the costs of operations and maintenance.
- 3) Policy of selecting equipment

Equipment is selected in accordance with the following policies.

- Equipment shall meet the objective of the Project.
- Equipment shall meet the purposes of training at EKI.
- Equipment requires low maintenance.
- Specifications shall be appropriate for the objective of the Project.
- Specifications shall be suitable for technical levels maintained in Ethiopia.
- Specifications shall be cost-effective and have competitiveness in procurement.
- The quantity of equipment shall meet the minimum requirements.
- Equipment shall be easily procured.

(2) Policy to meet natural environmental conditions

Ethiopia is an earthquake country. But, Addis Ababa where the construction site is located is a place rarely has earthquakes. Annual precipitation is approx.1200mm. They have cohesive rain from July to September. The wind is weak throughout the year. Humidity is various 40%-70% depending on the season. Low pressure because it is in the highlands at an altitude of 2300m, the temperature throughout the year is around 25° C. These natural conditions will be considered when design of the facility or equipment selection.

(3) Policy to meet social and economic conditions

Ethiopia is a multi-ethnic state by more than 80 different ethnic groups. Ethiopians of 62.8% of Ethiopians is Christian (Ethiopian Orthodox Church) and 33.9 % is Islam. In Ethiopia they use their own Ethiopian calendar, which is different from the Gregorian calendar. Major industrial is agriculture and animal husbandry. More than 30% of the population is engaged in agriculture. These Ethiopia customs, historical and cultural traditions will be considered to facility design and equipment selection.

(4) Policy on the situation of construction / procurement, special industrial circumstances and business practices

In the capital Addis Ababa is in a construction boom on the background of rapid economic growth. Many small or large construction companies are existing to response these big demand. Most of the construction materials other than cement and wood depend on imports. There are many of the building materials distributor in the city. Procurement of construction material is relatively easy. It is required a license when they import foreign products. These Ethiopian circumstances will be considered to facility design and equipment selection.

(5) Policy on the use of local consultants and construction companies

Since the acquisition of the construction permit requires Architect license of Ethiopia, at the stage of Detail Design, cooperation of the local design consultant with a license will be expected. At construction

stage, it is assumed that Japanese contractor subcontracts Ethiopian Construction Companies or conducts skilled workers by direct employment.

(6) Policy on operation and maintenance

The facility and equipment shall be planned to enable Ethiopia to voluntarily engage in operations and maintenance thereof. The Project gives consideration to the design of facility and equipment so as to minimize the costs of operations and maintenance.

(7) Policy to decide on grades of the facility and equipment

Grades of the facility and equipment are set out for the levels generally applied in Ethiopia. The Project gives consideration that they do not impose burdens in maintenance and repairs of the facility. At the same time, they must maintain a reliable quality of grades suitable for a grant aid project of Japan.

(8) Policy on a method of construction and procurement, and a work period

Construction and procurement shall be planned in a way to ensure safety and quality required for a grant aid project, while also considering methods of construction and procurement practiced in Ethiopia. A construction period shall be scheduled to achieve the shortest possible term, taking into account of climate conditions, working conditions, and lifestyle in Ethiopia.

2.2.2 Basic Plan (Construction plan / Equipment Plan)

- (1) Site and Facility Layout Plan
- 1) Site conditions
- i) Adjacent roads and adjacent land

The southern side of the project site is adjacent to Fitawrari Damtew Street with a road width of 30m and a distance of 96m, and this functions as a main adjacent road. The project site is adjacent to a road with a width of 8m in the east and a lane with a width of 5m in the north. The western side of the project site is a land boundary with residences.

ii) The project site

The project site is a premise of approximately 3,700 m² had been owned by the Ministry of Industry and the Land owner ship had been transferred to EKI in 2017. There was an old wooden storehouse in the project site. It was removed for this project. After the procedure of Addis Ababa City for this project, the site was made into vacant. As of August 2017, the removal of the existing building has been completed. The application for relocation of Land owner ship had been made from EKI to Addis Ababa City, and the certificate had been issued from Addis Ababa City in November 2017. The project site is a ground sloping down from the north towards the south with 3- to 4-m difference of level in the north-south section. On the other side of the road adjacent to the project site, There are an eight-story building and six story one. The north and west sides of the project site are residential areas with low-rise houses. The altitude of the project site is a proximately 2,300m.

iii) Legal restrictions

Regulations for urban planning are under jurisdiction of Land Development and Management Bureau of the sub-city subordinating Addis Ababa city. As the Land owner ship had been officially transferred to EKI in November 2017, it had been revealed that the number of floors that can be built in the project site is at least 10 stories above the ground level, the highest is 19 stories above the ground level. While regarding building with the lowest floor number among these it has been considered that public facilities will be constructed, and it will be derequlated. Regarding this matter, EKI is responsible for confirming it to the sub-city.

Furthermore, pursuant to the municipal law of Addis Ababa city (name of the law), parking space shall be proportionally assigned with the office floor area of 150 m^2 per vehicle.

- 2) Components of the project facility
- i) Planned Facility and its outline

Based on "2.2.1 Training Plan and Building Volume, the planned facility contains enough number of ① training rooms, @ bedrooms and ③ office rooms. It is constructed as "TICAD Human Resource Development Center for Business and Industry", the site for managing the above-mentioned functions and generalizing Kaizen activities.

It is composed of 7 areas, that is, 1) training room area, 2) office room area, 3) lodging room area, 4) welfare and recreational area, 5) public space, 6) services and parking spaces, and 7) common use area. The major rooms and their functions are given in the following table.

No.	Area	Major Rooms	Purpose of Use										
1	Training room area	Classrooms, large lecture hall, library	Training and seminars										
2	Office room area	EKI office room, General Director Office, conference room, printing room	Office works of EKI staff members, office works of Kaizen trainers, meetings of EKI staff members preparation and storage of learning materials										
3	Lodging room area	Lodging room	Accommodation of trainees coming from outside the city										
4	Welfare and recreational areas	Cafeteria, health room, Multi-purpose room	Provision of welfare and recreational services for lodgers and EKI staff members										
5	Public space	Entrance hall, display area	Public space for trainees and visitors										
6	Services and parking spaces	Parking space, laundry room, various machine rooms, waste disposal area	Parking of EK-owned vehicles and support service facilities										
7	Common use area	Elevators, stairways, toilets and hot-water supply room	Common area on each floor										

 Table 2-1
 Areas by Functions and the Major Rooms

Source: JICA Study Team

The following are the detailed plans of training gym, health room and day nursery.

a. Health room

For the purpose of trainees' health care, EKI intends to assign a part-time doctor for two hours in the evening five days a week. The health room is allocated for the doctor to provide medical consultations. During the day time, a health nurse is stationed in the room to provide health services.

b. Day nursery

The government of Ethiopia allocates the Ministry of Women, Children and Youth Affairs (MWCYA) to address social problems related to women, children and youth. It declares that its responsibilities for people include ensuring that women can gain opportunities to be involved in social affairs. Given this principle, the country has broadly obtained a social consensus to request a provision of a place for childcare in a workplace. It is thus increasingly common that a workplace provides a day nursery therein. Under this social environment, a request was made for the Project to provide a day nursery in its planned facility. However, it has decided not to, because there are no cases of which the similar institutions in Ethiopia have provided such nurseries. Alternatively, the Project has saved a vacant space reserved for a day nursery in the east side of the site so that the government of Ethiopia can construct it with its financial resource, as necessary.

c. Multi-purpose room (Utility Space)

In response to the strong request of EKI, a utility space is provided on the roof floor so that trainees can use for multiple purposes, because it is considered that the space enable recreation and communication among the trainees, and it has positive impact on their health and training result.

ii) Facility Layout Plan

The planned site is irregularly shaped and sloped across the site. Therefore, it was decided to separate the facility into two buildings; 1) training and administration building (training rooms, office rooms, public space) and 2) accommodation building (lodging rooms, welfare and recreational areas). Ample considerations are made to group relevant rooms so as to facilitate smooth and efficient movement of the users as well as to maintain the facility effectively. Based on the shape of the site, the accommodation

building will be located along the Northern border of the site and training and administration building will be located along its Western border, which is beside the back road. The parking space will be located at the set backed space in front of the training and administration building. The highest level on the Eastern side of the site will be set as the ground floor of the facility and the floor below will accommodate parking space and machine room using a semi-pilotis structure taking advantage of slopping site. The slope linking between front road and the ground floor leads to the deck which connects the two buildings. The users will use this route as the main approach to the facility and can enter each building via deck. This approach allows users to move between the buildings without difference in level on the ground floor. There will be 4 gates from outside to the compound, which clearly separate vehicles and people to safely enter the site.

	Training & Administration Bld.	Accommodation Bld.							
Function/ blocks	Training, administration, welfare (first aid), public (entrance lobby, exhibition), service/car parking (car parking, garbage stock, electrical room), common space	Accommodation, welfare (cafeteria, kitchen), public (reception, entrance hall), service/car parking (car parking, laundry, machine room), common space							
No. of stories	Basement 1F+G+4 stories	Basement 1F+G+ 4stories							
Building area (ground floor)	910.50 m ²	569.28 m ²							
Total floor area	5,516.30 m ²	2,979.33 m ²							

Table 2-2 Outline of Planned Buildings

Source: JICA Study Team



Source: JICA Study Team

Figure 2-1 Facility Layout Plan

(2) Training Plan and Building Volume

1) EKI training plan

EKI new facility is divided into three main different function rooms: (1) training rooms, (2) lodging rooms, and (3) office rooms. To determine the size of the facility, the survey team has estimated the size and the number of rooms for each component. The documents and information used for this survey are listed in the following Table. Among these materials, EKI training plan was mainly used to determine the size of facility, and others were used as a proof and an evidence to check the consistency and the reasonability between the plan and the estimation.

	Reference	Target unit	Description
1	GTP2	Number of companies	A five-year national plan of Ethiopia for 2015/2016-2019/2020. Followed by the previous five-year GTP, the plan indicates EKI's sector-based activities and target values for EKI allocated under the Ministry of Industry.
2	Past Record and Future Plan Prepared for JICA Mission	Number of trainees	A document prepared by EKI in 2015 upon request from JICA, covering its record of activities and describing a five-year plan (for the period of GTP2)
3	Record of EKI's activitiesNumber of companies and trainees		Sector-based activities implemented by EKI
4	EKI training plan	Number of trainees	The number of training provided per year is set out on a sectoral basis, targeting 2023 when an evaluation of the new facility will be carried out.
5	Various statistics	_	_

Table 2-3	Reference	Materials	Related to	EKI's	Training	Plan
1 a D I C 2-5	I ACICI CHEC	1 autians	ittiaitu iu	LINIS	11 anning	1 1411

Source: Prepared by JICA Study Team

The targeted number of training for the coming five years (2015/2016-2019/2020) in the Past Record and Future Plan and GTP2 is indicated in the following Table.

									D1)	
			GIP2		Actual			Futur	e Plan			Statistical
	Sector	1st Level	2nd level	Total	2014 /2015	2015 /2016	2016 /2017	2017 /2018	2018 /2019	2019 /2020	Total	values
1	Import and Export	75-100	50	125-175	29	35	41	49	59	71	255	2,170 companies
2	Infrastructure and Service	50-75	25-35	75-110	13	16	22	26	31	35	130	(LME)*
3	TVET	35-50	35-50	70-100	8	14	16	19	23	28	100	437 schools
4	University	12-25	12-25	24-50	8	2	3	4	5	6	20	96 institutions *
	Total					67	82	<i>98</i>	118	140	505	
5	Number of trainees				11,343	15,000	17,000	27,000	36,280	39,860	135,140	

 Table 2-4
 GTP2 and Past Record and Future Plan (2015/2016-2019/2020)

Source: CSA (Central Statistical Agency), Report on Large and Medium Scale Manufacturing and Electricity Industry Survey August 2012, Education Statistics Annual Abstract, MoE (Ministry of Education), 2012/13

*LME includes only the manufacturing sector. Ninety six universities include 34 national universities and 62 private counterparts.

Having been under jurisdiction of the Ministry of Industry until 2014/2015, the planned number of manufacturing (Import and Export) sector becomes relatively larger than others. However, the figures in GTP2 and in the Past Record and Future Plan are almost the same range. Also, statistic data shows that the potential targets are large enough to introduce KAIZEN.

EKI's key activities and venues for current respective activities are indicated in the following Table.

	Key Activity	Main Venue			
1	Training delivered on corporate sites and KAIZEN consulting activities	Site (company, school, or public agency)			
2	Stockpiling the best practices, granting awards and issuing certificates	EKI's facility			
3	Training of KAIZEN consultants (targeting EKI staff)	EKI's facility			
a					

 Table 2-5
 Types of EKI's Current Activities and Venues

Source: Prepared by JICA Study Team based on EKI's training plan

Currently, EKI had no training rooms, but there is one large conference room that are generally used for meetings and trainings of the internal personnel (a technical cooperation project, a Master's course, etc.) Accordingly, EKI is most exclusively engaging in the activities of KAIZEN training delivered on the sites such as companies, schools, or public agencies, and KAIZEN consulting. After the completion of the new facility, however, EKI will be able to carry out the KAIZEN training using its training venues as well.

	Key Activity	Main Venue
1	Training delivered on corporate sites and KAIZEN consulting activities	Site (company, school, or public agency)
2	Stockpiling the best practices, granting awards and issuing certificates	EKI's new facility
3	Training of KAIZEN consultants (targeting EKI staff)	EKI's new facility
4	KAIZEN training at EKI facility (targeting key persons from external organizations such as companies, schools, and public agencies, and African trainees)	EKI's new facility

 Table 2-6
 Types of EKI's Future Activities and Venues

Source: Prepared by JICA Study Team based on EKI's training plan

The aim of KAIZEN training at EKI new facility is to train key persons of each organization such as companies, schools, or public agencies, which is planned as Table2-7.

Duration and content of training course are different for each industrial sector, however all are planned based on achievements and experiences of the technical cooperation project implemented between 2010/2011 and 2013/2014. The common program of training consists of CRT (Class Room Training) which is lecture and ICT (In-Company Training) which is on-site training. There are four different durations' training course (four-month, two-month, one-month, and three-week trainings) depended on industrial sector.

The course targeting the manufacturing sector (Import and Export) and C/RKI (City/Regional KAIZEN Institute) is a four-month course, which includes a one-month CRT and three-month ICT. The original of this course was a six-month course, which was intended to train EKI staff members and had been implemented five times in total in JICA's previous technical cooperation project. ICT is conducted at Large Medium Enterprises (LMEs) in Addis Ababa city or in the suburbs. The reasons why the longest four-month course is implemented against manufacturing sector and C/RKI are because KAIZEN technique in the manufacturing sector is complex and highly sophisticated, requiring time to obtain skills. Also, development of the said sector is the highest priority for Ethiopia to achieve further economic growth. Similarly, RKI requires such advanced and extensive training to foster trainers of KAIZEN trainers.

An Infrastructure and Construction course and a Technical and Vocational Education and Training (TVET) course are two-month training covering three-week CRT and five-week ICT. The original of this

course was a past MSE-based course which was for teachers of TVETs and was implemented eight times under the technical cooperation project.

The respective three-week courses for the service sector, universities, and schools are arranged by simplifying a two-month course. Specifically, components unnecessary for the service sector are left out, such as a course subject on a productivity improvement in the manufacturing process. Similarly, one-month course for African trainees is based on the previous two-month course and is condensed the essence of content in order to make the duration shorten.

A preliminary training curriculum, contents and textbooks have been already prepared, and are currently in the process of being customized for each intended sector.

On the other hand, the part of the internal trainings targeting EKI staff (KAIZEN consultants) has already started in the previous technical cooperation project, a master's course is provided in a partnership with Mekelle University, which already produced the first 18 graduates who have completed learning. A doctoral course is planned to be launched within several years, which is being planned to collaborate with Addis Ababa University or Mekelle University. The purposes of these programs are to enhance capacities of the EKI consultants and also to function as an incentive and motivators to encourage EKI staff to stay longer in the organization.

	Table 2-7EKI's Training Plan for 2022/2023											
Target	Purpose	Sector	Description	Number of trainees per year	Duration of training per course	Number of training implemented per year	Number of trainees per course					
		Import & Export	KAIZEN training targeting business persons in the manufacturing sector (including the import and export sector)	120	4 months	2	60					
	To foster	Service	KAIZEN training targeting business persons involved in the service sector (including tourism) and public servants	80	3 weeks	4	20					
External	keyperson to disseminate and install KAIZEN into each org.	Infrastructure and Construction	KAIZEN training targeting business persons involved in the civil engineering, construction and infrastructure sectors (including low-cost housing)	80	2 months	4	20					
el		TVET	KAIZEN training targeting TVET (vocational training schools) teachers	80	2 months	4	20					
		University	KAIZEN training targeting university instructors	80	3 weeks	4	20					
		School	KAIZEN training targeting school teachers (from the kindergarten to high-school level)	80	3 weeks	4	20					
		City/Regional KAIZEN Institute	KAIZEN training targeting the RKI staff members	30	4 months	2	15					
		African trainee	A third-country training participated from countries in Africa	20	1 month	1	20					
	To foster	Basic KAIZEN at BSc/BA level (Bachelor's degree course)	Training targeting the prospective staff members who have just entered EKI, expecting to become regular employees.	20	1 year	All year	20					
Internal personn el (EKI staff)	KAIZEN instructor	Intermediate KAIZEN at MSc level* (Master's degree course)	Training targeting the regular staff members who have worked for more than six months at EKI to obtain intermediate skills as KAIZEN consultants	40	2 years	All year	20×2 years					
		Advanced KAIZEN at PhD level* (Doctoral degree course)	Training targeting the staff members who have worked for more than two years to obtain advanced skills as KAIZEN consultants	30	3 years	All year	10×3 years					
		Total		660			285					

Source: Prepared by JICA Study Team based on EKI's training plan

* At a specific point in time, there are double participants for master course and triple participants for doctor course because these are 2-year program and 3-year program respectively.

In the evaluation year of the Project (2022/2023), EKI's training is planned as Table2-7, assuming 660 trainees to be trained per year in the new EKI facility. Figure2-2 is a simulation of implementation of training for a given year based on the training plan. Assuming a given year has 52 operating weeks, this simulation makes the number of trainees distributed equally for a weekly unit.

It should be noted that, based on a lesson learned from the previous technical cooperation project, the simulated schedule has intervals between subsequent courses to spare for a preparation period necessary for offering applications for prospective trainees and selecting such trainees and ICT companies as well. Specifically, a one-month interval is given between two-month courses and three-week courses respectively, and a two-month interval between four-month courses.



Source: Prepared by JICA Study Team based on the EKI's training plan Figure 2-2 Simulation of EKI's Annual Training Schedule

- 2) Verification of EKI training plan
- i) Activity records of EKI

The following Table indicates record of EKI activities for the last four years from 2012/2013 to 2016/2017.

			2012/2013		2013/2014			2014/2015			2015/2016		2016/2017			
				2005EC		2006EC		2007EC			2008EC			2009EC		
No	Sector		Number of trainees	Number of KPT*	Number of trainees	Number of KPT*	Number of trainees	Number of KPT*	Number of companies and organization s	Number of trainees	Number of KPT*	Number of companies and organizations	Number of trainees	Number of KPT*	Number of companies and organizations	
1	Manufactu	uring	9,985	1,225	16,966	2,019	5,702	1,389	29	7,082	996	32	5,468	833	40	
2	Infrastruct Service	ture and Construction, and	1,172	84	321	61	2,510	492	13	2,287	392	15	9,580	1587	66	
3		TVET	181	0	1,574	151	1,293	139	9	1,877	-	16	981	120	8	
4	Capacity	University	658	6	2,196	44	1,838	438	8	3,798	794	10	1,982	237	6	
5	Building	School											850	125	38	
6	Dunung	C/RKI											77	0	2	
7		Others											127	23	2	
8	C/RKI act	tivities											9,528	1003	44	
	Total		11.996	1.315	21.057	2.275	11.343	2,458	59	15,044	2.182	73	28,593	3.928	206	

Table 2-8 Record of EKI Training (2012/2013-2016/2017)

Source: Prepared by JICA Study Team based on the number of training reported and the data provided in Past Record and Future Plan

*KPT refers to a KAIZEN Promotion Team, which is a unit of practicing KAIZEN on site, equivalent to a quality control (QC) circle used in Japan.

EKI has conducted KAIZEN training for more than 10,000 trainees every year by delivery-based. The number of trainees exceeded 20,000 especially in 2013/2014. This is because KAIZEN gathered momentum due to the establishment of KAIZEN Council, whose chairperson is the prime minster, and KAIZEN month set on September, so publicity of KAIZEN has rapidly proceeded. However, in the next year (2014/2015), the number of trainees decreased because EKI started to focus on conducting the advanced KAIZEN (2nd level KAIZEN) training not basic KAIZEN (1st level KAIZEN) such as 5S, which takes time and limited trainees to be trained because it requires a lots of OJT (ICT) to fully understand techniques, and EKI has been doing the other activities besides of KAIZEN training such as preparation of launching C/RKI and dissemination of KAIZEN for each region, seeking the way to create a doctoral course with candidate universities, etc. On the other hand, the actual number of trainees in the Past Record and Future Plan written in 2015 is beyond the planned number each year shown as Table2-9.

	5 OF LIFE									
Year	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023		
Number of trainees	15 000	17.000	27.000	26 200	20.960	42 440	47.020	50.600		
(Plan)	13,000	17,000	27,000	30,280	39,800	43,440	47,020	50,000		
Number of trainees	15.044	28 502								
(Actual)	13,044	28,393								
Number from C/RKI	0	0.529								
in the above actual	0	9,328								
Number from EKI	15.044	10.065								
in the above actual	13,044	19,005								
Total number of C/RKIs	1	2	6	6	6	7	0	0		
(Plan)	1	3	0	0	0	/	0	9		
Total number of C/RKIs	0	2								
(Actual)	0	3								
Source of plan Past Record and Future Plan						TM	TM (Aug. 15th, 2017)			

 Table 2-9
 Comparison between Plans and Actuals of EKI

Source: Prepared by JICA Study Team based on the data provided in Past Record and Future Plan, the number of training plan in the annex-4 of the technical memorandum agreed on 15th August 2017, and the record of EKI's activities

In addition, EKI plans to gradually increase the annual number of KAIZEN training participants as shown in the table2-9, and to increase it to 50,600 in 2022/2023. It should be noted here that the actuals up to 2015/2016 were the annual number of participants in the KAIZEN training which EKI staff carried out on the site, but since 2016/2017, the annual number of participants in the KAIZEN training conducted by C/RKI staff, who are KAIZEN consultants and were trained and guided by EKI staff, also adds on it. In 2016/2017, C/RKIs have been established in three regions, Addis Ababa city, Dire Dawa city, and Oromia region, and started their activities. Simply dividing C/RKI's actuals 9,528 by the established number of C/RKI 3, one C/RKI has already trained KAIZEN to 3,200 people per year. On the other hand, considering the time taken for full operation after establishing C/RKI -- to start with several consultants at the beginning and gradually increase the number of consultants -- C/RKI performance becomes even larger when C/RKI operates fully.

Besides, Harari region is scheduled to be opened C/RKI within one year, Tigray region within two years, and three regions which are Tigray region, SNNPR, and Amhara region within five years. The activities to establish C/RKIs in each region are progressing ahead of schedule.

ii) Total number of trainees attended per organization

Based on the data of the total number of organizations that obtained training in 2016/2017, the number of trainees per organization is as indicated in the left part of Table2-10. Although varied from 22 to 330 depending on the target sectors, approximately 139 trainees received training per organization on average.

The variation in the average number of trainees per organization is large because training sessions are provided by EKI consultants on respective organization sites several times for a prescribed period. The training sessions include various training such as a general seminar targeting whole organization members and a specific training for each KPT (KAIZEN promotion team) in the organization.

				016/2017 Actu	al	2022/2023 Plan					
				(2009EC)				(201	SEC)		
No		Sector		Number of companies and organization	Number of trainees / org.	Number of trainees	Number of companies and organization	Number of trainees / org.	How to calculate		
1	Manufac	turing	5,468	40	137	9,677	71	137	KAIZEN consulting for 71 enterprises (9,677 persons)		
2	Infrastructure and Construction, and Service		9,580	66	145	16,953	117	145	KAIZEN consulting for 117 enterprises such as utility (water, gas, electric),construction, and service companies (16,953persons)		
3		TVET	981	8	123	1,736	14	123	KAIZEN training for 14 TVETs (1,736 persons)		
4		University	1,982	6	330	3,507	11	330	KAIZEN training for 11 universities (3,507 persons)		
5	Capacity Building	School	850	38	22	1,504	67	22	KAIZEN training for 67 schools from Kindergarten to high school (1,504 persons)		
6		C/RKI	77	2	39	136	9	39	Fostering KAIZEN consultants for 9 regions and cities (136 persons)		
7		Others	127	2	64	225	4	64	KAIZEN training for 4 (local) governmental organizations (225 persons)		
8	8 C/RKI activities		9,528	44	217	16,861	78	217	KAIZEN trainings conducted by C/RKI (78 organizations, 16,861 persons)		
Total			28,593	206	139	50,600	370	_	_		

 Table 2-10
 EKI Activities Actual (2016/2017) and Plan (2022/2023)

Source: Prepared by JICA Study Team based on the record of EKI's activities

In order to train 50,600 people in 2022/2023, we simulated against how many organizations EKI will have to provide KAIZEN training by using the number of participants per organization by sector in 2016/2017, which is shown in the right part of Table2-10. The column of How to calculate indicates the total number of organizations and the number of participants in Kaizen training targeted by each center.

	EKI training p	olan for 2022/2023 (after adjustmen	at the new facility (t)			Prospective
	Sector	Sector Annual number of trainees Duration*Number of trainees per training*Frequency		Statistical values	[Reference] EKI Plan	implementation (2022/2023)
1	Import & Export	120	4 months×60 trainees×2 times		71	1-2 trainees /company× 71 companies
2	Infrastructure & Construction	80	2 months×20 trainees×4 times	2,170 companies (LME)*	35	4 trainees /company× 20 companies
3	Service	80	2 months×20 trainees×4 times		33	4 trainees /company× 15 companies
4	TVET	80	2 months×20 trainees×4 times	437 schools	28	3-4 trainees /company× 28 companies
5	School	80	2 months×20 trainees×4 times	Kindergarten: 3,580 Primary school: 29,648 Secondary school: 1,710 Total: 35,208		1-2 trainees ∕school× 76 schools
6	University	80	2 months×20 trainees×4 times	96 institutions*	6	12-13 trainees /university× 6 universities
7	City/Regional KAIZEN Institute	60	4 months×15 trainees×2 times	11 regions*		20 trainees /region× 3 regions
8	African Trainees	20	1 month×20 trainees ×1 time	_		

 Table 2-11
 Prospective Training Implemented in the Target Year (2022/2023)

Source: CSA (Central Statistical Agency), Report on Large and Medium Scale Manufacturing and Electricity Industry Survey August 2012, Education Statistics Annual Abstract, MoE (Ministry of Education), 2012/13

*LME includes only the manufacturing sector. Ninety six universities include 34 national universities and 62 private counterparts. *Nine regional states and 2 autonomous districts (2 cities) add up to 11 regions.

GTP2 stipulates establishment of Regional KAIZEN Institutes in Oromia, SNNP and Dire Dawa Regions, respectively.

Table2-11 indicates the result of simulation that a prospective training schedule at the EKI new facility by each sector to be implemented in the target year 2022/2023. The column How to calculate in the table is created on the base of the scheme that 1 or 2 participants, who are key persons, from the companies or organizations targeting KAIZEN installation in the EKI training in the new facility, the scheme which key persons of each organization introduce KAIZEN into the organization and promote KAIZEN activities cooperating with KAIZEN consultants of EKI will be established sufficiently. In this trial, the reason that the number of participants from one university, TVET, and C/RKI become bigger than the ones of other sectors is that those sectors focus on developing human resources especially the ability of KAIZEN.

On the other hand, considering the situation of C/RKI establishment as described above, the estimation of 16,861 people in 2022/2023 as C/RKI activities is significantly less than assumed. As there are already seven locations where have already established C/RKI or are surely in the process of establishment of C/RKI as the moment, when simply calculated the number of trainees by C/RKI in 2022/2023 using 3,200 persons/year, which is the average number of actuals per C/RKI in 2016/2017, it estimates 22,400, which is exceeding the planned number.

To summarize the above, when the EKI new facility completes on time in 2020, EKI will start to conduct the KAIZEN training at EKI facility in addition to the current activities such as providing the KAIZEN trainings and consulting at site. The target participants for the training at EKI facility are the key persons of the companies, schools, or public agencies for KAIZEN such as production and quality management officers, leaders of KPTs and so on. The number of participants for the EKI training is limited as only 660 persons (Table2-7) because the duration is long from a few weeks to a few months and they accommodate in the facility during the training period. This way of training, that is to train the key persons intensively, contribute to penetrate and diffuse KAIZEN more efficiency, quickly and deeply into the organization by the key persons with EKI consultants who are in charge of visiting at site. When thinking by this scheme, the estimated number of trainees by sector is judged as realistic and possible to realize. In addition, 660 persons trained at the EKI new facility are included in 50,600 persons.

3) Size of training rooms

Table2-12 is the summary of the size and quantity of training rooms in the new facility based on Table2-7 EKI's Training Plan for 2022/2023 and Figure2-2 Simulation of Annual Training Schedule.

Target	Purpose	Sector	Number of trainees per course	Duration of training per course	Number of training implemented per year	Number of training weeks	Person -week	Size and quantity of training rooms
	To footon	Import & Export	60	4 months	2	32	1,920	60 persons' room× 1 room
	keyperson to	Service	20	3 weeks	4	12	240	
	disseminate and install KAIZEN	Infrastructure & Construction	20	2 months	4	32	640	20 persons' room× 8 room
External	into each org.	TVET	20	2 months	4	32	640	
personnel		University	20	3 weeks	4	12	240	
		School	20	3 weeks	4	12	240	
	To foster KAIZEN	Regional KAIZEN Institute	15	4 months	2	32	480	
		African trainee	20	1 month	1	4	80	
		BSc/BA course	20	1 year	All year	52	1,040	
Internal	instructor	MSc course	20×2 years	2 years	All year	52	2,080	
personnel (EKI staff)		PhD course	10×3 years	3 years	All year	52	1,560	10 persons' room× 2 room
Total		285				9,160	Capacity: 240 12,480 person- week	

Table 2-12Size and Quantity of Training Rooms

Source: Prepared by JICA Study Team based on EKI's training plan

* At a specific point in time, there are double participants for master course and triple participants for doctor course because these are 2-year program and 3-year program respectively.

* 2 rooms are used to conduct the doctor course however 3 rooms required on calculation.

Total 285 trainees exceed the capacity of facility 240, however it is possible to adjust the schedule as the simulation. Also the operating rate of training rooms is calculated as 73% (9,160/12,480=0.7340). Judging from the information of general and similar projects, this operating ratio is relatively adequate.

In addition to providing training, as summarized in Table2-13, EKI organizes events twice a year related to a conferment ceremony of KAIZEN awards. In the events, nominated companies, award-winner companies and individuals make presentations on their KAIZEN practices. They last for a few days at the large conference room in EKI and a rent hall of a hotel. In addition, workshops and conferences are organized from time to time for the promotional purpose. The events, which will be continued regularly, require a venue to accommodate these ceremonies and conferences.

No	Event	Number of participants per event	Duration per event	Number of events per year	Number of participants per year
1	Workshop / Conference	120	5 days	4	480
2	KAIZEN Award (different level)	500	2 - 15 days	2	1,000

Table 2-13EKI's Other Activities

Source: Prepared by JICA Study Team based on EKI's training plan

EKI plans to organize (1) workshops and conferences, and (2) presentation and conferment of awards. The events (1) are expected four times per year for a period of five days each, and those of (2), twice per year for a period of 15 days. Drawing from the number of days mentioned above and the number of operating days (5 days×52 weeks=260 days), an operating rate is estimated to be approximately 20% (50 days÷260 days), which is not so high. However, the new EKI facility is intended not only to promote KAIZEN, but also to serve as an "industrial human development center in Africa" as well as a research and development hub of KAIZEN activities. For these reasons, a large-sized lecture hall should be provided to accommodate a certain number of persons. Also the large-sized lecture hall can be divided into 3 separate rooms which are planned to be used as a lecture room when it is insufficient.

4) Size of lodging rooms

At first EKI insisted to use the assumption all the trainees would stay overnight at the facility when estimating the size of lodging rooms. This is estimated referring to the similar training facility of Ethiopian Management Institute (EMI) in Debre Zeit in Oromia Region. Conventionally, many of the management training courses in the country are carried out in such a manner that the trainees share board and room. The new EKI facility, however, is located in Addis Ababa city, and many of the trainees will come from local companies therein, while also training will entail a long period of time. Therefore, the trainees are more likely to commute. Accordingly, those trainees within commuting distance are presumed to choose commuting, and the survey team has made the following assumptions to estimate the number of trainees who come from outside commuting distance (which should be equal to the number of lodgers at the facility).

	Table 2-14 Assumption for the Estimated Number of Lougers				
No.	Sector	Assumption	A ratio of multiplication		
1	Import & Export	According to Report on Large and Medium Scale Manufacturing and Electricity Industry Survey August 2012 by CSA (Central Statistical Agency), 40.3% of large and medium enterprises (LME) are located in Addis Ababa, and the remaining <u>60%</u> are operating <u>in other</u> areas than the said city.	0.6		
2	Service	Same as above	0.6		
3	Infrastructure and Construction	Same as above	0.6		
4	TVET	According to Education Statistics Annual Abstract 2012/13G.C of Ministry of Education (MoE), 10% of TVET teachers are in Addis Ababa, and <u>90% are</u> in other areas than Addis Ababa, in terms of regional distribution.	0.9		
5	University	According to Education Statistics Annual Abstract 2012/13G.C of MoE, 15% of the national university teachers are in Addis Ababa, and 85% are in other areas than the said city , in terms of regional distribution.	0.85		
6	School (Kindergarten to high school)	According to Education Statistics Annual Abstract 2012/13G.C of MoE, 42% of kindergarten teachers, 4.4% of primary school (Grade1-8) teachers, and 8.7% of secondary school teachers (Grade9-12) are in Addis Ababa in terms of regional distribution. Of all the school teachers, 6% are in Addis Ababa, whereas 94% are in other areas than the said city.	0.94		
7	City/Regional KAIZEN Institute	All the staff members of Reginal KAIZEN Institute are trainees who come from other areas than the said city.	1.0		
8	African trainees	All the trainees from other African countries come from other than Addis Ababa.	1.0		

 Table 2-14
 Assumption for the Estimated Number of Lodgers

Source: Prepared by JICA Study Team based on Central Statistical Agency (CSA), Report on Large and Medium Scale Manufacturing and Electricity Industry Survey August 2012, and Education Statistics Annual Abstract, Ministry of Education (MoE), 2012/13

Based on the simulation of EKI's Annual Training Schedule (Figure2-2) and the assumption for the estimated number of lodgers (Table2-14), the number of lodgers (Table2-15) and the number of lodging rooms and training rooms (Table2-16) were estimated, and the operating rate of lodging rooms are also considered (Figure2-3).

		(
	EKI's original estimate*	Estimate after adjustment*			
A peak period	200	85			
Average		62			

Table 2-15	Number o	of Lodgers	(Estimated)
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Source: Prepared by JICA Study Team based on EKI's training plan *The original EKI plan was prepared on a basis of 48 operating weeks per year. The

adjusted plan is prepared on a basis of 52 operating weeks per year.

Table 2-16	Number of Lodging Rooms and Training Rooms (Estimated)
14010 2 10	Tumber of Louging Rooms and Training Rooms (Lounated)

	Original plan	Adjusted plan	Remarks
Lodging room	120	62	The number of lodging rooms to achieve the full operating rate. Adjusted from 62 rooms as initially simulated

Source: Prepared by JICA Study Team based on EKI's training plan





The number of lodgers per year (22,719 person-day) and the change in operating rate of lodging room are indicated in the following Table. As a result of this simulation, the operating rate is estimated to become 100% (exactly 104%) at 60 lodging rooms.

		After adjustment
	Total number of lodgers \rightarrow	
Number of lodging rooms	Acceptable number of lodgers (persons per year)↓	Annual operating rate
40	14,560	156%
50	18,200	125%
60	21,840	104%
70	25,480	89%
80	29,120	78%
90	32,760	69%
100	36,400	62%

 Table 2-17
 Number of Lodging Rooms and the Operating Rate (Estimated)

 Σ (Number of trainee expected for each industrial sector×Accommodation ratio for each industrial sector)

=Σ(Import & Export*0.6+Service*0.6+Infrastructure*0.6+TVET*0.9+School*0.94+ University*0.85+ Third-country training *1.0+RKI*1.0) Source: Prepared by JICA Study Team based on EKI's training plan

The following Table provides the number of days and lodgers exceeding and below the full operating rate.

Table 2-18	Number of Days and Lod	laers Exceeding an	nd helow a full Or	nerating Rate (1	Fetimated)
Table 2-10	Number of Days and Lou	igers Exceeding an	ilu delow a luli O	perating Rate (1	estimateu)

	After adjustment
Number of weeks exceeding a 100% operating rate	30 weeks
Number of lodgers exceeding a 100% operating rate	3,469 person-day
Number of weeks below a 100% operating rate	22 weeks
Number of lodgers below a 100% operating rate	2,590 person-day
Number of lodgers and weeks exceeding a 100% operating rate at maximum	25 persons×6 weeks
Number of lodgers and weeks below a 100% operating rate at maximum	33 persons×5 weeks
Source: Prenared by IICA Study Team based on FKI's training plan	

Source: Prepared by JICA Study Team based on EKI's training plan

5) Size of office rooms

The size of office rooms was estimated based on the EKI organization chart and the planned number of EKI staff.

iii) Current organizational chart and the number of staff members per division

At the beginning of April, 2016, the institution has launched a current organizational setting as shown in the following Figure. The current number of staff members by division (as of August 2017) is also indicated in Table2-19.



Source: Source: Prepared by JICA Study Team based on the Past Record and Future Plan Figure 2-4 Organizational Chart of EKI (As of August 2017)

Division	Staff	Remarks
Director General Office	2	
Director General	1	
Director General Secretary & Staff	1	
Public Relation Office	5	
Audit and Inspection Directorate	1	
Gender Office	1	
Corporate Service and Operation Sector	34	
Deputy Director Office	0	
Secretary / Staff	1	
Human Resource Directorate	5	
Planning & Information Directorate	2	
Finance & Supply Directorate	9	
General Service Directorate	17	Include 15 staff of Drivers and Cleaners
Manufacturing Sector	37	
Deputy Director Office	1	
Secretary / Staff	1	
Textile Directorate	7	
Leather Directorate	6	
Agro Directorate	9	
Metal Directorate	6	
Chemical Directorate	7	
Capacity Building Sector	24	
Deputy Director Office	(1)	Hold a post of Education and Training Directorate
Secretary / Staff	1	
University Directorate	5	
TVET Capacity Building Directorate	5	
School Directorate	7	
Region and City Directorate	4	
Education and Training Directorate	2	
Infrastructure, Utility, and Service Sector	28	
Deputy Director Office	(1)	Hold a post of Basic Utility Service Directorate
Secretary / Staff	0	
Construction Directorate	8	
Logistic and Supply Directorate	7	
Basic Utility Service Directorate	6	
Natural Heritage and Tourism	7	
Research and Certificate Sector	20	
Deputy Director Office	1	Deputy Director (0), Secretary (0)
Secretary / Staff	1	
Research and Best Practice	6	
Awarding, Recognition and Certification	7	
Teaching Aid Material Preparation	2	
Information Technology	3	
Total	152	Include 15 staff of Drivers and Cleaners

Table 2-19 Divisions of EKI and the Number of Staff Members (As of August 2017)

Source: Prepared by JICA Study Team based on EKI's internal documents

iv) EKI organization plan in 2022/2023

Total number of EKI staff is 152 as of August 2017 (137 except the number of workers such as drivers and cleaners). The increment ratio of administration staff plans 5 % annually as shown in the following table.

	20 IT answord of the fi	uniber of East stan	(AS OF August 2017)
	Total staff* (w/o worker)	Technical sector Staff*	Administration sector staff*	Worker*
Nov. 2011 (Actual)	9 (9)	9	0	0
Nov. 2012 (Actual)	72 (70)	58	13	2
Jan. 2014 (Actual)	98 (85)	73	12	13
Aug. 2015 (Actual)	105 (97)	84	13	8
May 2016 (Actual)	110 (102)	83	19	8
Mar. 2017 (Actual)	155 (145)	111	29	15
Aug. 2017 (Actual)	152 (137)	109	28	15
2018 (Plan)	163 (144)	111	33	19
2019 (Plan)	174 (151)	113	38	23
2020 (Plan)	186 (159)	115	44	27
2021 (Plan)	198 (167)	118	49	31
2022 (Plan)	206 (175)	124	51	31
2023 (Plan)	215 (184)	131	53	31

 Table 2-20
 Transition of the number of EKI staff (As of August 2017)

Source: Prepared by JICA Study Team based on EKI's internal documents and reports of JICA's technical cooperation project * () means the number who need desks exclude site workers. Technical sectors include 4 sectors that are Manufacturing sector, Capacity building and regional assistance sector, Infrastructure, utility, and service sector, and Research and certification sector. Administration sector includes Corporate service and operation sector. Workers include driver, cleaner, mechanic guard, mechanical engineer, stock keeper, and copier, those who do not need desks in the office.

As a result of the above adjustment, the size of the staff room in the new facility is planned as shown in the following Table.

Division	Number of staff members	Room size	Number of room	Remarks
Director General Office				
Director General	1	Private	1	
Director General Secretary and Staff	10	10	1	
Public Relation Office	10	10	1	
Audit and Inspection Directorate	3	3	1	
Capacity Building Sector				
Deputy Director	1	Private	1	
Deputy Director Secretary	2	4	1	
Member	30	30	1	
Manufacturing Sector				
Deputy Director	1	Private	1	
Deputy Director Secretary	2	4	1	
Member	30	30	1	
Infrastructure, Utility, and Service Sector				
Deputy Director	1	Private	1	
Deputy Director Secretary	2	4	1	
Member	30	30	1	
Research and Certificate Sector				
Deputy Director	1	Private	1	
Deputy Director Secretary	2	4	1	
Member	30	30	1	
Corporate Service and Operation Sector				
Deputy Director	1	Private	1	
Deputy Director Secretary	2	4	1	
Member	30	30	1	Not included cashier and Education and Training Directorate.
Cashier	2	2	1	Need to be faced on the corridor and separated.
Education and Training Directorate	7	7	1	Need to be placed near the training rooms.
Total	198	208	21	

 Table 2-21
 Size of the EKI Staff Room

Source: Prepared by JICA Study Team based on EKI's internal documents

(3) Architectural Plan

- 1) Floor Plan
- i) Floor Plan of each Building

Based on the unit size of required rooms as well as efficient column span, it is planned to separate the training and administration building comprised of training rooms and office rooms $(11m \times 7m)$ as it main components from the accommodation building comprised of bedrooms $(6.4/2m \times 6.2m)$. Ample considerations are made to group relevant rooms so as to facilitate smooth and efficient movement of the users as well as to maintain the facility effectively.

Both buildings position corridor on each floor in the middle with rooms on the both sides. The training and administration building basically positions training rooms and office rooms on the Western side, while public space such as stair case, toilets and store rooms on the Eastern side across the corridors. As per the accommodation building, it positions bedrooms on the both sides of the middle corridor.

ii) Plan of major rooms

The facility size will be determined based on the training plan and the planned number of staff members. The plan is prepared essentially incorporating training rooms, lodging rooms and an office room, added with other rooms thereafter.

a.Training room

A unit capacity of a training room is designed to accommodate 20 persons, who are divided in four groups of five persons to receive training. A trainer is assigned for each group. The groups respectively engage in training, using a whiteboard and flip chart. Also, they have a discussion session with a projector and the whiteboard as a projector screen. A lock and key storage is provided for each group to secure equipment and learning materials. A printer is also provided for a group of 20 persons to print out their presentation handouts.



Source: JICA Study Team

Figure 2-5 Plan of a Training Room (Capacity of 20 Persons)

A floor area for a 20-capacity training room (24 persons including trainers) : 7 m x 11 m = 77 m² A floor area per person: 3.2 m² per person

The room plan secured enough passage space around groups depending on a teaching method of KAIZEN, because trainer moves around desks while teaching. And also, a constant space secured between a group and others in the plan for prevention from too much interference each other.

(Reference)

For a 25-capacity room in EMI, Ethiopia Management Institute; Human Resource Development Center Under the Government, (26 persons including a trainer, a floor area: 7.1 m x 14 m=99.4 m²), 3.82 m² per person

Current EKI provides a space of 7.5 m x 5 m = 37.5 m^2 for ten persons, which is equal to 3.125 m^2 per person when calculated for 12 persons including two trainers.



Source: JICA Study Team

Figure 2-6 Transverse Section of a Training Room (Capacity of 20 Persons)



Figure 2-7 Longitudinal Section of a Training Room (Capacity of 20 Persons)

b. Standard lodging room

A lodging room is provided for a single user, with a shower, toilet and washstand. It will be furnished with a bed, desk, locker, and a chest for a television, respectively.

A floor area for a lodging room (a single room) : 6.2 m x 3.2 m=19.84 m² (including PS) (Reference) A floor area of a single room in EMI's dormitory: $5 \text{ m x } 4.5 \text{ m} = 22.5 \text{ m}^2$

JICA Yokohama International Center: 7 m x 2.8 m = 19.6 m^2 (including PS)





Source: JICA Study Team Figure 2-8 Plan of a Standard Lodging Room

c. Two-bed lodging room

A two-bed type room is provided to accommodate associate executive trainees and trainees with disabilities. A shower, toilet and washing stand will be provided. The room will be furnished with a desk, locker, and a chest for TV, respectively.



Figure 2-9 Plan of a Two-Bed Lodging Room

d. Office room (a capacity of 30 to 40 persons)

The seating layout allocates working-desk "islands" (desks are attached each other with their front and side) which is able to palace desks most efficiently will be adopted for all of office rooms. Total 5 rooms of 30-capacity offices (for Technical Division comprising Manufacturing, Capacity Building. Infrastructure, and Research and Certificate Sectors, and also Administration Division) will be located in the 4th and 5th floor of Training & Administration Building. The room of the deputy director who is a section manager and is connected to the office room via secretary's office. For the consideration of the furniture layout, desk size and the wide of pass way between a desk and a desk, the size of 11m *10.5m assured a unit of one office room.

(A floor area of the office room per person) A floor area of the office room: 11 m x 11 m= 121 m^2

A floor area per person: 4.03 m^2 per person

(Reference)

A floor area per person in a typical Japanese office room is 4.5 to 7.0 m^2 per person, excluding an auxiliary area (SD Team in Okamura Corporation). Furthermore, when the layout of such working-desk "islands" achieve the best possible efficiency by eliminating other furniture, the said floor area is 3.7 m^2 per person (Architectural Design Source Collection, Unit Space II).



Figure 2-10 Plan of the Office Room



Figure 2-11 View of the Exciting EKI's Consultant Office

(A desk layout of an office room) In an office room in Ethiopia, working-desk "islands" are generally accepted, which can achieve the most efficient use of the floor area. The on-site survey identified such type of the desk layout in EKI's consultant office and a local architectural design consultant office. In this Project, moreover, EKI has requested to adopt a Japanese-style layout of furniture in its office room to achieve the floor efficiency, among other things.

e. Cafeteria

Cafeteria mainly provides food services to those who stay at the accommodation but the staff and visitors of the Center can also use the services during its operation hours. The total of 80 seats (20 tables with 4 seats) will be set up in the cafeteria for 60 persons who stay at the accommodation and 20 additional persons. In public institutions in Ethiopia, it is required to serve 3 different types of food for Muslim, Christian during fasting and normal food considering variety of religions and custom in Ethiopia. Therefore, all dishes will be provided through self-service at the kitchen counter.

Floor area of Cafeteria : $6m \ge 25.6m = 153.6 \text{ m}^2$ A floor area per seat: 1.92 m^2 per seat

Floor area per seat in typical cafeterias of Japanese companies' dormitories is about 1.9 to 2.5 m² per seat in case the total floor area is less than 150 m² and about 2.0 to 2.3 m² per seat in case the total floor area is more than 150 m². Hence, the floor area per seat of the EKI cafeteria is almost same as that of ordinary cafeterias of Japanese companies' dormitories. (Reference: Architectural Design Source Collection, Unit Space I).

f. Multi-purpose room (Utility room)

The multi-purpose room will be used mainly for welfare activities to promote friendly relations among trainees as like recreation and extracurricular activities, and to keep health of trainees who are staying for a long term. It is located at the top floor of the accommodation building and connected to the elevator hall and stair case in eastside. The trainees can access freely to outside on the roof top directly via the multipurpose room.

A floor area of the multi-purpose room: $6.4 \text{ m x } 10.5 \text{ m} = 67.2 \text{ m}^2$

Planned multi-purpose room shall be flexible space without any specified furniture and can accommodate 30 persons (half number of total beds). It's floor area of 67.2 m^2 is considered reasonable scale by comparison with the case of public training center in Japan, for example, in case of Yokohama Youth Training Centre (64 m^2 of a multi-seminar room for 30 persons) and The Overseas Human Resources and Industry Development Association (64.8 m^2 of a multi-purpose room for 30 persons).

iii) Required floor area

The components included on each floor in the project facility and the respective sizes (floor areas) are indicated in the table below.

Floor	Division	Name of room	Area (m ²)
		Garbage stock	35.00
		Staircase 1	36.00
		Storage 1	21.00
		EV hall 1	25.80
BFL	Services	Electrical room	126.00
		Staircase 2	12.00
		EV hall 2	46.8
		Parking space (including driveways)	673.08
		PS, EVS, corridors, etc.	123.12
		Entrance	49.50
GFL	Dublic and training	Lobby/Exhibition space	154.00
	area	Lecture /Multi-purpose	231.00
	u. ou	hall(120-capacity)	251.00
		Storage for Lecture hall	77.00

 Table 2-22
 Components of the Project Facility and their Sizes (Floor Areas)

Training and Administration Building				
Floor	Division	Name of room	Area (m ²)	
		Training reception	42.00	
		Staircase 1	42.00	
		EV hall	25.80	
		Toilet (male & female)	42.00	
		Storage 1	42.00	
		Staircase 2	21.00	
		Staff room	21.00	
		PS, EVS, corridors, etc.	163.20	
		Training room (20-capacity)×2 rooms	154.00	
		Videoconference room	77.00	
		Training room (60-capacity)	231.00	
		Library corner	63.00	
		Staircase 1	42.00	
		EV hall	25.80	
1FL		Toilet (male & female)	42.00	
		Server room	21.00	
		Printing room	21.00	
		Storage	15.40	
		Kitchenette	5.60	
	Training	Staircase 2	21.00	
	Ũ	PS, EVS, corridors, etc.	142.20	
		Training room (20-capacity)×6 rooms	462.00	
		Training room (10-capacity) \times 2 rooms	42.00	
		Training preparation room	42.00	
		Staircase 1	42.00	
		EV hall	25.80	
2FL		Toilet (male & female)	42.00	
		Storage	15.40	
		Kitchenette	5.60	
		Staircase 2	21.00	
		PS EVS corridors etc	163.20	
		Office room (30-capacity)×3 rooms	346.50	
		Deputy director's office×3 rooms	57.75	
		Secretary's office×3 rooms	57.75	
		Meeting room (large)	42.00	
		Staircase 1	42.00	
		FV hall	25.80	
3FL		Toilet (male & female)	42.00	
		Training materials/equipment storage	37.68	
		Kitchenette	4 32	
		First aid room	21.00	
		Staircase 2	21.00	
		PS EVS corridors etc	163.20	
	Administration	$Office room (30-capacity) \times 1$ rooms	115.50	
	Administration	Office room (40 capacity)×1 rooms	115.50	
		Deputy director's officex? rooms	38.50	
		Secretary's officex? rooms	38.50	
		Meeting room (middle size)	20.50	
		General Director's office	22.00	
451		Conoral Director Scoretory's office	33.00	
4FL		Stainage 1	27.50	
		Staticase 1 Waiting area	21.00	
		walting area	42.00	
		EV nall	25.80	
		101let (male & female)	42.00	
		Reception room	21.00	
		Accounting office	21.00	

Training and Administration Building					
Floor	or Division Name of room Area (m ²)				
		Storage	15.40		
		Staircase 2	5.60		
		PS, EVS, corridors, etc.	18.00		
RF		Penthouse	203.70		
Total			63.00		
			5,516.3		

Accommodation Building				
Floor	Division	Name of room	Area (m ²)	
		Parking space	96.00	
		EV hall 1	5.75	
		Staircase 1	25.20	
		Laundry	38.40	
DEI	Somiaas	Storage	67.20	
DFL	Services	Water reservoir tank, pump room	54.40	
		Driveway	192.00	
		EV hall 2	7.50	
		Staircase 2	24.00	
		PS, EVS, corridors, etc.	58.35	
		Entrance lobby	38.40	
		Reception counter and office room	26.80	
		Cafeteria	153.60	
	Walford	Kitchen	144.00	
		Staircase 1	25.20	
CEI		EV hall 1	5.75	
OFL	wenale	Toilet (male & female)	40.38	
		Service staff office	20.48	
		Security guard	20.48	
		EV hall 2	7.50	
		Staircase 2	24.00	
		PS, EVS, corridors, etc.	62.69	
		Lodging ×20 rooms	409.60	
		EV hall 1/linen	5.75	
151		Staircase 1	25.20	
II'L	Lodging	EV hall 2	7.50	
		Staircase 2	24.00	
		PS, EVS, corridors, etc.	84.75	
$2-3FL$ Same as above $\times 2$ floors		1,113.60		
4FL	Welfare	Utility room	170.85	
Total			2,979.33	

Total Floor Area of the Project Facility				
	Training and Administration Building Accommodation Building Total Floor Area(mathematical stress)			
Area (m2)	5,516.30	2,979.33	8,495.63	

Source: JICA Study Team

2) Section plan

The training and administration building faces a frontal road where the ground floor fulfills a public-space purpose such as a hall serving both as the main entrance and a display area. The building allocates a training division on the upper floor, and an administrative division on the next upper floor. This structure is planned to link various functions in a vertical line of flow, including promotional activities and information dissemination on Kaizen, institutional activities, and training and administration. In the basement, furthermore, the building provides a parking space including a lot for a microbus owned by EKI, garbage stock and machine rooms such as for electrical equipment. The accommodation building, on the other hand, allocates a common use area on the ground floor, which provides a lobby and cafeteria made available for the internal personnel as well as outside visitors. The lodging rooms are allocated on the upper floor. The basement provides a parking space, and a services division comprising a laundry room and a waste disposal area, and an electric room.



Source: JICA Study Team

Figure 2-12 Draft Vertical Section of the Facility

- 3) Structural Plan
- i) Soil condition of the site and type of foundation

As the result of soil investigation, the site has insufficient soil stratum for the project buildings with 10-25 N value within 20m depth from the ground level. Therefore, the pile foundation beard with solid stratum which has more than 50 N Value in more than 25m depth from the ground level is adopted for the planned building.

ii) Building structure

The training & administration building has 11m and 9m span of column, and the accommodation building has 8.5m and 6m span of column which are longer length comparing from local standard buildings. Therefore, planning building has steel structural floor and hybrid RC structure which is combined RC beam and steel beam will be adopted in the planning buildings. As for this method of construction, the construction works can expect simple and shortening of work period.

Outside wall and internal major wall basically adopt concrete block masonry which is most major in Ethiopia. The curtain-wall will be adopted at faced wall of the training & administration building.

iii) Structural design standard

Appling the following Ethiopian Building Code Standard (EBCS) and Japanese standards, structural design will be undertaken by introducing the allowable stress design.

Ethiopian Building Code Standard (EBCS)

- EBCS-1: BASIS OF DESIGN AND ACTIONS ON STRUCTURES
- EBCS-2:STRUCTURAL USE OF CONCRETE
- **ESCS-3:DESIEN OF STEEL STRUCTURES** •
- EBCS-4: DESINN OF COMPOSITE STEEL AND CONCRETE STRUCTURES .
- **EBCS-7:FOUNDATIONS**
- EBCS-8: DESIGN OF STRUCTURES FOR EARTHQUAKE RESISTANCE

Japanese Standard

- The Building Standards Act, the Enforcement Order
- Technical standards related to building structures
- Calculation Standard for reinforced-concrete structures, and its interpretation

iv) **Design Stress**

Earthquake a.

Addis Ababa belongs to SEISMIC HAZARD ZONES 2 in the Ethiopian standard. According to the calculation for the conversion into Japanese earthquake resistant design code, the design horizontal seismic coefficient shall be applied 0.115 (note: almost half of the design horizontal seismic coefficient in Japan of 0.2).

Seismic force for design of buildings is calculated by (Shear coefficient) × (Load for seismic design). According to Building Code Standard-8, Design of Structures for Earthquake Resistance (EBCS-8), Shear coefficient (S_d) based on Ethiopian standards is calculated by the following expression;

 $S_d(T_l) = \alpha \times \beta \times \gamma$

Where,

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\alpha = \alpha_0 \times I
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α	<i>o</i> : Bedrock acceleration ratio	\rightarrow	0.05 is applied in Addis Ababa
Ι	: Importance factor for buildings	\rightarrow	1.2 is applied based on use of the building
Theref	ore,		
	α=0.05×1.2=0.06		
And,			
•	$\beta = 1.2S/T^{2/3} \leq 2.5$	\rightarrow	The maximal figure 2.5 is applied for security.

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$$\gamma = \gamma_0 \times k_D \times k_R \times k_W \leq 0.7$$

The maximal figure 0.7 is applied for security.

Thus,

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 $S_d(T_1) = 0.06 \times 2.5 \times 0.7 = 0.105$

In the project, approximately 10% of the figure above is added in consideration of uncertainty coefficient of the assumed section and 0.115 is applied as shear coefficient (C_0) in use of structural design for earthquake resistance based on Japanese standards

 \rightarrow

b. Wind pressure

The maximum design wind speed of 30m/second applied in the project will be the wind speed for the design basis.

- v) Materials and their Strengths
 - a. Concrete

The specified concrete strengths for the concrete used for all the place of the building is C32/40 ($32N/mm^2$ in JIS, C40 in BS).

b. Reinforcing bar/ steel frame

Locally available reinforcing bar Grade 60 that are commonly used in Ethiopia shall be applied.

Steel frame is JIS G3106 SN490A • JIS G3136 SN490B or equivalent to other international standards.

4) Utility plan

i) Basis

Water supply, electric power, telephone and Internet services, and fire-fighting in the project site are under jurisdiction of the following service providers.

Table 2-25 Troviders of fill astructure Services				
Service	Name of provider			
Water supply	Addis Ababa Water and Sewage Authority (AAWSA)	Water supply	Water supply	
			Sewage	
Electric power	Ethiopia Electrical Light and Power Authority (EELPA)			
Telephone and Internet	Ethiopia Telecommunication Corporation (ETC)			
Fire fighting	Fire and Emergency Prevention and Rescue Authority (FEPRA)			

 Table 2-23
 Providers of Infrastructure Services

Source: JICA Study Team

Requirements and legal provisions related to infrastructure are as follows.

Table 2-24	Maior System R	equirements and A	oplicable Law	s and Regulations
				s while it is a second second

Type of requirements	Title of applicable standards	Japanese title
Drainage standards in	A public sewerage system is provided in the project site, and there are	
Ethiopia	no applicable standards for domestic wastewater.	
Electricity regulation in Ethiopia	Ethiopian Electrical Code	
_	British Standards (BS)	Eikokukikaku
	National Fire Protection Association (NFPA)	Beikoku Shoubou Kyoukai
	Japanese Industrial Standard (JIS)	Nihon Kikaku Kyokai
	International Electrotechinical Commission (IEC)	Kokusai Denki
	International Electrotechnineal Commission (IEC)	Hyoujunkaigi
Fire protection	British Standards (BS) and National Fire Protection Association	
requirements in Ethiopia	(NFPA) shall be complied.	
Architectural regulations in Ethiopia	Ethiopian Building Code Standard (EBCS)	

Source: JICA Study Team

- ii) Water supply and sewerage systems, and a sanitation facility
 - a. Water supply system and water sources

The project building (planned to accommodate 454 persons including the staff members and trainees) expects to use 53 m³ of water per day. In the project site, a branch pipe of 20 mm connected from a 2-inch (50 mm) city water pipe will be changed to the size of 30 mm for which water is supplied therein. Water will be distributed to a water tank provided in the project building, stored and pumped to an elevated water tank with a water supply pump. A gravity system will then supply water where necessary.

The maximum amount of water supplied per day is estimated below. The number of persons occupying the facility is as follows:

•	Staff members	254 persons
•	Trainees (including lodgers)	200 persons
	Total	454 persons

With a reference to the existing data on the amount of water supplied per person, the amount of water supply is estimated as below for 50 liters per person a day and 200 liters per lodging trainee a day:

•	Staff members	254 persons \times 50 L per person a day=	12,700 L per day
•	Trainees (including lodgers)	200 persons×200 L per person a day=	40,000 L per day
	Total	52,700 L per day→	52.7 m ³ per day

b. Estimate of a water tank capacity

For sanitary reasons, a water tank and an elevated water tank shall be a dual tank system made of fiberglass reinforced plastic (FRP) instead of a concrete structure to have the inside cleaned on a regular basis. The capacity of the water tank is estimated for the necessary daily amount because water supply is unstable through a water main. Also, the capacity of an elevated water tank is estimated equivalent to the average amount of water used per hour.

•	Water tank Capacity: $52.7 \text{ m}^3 \text{ per day} \times 1.0 =$		52.7 m ³
•	Dimension: $6 \text{ m} \times 4 \text{ m} \times 2.5 \text{ mh}$		1 unit
•	Elevated water tank Capacity:	52.7 m ³ per day× $1/8 =$	6.6 m ³
•	Dimension: 2 m×2 m×2 mh		1 unit

c. Drainage facility

The survey team has confirmed that a public sewerage system is laid in the east side of the project site, and that a wastewater treatment plant is provided therein, according to a representative of the sewerage division in AASWA Merkanisa Branch. Accordingly, the Project plans to drain wastewater discharged from the facility to the public sewerage system. The amount of wastewater is estimated 52.7 m³ a day, equivalent to that of water supply. Furthermore, rain water will be drained from the Project's building to the existing water channel of the frontal road.

d. Hot-water supply system

Easy for installation where necessary, an electric hot water unit will be provided for a shower in the lodging section and a kitchen to use hot water in dish washing.

e. Gas supply facility

A kitchen in the similar facility in the city has systems that provide heat sources including electricity and LPG. Accordingly, a kitchen in the Project's facility will use LPG to fuel a gas facility, which is readily available and inexpensive in Ethiopia.

f. Fire-extinguishing equipment

In principle, fire-extinguishing equipment shall be provided pursuant to the fire laws and regulations and the statutory building standards in Ethiopia. To extinguish a fire effectively, the Project plans to provide connecting water supplying pipes, fire hydrants, and fire extinguishers to exercise precautions all over the building. A fire cistern (5.2 m³ or more) will be provided in a pit.

- iii) Air-conditioning and ventilation systems
 - a. Air conditioner

Addis Ababa is located at latitude 9° north and 2,300 m above the sea level, with a temperature of about 25° C throughout the year. Therefore, split air cooling units will be installed where heat load is high, namely, a laundry area, training gym, and computer server room. This air conditioning system requires easy
maintenance and operations, and achieves high energy efficiency, while also allowing individual control of the air conditioning in each room.

b. Ventilation system

A mechanical ventilation system will be provided to eliminate a bad odor and humidity in toilets and pantries. Similarly, the system will be provided in other rooms such as an electric room, power generator room, machine room for a water tank. Ventilation requirements are indicated below, based on generally applicable Design Standards of the Government Buildings Department of Japan's Ministry of Land, Infrastructure, Transport and Tourism and American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

Name of place	Type of ventilation	Amount of ventilation	Remark
Classroom, conference room and office room	Air supply and exhaust	30-50 m ³ /hour per person	
Shower room in a lodging room	Exhaust only	10 times per hour	
Toilet	Exhaust only	10 times per hour	Vent a bad odor
Warehouse	Exhaust only	5 times per hour	
Cafeteria	Air supply and exhaust	50-80 m ³ /hour per person	
Kitchen	Exhaust only	40-50 times per hour	Vent exhaust gas
Machine room	Exhaust only	5 times per hour	
Electric room and power generator room	Air supply and exhaust	25-30 times per hour	Supply combustion air and eliminate heat
Parking space	Air supply and exhaust	5-10 times per hour	

 Table 2-25
 Requirements of Ventilation Systems

Source: JICA Study Team

iv) Electric facilities

a. Transformer room

Electricity is received from an electric company called Ethiopia Electric Light and Power Authority with a high-voltage 15kV transmission line under the ground. With a 630 KVA transformer provided for the Project, received electricity will be distributed to the facility with a 380/220V three-phase four-wire system. While the Electric Company will install and supply a primary power source to a switchboard (high-voltage cable laying, a breaker and transformer), Ethiopia side will bear the costs. The electric load of the project facility is estimated as below.

•	Light outlet load	50VA per m ² ×10,000 m ² =	500KVA
•	Ventilation system	$10VA \text{ per m}^2 \times 10,000 \text{m}^2 =$	100KVA
•	Sanitary facility		150KVA
•	Kitchen facility		100KVA
•	Elevator		20KVA
	Total		870KVA

Accordingly, the capacity required for the facility is 870 KVA, assuming the maximum demand power factor is 0.6:

870 KVA×0.6= 522KVA

According to an interview with a representative of the electric company, power supply is stable. Nonetheless, power outages occur two or three times a day, particularly in a rainy season. Therefore, a power generator should be provided to ensure steady operations of the project building. Also, of the intended equipment, an uninterrupted power supply (UPS) system will be provided by the Project separately for computers that are particularly sensitive to voltage fluctuation and momentary power interruption

b. Power generator

An emergency power generator will be provided so that the facility can be operated, albeit at minimum, at the time of power outage. It is expected to operate for about 10 hours. This emergency power generator may be also used for an electric motor of fire hydrant pumps in and outside the facility, which requires a backup power source. To efficiently use the output of backup power, a switching channel will be provided in the event of a fire.

The output of the generator is assumed 220 KVA which supply about 40% of the expected electric load (522 KVA). A low-noise type diesel power generator will be selected to meet a requirement of a long-duration operation and mitigate a noise in the surroundings.

c. Main feeder system

A main feeder is a 380/220V 50Hz three-phase, four-wire system distributing from a low-voltage switchboard. Depending on utilization points and areas of the facility, the feeder is divided in circuits, distributing power to each facility area via switchboards. A feeder capacity is determined in accordance with allowable voltage drop and current value suitable for the connected load of the facility. Wiring shall be distributed by cable racking from switchboards to each shaft and within the shafts, and other areas by piping.

- Main feeder Three-phase, four-wire 220V/380V
- Light outlet Single-phase, two-wire 220V
- Power equipment Three-phase, three-wire 380V
 - d. Lighting

Lighting is planned to use LED provided for rooms, a hall, and corridors, in consideration to maintenance and running costs. Lighting requirements (general illuminance) are as follows in accordance with the average illuminance prescribed by Japanese Industrial Standards as well as in reference to illuminance standards applied to the existing similar facilities.

•	Lobby and lounge	300	lux
•	Office room and staff room	500	lux
•	Classrooms and library	300	lux
•	Conference rooms	300	lux
•	Cafeteria	300	lux
•	Kitchen	300	lux
•	Warehouse	50	lux
•	Corridor	100	lux

•	Lodge	100	lux
•	Parking space	100	lux

Lighting on and off should be controlled individually room by room. Light control circuits are divided in small sections, as necessary. Lighting equipment in toilets is controlled on and off with a motion sensor to save electric energy. Electric power is distributed to lights and outlet circuits with a 220V single-phase, two-wire system. Evacuation lights are provided in stairways and evacuation exits, where necessary.

e. Telephone

To provide telephones in the project building, telephone lines will be connected to a main distribution frame (MDF) installed therein. Via an intermediate distribution frame (IDF), piping wiring is laid to periphery telephone sets provided in rooms. In reference to a circumstance in the existing similar facility, the Project will install about 100 telephone lines. The survey team has confirmed that a telecommunication company, Ethiopia Telecom, would work on wiring of telephone lines to connect with MDF by cost burden of Ethiopia side. Also, Ethiopia side shall bear the costs of supplying and installing a telephone switchboard.

f. Broadcast system

A broadcast system will be provided in the facility to make announcement and call for the staff members and trainees, which sets speakers in general classrooms and common areas such as corridors. Also, in a large hall to accommodate 120 persons, the Project plans to enable a lecture to use audio equipment.

g. Local Area Network (LAN) system

To make LAN and Internet available in the project building, the Project provides a LAN line wired under the ground with a server installed in the building. Via a HUB (set in a terminal board) in each floor, the line is connected with wiring pipes to periphery LAN equipment in the intended rooms. Optical fiber cables are planned to draw for the purpose of a videoconference as well as a future increase in an Internet speed and capacity. The survey team has confirmed that Ethiopia Telecom would draw a LAN line and optical fiber cables to connect with the project site. Furthermore, LAN equipment such as a server and HUB will be provided by equipment procurement.

h. Automatic fire alarm system

A fire alarm system shall be installed in pursuant to pertinent fire protection laws and regulations and architectural standards in Ethiopia. Detectors will be provided in rooms, where necessary, and emergency alarms, red lights, and a push-bottom control panel in corridors on each floor, where designated as alarm zones. Fire control and indicating equipment will be provided in an office room on the ground floor where a person stations at all time.

i. Lighting protection system

A lighting protection system shall be provided to protect the entire building, particularly in a rainy season.

v) Elevator plan

The installation work of elevator is included in construction work. One guest elevator and one service elevator will be installed in the accommodation building. And one guest elevator will be installed in the training and administration building. Each elevator futures as 11 passengers' capacity, 60m/sec, machine room less and safety device. There are some reliable elevator makers with the agency in Addis Ababa. They provide a periodic inspection and the maintenance for users. Therefore, proposed elevators also ca be sustained by proper maintenance.

5) Finish schedules

Each area is finished with selected materials suitable for the facility usage and functionality, while at the same time allowing durability for long-term quality control, easy cleaning and repairs, and low-cost maintenance.

Exterior finishes	Floor	Wall	Roof	External facility
Exterior finish of main parts	Granit, terrazzo tiles	Paint on mortar trowel/ curtain walls	Concrete on asphalt water proofing	Parking space: Asphalt pavement Sidewalk approach: Granite

Table 2-26Provisional Exterior Finishes of the Project Facility

Source: JICA Study Team

	Interior finishes	E1		G III	
Area	(Main rooms/spaces)	Floor	Wall	Ceiling	Fittings
Training	Large conference room (120-capacity)	Ceramic tiles	Gypsum wall boards with LGS structure/glasses and ammonium sashes	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	Training rooms (capacities of 60, 20, and 10 persons) Videoconference room, training preparation room	Carpet tiles	Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	Library	Vinyl flooring	Glasses and aluminum sashes	Rockwool acoustic panels	Aluminum sash windows Steel doors
Office	Office room Conference room	Vinyl flooring	Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	General Director Office, Deputy Director Office	Carpet tiles	Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	Warehouse, printing room	Vinyl flooring	Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
Lodge	Lodging room	Ceramic tiles/flooring	Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	Cafeteria	Vinyl flooring	Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	Laundry room	Ceramic tiles	Trowel mortar+ painting	Direct ceiling	Aluminum sash windows, Steel doors
Public area	Entrance hall Display area	Locally procured marble /granite	Locally procured marble Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	Reception counter Lobby	Marble /granite	Locally procured marble	Rockwool acoustic panels	Aluminum sash windows, Steel doors
	Health room	Vinyl flooring/ceramic tiles	Gypsum wall boards with LGS structure	Rockwool acoustic panels	Aluminum sash windows, Steel doors
Services	Waste disposal area, storage, machine rooms	Trowel mortar	Gypsum wall boards with LGS structure	Direct ceiling, painting	Steel doors
	Parking space	Concrete surface hardener for traffic loads	Trowel mortar + painting	Direct ceiling, painting	
Common area	Corridor	Vinyl flooring	Gypsum wall boards with LGS structure	Rockwool acoustic panels	
	Stairway	Marble /granite	Trowel mortar + painting	Direct ceiling+ painting	

 Table 2-27
 Provisional Interior Finishes of the Project Facility

Source: JICA Study Team

(4) Equipment Plan

1) Selection and grades of equipment

Users of equipment procured for the Project are chiefly trainees of Kaizen training and the EKI staff members. Specifications of the procured equipment shall be determined in consideration to various factors such as purposes of use, an operation and maintenance system, users of the procured equipment, a technical level in Ethiopia, cost-effectiveness and competitiveness in procurement.

- i) Criteria of selecting equipment
- Equipment necessary for Kaizen training
- Furniture for the EKI staff members to pursue office work
- Furniture necessary to accommodate trainees' lodging and equipment required for facility operations
- ii) Criteria of selecting equipment grades
- Equipment operable with the EKI staff-members' technical capability
- Equipment broadly used in training facilities in Ethiopia
- Equipment of which local agencies are able to provide maintenance services
- Printer satisfying minimum required image resolution (read: 300dpi \times 600dpi, write: 300dpi \times 600dpi) for making training materials
- 2) Equipment procurement plan
- i) Planned equipment

As the equipment of following table to be procured under the project. Equipment categorized in (1) AV equipment for training, (2) equipment to complement for training and office work, (3) furniture and other, it shows the classification and the main equipment below.

Tuble 2 20 Clussification of the Main Trocarca Equipment				
Large Category	Middle Item	Small Item (Equipment Name)		
(1) AV equipment for	Presentation system for auditorium	Screen, Power amplifier, Speaker, Picture switching		
training		unit, Microphone, Digital audio mixer, Projector,		
		PC, Blue-ray player		
	 Training equipment for classroom 	Whiteboard, Projector, PC, Flip chart, Color laser		
		Printer, Video camera		
(2) Equipment to	 Display Equipment for exhibition 	Large Monitor, Decoder, PC		
complement for training	• Computer server、 UPS	Same as on the left		
and office work	TV conference system	Monitor, TV conference system, Microphone,		
		Camera, Digital input recorder		
	 Printing machine, Photocopy machine 	Same as on the left		
(3) Furniture and other.	Office furniture	Desk & chair for Office, Meeting, file cabinet,		
		Table & chair, Bookshelf for Library corner		
		Desk & chair for training file cabinet		
	Training furniture	Table & chair for cafeteria, bed, desk, chair,		
	Accommodation furniture	wardrobe & chest for accommodation room, trolley		

 Table 2-28
 Classification of the Main Procured Equipment

Source: Technical Memorandum signed on September 17, 2015 (Priority A: Equipment to be provided by the Project, B: Equipment to be provided when allowable within a budgetary limit, C: Equipment to be procured by EKI unless covered by Japan's budget)

For the selection of the equipment on the basis of request equipment list of EKI that has been submitted by EKI, taking into account the criteria and grade of the procured equipment and the purpose of the industrial human resource development, matches the facility components. Also project provides the necessary and minimum quantities so as not overlap since to continue to use the equipment that is used in existing facilities.

At the request equipment list form EKI which included wireless LAN system and security system, but it often need adjustment and coordination with building work for that reason these equipment including construction work. The equipment to be procured in the project are as shown in the following Table.

No,	Equipment	Q'ty	Intended Use
1	Electrical Display for Exhibition	2	To use display and public information of KAIZEN training at entrance hall
2	Computer Server	1	To use for exchange of data and information with network connection of PC
3	UPS for Computer Server	1	To use for power backup of Computer Server
4	(Vacant Number)		
5	Video Conference System	1	To use for training with connecting between EKI and regional human resource center
6	Presentation System for Auditorium	1	To use for training with displaying teaching material and others at Auditorium
7	Printing machine	2	To use for prepare teaching materials of training
8	Photocopy Machine	3	To use for copy of teaching document of training
9	Presentation Equipment for Training room	46	Trainees and staffs use at raining room
10	(Vacant number)		
11	Maid Wagon	3	To use cleaning of the accommodation room
12	Linen cart	3	To use laundry
13	Desk with drawers on both sides	5	Desk for high class staff
14	Chair with arm rest	5	Ditto
15	Desk with drawers on one side	155	Desk for staff
16	Chair	155	Ditto
17	File Cabinet	31	To use store documents of office
18	Browsing Table	2	To use the table for reading books in library corner
19	Chair for browsing	8	Ditto
20	Book Shelf	6	To use at the library corner
21	Magazine rack	1	ditto
22	Folding table for Auditorium	40	To use at the Auditorium
23	Chair for Auditorium	120	Ditto
24	Table for training room	284	To use training of Trainees
25	Chair for training room	284	Ditto
26	File cabinet for training room	24	To use store equipment and documents of training room
27	Meeting table for TV meeting room	8	To use at the TV conference room
28	Chair for TV meeting room	16	Ditto
29	Meeting table	14	To use at the meeting room
30	Chair for meeting room	28	Ditto
31	Dining table	20	To use at the cafeteria
32	Dining chair	80	Ditto
33	Single bed	60	To use at the accommodation room
34	Desk for logging room	57	Ditto
35	Chair for logging room	57	Ditto
36	Wardrobe	57	Ditto
37	Chest	57	Ditto
38	Chair carrier	4	To use the storage of chairs

Table 2-29 List of Procurement Equipment

Source: JICA Study Team

2.2.3 Outline Design



















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2.2.4 Implementation Plan

- (1) Implementation Policy
- 1) Construction policy
- i) Project implementation framework

The Project is implemented by a grant aid scheme of Japan, and therefore shall be carried out smoothly in close communication with the related agencies, stakeholders, consultant, and constructor in Ethiopia.

ii) Basic construction work policy

Prior to the commencement of construction, a consultant and constructor will carefully review the work components indicated in the design drawings. Based on this review, details such as a work period, materials, work methods, quality control procedures, and safety and hygiene control will be determined by broadly considering Ethiopia's social and economic conditions including local lifestyles, culture, and applicable laws and regulations, natural environmental conditions, an intention of the implementing organization, the surrounding environment and location, manpower, and the nature of construction. The implementation plan shall be thereby decided to achieve an efficient and cost-effective work process.

Furthermore, although labor, construction materials, and equipment must be procured locally, in principle, they may be provided by a Japanese supplier, where more merits are identified, in such case that quality and inventory of local goods are inadequate, and when deemed appropriate to make sure post-delivery maintenance is feasible. The Project will take necessary measures for such case not to affect a construction progress, planning relevant transport and broadly taking into account of various requirements related to a delivery schedule, a transport route and procedure.

iii) Needs of delegating engineers

The Project plans to procure some of the construction materials and equipment from Japan. They require to apply methods and procedures practiced in Japan to the construction and installation processes. Therefore, engineers will be delegated from Japan to the project site to maintain the quality of these materials and equipment as well as accuracy of installation.

- 2) Procurement policy
- i) Equipment procurement policy

Equipment will be supplied by three options including local procurement, procurement from Japan or a third country. The Preparatory Survey has revealed that Ethiopia does not manufacture such products as copying machines, printers, personal computers and computer servers, and that they are imported from third countries in Europe and Asia (China, Viet Nam, and other countries).

For the reasons provided below, it is deemed appropriate that equipment shall be procured from Japan, making the best use of the merits of the Japanese products, combined with those products supplied from third countries.

- The intended equipment is not manufactured in Ethiopia.
- The intended equipment is manufactured in Japan or available for procurement in Japan.
- Of the intended equipment, Japanese products are highly durable and reliable in terms of their quality, featured by easy operability.

When the intended equipment is procured from Japan and third countries, a fair competition is ensured in a tender, which will keep transportation costs from increasing substantially, and the effectiveness of aid will not be undermined at the same time.

Of the intended equipment, products of American manufacturers such as DELL and Hewlett Packard are marketed in Ethiopia, specifically, personal computers, computer servers, and local area networks (LAN), and their local agencies are available. Therefore, those products procured from third countries have the merits of obtaining after-sales services in a post-delivery period.

ii) Procurement method

A supplier of equipment will be selected from an open bidding of interested Japanese companies. The supplier will provide equipment pursuant to tender documents.

iii) Procurement costs

①Price of equipment-After preparing a set of equipment specifications, quotations will be obtained from manufacturers including carriage and insurance paid to (CIP).

Quotations will be obtained from the manufacturers in pursuant to equipment specifications for 2 installation costs, 3 adjustment and commissioning costs, 4 costs of training initial handling, and 5 costs of training regular operations.

iv) Transportation costs

Quotations including CIP, covering prices of equipment, transportation costs and insurance, are obtained from manufacturers of the intended equipment. For price quotations other than CIP (such as FOB²), the transportation costs will be estimated by a shipping trader (freight forwarder) as soon as information on the package volume of equipment (cubic meters) is made available.

v) Tax exemption

With respect to value-added tax incurred on goods and services purchased in Ethiopia, the amount of payment is determined by submitting a tax office an application in accordance with monthly profits. It is refunded by the government of Ethiopia or is reimbursed by the implementing organization. Both require a budgetary measure in advance, and therefore a refund procedure should be checked and approved.

General procedures of import duties are outlined as below.

• Obtain an import license from the implementing organization

² Abbreviation of Free on Board. FOB is one of trade terms, which exempts obligation of a seller on board.

- Send a Budget Letter obtained from the implementing organization to Djibouti Customs, enclosed with specified documentation.
- Unload a cargo at Port of Djibouti.
- Obtain a permit of cargo transport to Ethiopia from Ethiopian Customs in Djibouti.
- Transport by land to the destination.
- Clear customs upon arrival of the cargo at the project site, where the amount of import duties and value-added tax are determined.
- Clearance of the customs requires at least 10 to 30 days.

*For detailed import procedures, see "(6) Procurement Plan."

The Embassy of Japan in Ethiopia and the Ministry of Finance of Ethiopia are discussing tax benefits for value-added tax, import duties, and other tax, and applicable procedures are subject to change, depending on the outcomes thereof.

- (2) Implementation Conditions
- 1) Points to be noted for construction of the facility
- i) Procurement of construction machinery

Construction machinery should be procured from a selected supplier so as to ensure the quality. In Addis Ababa, a lease of construction machinery is common, and also many of the constructors ranked Grade-1 own their crane trucks, excavators, and dump trucks. Taking the quality of the machinery into account, the Project will use locally procurable equipment, where possible.

ii) Labor laws and regulations

Local labor law and regulations shall be noted for employment of local engineers and workers while the construction period. While many of construction sites in Addis Ababa are operated at night, working hours shall be planned in a work schedule pursuant to pertinent law and regulations in the country.

- 2) Points to be noted for equipment procurement
- i) Timing of transporting equipment

Climate patters in Ethiopia fall into a minor rainy season (April), a major rainy season (June to September), and a dry season (October to March). In the major rainy season, downpours cause large puddles that disrupt the traffic, and may result in traffic accidents. As transporting the procured equipment entails risk in this major rainy season, it is desirable to schedule it during a dry season.

ii) Timing of installing equipment

The intended equipment includes components to be installed on the building, such as display facilities, a videoconference system, and a security system. Transporting these components to the project site should be desirably scheduled in accordance with timing of which construction of the building is completed.

- (3) Scope of Works
- 1) Scope of construction works

Ethiopia is responsible for bearing the costs of leveling the ground in the project site and accommodating utility lines into the premises. The demarcation of the construction costs will be stipulated in the drawings to be submitted when a study mission provides briefing of a draft Preparatory Survey Report. It must be agreed with Ethiopia.

- 2) Scope of procurement and installation
- i) Equipment that requires a power source

Equipment that requires a power source (AC220V 50Hz, single phase) will be procured by a set of the main body, the accessories (including power cables) and an inlet plug. The inlet plug supplied with the equipment must fulfill a specification and standard of the electrical socket installed in the building.

ii) LAN lines

A computer server of the intended equipment requires LAN lines. The building installs LAN lines connected with the computer server. Of the intended equipment, wireless LAN systems will be installed in corridors on each floor of the target facility. LAN lines are installed with piping and wiring on the building, connected with a hub on each floor (installed in a terminal board). The equipment connects a wireless LAN system with the hub.

iii) Internet connection

A videoconference system of the intended equipment requires Internet lines. The building connects the Internet lines with the videoconference system. The Internet lines will be installed with optical fiber cables to accommodate an increase in the speed and capacity of Internet.

iv) Emergency power generator

Emergency power generators are required to operate a computer server of the intended equipment without interruption. During an outage, a power supply from emergency power generators is essential for the reason that an uninterrupted power supply (UPS) provided with the computer server, which would supply power when detecting the outage automatically, covers only a limited backup period.

- (4) Consultant Supervision
- 1) Work supervision plan

A basic policy and points to be noted of the work supervision planned by the Project are indicated as below.

• To carry out the construction work as scheduled, consultant shall make a detailed coordination with the implementing organization. In particular, the timing of construction is important as utility lines provided by Ethiopia must be connected with the work completed by Japan. Both parties shall thoroughly discuss the work process and specifications in advance.

- Prior to construction, the Project shall thoroughly review in advance a work plan and work drawings to be submitted by a constructor. They should be evaluated with respect to relevance of a temporary work plan, a work process, quality of the planned materials and the timing of delivery.
- Upon the completion and delivery of the facility, the Project shall examine whether the work components have met the design specifications, and provide an appropriate order in the event any parts require modification.
- A work engineer is assigned to the work site at all times. The Project sends relevant engineers of the systems and equipment, who engage in work supervision, when it is necessary. Furthermore, the Project assigns a safety supervisor to the work site at all times to manage the safety and hygiene environment therein.
- 2) Plan of supervision for equipment procurement
- i) Basic policy

The Project is intended to construct a facility and provide associated equipment. The intended equipment includes units to be installed on the facility, such as presentation systems. A supplier³ shall obtain equipment when the facility is completed, and deliver it to the new EKI Center. Therefore, the supplier must properly manage a delivery schedule, inspect the procured products, and plan transport of them.

ii) Procurement supervision by a consultant

A consultant who is responsible for procuring equipment shall obtain necessary information from the supplier, related to assigned duties, where appropriate, and supervise the supplier's fulfillment of the contract.

- (5) Quality Control Plan
- 1) Work

A basic policy and points to be noted of the Project's quality control are as follows.

i) Design standard

Standards applicable to the Project shall be as follows.

- Ethiopian Building Code Standard (EBCS)
- Japanese Industrial Standard (JIS)
- · Japanese Architectural Standard Specification 5 (JASS-5)
- · American Society for Testing/Material (ASTM)
- British Standards (BS)
- British European Standard (BS EN)
- ii) Check of the key work components and materials

For the key work components such as concrete casting, the Project consults and confirms with a constructor prior to the commencement of work, regarding such procedures as trial mixes of concrete,

³ A contractor (such as a trading company), which is awarded an equipment procurement service, hereinafter called a "supplier."

material tests (aggregates, cement and water), pile foundation (excavation), planning of concrete casting, temperature, a method of curing. The constructor prescribes a simple method of work management, so that concrete can be uniformly poured in an appropriate manner.

Work dealing with other key materials is also planned with a simple inspection method for local engineers to ensure the uniform quality from the commencement of work.

iii) Consistent quality control sheet

As a method to consistently control the quality of work, the Project prepares a quality control sheet to check results of a preliminary test, mixing test, and material tests of various kinds at each stage of selection, construction and completion.

2) Storage of procured materials and equipment

To maintain and check the quality of materials and equipment provided by a contracted supplier, a pre-shipment inspection shall be carried out for the key equipment. Also, it shall be prevented from deterioration during storage, ensuring that a temporary storage area is not exposed to rainfall and sunlight, where the procured materials and equipment are located prior to distribution to the assigned installation sites.

- (6) Procurement Plan
- 1) Procurement plan for construction materials and equipment
- i) Construction materials and equipment

Cement and aggregates are produced locally, and are subject to materials tests pursuant to BS. Therefore, the Project is considering to use these materials. Reinforcing bars are locally produced, and also imported by local agencies from overseas. When decided to use them, the Project mandates submission of mill sheet, or checks the quality control information such as results of tension tests. In Addis Ababa city, several plants produce ready-mixed concrete, while also concrete pumping trucks and mixer trucks are available sufficiently. The project site is located within one hour from the existing plants, and therefore, the Project plans to use local ready-mixed concrete, whenever appropriate. Steel beam, deck plate and fireproof covering plaster board which are not available in the local market will be procured from Japan. Especially for the steel beam will be processed with stud bolt and painting the rust proof paint in Japan and to be built up on site. Finishing material and substrate material, otherwise OA floor tile, will be procured locally. OA floor tile will be procured from Japan. Locally sash materials which from Turkey or Chinese has poor quality and their moving parts also have less durability. Therefore, steel doors and aluminum windows will be procured from Japan. And glass material will be produced locally.

Equipment procured from Japan shall be properly planned for transport to avoid a negative effect on the work progress, as mentioned above.

2) Transportation plan

i) Marine transport

Equipment procured from Japan undergoes provisional customs clearance after having been loaded on Port of Djibouti. As customs clearance services entail time, the Project needs timely operations together with land transporters. Accordingly, an officer is assigned to manage customs clearance.

ii) Land transport

After the provisional customs clearance at Port of Djibouti, large trucks transport equipment by land, departing the country for Ethiopia. It will be delivered to Addis Ababa city after undergoing final customs clearance at the border.

- 3) Equipment procurement plan
- i) Equipment procurement plan

Equipment for the Project is procured from Japan. Procurement from Japan should eliminate poor quality products. Such products often have an extremely short operating life, and frequently fail or cause damage, resulting in the higher costs required for maintenance.

Equipment required for the Project is procured by a tender, followed by such procedures as contracting with a supplier, preparing the intended equipment, inspecting the products, and planning transport to the project site. The equipment will be then delivered to the new EKI Center by the supplier. These procedural steps are outlined in the following Table.

	Work steps	Description of work
1	An entire process	 Work on tender documents: A series of work including preparation and approval of tender documents for the intended equipment (terms and conditions of a contract, equipment specifications, etc.), an invitation for tender, a delivery of drawings for quotations, implementation of tender, evaluation of proposals, and contracting with a supplier Procurement process: A supplier is responsible for preparing and ordering the intended equipment, and carrying out a product inspection and pre-shipment review, pre-shipment inspection, export clearing, shipment, and marine transport, followed by provisional customs clearance after arriving at Port of Djibouti in Djibouti. After the provisional customs clearance, the procured equipment is under customs transit from Port of Djibouti to Mojo Dry Port in the suburbs of Addis Ababa to clear final customs. After this customs clearance, the procured equipment is sent into the new EKI Center in Addis Ababa city, which undergoes a series of work including unpacking, assembling, adjustment, commissioning, acceptance and delivery. Procurement supervision: Consultant⁴ supervises a procurement process in order to obtain the intended equipment.
2	Procurement of equipment	Equipment is procured from Japan pursuant to an equipment procurement policy.
3	Inspection of procured equipment	 Product inspection: In manufacturing plants, the supplier inspects qualities, shapes and appearances of the procured equipment pursuant to the specifications set forth in the contract. Inspection before shipping: Prior to packing for export, the supplier verifies a full count of the procured equipment (items and quantities) pursuant to the specifications set forth in the contract.

 Table 2-30
 Equipment Procurement Plan

⁴ Involved in Japan's general project-type grant aid, a consultant provides technical services related to a detailed design and cost estimate, preparation of tender documents, tender support, and work and procurement supervision.

	Work steps	Description of work
		Pre-shipment inspection: Prior to shipment, a third-party inspector undertakes a full count of the procured equipment (items and quantities) pursuant to the specifications set forth in the contract.
4	Planning of transport	Transport route: Equipment procured from Japan is generally transported by a marine route departing from Port of Keihin (or a trade port in a third country) and arriving at Port of Djibouti in Djibouti. Loaded on Port of Djibouti, the procured equipment undergoes provisional customs clearance, followed by customs transit to Mojo Dry Port in the suburbs of Addis Ababa to clear final customs. The procured equipment is sent into the new EKI Center in Addis Ababa city after clearing the final customs. Storage: The procured equipment is temporarily stored in the new EKI Center, under the responsibility of the supplier until it starts uppacking assembling adjustment and commissioning.
5	Acceptance and delivery	Assembling, adjustment, commissioning, initial-handling and operation training, acceptance and delivery: The supplier is responsible for unpacking and assembling the procured equipment. After commissioning and adjustment, the supplier provides the staff members of the new EKI Center with training of initial handling and regular operations (including handling, maintenance and safety precautions). Upon acceptance of the procured equipment, it is delivered to EKI which is the implementing organization of the Project.

Source: JICA Study Team

ii) Procurement plan for spare parts and consumables

For an initial term in which the procured equipment is installed, the maintenance work is primarily replacement of parts and consumables. This maintenance work, when properly pursued, enables the equipment to function in a good condition for a long term and keep its good performance at the same time. Where appropriate, part of the equipment procured for the Project will be provided with genuine spare parts and consumables. The new EKI Center will procure spare parts and consumables from its budget thereafter.

iii) Cost sharing between Japan and Ethiopia

Items to be borne by Japan and Ethiopia are as in the following Table. Japan assumes the costs of equipment, shipment, marine transport to the named port (Port Djibouti), transport insurance, custom duties, and inland transport to the new EKI Center.

The costs borne by Ethiopia are the amount of tax benefits for import clearance, and banking arrangement fees.

Cost item	Cost borne by Japan	Cost borne by Ethiopia
Equipment costs	0	
Costs of packing, shipment, export clearance, and marine transport	0	
Costs of transport insurance, inland transport, and import clearance	0	
Tax benefits related to import clearance and value-added tax, etc.		0
Maintenance costs for the procured equipment		0
Bank arrangement (B/A) fees		0

 Table 2-31
 Cost Sharing between Japan and Ethiopia

Source: JICA Study Team

4) Inspection

i) Product inspection

The procured equipment is inspected in the manufacturers' plants in pursuant to their standards with respect to the models, shapes and performances. Results of the inspection are prepared in a product inspection report or other relevant documentation. An inspector assigned by the supplier cross-references

information such as names of manufacturers and models described in an equipment list provided in a contract.

ii) Pre-shipment review

After the product inspection of the procured equipment, an inspector assigned by the supplier cross-references the total count of the said equipment (names of items and quantities) with an equipment list provided with a contract.

iii) Pre-shipment inspection

A third-party inspector carries out pre-shipment inspection, when the equipment procured in Japan is shipped from a plant and arrived at the customs warehouse for export.

The procedures include cross-references of (1) an equipment list provided with the contract and packing list included in shipment documentation, and (2) the procured equipment with information entered in the invoice and packing list included in the shipment documentation.

When the cross-references identify no discrepancy, the third-party inspector issues a certificate and report. For the equipment procured in a third country, it carries out a pre-shipment inspection.

5) Transportation plan for the equipment procured from Japan

The Project specifies transportation of the equipment to CIP Addis Ababa. The supplier is responsible for obtaining the intended equipment and delivering it to the new EKI Center. Transportation of the equipment procured in Japan to Ethiopia requires export clearance in Japan which is the place of departure.

6) Export permit

A cargo⁵ exported from Japan is subject to export regulations prescribed in the Foreign Exchange and Foreign Trade Law as well as the Export Control Order⁶ for the purpose of maintaining international peace and security. The applicable regulations are outlined in the following Table.

Title	Competent authority	Applicable laws
An Export License ⁷	Ministry of Economy, Trade and Industry	Paragraph 1 of Article 48 of the Foreign Exchange and Foreign Trade Law
Export Control Order	Ministry of Economy, Trade and Industry	Article 1 and 2 of Annex
Supplementary export control (a catch-all control) ⁸	Ministry of Economy, Trade and Industry	Paragraph 16 of Article 1 of Annex of the Export Control Order

	Table 2-32	Export Regulations of	Japan
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Source: Information on an export declaration specified by the Ministry of Economy, Trade and Industry, and the Security Trade Control

⁵ In exporting a cargo, the exporter delivers it to a customs area, and makes an export declaration for the customs in charge thereof. The customs examine and inspect the cargo to grant the exporter with an export permit. Furthermore, in exporting a cargo specified in the Trade Control Order², the exporter needs to obtain approval in advance from the Minister of Economy, Trade and Industry. A written approval is called an export license³

⁶ An ordinance to enforce provisions related to export trade in Japan pursuant to the Foreign Exchange Law. In particular, it stipulates matters related to an export permit and approval.

⁷ In exporting a cargo specified by the Trade Control Order, the exporter needs to obtain approval in advance from the Minister of Economy, Trade and Industry. A document issued upon approval of the application is called an export license.

⁸ The control stipulates that "all items or technologies to be transferred are subject to control," wherever there is a concern, without preliminarily specifying items that are subject to control. This has been applied since 2002.

7) Packing for export

After the equipment, procured in Japan, is packed suitable respectively for marine and land transport, it is recommended that a container be used to place and transport the packages, as a rule. To be handled as precision machines, the procured equipment must be applied barrier packing⁹ for the purpose of preventing humidity, water and rust.

8) Transportation method

In exporting the procured equipment, it is generally transported by sea, using such a ship as a sea freighter. It is expected to be shipped from Port of Tokyo and Port of Yokohama, where manufacturers may be located in proximity.

9) Marine transport route and the number of days required for transport

i) Marine transport route

The procured equipment shipped from Japan is transported by sea, which is generally loaded on Port of Djibouti in Djibouti.

ii) Number of days required for marine transport

Sea freighters are regularly operated between ports in Japan, namely, Tokyo, Yokohama, Nagoya and Kobe, and Port of Djibouti. The freighters from Ports of Tokyo and Yokohama to Port of Djibouti are assigned as frequently as more than about four freighters per month. Regarding the freighters assigned to Port of Djibouti, the following table summarizes type of freighter, the number of days required for transport, and ship companies providing the freight services.

<u> </u>					0
Port of departure	Port of destination	Type of freighter		Number of days required for transport	Major shipping company
Yokohama	Djibouti	Container ship	Liner shipping	Approximately 35 to 37 days	Maersk Line
Nagoya	Djibouti	Container ship	Liner shipping	Approximately 36-37 days	Maersk Line
Kobe	Djibouti	Container ship	Liner shipping	Approximately 38-39 days	Maersk Line
Hakata	Djibouti	Container ship	Liner shipping	Approximately 38-39 days	MCC Transport

 Table 2-33
 Shipping Assigned for Japan-Port of Djibouti in Djibouti

Source: Shipping Gazette, September 28, 2015 and November 9, 2015

iii) Provisional customs clearance at Port of Djibouti and customs transit

The procured equipment loaded on Port of Djibouti undergoes provisional customs clearance, followed by customs transit by truck to Ethiopia. As Ethiopia is a landlocked country with no outer port, much of the carriage and traffic depends on road transportation. The national road A1 is an international artery connecting the capital city of Addis Ababa with Port of Djibouti in the neighboring country of Djibouti.

⁹ Barrier packing (vacuum packing) is intended to protect equipment from rust and stains, covering with barrier materials and creating a vacuum in the package whose inside is placed with silica gel (drying agent) to prevent humidity which causes rust. Barrier sheets are coated with a metal layer and a clear film. Vacuum packing is suitable for electronic equipment, precision parts, and metal parts which should be protected from rust.

Awash Bridge on the said road was constructed more than 40 years ago and was severely deteriorated. This resulted in a traffic restriction that allowed only one vehicle to cross at a time to ensure safety. With a support of the Japanese grant aid scheme, the Project for Replacement of Awash Bridge on A1 Trunk Road¹⁰ has completed a renewal of the bridge. As a result, the traffic restriction against vehicles has been lifted.

iv) Number of days required for customs clearance, marine and land transport

The procured equipment undergoes import clearance at Mojo Dry Port in Oromia Region in the suburbs of Addis Ababa in Ethiopia. After import clearance, it is delivered inland by truck to the new EKI Center in Addis Ababa city. The following Table indicates the expected number of days required for marine transport from Japan to Port of Djibouti, provisional customs clearance, customs transit, inland transport and import clearance in Ethiopia (final custom clearance), respectively.

Country of departure and arrival	Service	Number of days required for shipping	Remarks
Japan	Export clearance	2 to 3 days	Port of Yokohama, Port of Nagoya, Port of Kobe, and Port of Hakata
	Marine transport	35 to 39 days	Port of Yokohama, Port of Nagoya, Port of Kobe, and Port of Hakata to Port of Djibouti
Djibouti	Provisional customs clearance	5 to 7 days	An import declaration is filed at Port of Djibouti upon arrival of the container ship. When shipping documentation is fully provided, provisional import customs clearance is permitted.
	Customs transit	3 to 5 days	The procured equipment is transported from Port of Djibouti to Mojo Dry Port in Oromia Region in the suburbs of the capital Addis Ababa.
Ethiopia	Import clearance (final customs clearance)	10 to 30 days	An import declaration of the procured equipment is filed at Mojo Dry Port. When tax-exemption application and shipping documentation are fully provided, the import clearance is completed. Customs clearance may require the number of days, and thus a schedule shall be made to allow sufficient time.
	Inland transport	1 to 2 days	Transport to the new EKI Center in Addis Ababa is completed.
	Total	56 to 86 days	

 Table 2-34
 Number of Days Required for Customs Clearance, Marine and Inland Transport

Source: Shipping Gazette issued respectively on September 28, and November 9, 2015 and information obtained from a hearing with shipping business traders and other parties concerned

v) Arrival of the procured equipment

After undergoing final customs clearance, the procured equipment is sent in the new EKI Center. It is temporarily stored on the project site thereof until the commencement of unpacking, assembling, adjustment and commissioning for which the supplier is responsible.

10) Work plan of equipment installation

After the procured equipment is sent and stored in the new EKI Center, the supplier sends engineers of the manufacturers to Ethiopia in accordance with the progress of facility construction. The engineers initiate unpacking of the exported components and distribution to the assigned sites, assembling, installing, mounting, adjusting, and commissioning of the equipment.

¹⁰ Agreements on the Project for Replacement of Awash Bridge on A1 Trunk Road were signed on March 8, 2011 (a detailed design study) and on June 9 of the same year.

When unpacking the components, the external appearance of the package shall be checked for any damage under the presence of the supplier, and a relevant person in charge of the new EKI Center or other persons concerned. After unpacking, in the event that the procured equipment is found lost or damaged, the supplier shall immediately file a claim for insurance compensation.

11) Plan for adjustment and commissioning of equipment

The procured equipment is adjusted and commissioned after unpacking assembly, installation and set-up. Adjustment and commissioning are carried out as required by manufacturers. Dispatch number of engineer and period estimated in accordance with the quantity, type of equipment, and difficulty of set-up.

Table 2-55 Dispatch of Engineer (Dispatch i eriou/Number of Engineer)								
Responsibility	Engineer A, B	Engineer C	Engineer D					
Target equipment	Display equipment for exhibition, Presentation system for Auditorium, Computer server, TV conference system	Printers, copying machines, training equipment for classrooms	Furniture, etc.					
Equipment No.	No.1,2,3,5,6	No.7,8,9	No.11~38					
1. Travel to Ethiopia	1	1	1					
2. Unpacking and distribution	2	21	10					
3. Assembling and installation	2	3						
4. Adjustment and commissioning	2	4						
5. Initial handling	1							
training	(only TV conference system)							
6. Travel back to Japan	2	2	2					
Total	10 days 2persons	31 days 1person	13 days 1person					

 Table 2-35
 Dispatch of Engineer (Dispatch Period/Number of Engineer)

Source: Information based on the results of a hearing with manufactures of the equipment

(7) Operational Guidance Plan

1) Implementation Plan for operation training

In the plan as above, Operation training implementing TV conference system to technical staff of EKI. TV conference system is introduced first time in EKI, and it is essential in order to get used to this system to take advantage of the ongoing TV conference system. Furthermore, the operation training on TV conference system is to be implemented with connection to organizations and schools in and out of Ethiopia after installation.

Equipment Name	Target person	No, of persons	Training contents of operating
TV conference system	EKI instructor Technical staff	Approx.15	 The organization which it is assumed to carry out TV conferencing. I. JICA Office 2. University 3. African Union Engineers provide training for operating about establish a connection of above organization, switching, zooming and how to deal with troubles.

 Table 2-36
 Implementation Plan for Operation Training

Source: JICA Study Team

2) Implementation plan for inspection and acceptance

The procured equipment undergoes a product inspection, pre-shipment review, and pre-shipment inspection by a third-party inspector, followed by acceptance in Ethiopia. Assignment of works related to inspection and acceptance is outlined in Table2-35.

3) Product inspection

The supplier inspects the qualities, shapes and external appearances of the procured equipment at the manufacturing plants.

4) Pre-shipment review

Prior to export packing, the supplier inspects and confirms the total counts of the procured equipment (items and quantities).

5) Pre-shipment inspection

Prior to shipment, a third-party inspector cross-references the total counts (items and quantities) of the procured equipment.

6) Acceptance

Upon arrival of the procured equipment at the project site, it is inspected for acceptance under the presence of the supplier, the staff members of the new EKI Center, and a consultant. The inspection for acceptance covers the quantities, external appearance, operations, accessories, and spares of all the procured equipment. Regular operations of the equipment are also checked. After the check is completed, it is recommended that the person in charge of the new EKI Center, the supplier and a consultant respectively sign on a delivery certificate.

Inspection and acceptance	Supplier	Consultant	Third-party inspector	New EKI Center
(1) Product inspection	0	—	-	—
(2) Pre-shipment review	O	_	—	—
(3) Pre-shipment inspection	0	0	0	—
(4) Acceptance	0	0	-	0

 Table 2-37
 Assignment of Works Related to Inspection and Acceptance

Source: JICA Study Team (\bigcirc ...an executor, \circ ...a person who shall be at present or confirm when the equipment is accepted on site)

7) Work completion certificate

Upon completion of the equipment delivery, EKI issues a work completion certificate for the supplier.

- (8) Soft Component (Technical Assistance) Plan
- 1) Background of Soft Component Plan

For this Grant Aid Project, the Government of Ethiopia has requested the construction of a Human Resource Development Center with lodging to provide necessary facilities for EKI (the Ethiopian counterpart of this Project) to conduct training. The new Center will be operated and maintained by EKI after completion of construction.

According to EKI's personnel plan, the operation and maintenance (O&M) staff of the new Center will consist of approximately 40 employees at the startup. A total floor area of about 8,495.63m2 will house a wide range of facilities, including training rooms, office rooms for EKI staff, bedrooms for trainees, a dining hall and kitchen for trainees and staff, an exhibition space for visitors, and a laundry room.

When designing and constructing this type of multipurpose building, the capacity and sustainability of the organization, which will own and operate the building after completion, needs to be examined and taken into consideration from the start of the planning phase. Since EKI has never owned this kind of multipurpose building, it lacks the knowledge and experience necessary to properly operate and maintain the facilities. Therefore, it is essential to enhance the capacity of EKI towards properly operating and maintaining the new center under this Project.

2) Objective of Soft Component

The objective of the Soft Component is to establish a solid foundation for ensuring sustainable operation and maintenance of the new Center after the completion of the Grant Aid Project. This will be implemented by providing technical guidance in order to ensure that training programs will be smoothly carried out at the new Center. More specifically, assistance will be provided for the Ethiopian counterpart towards ① Establishing O&M departments, ②Production of O&M manuals and ③Extraction of problems and improvement of O&M.

3) Outputs of Soft Component

Implementation of the Soft Component will deliver the following outcomes:

- O&M plan of the new Center will be established.
- O&M staff of the new Center will acquire basic knowledge, and O&M manuals will be produced.
- 4) Indicators of Outputs

The outcomes of the Soft Component will be verified by confirming the following:

- O&M departments have been established at the new Center.
- Trainees have acquired basic knowledge as verified by written and oral tests at the end of training.
- O&M manuals have been produced and are being applied to O&M activities at the new Center.
- 5) Activities of Soft Component (implementation plan)
- i) Activities

Soft Component activities consist of ①Support for establishment of O&M departments, ②Support for production of O&M manuals and ③Support for extraction of problems and improvement of O&M. To achieve the objective, lectures for O&M training will be given to each of the following departments The results of ①and ② will be verified by written and practical tests.

- 1. Administrative Department
- 2. Front Office Department
- 3. Cleaning Department
- 4. Security Department

- 5. Mechanical/Electrical/IT Equipment Department
- 6. Vehicle Department
- 7. Gardening Department
- 8. Laundry Department
- 9. Classroom/Conference Room Department
- 10. Dining Department
- 11. Health & Childcare Department
- 12. Waste Management Department

In No.12 above, training for waste management will held which target capacity development of collection of waste in the new center, temporary storage and handling over to collector.

ii) Implementation Plan

In implementing the Soft Component, the consultant will appoint Japanese engineers, who are involved with the O&M of the JICA International Center (a similar training facility to the new Center), and have expert knowledge and skills in O&M as full-time trainers of the Soft Component program. The duration of the program is estimated at ① 1.00 month for the establishment of the O&M departments, ② 1.00 month for setting up the production of the O&M manuals and ③0.50 months for Support for extraction of problems and improvement of O&M.

For ①, the first 0.67 month will be spent for the training for capacity development of O&M. It targets trainees will learn about the operations of each department such as lodgings, training programs, dining facilities and so on and acquire basic knowledge and skills necessary for performing O&M duties, through case studies such as a case of JICA Yokohama International Center in Japan. This phase will also include visiting and observing some similar facilities to the new center such as hotels and training facilities in around Addis Ababa, which targets the trainees to get knowledge and skill efficiently. A written test will be held on the final day to evaluate the trainees' levels of understanding and skills. The subsequent 0.33 month will be used for organizing O&M departments at the new Center in Ethiopia.

In the training for waste management, management method of waste such as paper, waste stationery, bottles and so on, which are assumed to be generated in the new center will be learned based on the standards of Ethiopia and Addis Ababa City. The Draft of Technical Guidelines on Households Waste Management (2004EC) shows policies of waste management as below:

- Decrease the amount of waste;
- Separate waste by category such as reusable, recyclable food waste and so on;
- Transport waste adequately.

For (2), the initial 0.67 month will be dedicated to supporting the production of an O&M manual for each of the administrative, front office, cleaning, and other departments that will be established during phase (1). Once these manuals have been compiled, the remaining 0.33 month will be spent on conducting practical tests in line with the manuals' contents in order to evaluate the trainees' levels of basic knowledge of O&M at the new Center. Support will be provided in such ways that will enable the Ethiopian staff to independently revise the manuals as necessary to cope with requests and problems that may arise in the future.

For ③, after a half year since starting of operation of the new center, it is dedicated to supporting extracting problems of O&M department and manual and improving them. It target O&M department to improve their organization and manual more practical and efficient by considering problems which were unforeseeable when they were established. The duration is 0.50 month.

The detailed schedule of technical assistance program in Ethiopia is as shown in the following Table.

Day no.	Description	Duration
1)-1 Train	ing at JICA Yokohama International Center + written test	
1	Travel (depart from Japan)	
2	Travel (arrive in Addis Ababa), Orientation/briefing on training program and site	
3	Basic knowledge required for O&M at New Center I	
4	Basic knowledge required for O&M at New Center II	
5	Administrative Dept.	
6	Front Office Dept.	
7	Cleaning Dept.	
8	Summary of training results, visit to similar facility (hotel)	
9	Visit to similar facility (hotel)	
10	Security Dept.	0.67
11	Mechanical/Electrical/IT Equipment Dept.	0.67 month
12	Vehicle Dept., Gardening Dept.	
13	Laundry Dept.	
14	Waste Management Dept.	
15	Summary of training results, visit to similar facility (training facility)	
16	Visit to similar facility (training facility)	
17	Classroom/Conference Room Dept.	
18	Dining Dept.	
19	Health & Childcare Dept.	
20	Knowledge retention tests (written and oral)	
1)-2 Estat	blishment of O&M departments	
21	Organizing O&M Department I	
22	Organizing O&M Department II	
23	Organizing O&M Department III	
24	Knowledge required for managing an organization I	
25	Knowledge required for managing an organization II	0.33 month
26	Knowledge required for managing an organization III	0.55 1101111
27	Establishment of O&M departments I	
28	Establishment of O&M departments II, confirmation	
29	Sorting out of training outcome, travel (depart from Addis Ababa)	
30	Travel (Arrive in Japan)	

 Table 2-38
 Detailed Schedule of Technical Assistance Program (in Ethiopia)

 ①
 Support for establishment of O&M departments

② Support for production of O&M manuals

Day no.	Description	Duration
2-1 Prod	uction of O&M manuals	
1	Travel (depart from Japan)	
2	Travel (arrive in Addis Ababa), Orientation/briefing on training program and site	
3	Introduction & analysis of O&M manual examples I	
4	Introduction & analysis of O&M manual examples II	
5	Setting the content and objective of O&M manual I	
6	Setting the content and objective of O&M manual II	0.67 month
7	Setting the content and objective of O&M manual III	
8	Sorting out of training outcome	
9	Administrative Dept., Front Office Dept.	
10	Cleaning Dept., Security Dept.	
11	Mechanical/Electrical/IT Equipment Dept.	

12	Vehicle Dept., Gardening Dept.	
13	Laundry Dept., Classroom/Conference-room Dept.	
14	Dining Dept., Health/Childcare Dept.	
15	Sorting out of training outcome	
16	Compilation of O&M manual I	
17	Compilation of O&M manual II	
18	Review of O&M manual I	
19	Review of O&M manual II	
20	Finalization of O&M manuals	
2-2 Pract	ical exercise/tests in line with O&M manuals	
1	Administrative Dept., Front Office Dept.	
2	Sorting out of training outcome	
3	Cleaning Dept., Security Dept.	
4	Mechanical/Electrical/IT Equipment Dept.	
5	Vehicle Dept., Gardening Dept.	0.33 month
6	Laundry Dept., Classroom/Conference-room Dept.	0.55 1101111
7	Dining Dept., Health/Childcare Dept.	
8	Summarize the outcomes of training	
9	Verify the use of manuals, Travel (depart from Addis Ababa)	
10	Travel (arrive in Japan)	

③Support for extraction of problems and improvement of O&M

Day no.	Description	Duration
1	Travel (depart from Japan)	
2	Travel (arrive in Addis Ababa), Orientation/briefing on training program and site	
3	Understanding the actual conditions of O&M department and manual	
4	Extraction of problems of O&M department I	
5	Extraction of problems of O&M department II	
6	Extraction of problems of O&M manual I	
7	Extraction of problems of O&M manual II	
8	Sorting out of training outcome	0.50 month
9	Suggestion for improvement of O&M department I	
10	Suggestion for improvement of O&M department II	
11	Suggestion for improvement of O&M manual I	
12	Suggestion for improvement of O&M manual II	
13	Confirmation of starting improved O&M department & manual	
14	Sorting out of training outcome, travel (depart from Addis Ababa)	
15	Travel (Arrive in Japan)	

Source: JICA Study Team

6) Implementation of Soft Component and Procurement of Resources

EKI has no previous experience in operating a training center with lodging facilities. Since the new Center will be providing training, lodging, amenity, and a variety of other services, its operation and maintenance will also be complex. For this reason, experts with experience in operating and maintaining JICA's training facilities in Japan will be dispatched as teachers to train the O&M staff of the new Center. This will take by Japanese consultant, in which Japanese experts having experience in managing and maintaining multipurpose buildings will serve as teachers.

It is assumed that ten persons from EKI, who will be serving as managers of the O&M departments of the new Center, will be selected as trainees. It is assumed that training venues and office rooms, the latter used for producing manuals, will be provided. However, in order to ensure smooth implementation of the Soft Component and effective and efficient O&M activities afterwards, it is essential for EKI's O&M staff to take initiative and make independent efforts. For this reason, a supervisor in charge of managing the trainees of the Soft Component program will be appointed from the EKI staff.

7) Implementation Schedule for the Soft Component

The following Table shows the relationship between the workflows of the hardware (construction of the new center) and the software (Soft Component) portions of this Project. The Soft Component will be implemented in two phases, spaced about seven months apart. Phase ① will be carried out during the construction work. Phase ② will take place during the completion of the new center. Phase ③ will be carried out six months after the operation of new building is started. Phase ①&② will last for 1.00 month respectively and phase ③ will take place for 0.50 month.





Source: JICA Study Team

The training schedule and personnel dispatch plan (M/M) are shown in the following Table.

Item		Duration of Dispatch (month)						No. of	M/M
		1.00			1.00		0.5	Person	101/101
① dep	Support for establishment of O&M partments								
1	Training at JICA Yokohama International Center + written test	20 days						2	1.33
2	Establishment of O&M departments	10 days						2	0.67
2	Support for production of O&M manuals		4	1		4			
1	Production of O&M manuals				20 days			2	1.33
2	Practical exercise/tests in line with O&M manuals				10 days			2	0.67
3	Support for extraction of problems and improvement of O&M						15 days	2	1.00
	Total								5.00

Table 2-40	Training Schedule and Personnel Dispatch Plan (M/M)

Source: JICA Study Team

8) Outputs of Soft Component

Outputs or deliverables of the Soft Component are as follows:
i) Deliverables to the Project Owner

As outputs of the Soft Component, Execution Agency will receive:

- a. Manual of Operation, Maintenance and Management for TICAD Human Resource Development Center for Business and Industry
- b. Report (in English)
- ii) Deliverables to JICA
 - a. Progress Report of Soft Component
 - Initial targets / results
 - · Progress status of initially-planned inputs and activities
 - Results thus far (test results)
 - Project Owner's feedback
 - b. Completion Report of Soft Component
 - Outline of Project (name of Project, signing dates of E/N and G/A, maximum grant amount stipulated in E/N and G/A, amount of Consultant Agreement)
 - Outline of Soft Component (costs, background, planned objectives, expected results, planned activities, assistance providers and participants, implementation schedule (timing and M/M), actual activities conducted, actual outcomes produced in comparison with planned outcomes)
 - Remaining tasks and recommendations for sustaining and developing the effects to meet the objectives.
 - Attached documents (Soft Component implementation schedule, participants list, attendance record, list of outputs (document titles, names of authors, summaries))
 - Packet of reference materials (outputs (Completion Report to the Project Owner, O&M manuals produced, textbooks used, results of retention tests, etc.) video clips, photos, and newspaper articles.)
- 9) Outline Cost of Soft Component

The outline cost of the soft component is as shown in the following Table.

This data is closed due to the confidentiality.

10) Undertakings of the Recipient Country

In order to achieve the objectives of the Soft Component, the Government of Ethiopia will allocate a necessary budget and personnel to ensure that O&M manuals, produced under the Soft Component program, will be effectively utilized and the intended effects of the Project will be realized.

- (9) Implementation Schedule
- 1) Construction Schedule

Upon the signing of the Exchange of Notes (E/N) and the Grand Agreement (G/A) between the Governments of Japan and Ethiopia, the Consultant will proceed with detailed design. Japanese construction contractors and equipment suppliers will then be selected through a tender procedure, and construction along with equipment procurement/installation will commence once the contractor agreements are approved by the Japanese Government. The project schedule from detailed design to completion is as shown below: 8.0 months for the detailed design/tender processes, 20.0 months for facility construction and equipment installation. The total period is 34.5 months including the Soft Component.





Source: JICA Study Team

2) Equipment Procurement Schedule

Equipment will be handed over to the Ethiopian side within 13 months after the selection of equipment suppliers through a tender procedure, including the time period for manufacturing and shipping the equipment. The equipment procurement schedule is summarized in the following Table below.

		Month*												
Phase	Description	1	2	3	4	5	6	7	8	9	10	11	12	13
Tender	Bidding													
	Bid evaluation													
	Contractor agreement													
Procurement	Manufacture of equipment													
	Product inspection													
	Pre-shipment inspection													
	Pre-loading verification of conformity													
	Export, packing, ocean freight													
	Import, inland transportation, delivery to site													
	Unpacking, assembly, tuning, trial operation													
	Guidance on startup													
	Guidance on operation												I	
	Acceptance inspection/handover													

 Table 2-42
 Equipment Procurement Schedule

Source: Based on interviews with equipment manufacturers and ocean freight companies (*note: "month" refers to serial month)

2.3 Obligation of Recipient Country

2.3.1 General Matters under Japan's Grant Aid Scheme

In implementing this Grant Aid Project, the general undertakings of the recipient country are as follows:

- Provision of data and information necessary for the implementation of the Project.
- Securing of land necessary for the implementation of the Project (site for construction work, material/equipment storage, etc.)
- · Ground leveling of each construction site before construction work commences.
- Opening a Japanese bank account under the name of the Government of Ethiopia and issuance of Authorization to Pay (A/P).
- Ensuring that materials/parts are swiftly unloaded at the port of disembarkation in Ethiopia, and that completion of tax and tariff exemption procedures is met without delay or omission.
- Exemption of Japanese corporations and nationals, who are engaged in the provision of products and services pursuant to approved agreements under this project, from tariffs, domestic taxes, and other charges.
- Granting of permits to enter and work in Ethiopia and other authorizations to Japanese nationals in connection with the provision of products and services in accordance with approved agreements.
- Granting of permits, licenses, and other authorizations necessary for the implementation of the Project.
- Proper and effective maintenance, management and preservation of the facilities to be constructed by this Project.
- Shouldering of expenses associated with the Project other than those borne by the Japanese Government under its Grant Aid Scheme.

2.3.2 Matters Unique to this Project

For this particular Project, the recipient country is responsible for the following items:

(1) Construction site

The Ethiopian Government will be responsible for securing the construction site at its own expense.

(2) Payment of all domestic taxes and charges associated with this Project

All domestic taxes and other public charges imposed in Ethiopia in connection with the implementation of this Project will be paid by the Government of Ethiopia.

Item	Undertakings of the Ethiopian Side
Acquisition of construction site	Acquire construction site before tender.
Construction permits	Obtain all required construction permits before tender.
Service lines for industrial-scale electricity, water, sewage, and telecommunication.	Install service lines for industrial-scale electricity, water supply, sewage, and telecommunication before the commencement of construction work.
Installation of electrical and telecommunication cables and water/sewer pipes	Install electrical and telecommunication cables and water/sewer pipes for the new Center before the completion of construction work.
Planting of trees	Plant trees and bushes immediately after the completion of construction work.
Purchase and installation of equipment.	Purchase and install equipment items not to be procured by Japan.

 Table 2-43
 Undertakings of the Ethiopian Side

Source: JICA Study Team

2.3.3 Tax measures in the Project

(1) Tax type and subject to taxation in Ethiopia

The major tax types in Ethiopia are below.

	Cat.	Тах Туре	Description	Tax Rate %	Regulation	
1		Corporate Income Tax	Tax imposed on income and sales of the corporation.	30		
2	Direct	Personal Income Tax	Tax to be imposed on individual income	10-35	Income Tax Proclamation No. 286/2002	
3	Tax	Withholding Tax	thholding x One of the ways of collecting Corporate income Tax. A payment person of the income collects and pays an income tax for a receiver in case of payment		Amendment Proclamation No. 693/2010	
4		Customs Duty	The tax which is imposed when importing article.	0-35	Customs Proclamation No. 622/2009 Customs Tariff Amendment No. 1, 1996 edition Ethiopia Customs Tariff, Volume 1 and 2, 2007 version Proclamation No. 570/2008	
5		Excise Tax	The tax imposed on sugar, a vehicle, cotton and others which are luxury goods.	0-100	Excise Tax Percolation No. 307/2002 Amend Proclamation No. 610/2008	
6	Indirect Tax	Value Added Tax (VAT)	The tax imposed with respect to transactions such as selling a product and providing service. Equivalent to the consumption tax in Japan. Pay when you purchase goods and services, receive when provided, and offset in and out for a certain period of time to get the difference which is paid as the tax.	15	Value Added Tax Proclamation No. 285/2002 Amendment Proclamation No. 609/2008	
7		Import Surtax	In order to improve the trade balance by suppressing the import, special surtax levied on imported goods.	0-10	Import Surtax Regulation No. 133/2007	
8		Stamp Duty	Those to tax captures the creation act of the document accompanying the distribution deal in the economy and society. One of the distribution tax.	0.5-2 (5-350 birr)	Stamp Duty Proclamation No. 110/1998 Amendment Proclamation No. 612/2008	

Table 2-44	Tax Types in	n Ethiopia
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Source: JICA Study Team

Taxes applied to imported goods are the following five types of taxes to be taxed in this order: Customs Duties, Excise Tax, Value Added Tax (VAT), Import Surtax, and Withholding Tax. Excise Tax is a tax that is added sugar, vehicle, in cotton and other luxury goods, in other than those of the general imported goods is not added.

The type of Income Tax are not only Corporate Income Tax, Personal Income Tax, and Withholding Tax, but also Royalty Payments, Capital Gains Tax, and Rental Income.

The tax related to conducting the Project will be mainly in the following five.

- ① Taxes on Imported Goods (Custom Duties and so on)
- ② Corporate Income Tax
- ③ Personal Income Tax (Japanese Staff, Foreign staff, and Local staff)
- ④ Value Added Tax (Input VAT and Output VAT)
- (5) Withholding Tax

Withholding Tax is a system that a part of the income tax a recipient must pay is collected by a payer as proxy at the time of payment (see the following figure). In the past grant aid project, there is a case that tax collection obligations violation was accused due to breach of this tax collection as proxy, so that there is a need for sufficient consideration. For the understanding of the Withholding Tax, the following figure shows: (A) tax collection without Withholding Tax and (B) tax collection with Withholding Tax.



Source: JICA Study Team

Figure 2-13 Withholding Tax

As for Value Added Tax (VAT), it has been taken the "substantial tax exemption" system that implementing agency took over all of them in the past grant aid project. In this project, EKI (Ethiopian Kaizen Institute), which is the implementing agency, bears all of them to ensure the substantial tax exemption.

The concept of Ethiopian VAT is similar to the Japanese consumption tax, and there are two kinds of VAT: input VAT and output VAT. Input VAT is to be added on the payment when you pay, and output VAT is to add on the sales when you receive, then the difference between the sum of output VAT and the sum of input VAT in the certain duration is calculated to tax or to get a refund.

In the past grant aid project, although the input VAT was take over the implementing agency, the project had a problem that was required to pay the output VAT which was calculated using the amount of the

contract. In order to avoid this problem, there is a need to clarify the handling of the output VAT as well as input VAT. There are two ways below as a specific method.

[Method 1] Input VAT (VAT applied to the payment) is received as a refund from implementing agency, output VAT (VAT applied to the revenue) is paid by the implementing agency to ERCA.

[Method 2] Japanese companies receive output VAT (VAT imposed on income) from the implementing agency, and pay input VAT using the source of output VAT received from the implementing agency, then the difference between output VAT and input VAT is returned to the implementing agency at the end of certain period.



Source: JICA Study Team

Figure 2-14 VAT Refund Flow

For Japanese companies, the [Method 2] is preferable because it is not necessary to require a refund of input VAT. But for the implementing agency, they need to prepare a lot of cash in order to pass Japanese companies. This is why the [Method 2] is difficult to realize and the [Method 1] is more realistic. In the [Method 1], the implementing agency only needs to prepare the amount of cash for refund of input VAT by each month, and the cash for paying out VAT is not requested because the transaction is between ERCA and the agency, and is required only a procedure of documentation so that cash never move. Even in the past grant aid project the [Method 1] have been adopted, so it is desirable that the [Method 1] is adopted by the Project as well.

Also not a tax, but there are those that are similar to the tax such as ①Insurance Custom Bond, which is required when importing goods¹¹, ②various licensing costs like construction permits, and ③other local taxes and levies, so there is a need to check how to treat each subject.

(2) Process of Taxation and Tax exemption or refund

By Ethiopian laws, all corporations to carry out commercial activities to stay more than six months must register business and obtain TIN (Taxpayer Identification Number) and VAT (Value Added Tax) number,

¹¹ Insurance Custom Bond is a bond in order to guarantee the taxes (tariff and other taxes applied to the time of importation) of goods temporary use.

even the activity only of grant aid project. The procedure of registering and obtaining these numbers are very simple and the fees are not expensive.

The opinion of MoFEC (Ministry of Finance and Economic Cooperation) is that the taxes are exempted for the Embassy of Japan by diplomatic immunity and for international aid agencies such as JICA and USAID by technical cooperation agreement, but the taxes are not exempted for a private company and person working for a grant aid project under these agencies. This makes a conflict against E/N (Exchange of Notes) for a grant aid project which guarantees the tax exemption for the project.

The discussion is on going between two governments. As of August 2017, the following masures are discussing.

	Tax type and Item related to tax	Measure
1	Custom Duties	Tax exemption or payed by implementing Agency
2	Corporate Income Tax	Tax exemption (or No actual burden)
3	Personal Income Tax	Tax exemption (or No actual burden)
4	VAT (Value Added Tax)	Tax exemption or payed by implementing Agency
5	Withholding Tax	Under Discussion
6	Insurance Custom Bond, License Fees, Bank Commitment	Be borne by implementing agency (Direct payment or refund by implementing agency)
7	Other local taxes and levies, Local costs related to the Project	Be borne by implementing agency (Direct payment or refund by implementing agency)
8	Penalty, Delay payment, and Interests by the tax authorities pointed out	Under Discussion

Table 2-45Measures by Tax Type (Draft)

Source: JICA Study Team

(3) Confirmed measures between Ethiopian and Japanese Government for the Project

Discussion on the measure of tax exemption has been still continued between Ethiopia Government and Japanese Government. However it is not reached final agreement yet at present.

2.4 **Project Operation Plan**

2.4.1 Facility Operation and Maintenance Plan

For operating and managing the new Center, EKI is going to establish its own O&M departments as listed below, consisting of 40 employees.

Department	Duties
Administration	Supervision of O&M departments
Front Office	Reception and lodging management
Cleaning	Cleaning of the Center and house-keeping of guest rooms
Security	Surveillance and security
Mechanical/Electrical/IT	Management and operation of mechanical/electrical/IT equipment
Mechanical/Electrical Inspection	Inspection of mechanical and electrical equipment
Vehicle	Maintenance and driving of vehicles
Gardening	Management of trees and plants
Laundry	Laundry and ironing
Classroom/Conference Room	Management of reservation and equipment of classrooms and conference rooms
Dining	Operation of dining room and catering service within the Center
Health & Childcare	Public health nurses, childcare persons
Waste Management	Management of waste at the center

 Table 2-46
 EKI's O&M Departments (tentative)

Source: JICA Study Team

At the average monthly salary of 2,000 Birr (approx. 10,000 yen) for each of the 40 O&M employees, the annual personnel cost is estimated at 960,000 Birr (approx. 4.8 million yen), which accounts for only around 3% of, and is well within, the total forecast budget for 2018 of 33 million Birr. In addition, EKI has decided to charge lodging fees to those who will be staying at the new center, as well as training fees, which the beneficiaries will pay an increasing percentage starting in 2019, reaching 100% by 2022. These conditions indicate that EKI has a sufficient financial capacity for operating and maintaining the new Center. Nonetheless, EKI has requested the Soft Component as technical assistance for developing the O&M personnel.

Item	Item Revenue/Expenditure			
Revenue				
Trainees lodging fees (including meals)	500Birr x 120 rooms x 365 x 0.7	15,330,000		
	Total revenue	15,330,000		
Expenditures				
Salaries	2,000Birr/month x 40 persons x 12 months	960,000		
Laundry (bed sheets, pillow cases)	40Birr x120 rooms x 8/month x 12 months	460,800		
Laundry (bath/face towels, bath mats)	60Birr x 120 rooms x 365x0.7	1,839,900		
Restaurant (3 meals)	100Birr x 120 persons x 365 x 0.7	3,066,000		
Utility charges				
Water		73,095		
Electricity		322,878		
Communication (Internet)		1,472,000		
Building and vehicle maintenance		918,000		
Consumption cost		4,997,000		
	Total expenditure	14,109,373		
Balance 1,220,62				

 Table 2-47
 Estimated Revenue and Expenditure Associated with Operation and Maintenance

Source: JICA Study Team

2.4.2 Equipment Operation, Maintenance, and Management Plan

Without adequate resources (engineers, budget, etc.) for the operation and maintenance of the procured equipment, problems will likely occur after handover. Allocation of sufficient personnel and budget resources is necessary. Otherwise, equipment will deplete over time with use, and will require spare-parts replacement and/or repair.

Maintenance methods, which will enable the procured equipment to be used safely and effectively for an extended period of time, are summarized as follows.

(1) Classification of Equipment Maintenance

Equipment maintenance methods are classified into Level 1 to Level 3. It is important to understand that service lives of equipment can be prolonged only when all the three levels work synergistically and complement one another.

Level-1 maintenance is to be performed by equipment users/operators. Level-2 is to be carried out by the O&M departments¹² of the new center, while Level-3 requires servicing by engineers of the local agents of equipment manufacturers.

1) Maintenance Level 1

Equipment users/operators assumed at Level 1 include staff of the new EKI Center, including Japanese experts dispatched under the "Technical Cooperation Project for Capacity Development to Facilitate Improvement (Kaizen) of Quality, Productivity, and Competitiveness" (launched in FY 2015), a complementary Project to this one.

After the installation, tuning, and trial operation of the equipment to be procured for this Project, engineers (to be dispatched by equipment suppliers) will give guidance -through a workshop- on equipment operation. We recommend that the aforementioned Japanese experts also attend the workshop to learn how to use the equipment.

2) Maintenance Level 2

Level 2 is the case where an equipment user/operator finds a problem or failure, is unable to solve or repair it, and contacts the relevant O&M department for help.

3) Maintenance Level 3

Level 3 is the case where O&M engineers find it impossible to repair the equipment and have to contact the equipment suppliers for repair or servicing work.

As of the time of this survey¹³, equipment manufacturers are providing after-market services for their customers through their local agents in Ethiopia, albeit in a limited number. Equipment suppliers for Grant Aid projects are generally required to provide a 1-year warranty through their local agents after handover of equipment as one of the conditions for bidding. We recommend the use of local agents for repair and servicing of equipment for this Project as well.

¹² However, once materials have been requested for the EIA building project in Addis Ababa, the EPA holds such example

¹³ Conducted From 23 August to 20 September, 2015

by	Description	
Equipment users	 It is important for equipment users to visually check the equipment before use to see if it operates properly. Cleaning of equipment after use is also essential for ensuring safety and prolonging the service life of equipment. Equipment users are also responsible for daily chores, such as checking the connection of power plugs and replacing/replenishing spare parts and expendables. In performing daily maintenance work, it is important for equipment users to know how the procured equipment operate under normal conditions . 	
O&M departments	 When the procured equipment requires repair or replacement of spare parts for instance that cannot be handled by equipment users at Level 1, the users will contact the relevant O&M department. O&M staff must be electrical engineers with experience in repairing equipment or persons having experience and specialized knowledge in the fields of electronics, electrical engineering, etc. When necessary, O&M staff will teach the users how to operate the equipment properly and manage operation manuals and repair record. O&M staff should be equipped with appropriate measuring instruments (ammeter, clamp meter, insulation resistance tester, etc.) and tools for performing repair work and periodic servicing. 	
Local equipment dealers Local agents of equipment suppliers	 Applicable instances include when the procured equipment requires repair or replacement of spare parts that cannot be handled by the O&M staff at Level 2 as they are unable to find the cause of problem or do not have spare parts, etc. Equipment failure beyond the capacity of the O&M staff will be repaired for a fee by engineers dispatched by local agents of equipment manufacturer. It will be mandated that local agents of equipment suppliers periodically visit the Project site to repair damage, gather information on maintenance matters such as spare parts, and report the results to the equipment suppliers. Based on the report from the local agents, equipment suppliers will respond to equipment failure, etc. in the following manner. Engineers of equipment manufacturers will identify the cause of failure and/or instruct how to fix the problem based on the photos or videos of broken equipment sent by local agents. If necessary, local agents and equipment suppliers exchange opinions via telephone or other audio communication devices. O&M work includes provision of guidance on how to use the 	
	by Equipment users O&M departments O&M departments Local equipment dealers Local agents of equipment suppliers	

 Table 2-48
 Equipment Maintenance Methods

Source: JICA Study Team

2.4.3 Points to be noted when this project is implemented

- Ensuring a sure execution of tax exemption, obtaining related permissions as well as securing expediency of the recipient country, which are to be implemented in cooperation with the executing agency.

- Ensuring a quick exemption for building conditions of minimum G+10 floors and maximum G+19 floors imposed in the land ownership document issued by Lideta Sub-city.

- Concern of price inflation by devaluation of Ethiopian currency (Birr)

2.4.4 Clarification of Points to be noted for detailed design implementation

Table 2-49 (Clarification of Points to be noted for detailed design implementation
Points to be noted	Re-confirm construction method of retaining and pile.
	Set up the floor level with consideration of the gap between the front road
	and west side road.
	Consider the consistency of electrical, plumbing, air conditioning and
	ventilation for the kitchen and laundry equipment.
	Consider the sound insulation performance of walls both fixed and
	movable.
	Consider the sound insulation performance of the individual room of the
	accommodation.
	Make no floor gaps in consideration of the barrier free concept.
	Secure a safe fixing of the sun light protection louvers.
Pending matters	-None-

2.4.5 Assumed project risk

During construction				
Risks	method			
Effect to the surrounding	To confirm the safety contr	To confirm the safety control plan by the construction		
roads caused by the	company.			
construction trucks traffic.				
Noise and Vibration	To check the scale, range a	nd duration of the effect in		
caused by the construction	order to take measures for t	order to take measures for the problem.		
Delay of acquisition of	To coordinate carefully w	ith relevant organizations		
construction-related	through the execution agence	cy.		
permissions				
After the construction				
Tangible/Intangible	Risks	Control method		
Intangible	Operation & Maintenance	To support the		
	Organization is not	organization start-up		
	established.	through Soft component.		
Intangible	Maintenance & Operation	To teach Maintenance and		
	is not performed properly.	Operation method through		
		Soft Component		
Tangible	Defective or malfunction	To describe		
	of electrical / mechanical	countermeasures in the		
	equipment cannot be	Maintenance & Operation		
	managed.	manual which will be		
		prepared through Soft		
		component		

Table 2-50 Assumed project risk and control method

2.5 **Project Cost Estimation**

Initial Cost Estimation

The total cost for implementing the Project is closed due to the confidentiality.

- (1) Condition of Cost Estimation
- 1) Time of estimation: August 2017
- 2) Exchange rates:
 - 1 ETB =4.900JPY
 - 1 US\$ =112.83JPY
 - 1 Euro =127.46JPY

The exchange rates used were the average rates for the three months between May 1st and July 31, 2017. ETB (Ethiopian Birr) is the local currency of Ethiopia.

Construction/Procurement period: 28 months for detailed design, facility construction, and equipment procurement as shown in the Implementation Schedule.

(2) Expenses to be Paid by the Japanese Side

This data is closed due to the confidentiality.

(3) Expenses to be Paid by the Ethiopian Side

Item to be burden	Item	Estimated cost (in thousand ETB)
	Removal of the debris in the site (include existing sheds and plants) and site clearance	578
Facilities	Installation of electricity, water, sewage and telecommunication lines. Commission for construction permission.	2,112
	Wiring, Planting, furniture and furnishings which are not include in Japanese works	4,950
Bank CommissionBank Commission (Bank Arrangement B/A, Authorization to Pay A/P)		500
	8,140	

Table 2-51 Estimated Cost to be Borne by the Ethiopian Side

Source: JICA Study Team

2.5.1 Operation and Maintenance Cost

The table below lists estimated annual expenses associated with the operation and maintenance of the building to be constructed and equipment to be procured by this Project.

Tuble 2 32 Tilliudi Octivi Cost					
Item	Estimated cost (in thousa	Note			
	Personal cost	960	40 staff		
	Utility cost	406			
Maintana	Communication (Internet)	1,472			
& Operation	Building and vehicle	018			
& Operation	maintenance	910			
	Consumption cost	4,997	Include Fuel		
	Total	8,753			

Source: JICA Study Team

CHAPTER 3 PROJECT EVALUATION

CHAPTER 3: PROJECT EVALUATION

3.1 Preconditions

To implement this project, the following activities will be executed by EKI.

- Prior to the construction commencement, acquire the title deed of the Site(**), Those borne by the partner, such as tax exemption procedures, will be implemented without delay.
- Remove rubble and foundation remained in the Site.
- Run a water supply and draw electricity to the Site.
- Obtain necessary permission before tender announcement, discuss with environment expert about the Ecological Expertise (EE) Law.
- Obtain construction permit before tender announcement, discuss with Addis Ababa City and building expert.
- · Carry out the procedure of tax exemption and import clearance for the items procured by the Project.

(*)Certificate concerning Land owner ship from Addis Ababa City Hall and approval documents of this city's sub-city were received on 14 August 2017, 7 November 2017, respectively. However, it had been revealed that the number of stories that can be built in the project site is at least 10 stories above the ground level, the highest is 19 stories above the ground level in the approval letter, from EKI to the sub-city so as to relax it, and it has been pending to reply in writing in middle of December 2017

3.2 Necessary Inputs by Recipient Country

To produce an effect and able to maintain it, the following activities are to be executed by EKI.

Within one month before commencement of the soft component (Technical Assistance), select staff so they can relate with the new building and confirm who receive the training.

3.3 Important Assumption

To produce an effect and able to maintain it, external conditions are shown below.

- EKI would continuously make necessary funding and human resources available, and counterpart personnel of the project would be involved in upgrading aviation safety.
- EKI would continuously conduct its Kaizen activities based on its future plan.

3.4 Project Evaluation

3.4.1 Relevance

In view of the above, it is judged that the project is appropriate for technical assistance project, by using Japanese grant aid.

(1) Object suitability

This project aims to construct the new building and procure equipment which can follow EKI's future expansion of its Kaizen activities.

The construction of new building and improvement of EKI's function such as its head office and training center have high suitability in view of contribution to improvement of quality and productivity and human resource development in Ethiopia.

(2) Benefit target

EKI is only an organization which conducts and promotes Kaizen activities in Ethiopia. The construction of the new building and procurement of equipment supports expansion of its activities and provides benefits human resource development in the future in Ethiopia.

(3) Purpose of the project

EKI has currently its head office in private buildings for rent in Addis Ababa City. The use of the buildings had been changed from an apartment, the original use, to EKI's office and the area is not enough for the office use. Furthermore, the plan of the buildings is designed based on the use for EKI's head office and work space for trainers. The buildings do not have enough rooms for training or holding seminars. In addition, the number of staffs is currently assumed to increase due to expansion of Kaizen activities and function of EKI's Head office, that results in demand for construction of new building for them.

This project aims to contribute improvement of EKI's function such as its head office and training center to development of human resource in Ethiopia by construction of the new building and procurement of equipment which can follow EKI's future expansion of its Kaizen activities.

The construction of new building and

(4) Mid- and Long-term Policies of Ethiopia

The Ethiopian government supports the necessity to improve quality and productivity in the 2nd Growth and Transformation Plan (GTP2). EKI, as the implementation organization, submitted "the Past Record and Future Plan prepared for JICA Mission" to JICA, which consists of its future plan regarding content of activity and organization system. This project corresponds to these policies.

The "Country Assistant Policy to Ethiopia" decides that the development of private sector, including promoting Kaizen activities, is one of priorities. This project corresponds to the policy.

3.4.2 Effectiveness

(1) Quantitative Effect Indicators

The quantitative effect indicators' target year is settled in 2023; three years after the completion of the construction. By the social, economic, and technical results of this survey, the quantitative effect indicators are shown in the following Table.

The target number in 2023 is the figure presented by EKI. Study team verified the figure and concluded it is feasible by following reasons; the achievement of the training in 2017 is exceeded the plan, the number of companies / organization and the number of trainee attendants is realistic in the light of fact and local Kaizen implementation is expected to progress in the future.

In the upper row in the following table shows the direct effect which will be achieved by training for keypersons at EKI head office and in the lower row shows overall effect which will be achieved by those activities in whole country.

Indicator	Base (2017)	Target (2023) (3 years after completion of construction)
Number of trainees at EKI Center	0	660
Number of trainees at EKI Center and the whole region	28,593	50,600

 Table 3-1
 Quantitative Effect Indicators

Source: JICA Study Team

(2) Qualitative Effect Indicators

The qualitative effect indicator of the project is shown below:

- · Improve EKI's capacity for human resource development.
- · Contribute the improvement of quality and productivity in Ethiopia.

Appendices

- A-1 Member List of the Study Team
- A-2 Study Schedule
- A-3 List of Parties Concerned in the Recipient Country
- A-4 Minutes of Discussions 1
- A-5 Technical Memorandum 1
- A-6 Minutes of Discussions 2
- A-7 Soft Component (Technical Assistance) Plan
- A-8 Procedures of Environmental Impact Assessment
- A-9 Training Plan
- A-10 Project Monitoring Report

A-1 Member List of the Study Team

(1)	Mr. Hiroyuki TANAKA	: Leader	JICA Ethiopia Office Senior Representative
(2)	Mr. Yoshifumi HOSHIAI	:Team Leader of the Consultants / Architect 1	Nippon Koei Co., Ltd
(3)	Mr. Yoshiya NAKANISHI	: Cost Estimator	Koei Research & Consulting Inc.
(4)	Ms. Kiyomi EGUMA	: Training Planner	Nippon Koei Co., Ltd
(5)	Mr. Kotaro MATSUNAWA	: Equipment Planner	Koei Research & Consulting Inc

A-2 Study Schedule

\wedge	Member		JICA	Consultant			
			Leader	Team Leader of the Consultants / Architect 1	Cost Estimator	Training Planner	Equipment Planner
Date			Mr. Hiroyuki TANAKA	Mr. Yoshifumi HOSHIAI	Mr.Yoshiya NAKANISHI	Ms. Kiyomi EGUMA	Mr. Kotaro MATSUNAWA
	2017			1		1	1
1	23-Jul	Sun		Departure at NRT(ET673)		/	Departure at NRT(ET673)
2	24-Jul	Mon		Arrival at ADD	Arrival at ADD		Arrival at ADD
-			Visit to JICA Ethiopia Office, Description of E	KI and ICR, Visit to Construction Site		4 /	Visit to JICA Ethiopia Office, EKI and Construction Site, Description of ICR
3	25-Jul	Tue		Data Collection and Analysis	Unit Price Survey	. /	Comfirmation of Existing Equipment at EKI
4	26-Jul	Wed		Data Collection and Analysis	Unit Price Survey		Confirmation of Existing Equipment Agency Survey Agency Survey
5	27-Jul	Thu	Visit to Fo.I	Discussion for Architecture, Cost Estimation, T	raining and Equipment at EKI	- /	Agency Survey
6	20_101	Evi	Hart to Edd	Discussion with Mr.Mekonnen		1 /	Agency Survey
0	20 001			Meeting at Local Design Office		. /	Comfirmation of Existing Equipment at EKI
7	29-Jul	Sat		Discussion for Architecture, Cost Estimation, T	raining and Equipment at EKI	. /	Data Collection and Analysis
-				Data Collection and Analysis	Unit Price Survey	4 /	,
8	30-Jul	Sun		Team Meeting, Summarize the Investigation Re-	sult		Team Meeting, Gathering for Investigation Sesult
9	31-Jul	Mon		Sisuation Survey of EKI			Confirmation of Procurement Plan Comfirmation of Existing Equipment at EKI
10	1-Aug	Tue		Data Collection and Analysis			Comfirmation of Existing Equipment at EKI
11	2-Aug	Wed		Discussion with Mr. Mekonnen			Discussion with Mr. Mekonnen
	0	-		Training Planning and Discussion	Unit Price Survey		Comfirmation of Existing Equipment at EKI
12	3-Aug	Thu		Data Collection and Analysis			Gathering Result of Field Survey
				Discussion for Team and			
13	4-Aug	Fri		Discussion for Organization and Number of Sta			Arrived at NRT
14	5-Aug	Sat		Data Collection and Analysis			/
15	6-Aug	Sun		Team Meeting, Summarize the Investigation Re-	sult	1/	
10	7.4			Hearing at RKI	Unit Price Survey	1/	
16	/-Aug	Mon		Visit to FEPRA		7	/
17	8-4.10	Тиа		Data Collection and Analysis	Unit Price Survey	Departure at NRT (NH811) Via Hong Kong	
	0 Aug	Tuc		Meeting at Local Design Office		(ET609)	/
18	9-Aug	Wed		Discussion with Mr. Mekonnen		Arrival at ADD Data Collection and Analysis	
H	8			Data Collection and Analysis		Data Collection	/
19	10-Aug	Thu		Data Collection and Analysis	Unit Price Survey	Hearing of Training Plan	
		1		Discussion with Mr. Mekonnen	Departure dLADD (E1072)	Discussion with Mr. Mekonnen Hearing at DKI	1 /
20	11-Aug	Fri		Visit to Construction Site	Arrived at NRT	Visit to Construction Site	
21	12-Aug	Sat		Data Collection and Analysis		Data Collection and Analysis	
22	13-Aug	Sun		Team Discusssion of Minutes, Gathering for Investigation Sesult		Minutes Team Discusssion, Gathering for Investigation Sesult	
23	14-Aug	Mon		Discussion for Technical Memorandum (Mr. Mekonnen)		Discussion for Technical Memorandum (Mr. Mekonnen)	
			Team Meeting of Minutes	Meeting with JICA Ethiopia Office		Meeting with JICA Ethiopia Office	
24	15-Aug	Tue	Signing on Technical Memorandum and Minutes			Discussion for Minutes Signing on Technical Memorandum and Minutes	
25	16-Aug	Wed		Data Collection and Analysis Cathering for Investigation Secult		Data Collection Cathering for Investigation Secult	
26	17-Aug	Thu	Report to Embassy of Japan	Gautering for investigation desuit		Report to Embassy of Japan	
Ē	8			Departure at ADD (ET672)		Departure at ADD (ET672)	1/
27	18-Aug	Fri		Arrived at NRT	/	Arrived at NRT	/

Table A-2-1 Schedule of Outline Design Site Survey

Source : JICA Study Team

Member		Member	JICA	Consultant		
			Leader	Team Leader of the Consultants / Architect 1	Cost Estimator	
Date	Date		Mr. Hiroyuki TANAKA	Mr. Yoshifumi HOSHIAI	Mr.Yoshiya NAKANISHI	
	2017					
1	17-Nov	Fri		Departure at NRT		
2	2 18-Nov Sat			Arrival	at ADD	
2				Team M	leeting	
2	19-Nov	C		Document Arrangement		
3	3 19-110V Sul			Study of Minutes		
	20-Nev	Mon	Team Meeting Visit to EKI	Meeting with JICA Ethiopia Office, Visit to EKI		
4	20-1000		Preparation of Minutes	Preparation	of Minutes	
5	E 01 Nov. Too		Description o	Description of Report(Draft) at EKI, Discussion of Minutes		
J	21 100	Tue	Explanatory Docu	ment Preparation for State Minister of MoP	SHRD	
6	22-Nov	Wed	Meeting of Lideta sub city Report to EoJ, Visit to State Minister of MoPSHRD, Signing on Minutes			
0	22 100	weu				
7	23-Nov	Thu		Document A	rrangement	
_ ′				Departur	e at ADD	
8	24-Nov	Fri		Arrival	at NRT	

 Table A-2-2
 Schedule of Site Survey for Description of Outline Design

Source : JICA Study Team

Table A-3 List of Parties Concerned in the Recipient Country						
Occupation (英文)	Titie (英文)	Name (英文)				
Ministry of Public Service and Human Resource Development	State Minister	Adamu Ayana Gosa				
Ethiopian Kaizen Institute	Director General	Mekonnen Yaie				
Ethiopian Kaizen Institute	Director Regions and City KAIZEN Directorate	Temesgene GebreEgziabher Hagos				
Ethiopian Kaizen Institute	TVET Directorate Sinior KAIZEN consultant	Fetene Getachew				
Ethiopian Kaizen Institute	Director Education and Training Directorate	Tigist Kebede				
Ethiopian Kaizen Institute	Director Planning and Information Directorate	Tewodros Tafese Asaye				
Ethiopian Kaizen Institute	Corporate Communication Directorate Literary Expert	Mihret Sisay				
Ethiopian Kaizen Institute	Executive Secretary	Sofiya Zeray				
JICA Ethiopia Office	Chief Representative	Ken Yamada				
JICA Ethiopia Office	Senior Representative	Hiroyuki Tanaka				
JICA Ethiopia Office	Representative	Yasuhito Kikuma				
JICA Ethiopia Office	Program Officer for private sector development	Gebeyehu Tuji				
Embassy of Japan	First Secretary Head of Economic Dicvision	Yuka Hananogi				
Embassy of Japan	Second Secretary Economic Dicvision	Yohei Otomo				
Embassy of Japan	Second Secretary Economic Dicvision	Keiichiro Ichikawa				
CMT Consultant	President	Hillawi Abraham				
CMT Consultant	Civil Engineer	Sirak Fetene				
ALTA Computec Plc	General Manager	Cherinet G. Giorglis				
ALTA Computec Plc	Seniror Manager/Marketing and Sales Operation	Sintayehu Abebe				
DCL Trading Plc	General Manager	Milkiyas Lemma				
DCL Trading Plc	Sales & Marketing Manager	Nathan Darsema				
OMEDAD Pvt.Ltd.Co.	Branch Manager	Abebe Seifu				
Glorious Pvt.Ltd.Co.	Operations Director	Wahib Yusuf				
Bridgetech Plc.	Deputy General Manager	Mikiyas Tamrat				
Bridgetech Plc.	Sales Representative	Eyerus Shibabaw				

A-3 List of Parties Concerned in the Recipient Country Table A-3 List of Parties Concerned in the Recipient Country

Sauce : JICA Study Team

A-4 Minutes of Discussions 1

Minutes of Discussions on the Additional Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Industries

Regarding the Project on Construction of TICAD Human Resource Development Center for Industries (hereinafter referred to as "the Project"), in response to the request from the Government of Ethiopia, Japan International Cooperation Agency ("JICA") conducted a Preparatory Survey ("the Previous Survey") in August / September 2015 and gave an Explanation on Draft Preparatory Survey Report in May 2016. The contents discussed during the Previous Survey are agreed in the Minutes of Discussions signed on the 3rd September 2015 and 13th May 2016, respectively.

However, the implementation of the Project has been postponed due to the prolonged discussions between the two governments.

Since a tentative agreement was reached between the two governments in June 2017, JICA has decided to conduct an Additional Preparatory Survey in order to review the project cost for the outline design estimated in the Previous Survey.

JICA dispatched the Additional Preparatory Survey Team for the Outline Design ("the Team") of the Project to Ethiopia, headed by Mr. Hiroyuki Tanaka, Senior Representative of JICA Ethiopia Office, from 24th July to 17th August, 2017.

The Team held a series of discussions with the officials of the Government of Ethiopia and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Hiroyuki Tanaka

Leader Additional Preparatory Survey Team Japan International Cooperation Agency



Addis Ababa, 15th August 2017

Mekonnen Yaie Director General Ethiopian Kaizen Institute The Federal Democratic Republic of Ethiopia



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ATTACHMENT

- Confirmation of contents of the Minutes of Discussions of the Previous Survey Both sides confirmed that the main points agreed on the Previous Survey, mentioned in the Minutes of Discussions signed on the 3rd September 2015 (Annex-1) and the Minutes of Discussions signed on the 13th May 2016 (Annex-2), have remained unchanged, except the points mentioned below.
- 2. Review of the project cost based on the original design

Both sides confirmed that the purpose of this Additional Preparatory Survey is to review the project cost for the outline design estimated in the Previous Survey. Both sides confirmed that JICA will prepare a draft Preparatory Survey Report and dispatch a mission to Ethiopia in order to explain its contents by the end of November 2017.

3. Schedule of the Survey

Both sides confirmed that the updated schedule of the Survey will be as follows: -The Team will proceed with further survey in Ethiopia until 17th August 2017. -JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Ethiopia in order to explain its contents by the end of November 2017. -If the contents of the draft Preparatory Survey Report are accepted in principle and the undertakings stipulated in Annex-2 are fully agreed by the EKI, JICA will complete the final report in English and send it to EKI by March 2018. The above schedule is tentative and subject to change. If there is need to change this schedule, it will be discussed between EKI and JICA.

4. Project Implementation Schedule

Both sides confirmed that the updated Project Implementation Schedule will be as shown in Annex-3.

This Project Implementation Schedule is tentative and subject to change. If there is need to change this schedule, it will be discussed between EKI and JICA.

5. Tax exemption

Both sides agreed that regarding indirect taxes such as Custom Duties, VAT and Stamp duties etc. which may be imposed in Ethiopia with respect to the purchase of products and services, they are to be exempted or borne by EKI, whereas regarding

direct taxes such as corporate tax and personal income taxes, the issue of tax exemption is still under discussion between the two governments.

6. Land Acquisition

Both sides confirmed that the ownership transfer of the proposed construction site has been completed and EKI will take responsibility for holding the ownership of the land.

Annex-1:

Minutes of Discussions on the Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Business and Industry, signed on 3rd of September, 2015

Annex-2:

Minutes of Discussions on the Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Business and Industry (Explanation on Draft Preparatory Survey Report), signed on 13th of May, 2016.

Annex-3: Updated Project Implementation Schedule



Annex-1

Minutes of Discussions on the Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Business and Industry

In response to the request from the Government of Ethiopia (hereinafter referred to as "Ethiopia"), the Government of Japan decided to conduct a Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Business and Industry (hereinafter referred to as "the Project"), and entrusted the Preparatory Survey to Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") to Ethiopia, headed by Mr.Takusaburo Kimura, leader of the mission, and is scheduled to stay in the country from 24th August 2015 to 19th September 2015.

The Team held a series of discussions with the officials concerned of the Government of Ethiopia and conducted a field survey in the Project area. In the course of the discussions, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Kimuran International Takusaburo Cooperation Agency Leader Preparatory Survey Team

Japan International Cooperation Agency

Addis Septembers 2075/ey Ababa, Getahun Tadesse Director General Sand Democratic Reput Ethiopian Kaizen Institute The Federal Democratic Republic of Ethop

Witnessed by Kokeb Misrak Director

Ministry of Finance and Economic Development The Federal Democratic Republic of Ethiopia



ATTACHEMENT

1. Objective of the Project

The objective of the Project is to promote human capacity development for industries in Ethiopia through strengthening EKI physical capacity by constructing EKI Complex Building and procuring necessary equipment, as TICAD Human Resource Development Center for Business and Industry.

TICAD Human Resource Center for Business and Industry as Center of Excellence, is aiming to educate the people to get the jobs, to foster the human resource to match the demand of labor market, which contribute to the human resource development needs for Japanese companies in Ethiopia as well as in other African countries.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for "the Project on Construction of TICAD Human Resource Development Center for Business and Industry".

3. Project Site

Both sides confirmed that the site of the Project is in Addis Ababa, which is shown in Annex-1.

- Line Ministry and Executing Agency Both sides confirmed the line ministry and executing agency as follows:
 - 4-1. The line ministry is Ministry of Industry, which would be the agency to supervise the executing agency.
 - 4-2. The executing agency is Ethiopian Kaizen Institute. The executing agency shall coordinate with all the relevant agencies to ensure smooth implementation of the Project and to execute all the undertakings stipulated in Annex-8 taken by relevant agencies properly and on time. The current organization chart of the executing organization is shown in Annex-2.
- 5. Items requested by the executing agency
 - 5-1. Ethiopian side requested the following items regarding to the Project to the

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Mission:

- Construction of EKI Complex building (the proposed component is attached in Annex 3):
- Provision of equipment (the proposed list of equipment is attached in Annex 4))

- Soft Component (technical assistance for operation and management of the building and equipment)

- 5-2. Regarding to the items mentioned above, the Ethiopian side explained training plan and program of the EKI 2021(Draft) as attached in Annex 5.
- 5-3. Then, JICA will assess the appropriateness of the above requested items through the survey and will report findings to the Government of Japan. The final components of the Project would be decided by the Government of Japan.

6. Japanese Grant Scheme

- 6-1. The Ethiopian side understands the Japanese Grant Scheme and its procedures as described in Annex-5 and Annex -6, and necessary measures to be taken by the Government of Ethiopia.
- 6-2. The Ethiopian side shall take the necessary measures, as described in Annex-8, for smooth implementation of the Project, as a condition for the Japanese Grant to be implemented. The detailed contents of the Annex-8 will be worked out during the survey and shall be agreed no later than by the Explanation of the Draft Preparatory Survey Report.

The contents of Annex -8 will be used to determine the following:

- (1) The scope of the Project.
- (2) The timing of the Project implementation.
- (3) Timing and possibility of budget allocation.

Contents of Annex -8 will be updated as the Preparatory Survey progresses, and will finally be the Attachment to the Grant Agreement.

- 7. Schedule of the Survey
 - 7-1. The Team will proceed with further survey in Ethiopia until 19th September, 2015.
 - 7-2. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Ethiopia in order to explain its contents by the end of January, 2016.
 - 7-3. If the contents of the draft Preparatory Survey Report is accepted in principle and

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the undertakings stipulated in Annex-8 are fully agreed by the Ethiopian side, JICA will complete the final report in English and send it to Ethiopia around June 2016.

- 7-4. The above schedule is tentative and subject to change. However, if there is need to change this schedule that will be done upon consultation by EKI and JICA.
- 8. Environmental and Social Considerations
 - 8-1. The Ethiopian side confirmed to give due environmental and social considerations during implementation of the Project, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010).
 - 8-2. The Project is categorized as "B" because the Project is not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant. The Ethiopian side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment(EIA) /Initial Environmental Examination (IEE) and information disclosure, etc.) and make EIA/IEE report of the Project. If necessary, the EIA/IEE approval shall be received from the responsible authorities and submitted to JICA by the commencement of the construction.
- 9. Other Relevant Issues
- 9-1. Tax Exemption

The Japanese side position as to the tax exemption is clearly stipulated under the grant agreement attached Article (5) of Annex-5, though the Ethiopian side didn't agree on it. However, both sides have also agreed to undertake further discussions on the tax exemption specifically income tax and corporate tax for Japanese contractor and consultant as specified under Article(5) of Annex-5 of Japanese Grant.

- 9-2. EKI confirmed that EKI bear the cost for site preparation, infrastructure connection such as electricity, water supply and drainage at the Project site. EKI agreed to complete these works before the commencement of the construction.
- 9-3. EKI confirmed that EKI bear the necessary cost for operation and maintenance of the EKI Complex and equipment.. The Mission also explained that JICA will support the operation of the EKI Complex in the technical aspect through



technical cooperation, if necessary.

9-4. Land Acquisition

EKI explained that the ownership transfer of the proposed construction site is now on process and promised that when it completes, a copy of the title deed will be submitted to JICA by the end of December, 2015.

- 9-5. The both sides confirmed that the approval of the Project would be subjected to the decision by the Government of Japan.
- 9-6. Ethiopian side expressed the name of EKI shall be maintained .However, both side agreed that the name of the Complex to reflect Kaizen and friendship between two countries shall be discussed further.
- 9-7. During the field study, the consultant will confirm priority and details of the requested equipment based on the further discussions with EKI.

- Annex -1 Project Site
- Annex -2 Organization Chart
- Annex-3 Component of the facility
- Annex-4 List of Equipment
- Annex -5 Training program of the EKI 2021(Draft)
- Annex -6 Japanese Grant
- Annex -7 Flow Chart of Japanese Grant Procedures
- Annex -8 Financial Flow of Japanese Grant
- Annex -9 Major Undertakings to be taken by Each Government
- Annex -10 Project Monitoring Report (template)



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Current EKI office
Current Organization Structure



Annex-3 Component of the Facility

	Main Room/Space
Ι	Training Section
	Classroom (for 10 traince)
	Classroom (for 20 traince)
	Classroom (for 60 traince)
	Conference room (for 120 trainee)
	Preparation Room for classroom
	Library
	Ergonomics Laboratory
Π	Accommodation Section
	Bed room (standard)
	Bed room (Large)
	Lounge for stay trainee
	Laundry for stay trainee
	Linen sevice room
	Kitchenette for stay traince
	Dining hall (Cafeteria)
L	Kitchen for dinning
<u> </u>	Trainig Gym
ļ	Kiosk
-	
I	Management Section
	General Director's room
	Secretary's office
	Deputy DG's room
	Sector's Offices
	Management Offices
	Meeting room (middle)
	Meeting room (large)
	Walling room
	Storage
ĪV	Welfare Section
	First Aid room
	Nursery
V	Public Section
	Entrance hall
	Lobby
	Exhibition space
	Preparation room
	Storage
	Elevator hall
	Car parking
N	Service Section
	Office for Operation and Maintenance
	Security (Janitor) room
	Reception
	Garbage strage
	Machine rooms

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Annex-4 List of Equipment

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	ltem
1	Desks and Chairs for offices, classrooms and library
2	Shelves and Racks for offices and classrooms
3	Meeting table and chairs for meeting rooms
4	Furniture for Entrance, Reception, lounge and restaurant.
5	Display equipment for exhibition
6	Electrical display for Entrance hall
7	Equipment for First Aid
8	Equipment for Nursery
9	Equipment for Ergonomic Laboratory
10	Equipment for Training Gym
11	Personal Computers for staff
12	Computer Server System with UPS
13	Wireless LAN system
14	Video Conference System
15	Presentation system for class rooms
16	White Board for class rooms
17	Printing Machines
18	Photocopy Machines
19	Bed and furniture for Accommodation
20	Equipment for Operation and Maintenance
21	Security System
22	Cars for training transportation

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EKI Training Plan (Draft)

		A VIVEA
	2 months Traini	
	TVET	CRT CT CRT CT (20 personal (4 groups) (4 groups) (4 groups) (4 groups)
	Service	CRT CT CRT CT (20 censorial (4 groups) (20 censorial (20 censorial
	Infrastructure	CT (20 cerisonal (4 groups) (20 cerisonal
	School	CT CAT CT
6	University	CRT CT CRT CT Improve Improve Improve Improve Improve (20 persons) (4 groups) (4 groups) (4 groups) (10 persons) (10 persons)
Y	African Trainee	Secure 4) Encerso 02) Social 4) 13+ TRO T3+ TRO
	4 months Traini	
	Manufacturios	
	Best A	(60 perional C1 (12 groups) (20 perional C1 (20 perional (21 perional C1 (22 groups)
	KAIZEN	CT (12 groups) CHT CT (60 person) (12 group)
	Academic Trainir	(60 cerane) (12 sroute)
А	 Basic KAIZEN 	
-4-]	at BSc/BA lavola	CHT · LT (20 core-nu'
6	Intermediate	
	at MSc lavel*	l year CRT + KT 120 cersoris
		2 years: CATT + CCT (20 percens)
		3 rear CHT + ICT 20 pararal
	Advanced KAIZEN	1 Yee' (201 + 101 110 remove)
	at Phy loval	
	tt of Vehicles	
(Clease com	10 persons' room 13
	2	20 persons' room : 9 > 14 roome
	~ ~	60 persona' room : 2
		Conference room (120 persons) 1
,	4 of Accomodations	
	5	
	<u> </u>	

ANNEX-5

EKI Training Plan Explanation in 2021 (Draft)

No	Activity	
1	Provide the training of KAIZEN for each sector in Ethiopia.	Company DB for ICT by each and a C
2	Accept the trainees from neighboring countries in Africa as the third country's KAIZEN training.	TV Conference System and Room. Car
3	Foster the trainer/consultant of KAIZEN (mainly EKI staff) by providing academic course.	Car. (Need help from Janapese Professor/Expert)
	(Remote lecture from the University such as Mekelle University.)	TV Conference System and Room
4	Provide the KAIZEN consulting for each company/organization as request-base.	Consulting Record DB. Car
5	Widen and Depen KAIZEN technically (MSc and PhD level)	Ergonomics System
6	Stock and supply the data and information of the cases of applying KAIZEN (Best practice DB).	Best Practice DB
7	Research KAIZEN technique/tools/method, etc.	ICT System,
	(Exchange the knowledge and skill with other research centers.)	TV Conference System and Room
8	Certify and award a prise to the excellect company/organization/person made a great result by KAIZEN.	(Plan to oursource)

Demands of KAIZEN Training in 2021 (Draft)

RE	Targel	a c' No nec	Duration	P of A992a	del Anaça Traned		Three Oldf	Sec Minner	≓ d's n teiton	2 of 2eg april	Correction Sec.
		atir att		0.025	1	্ৰাণ্ড হেলচ (বি)	condany & urg	টনা প্রায		best an or part in	
1	TVET	20 persons	2 months	4 times	80 persons	20 companies	omiala MSE	1	0	4 instructors	Teaching materials such as
-	Service Sector				Faire	(1trainee/comp.)	private MOC	4 8100095	2 cars	(Main: 1, Sub: 3)	constant trained pulse, trained matarial sto have strainly been
2	(Includes Tourism)	20 persons	2 months	4 times	80 persons	20 companies	private,	4 000005	2 6 2 179	4 instructors	
	Infrastructure Sector		+	<u> </u>	-	(1trainee/comp.)	govowned	1 9.0043	A (401)	(Main: 1, Sub: 3)	
3	(Includes Low Cost Housing)	20 persons	2 months	4 times	80 persons	20 companies	private,	4 groups	2 cars	4 instructors	
	Industrial Development Institute					(Turainee/comp)	gavawned			(Main: 1, Sub: 3)	
4	(Industories under Mol such as Export/Import)	60 persons	4 months	2 lirnea	120 persons	OU companies	private,	12 groups	6 cars	12 instructors	
5	Regional KAIZEN Institute					60 companies	yov-owned			(Main: 1, Sub: 11)	
Ľ		50 persons	4 months	2 times	120 persons	(1trainee/comp)	private,	12 groups	6 cars	12 instructors	
6	School Teachers (Kindergarten to High school)	20.000000	2			20 companies				(Main: 1, Sub: 11)	
			2 mon(ns	4 1/17/05	80 persons	(1trainee/comp.)	Institute	4 groups	2 cars	(Main: 1 Sub: 7)	
7	University Teachers	20 persons	2 months	11,000	10	20 companies	temp. Amobo			4 instructors	
-			2 ///01/013	4 0///85	ou persons	(1trainee/comp)	University	4 groups	2 cars	(Main: 1, Sub: 3)	
8	African Trainees	20 persons	1 month	3 times	60 рагкора	20 companies	private,	4	^	4 instructors	
-						(1trainee/comp.)	gov -owned	4 groups	2 cars	(Main: 1. Sub: 3)	
9	Basic KAIZEN al BSc/BA level	20 persons	1 year	-	20 persone	20 companies	private,	d arouar	2 ~~~~		
						(1trainee/comp.)	govowned LME	4 fronhs	2 الصا 2		
10	Intermediate KAIZEN at MSc level	20 persons	1 year and half	-	20 persons (*1)	10 companies	private,	4 amuos	2 cars		
						(2trainees/comp.)	gov -owned LME	- groups			
[11	Advanced KAIZEN at PhD level	10 persons	2 years and half	—	10 persons (*1)	3 companies	privale,	2 groups	1 car	_	
12	Workshop / Conference	120 рагволя	5 days	d times	490 0000000 (10)	1 (Suainees/comp.)	gav -owned LME				
	KAIZEN Award (different level)	500 portosita		4 101105	i →ou persona (*2)						
1.11		our hereouz	2 - 15 days	2 times	1,000 persons (*3)	-	-	-			

(*1) Intermediate KAIZEN at MSc level and Advanced KAIZEN at PhD level are not complited in one year. This is number is graduates in each year.

(*2) Not all participants use EKI accomocation.

(*3) This will be outsourced. No need to count for the size and number of building.

(*4) All ICT companies and organizations are located in Addis Ababa or within 100 km distance.

Composition of Training ★ 2 months Training

A-4-17

- * 4 months Training
- * 1 and helf years Training
- * 2 and half years Training

3 weeks CRT + 5 weeks ICT (ICT : 5 persons / group, 1 company / person, 2 groups share 1 car.) 4 weeks CRT + 12 weeks ICT (ICT : 5 person / group, 1 company / person, 2 groups share 1 car.)

CRT + ICT

CRT + ICT

ANNEX-5

l	Т	1		- T	: m 	ust	$\frac{c}{\Gamma}$	adv	/isab	10	<u>.</u>	con	Сал	bed	
				L	Ca	89 	Ļ		Tango	1 800			05	ect c	lee:
Calagory	ň	4. Training name	Curriculum of CRT			5	Private company	National company	Public Institution	ducational institution	3	Neighboring country	Top managemen	Mddie manegemen	General smolower
Commission KAIZEN	1						L								
Comprendentive IVAZEN	-	1. KAIZEN course for top	KAIZEN philosophy, KAIZEN concept, Visible				1	1	1	1		1	1	1	
		2. Basic KAIZEN	Brief KAIZEN obloscoby 55 MUDA				┢	nijaran.							
			elimination		0	ministrature (Carlos	1	1	1	1					V
KAIZEN introduction	1 :	3. Introduction to KAIZEN (1)	5S, MUDA elimination	1	1	T	1	1	1	1		1		1	4
nvalen iniroducion	4	I. Introduction to KAIZEN (2)	KPT, KP (QC) story, Deming cycle (PDCA,		10		1	1	1	1				1	
	-	Introduction to Quality	ISDCA)	+			L	+	-			_		_	
Causily KAIZEN		KAIZEN			0		1	1	1	1		1		1	
	6	Advanced Quality KAIZEN	New 7 QC tools, QC process chart, SOP,	T			,	š						1	
	+		Quality assurance, TQM			-	Ľ	لى سىسىلە	-]	1		•	
	1	KAIZEN	Process analysis, Work sampling, Work study,					And and a second se							
American Martine			Retio-delay study man-hour londing I too		0		1	1	1	1	-	1		1	
HOGICANIY MUZEN			halancing, Multi-activity analysis		1										
	8	Advanced Productivity	TOC, TPS		la		1					7	,		
		KAIZEN		1	4		-	<u> </u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100	<u> </u>	Ĭ	_	×	
	1 3	Introduction to Cost KAIZEN	Cost management, Cost accounting, Direct		ø	1010000	1	1	1		9 w	1		√	
Cost KAIZEN	10	Advanced Cost KAIZEN	Target costing, ABC(Activity-based	-	1			<u> </u>		· .			 i	1	n an ngan
	_		accounting). Economic engineering		C		1	ĺ				1		1	
	11.	Introduction to Delivery time	Production scheduling, Process control,	Т	0		1	5		1		オ			,
Selivery Ime KALZEN	12	KAIZEN	Inventory control	.	-							-			
	12.	KAIZEN	Cue-Liece-VI-e-Lime Lugarction		a		1				ŝ	1		1	
	13.	Introduction to Equipment	Autonomous maintenance, Preventive	┢	1							+	-	-	
quipment meintenance		maintenance	maintenanca		0			1	1	•	-	1		1	
	14.	Advanced Equipment	TPM (Total Productive Maintenance)		0		1	1	1	-		1	l	,	
	15.	Introduction to	Morale survey		-		_				+	4		-	
maol milional manadama		Organizational management		0			1	1	1	•		~	-		
e Plen rette noti etti si unti su filiti suffici suti	16.	Advanced Organizational	Organizational development				{	·····	*****		ب غر :		7		/ 16 NW
	117	management			<u> </u>			<u> </u>			Ļ	4			_
	17.	KAIZEN consultant of EKI	MUDA elimination KIT KR (CC) des		10000							I	"di-venesat		
			Deming cycle (PDCA, SDCA), 7 OC tools												
			Statistical Quality Control, Process analysis,			1									
			Work sampling, Work study, Ratio-delay study,			•	Contraction of the	- 14 C			Γ,				/
			Time study, Standard time, Plant layout, man-						e la compañía de la c	-	-		ę		
			hour loading, Line balancing, Multi-activity		and and an		Î			-			;	i	
sining for KAIZEN			analysis, consulting procedura, Problem					Service Services					el es hill en anne	-	
nsultant	18.	Training for advanced	Economic engineering, New 7 OC tools, OC	******			.					Î			
		training for senior KAIZEN	process chart, SOP, Quality assurance, TQM,						ţ	300 . · ·	One				
		consultant of EKI	TOC, TPS, Cell production system, MRP,			•	,	ł	÷	; •	/ .		inani in a		
			Production scheduling, ISO 9001, Ergonomics,		Access freedom		,	ł		Manual Volume					
			Balanced scorecard	_	·····		4	\downarrow			_	_	<u></u>	i	
	13.	Intermediate KAIZEN at	See attachment	0	o	•					1			1	
	20.	Advanced KAIZEN at PhD	See attectment				-				- Ar				į
		level		0	a	0					1		/ •		-
	21.	Training for basic KAIZEN	KAIZEN philosophy, KAIZEN concept, 55,	1		Т			1			Т		****	1
			MUDA elimination, KPT, KP (QC) story,	10,000	Benchattperio		1 State	Adda wasannan		/					
ining for KAIZEN trainer IVET			Deming cycle (PDCA, SDCA), 7 QC tools,	SUCCESSION NAME	1.506		And in the second second								
	22	Training of advanced	Stabletical Quality Control Descent -	~~~~				~ -			4 - 9				
	 ,	KAIZEN	Work sempting, Work study Line balancing			0	1.	waters.		1					
	22 1		Management of MALTER	_		_	min			+		╇	: •		
		Example and the second s			2					1	4	R.			F
ining as Center of	23.1	AIZEN disseminating body	nanagement information management	0	O I						1	•	1;1	1	
ining as Center of elience	23. F	CAIZEN disseminating body	nanagement, information management	0	0			anna an an an an an an Anna Anna An			•		1	and the local distance of	



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EKI Long-Term KAIZEN Trainig Program (Draft)

Intermediate KAIZEN Training at MSc Level

1 KAIZEN Management	2. KAIZEN Systems	3 KAIZEN Todo
 1. KAIZEN Management Productivity Management Quality Management Cost Management Delivery Management Delivery Management Cross-functional Management V. Policy Management 2. Basics of KAIZEN leadership-Lean Leadership 	 Medium KPTs TPS TQM TPM Appropriate Costing System (ABC, Direct, Standard, Target) MRP Production Scheduling 	1. SOP 2. 7 QC Tools/QC story 3. Value System Mapping 4. Quality Control Process Chart 5. Basic IEs Time Study Motion Study Line Balancing Process Analysis Operation Analysis Operation Analysis Control Charts Process Capability Index Ergonomics Layout 6. Multi-Activity Analysis 7. Costing (P=P-C) 8. Ratio-Delay Study 9. Shortening Set-Up Time

Advanced KAIZEN Training at PhD Level

TRAIZEN Management	2. KAIZEN Systems	3. KAIZEN Table
 Advanced KAIZEN Management Innovation Management Innovation Management Global Production Management Value Management Value Management Advanced KAIZEN Leadership-Lean Leadership 	 IKT (Innovative KAIZEN Team) TPM Advanced Analytical Systems Competitive Analysis Financial Analysis Value Analysis Value Analysis Business Modeling Business Systems Analysis Idea Generation Methods 	 KAIZEN Tools 1. TRIZ 2. Off-Shoring 3. Production Sharing 4. Value Engineering 5. Quality Function Development 6. FMEA (Failure Mode Effect Analysis) 7. FTA (Fault Tree An 8. Reliability Engineering 9. SMED (Single Minutes Exchange of Die)

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JAPANESE GRANT

The Japanese Grant (hereinafter referred to as the "Grant") is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant is not supplied through the donation of materials as such.

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

1. Grant Procedures

The Grant is supplied through following procedures :

Preparatory Survey

- The Survey conducted by JICA

·Appraisal & Approval

-Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet

•Authority for Determining Implementation

-The Notes exchanged between the GOJ and a recipient country

"Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and a recipient country

Implementation

-Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Scheme from a technical, financial, social and economic point of view.



- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japanese Grant Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

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(3) Eligible source country

Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Project, the recipient country is required to undertake such necessary measures as Annex. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant should not be exported or re-exported from the recipient country.

- (8) Banking Arrangements (B/A)
 - a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
 - b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

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(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Environmental and Social Considerations

The Government of the recipient country must carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the recipient country and JICA Guidelines for Environmental and Social Consideration (April, 2010).

(11) Monitoring

....

The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

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ANNEX-7

FLOW CHART OF JAPANESE GRANT PROCEDURES





Major Undertakings to be taken by Recipient Government for the Project

1. Before the Tender

NO	ltems	Deadline	In charge	Cost	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	EKI		
2	To approve IEE/EIA	within 1 month after G/A	EKI		
3	To implement EIA	before start of the construction	EKI		
4	To secure the following lands 1) project sites (Approx. 3,700m2) at Addis Ababa 2) temporary construction yard and stock yard near the Project area	before notice of the tender document	EKI		
5	To obtain the planning, zoning, building permit	before notice of the tender document	EKI		
6	To clear and level the following sites 1) existing facilities (Warehouse and other sheds including their foundation) 2) leveling the sites at Addis Ababa	before notice of the tender document	EKI		

2. During the Project Implementation

NO	ltems	Deadline	In charge	Cost	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		EKI		
	1) Advising commission of A/P	within 1 month after the singing of the contract	EKI		
	2) Payment commission for A/P	every payment	MOFED		
2	Tax exemption and customs clearance of the products at the dry port of disembarkation	during the Project	MOFED		
3	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	EKI		
	N	<u> </u>		•	



		· · · · · · · ·	MOSER	
4	The Japanese side position as to the tax exemption is clearly stipulated under the	during the Project	MOPED	
	grant agreement attached Article (5) of Annex-5, though the Ethiopian side didn't			
	agree on it. However, both sides have also agreed to undertake further discussions on			
	the tax exemption specifically income tax and corporate tax for Japanese contractor			
	and consultant as specified under Article(5) of Annex-5 of Japanese Grant.			
5	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for	during the Project	EKI	
	construction of the facilities as well as for the transportation and installation of the			
	equipment			
6	TO provide facilities for the distribution of electricity, water supply, drainage and other			
	incidental facilities.			
	1)Electricity			
	The distributing line to the site	before start of the	EKI	
	The main circuit breaker and transformer	construction		
	2)Water Supply			
	The city water distribution main to the cite	hofare start of the	EKI	
	The City water distribution main to the Ske	construction		
	3)Drainage			
	The city drainage main (for storm, cawor and otherm) to the site	baince start of the	EKI	
	The dry dramage main (for storm, sewer and others) to the site	construction	210	
	4)Telephone and Communication Line	before start of the	EKI	
		construction		
7	To implement Environmental Management Plan and Environmmental Monitoring Plan	during the	EKI	
		construction		

3. After the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of operation and maintenance cost 2) Allocation of operation and maintenance staff 3) Routine check/Periodic inspection	After completion of the construction	EKI		
2	To bear all the expences ,other than those to be borne by the Grant Aid.	After completion of the construction	EKI		
3	To implement Environmental Management Plan and Environmrental Monitoring Plan	for a period based on EMP and EMoP	EKI		
4	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between EKI and JICA.	for three years after the Project	EKI		

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

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Annex-9

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Major Undertakings to be Covered by the Japanese Grant for the Project

No		Deadline	Cost Estimated		
	Items		(Million		
			Japanese Yen)*		
1	To ensure prompt unloading and customs clearance at the dry port of disembarkation in recipient country				
	1) a) Marine(Air) transportation of the products from Japan to the recipient country				
	b) Internal transportation from the port of disembarkation to the project site				
	2) To construct the temporary building				
	 To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities 				
	a) Electricity				
	The drop wiring and internal wiring within the site				
	- b) Water Supply				
	The supply system within the site (receiving and/or elevated tanks)				
	c) Drainage				
	The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site				
	d) Fumiture and Equipment				
	Project equipment				
2	To implement detailed design, tender support and construction supervision (Consultant)				
	- Total				

": The cost estimates are provisional. This is subject to the approval of the Government of Japan.

2

Project Monitoring Report

on

for the Project for the Project on Construction of TICAD Human Resource Development Center for Industries Grant Agreement No. <u>XXXXXXX</u> 20XX, Month

Organization Information

Authority (Signer of the G/A)	Person in Charge Contacts	(Division) Address: Phone/FAX: Email:
Executing Agency	Person in Charge Contacts	(Division) Address: Phone/FAX: Email:
Line Agency	Person in Charge Contacts	(Division) Address: Phone/FAX: Email:

Outline of Grant Agreement:

Source of Finance	Government of Japan: Government of Ethiopia:
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
	M

1: Project Description

1-1 Project Objective

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

1-3 Effectiveness and the indicators - Effectiveness by the project

Quantitative Effect (Operation and Effect indicators)				
Indicators	Original (Yr)	Target (Yr)
	غوري وراغره بريزار المالية معالم والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع		ĨĨŧŧŧġņājā 1944.1945.1944.1945.1944.1946.1944.1944.1944.1944.1944.1944	

			an a	
Qualitative Effect				
	ունը, որոցվոր չունիցքում ինչ հետ է ու չուն, են ու նույն ու չունը հետ գունը հետ քունը՝ ինչը է ու եր հետ չունա են հետ նու ու ու			

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D)	Actual: (PMR)
Location	Attachment(s):Map	Attachment(s):Map

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D)	(M/D)	(PMR)
1	$\overline{\mathcal{N}}$	

2-1-2 Reason(s) for the modification if there have been any.

(PMR)

2-2 Implementation Schedule

2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

74.0	Orig	inal	Actual	
Rell15	DOD	G/A	Actual	
Cabinet Approval			-	
E/N				
G/A				
Detailed Design				
Tender Notice				
Tender				
(Lot1) Construction				
Period				
(Lot2) Installarion of				
Equipement				
Project Completion Date				
Defect Liability Period				
*Project Completion was defined as <u>Check-out of Construction work</u> at the time of				
G/A.				

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

- 2-3 Undertakings by each Government
- 2-3-1 Major Undertakings See Attachment 2.
- 2-3-2 Activities See Attachment 3.
- 2-3-3 Report on RD See Attachment 4.
- 2-4 Project Cost2-4-1 Project Cost

Table 2-4-1a Comparison of Original and Actual Cost by the Governme	ent of Japan
(Carefidential wetil the Tender)	

(Confidential until the Tender)

		Items			Co	ost
Non-		,	/		(Millio	n Yen)
	Original	/		Actual	Original ^{1),2)}	Actual
		N	3			



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Construction		Ditto			
Facilities		Ditto			
Equipment		Ditto	and a stand of a stand of a stand stand stand stand stand stand a stand stand stand stand stand stand stand st		
Consulting	- Detailed design	Ditto			
Services	-Procurement Management				
	-Construction Supervision				
	-Soft Component				
	Total				

Note: 1) Date of estimation: XXXXXXX 2) Exchange rate: 1 US Dollar = XXXX Yen

Table 2-4-1b Comparison of Original and Actual Cost by the Government of Ethiopia

Items		Cost ()		
	Original	Actual	Original ^{1),2)}	Actual
		Ditto		and d'Art galaxies and a far for a star
and a second		Ditto		
		Ditto		
		Ditto		

Note: 1) Date of estimation: October, 2014

2) Exchange rate: 1 US Dollar = 0.887 Bangladesh Taka (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR)

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: (M/D)

Actual, if changed: (PMR)

2-6 Environmental and Social Impacts

- The results of environmental moniforing as attached in Attachment 5 in accordance with

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Schedule 4 of the Grant Agreement.

- The results of social monitoring as attached in Attachment 5 in accordance with Schedule 4 of the Grant Agreement.

- Information on the disclosed results of environmental and social monitoring to local stakeholders, whenever applicable.

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M

- Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: (M/D)

Actual: (PMR)

3-2 O&M Cost and Budget - The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): (M/D)				
Potential Project Risks	Assessment			
1.	Probability: H/M/L			
(Description of Risk)	Impact: H/M/L			
	Analysis of Probability and Impact:			
	Mitigation Measures:			
	Action during the Implementation:			
N	5			

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	Contingency Plan (if applicable):		
2.	Probability: H/M/L		
(Description of Risk)	Impact: H/M/L		
	Analysis of Probability and Impact:		
	Mitigation Measures:		
	Action during the Implementations		
	Action during the implementation.		
	Contingency Plan (if applicable):		
3.	Probability: H/M/L		
(Description of Risk)	Impact: H/M/L		
	Analysis of Probability and Impact:		
	Mitigation Measures:		
	Action during the Implementation:		
	Action during the implementation.		
	Contingency Plan (if applicable):		
Actual issues and Countermeasure(s)			
(PMR)			

5: Evaluation at Project Completion and Monitoring Plan

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability./

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5-3 Monitoring Plan for the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.



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Attachment

- 1. Project Location Map
- 2. Undertakings to be taken by each Government
- 3. Monthly Report
- 4. Report on RD
- 5. Environmental Monitoring Form / Social Monitoring Form
- 6. Monitoring sheet on price of specified materials (Quarterly)
- 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Final Report Only)





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Attachment 6

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume	Initial Unit Price (¥)	Initial total Price	1% of Contract Price	Condition of Price (Decreased)	Price (Increased)
	F	A	В	C=A×B	D	E=C-D	F=C+D
1	Item 1	●● t		0	0	0	0
2	Item 2	●● t	0	0	0		
3	Item 3		1979 Shine of the second state of the second s				
4	Item 4						
5	Item 5						
L							

Monitoring of the Unit Price of Specified Materials
 Method of Monitoring :

. . .

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd @month, 2015	3rd @month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)



Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Actual Expenditure by Construction and Equipment each)

gan yang mang mang kanang kanang kanan Sala Mang Sala Salah Salah Salah Salah Kanang Kanang Kanang Kanang Kana Kanang mang mang kanang kan	Domestic Procurement	Foreign Procurement	Foreign Procurement	Total
	(Recipient Country)	(Japan)	(Third Countries)	D
	A	В	С	
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	_
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Tota	al (A/D%)	(B/D%)	(C/D%)	



Minutes of Discussions on the Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Business and Industry (Explanation on Draft Preparatory Survey Report)

On the basis of the discussions and field survey in the Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia") in August and September 2015, and the subsequent technical examination of the results in Japan, the Japan International Cooperation Agency (hereinafter referred to as "JICA") prepared a draft Preparatory Survey Report for the Project on Construction of TICAD Human Resource Development Center for Business and Industry(hereinafter referred to as "the Draft Report").

In order to explain the Draft Report and to consult with the concerned officials of the Government of Ethiopia on its contents, JICA sent the Preparatory Survey Team to Ethiopia for the Explanation of the Draft Report (hereinafter referred to as "the Team"), headed by Mr. Hiroyuki Tomita, JICA, and is scheduled to stay in the country from 8th to 14th, May 2016.

As a result of the discussions, both sides confirmed the main items described in the attached sheets.

Hiroyuki Tomita Leader Preparatory Survey Team Japan International Cooperation Agency

Addis Ababa, 13 May, 2016 Getahun Tadesse

Director General Ethiopian Kaizen Institute The Federal Democratic Republic of Ethiopia

Witnessed by Kokeb Misrak

Director, Birateral Cooperation Directorate Ministry of Finance and Economic Cooperation The Federal Democratic Republic of Ethiopia

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ATTACHMENT

1. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey for the Project on Construction of TICAD Human Resource Development Centre for Business and Industry" (hereinafter referred to as "the Project").

2. Objective of the Project

The objective of the Project is to promote capacity of human resource development for Ethiopia Kaizen Institute(EKI) through building the EKI Complex and procuring necessary equipment for EKI, thereby contributing to developing Quality Control and Productivity in Ethiopia, as TICAD Human Resource Development Center for Business and Industry.

TICAD Human Resource Center for Business and Industry as Center of Excellence, is aiming to educate the people to get the jobs, to foster the human resource to match the demand of labor market, which contribute to the human resource development needs for private companies including Japanese companies in Ethiopia as well as in other African countries.

3. Project Site

Both sides confirmed that the site of the Project is in Addis Ababa City,Lideta Sub – City,Woreda 10,Lideta Tena, which is shown in Annex-1.

4. Line Agency and Executing Agency

Both sides confirmed the line ministry and executing agency as follows:

4-1. The line agency is Ministry of Public Service and Human Resource Development, which would be the agency to supervise the executing agency.

4-2. The executing agency is Ethiopia Kaizen Institute. The executing agency shall coordinate with all the relevant agencies to ensure smooth implementation of the Project and to ensure all the undertakings stipulated in Annex-8 taken by relevant agencies properly and on time. The current organization chart of the executing organization is shown in Annex-2.

5. Contents of the Draft Report

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After the explanation of the contents of the Draft Report by the Team, the Ethiopian side agreed in principle to its contents.

6. Cost Estimation

Both sides confirmed that the Project cost estimation described in Annex 3 was provisional and would be examined further by the Government of Japan for its final approval.

7. Confidentiality of the Cost Estimation and Specifications

Both sides confirmed that the Project cost estimation shown in Annex 3 and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until the procurement contract is concluded between Ethiopian side and Japanese contractor.

8. Japanese Grant Scheme

The Ethiopian side understands the Japanese Grant Scheme and its procedures as described in Annex 4, 5 and 6, and necessary measures to be taken by the Government of Ethiopia.

- 9. Project Implementation Schedule The Team explained to the Ethiopian side that the expected implementation schedule is as attached in Annex 7.
- 10. Expected outcomes and Indicators

Both sides agreed that key indicators for expected outcomes as follows. The Ethiopian side has responsibility to monitor the progress of the indicators and achieve the target in year 2021.

Ľ	Quant	itativ	e Effe	ect]
-				

Indicator	Current Value (As of End of 2015)	Planned Value (March 2021)
Number of Trainees per year	12,117	39,860

[Qualitative Effect]

It is expected to improve the capacity of human resource development for EKI.

11. Soft Component of the Project

Considering the sustainable operation and maintenance of the provided facility and equipment, following technical assistance is planned to be provided by consultant

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under the soft component of the Project.

- Supporting formulation of the Operation and Maintenance(O&M) Team in EKI
- Developing the O&M plan in discussion with EKI.
- Training of the O&M team in EKI.

The Ethiopian side confirmed to assign necessary number of competent and appropriate C/Ps as described in the Draft Report.

12. Undertakings Taken by Both Sides

Both sides confirmed undertakings described in Annex 8. The Ethiopian side (EKI) assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project shown in Annex 3. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

13. Monitoring during the Implementation

The Project will be monitored at least every once a month by the executing agency with the Project Monitoring Report (PMR). The template of PMR is shown in Annex 9.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation three (3) years after the project completion with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability) of the Project. Result of the evaluation will be publicized. The Ethiopian side is required to provide necessary support for them.

- 15. Issues to be Considered for the Smooth Implementation of the Project Both sides confirmed to remove debris and foundation before the tender for the smooth implementation of the Project described in Annex 7.
- 16. Schedule of the Study

JICA will complete the Final Report of the Preparatory Survey in accordance with the confirmed items and send it to the Ethiopian side around July 2016.

- 17. Environmental and Social Considerations
- 17-1 General Issues



17-1-1 Environmental Guidelines and Environmental Category

The JICA team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as 'the Guidelines') is applicable for the Project. The Project is categorized as B because it is not likely to have a significant adverse impact on the environment as the Project is not considered to be a large-scale construction project, is not located in a sensitive area, has none of the sensitive characteristics under the JICA guidelines for environmental and social considerations.

17-1-2 Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 10. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, The Ethiopian side shall submit the modified version to JICA in a timely manner.

17-2 Environmental Issues

17-2-1 Environmental Impact Assessment (EIA)

Both sides confirmed the procedure of EIA, then, EKI should submit the application of EIA to Ethiopian Environment Agency(EPA) after EKI receives the certificate of land ownership. Both side also confirmed that the final EIA should be approved before starting the tender notice, when it will be around March 2017, and to be submitted it to JICA through EKI in December, 2016.

17-2-2 Environmental Management Plan and Environmental Monitoring Plan Both sides confirmed Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) of the Project is as Annex 11 and Annex 12 respectively. Both side agreed that environmental mitigation measures and monitoring shall be conducted based on the EMP and EMoP, which may be updated during the detailed design stage.

17-3 Social Environment

Both sides confirmed that land ownership has already been transferred to EKI and there are no inhabitants to be relocated from the site to other place.

17-4 Environmental and Social Monitoring

Both sides agreed that the Ethiopian side will submit results of environmental and

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social monitoring to JICA by using the monitoring form attached as Annex 13

- 18. Other Relevant Issues
- 18-1. Customs and Tax Issue

Regarding indirect taxes such as Custom Duties, VAT and Stamp duties etc., which may be imposed in Ethiopia with respect to the purchase of the products and the services to be exempted by MOFEC or borne by EKI.

Regarding direct taxes such as corporate tax and personal income taxes, both sides understand that further discussion will be continued between Government of Japan and Government of Ethiopia.

18-2. O & M of the Facility and Equipment

The Team explained the importance of operation and maintenance of the facility and equipment procured by the Project considering that proper asset management impacts greatly on life-span of the facility and equipment and its maintenance cost. EKI shall secure enough staff and budgets necessary for appropriate operation and maintenance of the facility and equipment.

[Annex 1 Project Site]

[Annex 2 Organization Chart of EKI]

- [Annex 3 Project Cost Estimation]
- [Annex 4 Japanese Grant]
- [Annex 5 Flow Chart of Japanese Grant Procedures]

[Annex 6 Financial Flow of Japanese Grant]

[Annex 7 Project Implementation Schedule]

[Annex 8 Major Undertakings to be taken by Each Government]

[Annex 9 Project Monitoring Report] (template)

[Annex 10 Environmental Check List]

[Annex 11 Environmental Management Plan]

- [Annex 12 Environmental Monitoring Plan]
- [Annex 13 Environmental and Social Monitoring Form]

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1. Expenses to be borne by Japan

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This data is closed due to the confidentiality.

2. Expenses to be covered by the Ethiopia Side

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Item to be burden	Item	Estimated cost (in thousand ETB)	
	Removal of the debris in the site (include existing sheds and plants) and site clearance	To be estimated by EKI	
Facilities	Installation of electricity, water, sewage and telecommunication lines. Commission for construction permission.	To be estimated by EKI	
	Planting, furniture and furnishings which are not include in Japanese works	To be estimated by EKI	
Bank Commission	Bank Commission (Bank Arrangement B/A, Authorization to Pay A/P) 0.1% of Grant Amount	500	
	Total /	\	ļ
Source: JICA Surve	y Team IN)	
		Dor	
		<i>r</i> /	26.
	11		
		(B)	
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3. Estimated Indirect Taxes and Direct Taxes

This data is closed due to the confidentiality.

4. Condition of Cost estimation Timing of estimation: September 2015 Exchange rates: 1 ETB =6.030JPY 1 US\$ =124.40JPY 1 Euro =138.68JPY

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Annex-4

JAPANESE GRANT

The Japanese Grant (hereinafter referred to as the "Grant") is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant is not supplied through the donation of materials as such.

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

1. Grant Procedures

The Grant is supplied through following procedures :

Preparatory Survey

- The Survey conducted by JICA

Appraisal & Approval

-Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet

•Authority for Determining Implementation

-The Notes exchanged between the GOJ and a recipient country

•Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and a recipient country

Implementation

-Implementation of the Project on the basis of the G/A

- 2. Preparatory Survey
- (1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Scheme from a technical, financial, social and economic point of view.

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- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japanese Grant Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

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(3) Eligible source country

Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Project, the recipient country is required to undertake such necessary measures as Annex-8. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority

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(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Environmental and Social Considerațions

The Government of the recipient country must carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the recipient country and JICA Guidelines for Environmental and Social Consideration (April, 2010).

(11) Monitoring

The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

ANNEX-5

FLOW CHART OF JAPANESE GRANT PROCEDURES



Financial Flow of Grant Aid (A/P Type)



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Annex 7 Project Implementation Schedule



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Major Undertakings to be taken by Recipient Government for the Project

1. Before the Tender

NO	Items	Deadline	In charge	Cost	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	MOFEC		E/N and GA
2	To approve IEE/EIA	within 1 month after G/A	EKI		
3	To implement EIA	before start of the construction	EKI		
4	To secure the following lands 1) project sites (Approx. 3,700m2) at Addis Ababa 2) temporary construction yard and stock yard near the Project area	before notice of the tender document	EKI		MD of Preparat ory study
5	To obtain the planning, zoning, building permit	before notice of the tender document	EKI		
6	To clear and level the following sites 1) existing facilities (Debris andFoundation) 2) leveling the sites at Addis Ababa	before notice of the tender document	EKI		MD of Preparat ory study

2. During the Project Implementation

NO	Items	Deadline	In charge	Cost	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		EKI		E/N and GA
	1) Advising commission of A/P	within 1 month after the singing of the contract	EKI		
	2) Payment commission for A/P	every payment	MOFEC		
2	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	EKI		

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3	Regarding indirect taxes such as Custom Duties,VAT and Stamp duties etc.,which may be imposed in Ethiopia with respect to the purchase of the products and the services to be exempted by MOFEC or borne by EKI. Regarding direct taxes such as corporate tax and personal income taxes, both sides understand that further discussion will be continued between Government of Japan and Government of Ethiopia.	during the Project	MOFEC EKI	
5	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment	during the Project	EKI	
6	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities.			MD of Preparat ory study
	1)Electricity -The distributing line to a swichboard(high-voltage cable laying, a breaker and transformer) of the site	during the Project	EKI	
	2)Water Supply The city water distribution main to the site	during the Project	EKI	
	3)Drainage			
	The city drainage main (for sewer and others) to the site The rainwater from water channel of the frontal road to public gutter	during the Project	EKI	
	4)Telephone and Communication Line-Telephone line to a main distribution frame(MDF) via an intermediate distribution frame (IDF) -Installing telephone switchboard and terephone	during the Project before start of the construction	EKI	MD of Preparat ory study
7	Planting of trees	during the Project	EKI	MD of Preparat ory study
8	To implement Environmental Management Plan and Environmrental Monitoring Plan	during the Project during the construction	ЕКІ	JICA Environm ental and Socialgui deline(20 10)
9	To submit results of environmental monitoring to JICA, by using the monitoring form on monthly basis as a part of Project Monitoring Report	during the Project	EKI	MD of Preparat ory study

3. After the Project

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NO	ltems	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment	After completion of	EKI		MD of
1	provided under the Grant Aid	the construction			Preparat
	1) Allocation of operation and maintenance cost				ory study
	2) Allocation of operation and maintenance staff				
	3) Routine check/Periodic inspection				
2	To implement Environmental Management Plan and Environmrental Monitoring Plan	for a period based	EKI		JICA
		on EMP and EMoP			Environm
					ental and
					Socialgui
					deline(20
					10)
3	To submit results of environmental monitoring to JICA, by using the monitoring form,	for three years after	EKI		MD of
	semiannually	the Project			Preparat
	- The period of environmental monitoring may be extended if any significant negative				ory study
	impacts on the environment are found. The extension of environmental monitoring will				
	be decided based on the agreement between EKI and JICA.				

Be decided based on the agreement between EKI and JICA.

No	Items	Deadline	Cost Estimated (Million Japanese Yen)*	
1	To construct of the buildings includinbg fences and procurement of equipment	· · · · · · · · · · · · · · · · · · ·	2,546	
2	To ensure prompt unloading and customs clearance at the dry port of disembarkation in recipient country		165	
	1) a) Air transportation of the products from Japan to the recipient country			
	b) Internal transportation from the port of disembarkation to the project site	·····		
	2)To construct the temporary building			
	3)To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities			
	a) Electricity			
	The drop wiring and internal wiring within the site			
	b) Water Supply			
	The supply system within the site (receiving and/or elevated tanks)			
	c) Drainage			
	The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site			
	d) Furniture and Equipment			
3	To implement detailed design, tender support and construction supervision (Consultant)		203	
4	Soft Components		15	
5	Contingency		138	
	Total		3,067	
*; T	he cost estimates are provisional. This is subject to the approval of the Government of J	apan		······
		All	24.	

Major Undertakings to be Covered by the Japanese Grant for the Project

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Project Monitoring Report

on

for the Project for the Project on Construction of TICAD Human Resource Development Center for Industries Grant Agreement No. <u>XXXXXXX</u>

20XX, Month

Organization Information

Authority (Signer of the G/A)	Person in Charge (Division) Contacts Address: Phone/FAX: Email:
Executing Agency	Ethiopia Kaizen Institute(EKI) Person in Charge Mr.Getafun Tadesse Director General Director General Contacts Address:P.O.Box 2292, Addis Ababa, Ethiopia Phone:+251-912-503-023 Email:getafuntadese2007@gmail.com
Line Agency	Person in Charge (Division) Contacts Address: Phone/FAX: Email:

Outline of Grant Agreement:

Source of Finance	Government of Japan: Government of Ethiopia:
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:

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G/A NO. XXXXXXX PMR prepared on DD/MM/YY

1: Project Description

1-1 Project Objective

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

1-3 Effectiveness and the indicators

- Effectiveness by the project

Quantitative Effect (Operation	and Effect indicators)			
Indicators	Original (Yr)	Target (Yr)
Qualitative Effect		<u> </u>		

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D)	Actual: (PMR)
	Attachment(s):Map	Attachment(s):Map

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D)	(M/D)	(PMR)
)	
<u></u>	m	ky 14.
(3	24	And I

2-1-2 Reason(s) for the modification if there have been any.

(PMR)

2-2 Implementation Schedule

2-2-1 Implementation Schedule

Table 2-2-1: Com	parison of Original	l and Actual Schedule
	1 0	

Itoma	Orig	Astrol	
nems	DOD	G/A	Actual
Cabinet Approval		-	-
E/N			
G/A			
Detailed Design			
Tender Notice			
Tender			
(Lot1) Construction			
Period			
(Lot2) Installarion of			
Equipement			
Project Completion Date			
Defect Liability Period			
*Project Completion was o	defined as Check-ou	t of Construction worl	s at the time of

*Project Completion was defined as <u>Check-out of Construction work</u> at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

2-3 Undertakings by each Government

- 2-3-1 Major Undertakings See Attachment 2.
- 2-3-2 Activities See Attachment 3.
- 2-4 Project Cost
- 2-4-1 Project Cost

Table 2-<u>4</u>-1a Comparison of Original and Actual Cost by the Government of Japan (Confidential until the Tender)

	Items	· · ·		Co (Millio	ost n Yen)	
	Original		Actual	Original ^{1),2)}	Actual	
Construction Facilities			Ditto Ditto	0		
		25	(Ar	<u>p</u>	9L.	
		A-4-63	B		/ -	

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%b-

Equipment		Ditto	
Consulting - Detailed design Services -Procurement Management -Construction Supervision -Soft Component		Ditto	

Note: 1) Date of estimation: XXXXXXX 2) Exchange rate: 1 US Dollar = XXXX Yen

Table 2-4-1b Comparison of Original and Actual Cost by the Government of Ethiopia

	Cost			
			0	
	Original	Actual	Original ^{1),2)}	Actual
		Ditto		
	Total			

Note: 1) Date of estimation: October, 2014 2) Exchange rate: 1 US Dollar = 0.887 Bangladesh Taka (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR)

2-5 **Organizations for Implementation**

2-5-1 **Executing Agency:**

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: (M/D)

Actual, if changed: (PMR)

2-6 **Environmental and Social Impacts**

- The results of environmental monitoring as attached in Attachment 4 in accordance with Schedule 4 of the Grant Agreement.

- The results of social monitoring as attached in Attachment 4 in accordance with Schedule 4 of 26

the Grant Agreement.

- Information on the disclosed results of environmental and social monitoring to local stakeholders, whenever applicable.

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M

- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

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Actual: (PMR)

#### 3-2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)

## 4: Precautions (Risk Management)

Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): (M/	D)
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
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2.	Probability: H/M/L				
(Description of Risk)	Impact: H/M/L				
	Analysis of Probability and Impact:				
	Mitigation Measures:				
	Action during the Implementation:				
	Contingency Plan (if applicable):				
3.	Probability: H/M/L				
(Description of Risk)	Impact: H/M/L				
	Analysis of Probability and Impact:				
	Mitigation Measures:				
	Action during the Implementation:				
	Contingency Plan (if applicable):				
Actual issues and Countermeasure(s)	J				
(PMR)					

# 5: Evaluation at Project Completion and Monitoring Plan

# 5-1 Overall evaluation

Please describe your overall evaluation on the project.

# 5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

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# 5-3 Monitoring Plan for the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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#### G/A NO. XXXXXXX PMR prepared on DD/MM/YY

#### Attachment

- 1. Project Location Map
- 2. Undertakings to be taken by each Government
- 3. Monthly Report
- 4. Environmental Monitoring Form / Social Monitoring Form
- 5. Monitoring sheet on price of specified materials (Quarterly)
- 6. Report on Proportion of Procurement (Recipient Country) Japan and Third Countries) (Final Report Only)

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#### Attachment 5

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# Monitoring sheet on price of specified materials

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of Price (Decreased) E=C-D	of payment Price (Increased) F=C+D
1	Item 1	●●t		•			
2	Item 2	••t	•	-			
3	Item 3						
4	Item 4						
5	Item 5						

## 1. Initial Conditions (Confirmed)

2. Monitoring of the Unit Price of Specified Materials
(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1			an a			
2	Item 2			······································			
3	Item 3						
4	Item 4						
5	Item 5						·····

(3) Summary of Discussion with Contractor (if necessary)  $\langle \gamma \rangle$ 

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## Attachment 6

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Actual Expenditure by Construction and Equipment each)

Domestic Procurement	Domestic Procurement Foreign Procurement		Total
(Recipient Country)	(Japan)	(Third Countries)	D
А	В.	С	
(A/D%)	(B/D%)	(C/D%)	
	Domestic Procurement (Recipient Country) A (A/D%) (A/D%) (A/D%) (A/D%) (A/D%) (A/D%)	Domestic Procurement (Recipient Country)Foreign Procurement (Japan)AB(A/D%)(B/D%)(A/D%)(B/D%)(A/D%)(B/D%)(A/D%)(B/D%)(A/D%)(B/D%)(A/D%)(B/D%)(A/D%)(B/D%)(A/D%)(B/D%)(A/D%)(B/D%)	Domestic ProcurementForeign ProcurementForeign Procurement(Recipient Country)(Japan)(Third Countries)ABC(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)(A/D%)(B/D%)(C/D%)

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#### Annex 10 Environment Check List

Category	Environmen tal Item	Main Check Items	Y N NA	Yes: Y No: N NA: Not applied		firmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	1(1) EIA and Environment al Permits	(a) Have EIA reports been already prepared in official process?	(a)	N	(a)	EIA reports are required after the determination of detailed design according to the Ethiopian Environmental Guideline. EKI will start EIA process after PMU is established.
		(b) Have EIA reports been approved by authorities of the host country's government?	(b)	NA	(b)	-
		(c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?	(c)	NA	(c)	-
		(d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(d)	NA	(d)	-
	1(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders?	(a)	N	(a)	
		(b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(b)	NA	(b)	-
	1(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a)	N	(a)	-
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, (such as sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken?	(a)	Y/N	(a)	It is likely anticipated that the vehicles used for transportation of construction materials at the construction phase will pollute air quality. As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase.

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Category	Environmen tal Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(b) Are electric and heat source at accommodation used fuel which emission factor is low?	(b) Y	(b) The Kaizen Center will use commercial power as main power source. As power failure occurs frequently, install of a low-noise type diesel generator is planned. JICA team will suggest EKI to use fuel of high quality and low emission factor for the generator.
	(2) Water Quality	(a) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and amblent water quality standards?	(a) Y	<ul> <li>(a) These is no quality standard of water discharge.</li> <li>Waste water from the Kalzen Center is planned to discharge to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).</li> </ul>
	(3) Wastes	(a) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's regulations?	(a) Y	(a) A garbage collection point is planned on the basement floor. The municipality service will collect garbage. The JICA team will give training (as soft component) on the O&M of facilities including waste management to the staffs.
	(4) Soil Contaminati on	(a) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachate from the infrastructure facilities and the ancillary facilities?	(a) N	(a) The Kaizen Center will neither be used for the purpose other than training nor generate effluents or leachate.
	(5) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	(a) Y	(a) Noise will be made at the construction phase and contractor needs to comply with Ethiopian noise standards. The Kaizen Center will not generate noises and vibrations at the operation phase.
	(6) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a) N	(a) Kaizen Center will not extract groundwater and will not cause subsidence.
	(7) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a) N	(a) There are no odor sources generated by the Kaizen Center.
3 Naturał Environ-men t	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) N	(a) The site is not located in the designated protected area.
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Category	Environmen tal Item	Main Check items	N a	Yes: Y No: N A: Not pplied	Con	firmation of Environmental Considerations (Reasons, Mitlgation Measures)
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal fiats)?	(a)	N	(a)	The site of the Kaizen Center does not encompass in the any kind of forests.
		(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	(b)	N	(b)	The site of the Kaizen Center does not encompass the protected habitats.
		(c) is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation?	(c)	Ν	(c)	The Kaizen Center will not have the possibility the change in micro-meteorological conditions.
		(d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	(d)	N	(d)	The Kaizen Center will not use large amount of water.
	(3) Hydrology	(a) is there a possibility that hydrologic changes due to the project will adversely affect surface water and groundwater flows?	(a)	N	(a)	The Kaizen Center will not cause the hydrologic changes.
	(4) Topography and Geology	(a) is there a possibility the project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas?	(a)	N	(a)	Area of the Kaizen Center is about 3,700m2 and has no possibility to cause large-scale alteration.
4 Social Environment	(1) Resettlemen t	(a) is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	(a)	N	(a)	The building site is the land of other ministry and the land use right will be transferred to EKI. Addis Ababa Municipality is coordinating this matter and there is no objection. No residents live there but a ware house exists and EKI is arranging removal.
	-	(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?	(b)	NA	(b)	-
		(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?	(c)	NA	(c)	
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Category	Environmen tal Item	Main Check Items	Ye Ne NA ap	es: ¥ o: N : Not plied	Con	firmation of Environmental Considerations (Reasons, Mitigation Measures)
		(d) Is the compensations going to be paid prior to the resettlement?	(d)	NA	(d)	-
		(e) Is the compensation policies prepared in document?	(e)	NA	(e)	-
		(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people living below the poverty line, ethnic minorities, and indigenous peoples?	(f)	NA	(f)	-
		(g) Are agreements with the affected people obtained prior to resettlement?	(g)	NA	(g)	-
		(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	(h)	NA	(h)	-
		(i) Are any plans developed to monitor the impacts of resettlement?	(i)	NA	(i)	-
		(j) is the grievance redress mechanism established?	(j)	NA	(j)	_
4 Social Environment	(2) Living and Livelihood	(a) is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a)	N	(a)	Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction. Construction will not start till EKI receives the building permission issued by Addis Ababa Municipality. EKI will inform construction to the inhabitants in the surrounding area before the construction work starts
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a)	N	(a)	There is no heritage on the project site.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a)	Ň	(a)	The area of the project site is not the specified landscape.
		(b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?	(b)	N	(b)	The area surrounding the project site is not the specified landscape. The construction plan including building heights follows Ethiopian construction regulations.

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Category	Environmen tai Item	Main Check Items	Y N NA ap	es: Y lo: N A: Not oplied	Cor	firmation of Environmental Considerations (Reasons, Mitigation Measures)
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	(a)	N	(a)	No ethnic minorities and indigenous peoples near to the project site.
		(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(b)	N	(b)	No ethnic minorities and indigenous peoples live in the construction site.
	(6) Working Canditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?	(a)	N	(a)	The project proponent (EKI) does not violate laws and ordinances associated with the working conditions.
		(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?	(b)	Y	(b)	EKI considers safety measures at the construction. It is planned to install safety equipment and to construct nurse's room or the first-aid. EKI will not use hazardous industrial materials.
		(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?	(c)	Y	(c)	Soft component program is planned to support EKI in (i) establishment of management system and (ii) preparation of O&M manual for EKI.
		(d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(d)	Y	(d)	JICA expert team shall ask EKI to give proper instruction to the security guards not to violate safety of other individuals and local residents as well as have appropriate human resource management.
5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?	(a)	Ŷ	(a)	It should be considered and included in the tender document to reduce and mitigate negative impact on the surrounding area during construction. Also Japanese consultant shall supervise the contractor to follow the TOR and regulations.
		(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?	(b)	NA	(b)	-

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Сатедогу	Environmen tal Item	nmen Main Check Items em		es: Y o: N : Not plied	Conf	irmation of Environmental Considerations (Reasons, Mitigation Measures)
		(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(C)	Ŷ	(c)	Adequate measure should be considered should be include in the contract with contractor to reduce negative impacts on the social environment during construction. Also construction works should be monitored.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?	(a)	N	(a)	JICA project team suggests EKI to start EIA procedure including monitoring plan in accordance with Ethiopian guidelines. EKI confirmed that they will start the procedure after they get land use right
		(b) What are the items, methods and frequencies of the monitoring program?	(b)	NA	(b)	EKI will prepare the detailed monitoring plan based on the result of EIA study.
		(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?	(c)	NA	(c)	JiCA project team suggests EKI to establish an adequate monitoring structure.
		(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(d)	N	(d)	Ethiopian environmental guidelines do not provide specific regulatory requirements.
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Roads, Railways and Bridges checklist should also be checked (e.g., projects including access roads to the infrastructure facilities).	(a)	NA	(a)	Not necessary
		(b) For projects, such as installation of telecommunication cables, power line towers, and submarine cables, where necessary, pertinent items described in the Power Transmission and Distribution Lines checklists should also be checked.	(b)	NA	(b)	Not necessary
	Note on Using Environment al Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a)	NA	(a)	Not necessary

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons 38

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with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

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# Annex 11 Environmental Management Plan (Draft)

Categor	Environm	Evaluat	Anticipated impacts	Mitigation Measures	Implementer	Responsible
Y	ental	ion		(preliminary)	:	Organization
	ltern	ļ				
Pollutio	(1)	B-	Due to transportation of	EKI/PMU and supervising	Contractor	PMU,
n	Air		construction materials and	consultant shall instruct		Municipality
Control	Quality		equipment as well as operation of	contractor to use unleaded		
			construction machines, air quality	gasoline and maintain their		
			becomes worse temporarily.	vehicles to keep clean exhaust		
				gas at the construction period.		
				They will conduct periodical		
				monitoring.		
	{2}	B-	Water contamination is	EKI/PMU and supervising	Contractor	PMU,
	Water		anticipated by drainage of used	consultant shall instruct		Municipality
ĺ	Quality		water from construction works.	contractor to follow the		
				Ethiopian laws and regulations		
				on water drainage. They will		
	(2)			conduct periodical monitoring.		
	(3)	В-	It is anticipated that waste lumber	EKI/PMU and supervising	Contractor	PMU,
	wastes		and waste materials are generated	consultant shall instruct		Municipality
			by construction works.	contractor to treat wastes		
				properly. They will conduct		
				periodical monitoring.		
6 9 9 9	(4)	8-	Soil contamination is likely	EKI/PMU and supervising	Contractor	PMU,
	Soli		anticipated due to leakage of oil	consultant shall instruct		Municipality
	Contamin		for construction and other	contractor to use construction		
	auon		materials from construction site to	machinery of the low oil leakage		
			a certain volume.	type. They will do periodical		
	(5)		Noise and vibration is antisianted			
	Noise and	<b>B-</b>	and contractor poods to comply		Contractor	Piviu, Musicinality
1 1	Vibration		with Ethiopian poice standards	contractor to drive construction		wunicipality
	Violation		with Europian noise standards.	vahicles at low tread and pat to		
				conduct construction work at		
				night time. EKI/PMI / will		
				conduct periodical monitoring		
				hy installing sound-level mater		
				and whration motor at the		
				boundary of the Center		
				premises		
	(6)	D	Kaizen Center will not extract	_		
	Subsidenc		groundwater and will not cause			
	e	ľ	subsidence.			
	(7)	D	No construction works are			
	Odor	-	anticipated that cause bad smell.			
Natural	(1)	- D	Kaizen Centre is located in the	<b>_</b>		<u>.</u>
Environ	Protected	-	urban area and not within or	ني. ا	-	-
ment	Areas		adjacent to the designated			
			protected areas.			
	(2)		Kaizan Centre is located in the			
	Ecosyste	-	urban area and will not affect			
	m		natural environment and			
			ecosystem.	1		

#### 1. Construction Phase

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Categor	or Environm Evaluat Anticipated impacts		Mitigation Measures	Implementer	Responsible	
У	ental Item	ion		(preliminary)		Organization
	(3)	D	As construction will not pump up	•	-	-
	Hydrology		ground water, it will not cause			
			hydrologic changes.			
	(4)	D	Area of the Kaizen Center is about	-	-	-
	Topograp		3,700m2 and has no possibility to			
	hy and		cause large-scale alteration.			
	Geology					
Social	(1)	C-	The building site is the land of	Confirmation of progress of	Municipality	PMU
Environ	Resettlem		other ministry and the land use	transfer of the land title to EKI.		
ment	ent		right will be transferred to EKI.			
			There is no objection. Addis Ababa			
			wunicipality is coordinating this			
			Matter.			
			house exists and EX is assessed			
			removal			
	(2)		Construction of the Kaizon Contor			
	Living and	J	follows Ethionian Laws and	-	-	-
	Livelihood		regulations regarding huilding			
			construction and will not disturb			
			living and livelihood of			
			surrounding community.			
		1	JICA study team suggests EKI to			
			inform construction to the			
			inhabitants in the surrounding			
	ſ		area before the construction work			
			starts.			
	(3)	D	The project will not damage the	-	-	-
	Heritage		local heritage		1	
	(4)	D	There is no possibility that the	-	-	-
	Landscap		project will adversely affect the			
	е		local landscape.			
	(5)	D	No ethnic minorities and	-	-	-
	Ethnic		indigenous peoples near to the			
	Minorities		project site.			
	and					
	Indigenou					
-	s Peoples					
	(6)	В-	It is anticipated that construction	Safety and health measures at	Contractor	PMU,
	Working		works cause negative impact on	the construction shall be		Municipality
	condition		workers.	included in the terms of		
	3			reference to the contractor.		
				CAN PIVIU and supervision		
				consultant wininstruct		
		1		against traffic and industrial		
				accidents. They shall conduct		
				periodical monitoring of working		
				condition		

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#### **Operational Phase**

Category	Environ- mental Item	Evaluat Ion	Anticipated impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	C-	As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase. Also, it will use commercial power as main power source. However, installation of a low-pollution type diesel generator is planed as a measure to power failure occurring frequently.	JiCA consultant team recommends EKI to use diesel of high quality for the generator.	ЕКІ	EKI, Municipality
	(2) Water Quality	с-	As Kaizen Center is not a production facility, it will not discharge large volume of waste water.	The OD Study Team plans that water used in the Kaizen Center will be drained to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).	EKI, Municipality	EKI, Municīpality
	(3) Wastes	C-	Waste from Kaizen Center is neither estimated a large amount nor consisted of hazardous matters.	The OD Study Team plans a garbage collection point on the basement floor and the municipality garbage collection service will collect it. Also, the team plans that JICA expert will give training (as soft component) on the O&M of facilities including waste management to the staffs.	EKI, Municipality	EKI, Municipality
	(4) Soil Contami nation	D	Kaizen Center will be used only for the purpose of training and will generate no effluents or leachate.	-	-	-
	(5) Noise and Vibration	D	Kaizen Center will not generate noises and vibrations at the operation phase.	-		-
1	(6) Subsiden ce	D	-	-	•	-
	(7) Odor	D	-	-	-	-
Natural Environ ment	(1) Protecte d Areas	D	Kaizen Centre Is located in the urban area and not within or adjacent to the designated protected areas.	•	-	-
	(2) Ecosyste m	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.	-	-	•
	(3) Hydrolog Y	D	Kaizen Center will not pump up ground water and will not cause hydrologic changes.	-	-	-
	(4) Topogra	D	-	-	-	-

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Category	Environ- mental Item	Evaluat ion	Anticipated impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization
	phy and Geology					
Social Environ ment	(1) Resettle ment	D	-	-	-	-
	(2) Living and Livelihoo d	B+	Kaizen Center is a training center aiming at enhancement of productivity of Ethiopian industry. It will contribute to strengthening economic competence of Ethiopia and her economic growth. Therefore, Kaizen Center will indirectly give positive impact on the livelihood.	-	-	-
	(3) Heritage	D	The project will not damage the local heritage	-	-	-
	(4) Landscap e	D	There is no possibility that the project will adversely affect the local landscape.	-	-	-
	(5) Ethnic Minoritie s and Indigeno us Peoples	C+	Kaizen Center plans to give Kaizen training to trainees from different states (different ethnic groups).	-	-	-
	(6) Working Conditio ns	C-	Strong negative impact of working condition is not anticipated. EKI will not use hazardous industrial materials.	EKI shall follow Ethiopian Labour Laws and Regulations. BD study team plans to install safety equipment. Also, they plan to construct nurse's room or the first-ald in the Center and JICA consultant will support EKI to prepare working manual to manage the center.	EKI	EKI, Municipality

#### Legend

A +/- Significant positive/negative impact is expected.

B +/- Positive/negative impact is expected to some extent.

C+/- Extent of positive/negative impact is unknown (A further examination is needed and the impact could be clarified as the study progresses.)

D No impact is expected.

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made. In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

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Annex 12

# Environmental Monitoring Plan (Draft)

Catagory	Environment	Adapting.	344444	Environment		Francisco	Inclanta	Danna-Bila
category	Environment	Nonitoring	ivieans or	Environmentai	Wienstoring	Frequency or	Impieme	Responsible
	aittem	Parameters	Monitoring	Standard	Point	Monitoring	nter	Organization
Pollution	(1)	Temperature,	Measurement	Ethiopian Air	Construction	once/three	Contract	PMU,
Control	Air Quality	humidity, wind		Quality	sītes	months	or	Municipality
		velocity, dust,		standards				
		SO ₂ , NO ₂ , CO			[			
	(2)	pH, colour,	Measurement	Ethiopian	Outlets	once/ three	Contract	PMU,
	Water	BOD, COD, N,		water quality	1	months	or	Municipality
	Quality	Total P		standards				
	(3)	Kind of wastes,	Observation	Ethiopian	Construction	once/ month	Contract	PMU,
	Wastes	amount, record		waste	sites		or	Municipality
		of collection		managemen				
				t regulations			Í	
	(4)	Oil leaking	Observation	-	Construction	once/ month	Contract	PMU,
[	Soil				sites		or	Municipality
	Contaminati							
	on			ļ				
	(5)	Noise (db)	Measurement	Ethiopian	Boundary of	once/three	Contract	PMU,
	Noise and			noise	premises of	months	or	Municipality
	Vibration			pollution	the medical			
				regulations	facilities			
	(6) Subsidence	-	-	-	-	-	-	-
	Subsidence							
		-	-	-	•	-	-	-
	Odor					······		
Natural	(1)	-	-	-	-	-	-	-
Environm	Protected							
ent	Areas							
	(2)	-	-	-	-	-	-	-
	Ecosystem							
	(3)	-	-	-	-	-	-	-
	Hydrology							
	(4)	-	-	-	-	-	-	-
	Topography							
	and Geology							
Social	(1)	progress of land	Interview and	-	-	At the	Municip	PMU
Environm	Resettleme	title transfer	observation			beginning of	ality	
ent	nt					construction		
	(2)					WOľK		
	(2) Uning cod	-	-	-	-	-	-	-
	Living and							
	(2)							
	(3) Horitaro	-	-	-	-	•	-	-
	neritage							
	(4)	-	-	-	-	-	-	•
	Landscape							

#### 1. Construction phase

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Category	Environment al Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Impleme nter	Responsible Organization
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Construction accidents, traffic accidents	Record of accidents, interview to labourers	Labour laws, regulations	Construction sites, route of vehicles used for transportati on of materials and other	once/ day	Contract or	PMU, Municipality

# 2. Operational Phase

Category	Environ-me ntal Item	Monitoring Parameters	Means of Monitoring	Environmen tai Standard	Monitoring Point	Frequency of Monitoring	Implem enter	Responsible Organizatio n
Pollution Control	(1) Air Quality	Temperature, humidity, wind velocity, dust, SO ₂ , NO ₂ , CO; quality of gasoline	Actual measurement; record	Ethiopian Air Quality standards	Kaizen center	once/ three months	ЕКІ	EKI, Municipality
	(2) Water Quality	pH, colour, BOD, COD N; bacteria, virus	Measurement	Ethiopian water quality standards	Outlets	Always	EKI, Municip ality	EKI, Municipality
	(3) Wastes	Kind of wastes, amount, cleanness, record of waste collection	Observation	Ethiopian waste managemen t regulations	Depository	once/ month	EKI, Municip ality	EKI, Municipality
	(4) Soil Contaminat ion	-	-	-	-	-	-	-
	(5) Noise and Vibration	-	-	-	-	-	-	-
	(6) Subsidence	-	-	~	-	-	-	-
	(7) Odor	-	-	-	-	-	-	-
Natural Environ ment	(1) Protected Areas	-	•	-	-	-	-	-
	(2) Ecosystem	-	-	-	-	-	-	-
	(3) Hydrology	•	-	-	-	•	-	•
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Сатевогу	Environ-me ntal Item	Monitoring Parameters	Means of Monitoring	Environmen tal Standard	Monitoring Point	Frequency of Monitoring	Implem enter	Responsible Organizatio n
	(4) Topography and Geology	-	-	-	-	-	-	-
Social Environ ment	(1) Resettleme nt	-	-	-	-	-	-	-
	(2) Living and Livelihood	-	-	-	-	-	-	-
	(3) Heritage		-	-	-	-	-	-
	(4) Landscape	-	-	-	-	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Health condition of staff members and workers	Periodical medical examination, accident report	-	Kaizen center	once/ six months	EKI	EKI, Municipality

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#### Annex 13 Environmental and Social Monitoring Form (Preliminary)

#### A. Construction phase

Name of the construction site /			/
Date of monitoring /	/	Date of reporting /	/
Person in charge of monitoring	1	/	
Person in charge of reporting	I	/	

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal	
comments made by the public, if any	
Number and contents of responses	
from the Government agencies, if any	

#### 2.Pollution control

r			T					
ltem	Unit	Measur	Measured	Ethiopian	Standards	Referred	Measureme	Frequency
		ed	Value	standards	for contract	internationa	nt points	
		Value	(max)			l standards		
		(mean)						
				(1) Air q	uality			
Temperature	°C							Once/ three
humidity	%							months
wind velocity	m/s							
SO2	µg/m³							
NO2	$\mu g/m^3$							
CO2	µg/m³							
PM10	µg/m ³							
Pb	µg/m ³							
		······································	· ·	(2) Waste wa	ter quality	· · · · · · · · · · · · · · · · · · ·	***	. <u> </u>
Color	Hazen							Once/ three
Odor	-							months
рН	-							
Turbidity	NTU		**************************************					1
Total			· · · · · · · · · · · · · · · · · · ·				,	ĺ
Dissolved	mg/l							
solids								
Total			······					
Hardness as	mg/l							
CaCO3								
				(3) Solid v	vaste			<u> </u>
Kind of waste	Туре							Once/month
Amount	Ton/ day							
Record of	Frequenc							
collection	у							
				(4) Soil contai	mination			
Oil & Grease	mg/l					-	/	
				<i>۳</i> ۸			n	<u> </u>
				47		A.		76
						por		14
						/ /		
				<b>.</b> .	~ <b>~</b>			
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(5) Noise and vibration							
Noise (dB)	db						Once/three
							months

3. Social environment

Item	Monitoring results	Measures to be taken		
	(6) Resettlement			
Progress of land title				
transfer				
	(7) Working Conditions			
Daily recording				
Construction accidents				
Traffic accidents				
Others				

# **B.Operational** phase

Name of the construction site /	/
Date of monitoring / /	Date of reporting //
Person in charge of monitoring /	/
Person in charge of reporting /	/

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal comments made <u>by the public, if any</u>	
Number and contents of responses from the Government agencies, if any	

2.Pollution control

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ltem	Unit	Measured Value (mean)	Measured Value (max)	Ethiopia n standar ds	Standar ds for contract	Referred internation al standards	Measurement points	Frequency
	_L		(1)	Ambient Air	quality	Junderus		
Temperature	°C				T			
humidity	%	1						
wind velocity	m/s							
SO2	µg/m³							
NO2	µg/m³							
со	µg/m³							
			(2)	Indoor Air o	uality			
SO2	µg/m³							
NO2	μg/m³							
со	µg/m³							
Pb	µg/m³							
		(3)	Diesel Genera	ator Stack E	mission Mo	nitoring		

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SOx	mg/Nm3			1	1		1	1
NOx	mg/Nm3	1						
со	mg/Nm3							· · · · · · · · · · · · · · · · · · ·
Pb	µg/m ³	1						
		***		(4) Waste v	vater	. <b>.</b>		
Colour	Hazen		1			]	T	T
Odour	-	1				1		
рН	-							•
Oil & Grease	mg/l		1		1			· · · · · · · · · · · · · · · · · · ·
				(5) Solid wa	istes	J	J	
Kind of waste	By type		1		1	<u> </u>		T
Amount	t/day							
Cleanness of	-		1	_				
collection								
points					1		, ·	
Record of	Frequenc							
collection	y							

#### 3. Social environment

Item Monitoring results		Measures to be taken
	(6) Working Condition	}5
Daily recording		
Health condition of EKI		
staff and workers		
Labour accidents		
Traffic accidents		
Others		/

Source: Prepared by JICA Expert in charge of environmental and social considerations

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#### Annex-3 Project Implementation Schedule



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(8 months +26.5 months)

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# A-5 Technical Memorandum 1

# Technical Memorandum on the Additional Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Industries in the Federal Democratic Republic of Ethiopia

Based on the Minutes of Discussion dated August 15th, 2017 signed by Mr. Mekonnen Yaie, Director General Ethiopian Kaizen Institute, the Federal Democratic Republic of Ethiopia and Mr. Hiroyuki Tanaka, Leader of Additional Preparatory Survey Team of JICA, Japan, the Survey Team of Consultants held a series of technical discussions with officials concerned of Ethiopian Kaizen Institute for the above-captioned survey to wrap-up the works carried out during their stay in the Federal Democratic Republic of Ethiopia.

In the course of technical discussions and field survey, the both Japanese and Ethiopia sides confirmed the main items described in the attached sheets.

Addis Ababa, August 15th, 2017

Mekonnen Yaie Director General Ethiopian Kaizen Institute The Federal democratic Republic of Ethiopia

Yoshifumi Hoshiai

Leader of the Consultants JICA Preparatory Survey Team



#### ATTACHMENT

#### I. Precondition for design

#### 1. Budget

Fact of budgeting, accomplish result and future estimation is as show in below.

EKI made accomplish 23,021 thousand Birr against their budget 26,215 thousand Birr in 2015/2016 and 32,136 thousand Birr against their budget 33,554 thousand Birr in 2016/2017.

EKI intends to increase their budget 67,000 thousand Birr by 2024.

Study team confirmed that EKI secured their budget more than they promised at the previous survey in 2015.

(Thousand Birr)

Year	Survey in	Surve	y in 2017		
(Gregorian)	2015 Budget	Approved Budget	Expenditure Accomplish	Note	
2011/2012	4,000	4,646	3,832	Result	
2012/2013	12,000	$18,885 \\ (14,671 \\ +4,214)$	18,309 (14,095 4,214+)	Result (+4,214 was additional Budget for Tax purpose)	
2013/2014	15,000	15,526	15,231	Result	
2014/2015	18,000	18,917	17,776	Result	
2015/2016	21,000	26,215	23,021	New Result	
2016/2017	24,000	33,554	32,136	New Result	
2017/2018	27,000	36,870	-	Actual	
2018/2019	30,000	42,000	-	Estimation	
2019/2020	33,000	47,000	-	Estimation	
2020/2021	36,000	52,000	-	Estimation	
2021/2022	39,000	57,000	-	Estimation	
2022/2023	-	62,000	-	Estimation	
2023/2024		67,000	-	Estimation	

 Table 1
 Budgeting result and estimation

Source: EKI

#### 2. Staff and organization chart

The fact of the staff of EKI in August 2017 is 152 in total. Study team expects the technical and administration staff will be increased 5 % a year in the future. The number of total staff in 2023 will be 239 (184 without driver and cleaner). This number is still within the capacity of new building which is designed in the previous study. Thus the building plan of the pervious design is not required to change even though the target year is extended to 2023 from 2021.

The Current organization of EK1 is not changed except transfer of the Education and Training Directorate. Current organization chart is attached as Annex-

	Total Staff (w/o driver and cleaner)	Technical Sector Staff	Administration Sector Staff	Driver, Cleaner, Mechanic etc.
Nov. 2011	9 (9)	9	0	0
Oct. 2012	72 (70)	58	13	2
Jun, 2014	98 (85)	73	12	13
Aug. 2015	105 (97)	84	13	8
May. 2016	110 (102)	83	19	8
Mar. 2017	155 (145)	111	29	15
Aug. 2017	152 (137)	109	28	15
2018	163 (144)	111	33	19
2019	174 (151)	113	38	23
2020	186 (159)	115	44	27
2021	198 (167)	118	49	31
[Previous Plan by EKI] 2021	198 (167)	118	49	31
2022	206 (175)	124	51	31
2023	215 (184)	131	53	31
Designed  Capacity	239 (208)	147	61	31

Table 2 Result of Number of staff

Source: EKI

#### 3. Training Record and Plan

The expected number of trainees that EKI committed in their future plan will be accomplished in the new target year in 2023, because the number of trainees which EKI has provided Kaizen training for last 4 years has increased as EKI planned. (Annex-2). Thus there is no change in the training plan for new EKI building confirmed in the previous study. (Annex-3). The number of required training rooms is also unchanged from the previous study's building plan.

#### 4. Target number of quantitative effect indicators

The target of quantitative effect indicators is re-set in 2023 instead of 2021. The indicator is the number of trainee trained by EKI. New indicator number of trainee in 2023 will be 50,600 instead of 39,860 in 2021. Base year is also updated form 2015 to 2017. The beak down of the number is shown in Annex-4

#### Table 3 New Indicator

Indicator	Base(2017)	Target (2023)
		2 years after project completion*
Number of trainee	28,593	50,600

Source: Study team

Table 4 Previous Indicator (for reference)

Indicator	Base(2015)	Target (2021)
······································		2 years after project completion*
Number of trainee	12,117**	39,860

Source: Previous study report

* Target year is set in 3 years after the completion of the new building or 2 years after project completion (completion of soft component).

** EKI has modified this result from 12,117 to 11,343 by the record of EKI training (2012/2013-2016/2017)

#### 5. Equipment Plan (Furniture and Equipment Procurement Plan)

Since both the building plan for staff and training are unchanged then equipment plan is also stayed as designed in the previous study.

#### II. Acquisition of Land ownership for Construction site

Mayor of Addis Ababa City decided that the land ownership has been transferred to EKI. (Document no. AA/Mayor office /17/30/10/5, Dated August 10 2017) And Addis Ababa City Land Development & Management Bureau provided Land Ownership Transfer Agreement document dated 14st August 2017 (Ethiopian Calendar 8/12/09) with No LBT/2-4/5623/09 (Annex-5)

#### III. Construction site clearance

EKI understands that EKI shall remove remaining concrete debris and abandoned cars in the construction site, and make temporary fence on the boundary so that people who are not concerned may not to enter the site. Those measure shall be in action immediately after the acquisition of the Land ownership and keep this condition until the commencement of the construction.

#### IV. Effectiveness of the previous survey report of 2016

The result which is described in the previous survey report of 2016 remains unless those changes are mentioned in the final report of this additional survey which will be provided in 2018.

## V. Draft of Final report of this survey

The Draft final report will be presented at explanation of draft final report which will be planned in November 2017. EKI understands that the scopes and details of the project will be decided after careful consideration by JICA, as well as the decision of the project budget. EKI also understands that this result of discussion of the design may not always be fully reflected on the final result.

#### VI. Clarification of Collected Data and Information

The Survey Team requests further collaboration with EKI for clarification of data and information collected during the survey.

#### VII.Confidentiality

Since this Technical Memorandum includes outline of the Project, both side understand that this Technical Memorandum shall be treated as confidential for the third party. It is a consideration to fair and transparent competition in the future tendering.

#### Annex

Annex-1: Current organization chart of EKI Annex-2: Record of EKI Training (2012/2013-2016/2017) Annex-3: EKI's Training Plan for 2021 (quote from previous study report) Annex-4: Plan of Action (2014-2023) Annex-5: Land Ownership Transfer Agreement





Annex-1-

	Sector		2012/20	)13	2013/	/2014		2014/20	15		2015/20	16		2016/20	17
			2005EC		200	2006EC		2007EC		2008EC			2009EC		
No			Number of trainees	Number of KPT*	Number of trainees	Number of KPT*	Number of trainees	Number of KPT*	Number of companies and organization	Number of trainees	Number of KPT*	Number of companies and organization	Number of trainees	Number of KPT*	Number of companies and organization
1	Import and Export	Manufacturing	9,985	1,225	16,966	2,019	5,702	1,389	29	7,082	996	32	5,468	833	40
2	Infrastructure and Service		1,172	84	321	61	2,510	492	13	2,287	392	15	9.580	1587	66
3		TVET	181	0	1,574	151	1,293	139	9	1,877	-	16	981	120	8
4		University	658	6	2,196	44	1,838	438	8	3,798	794	10	1,982	237	6
5	Capacity	School											850	125	38
6	Building	C/RKI	e series de la companya de la company Recompanya de la companya de la comp										77	0	2
7	-	Others		lan (see as as									127	23	2
8	RKI									1.000			9,528	1003	44
Total		11,996	1,315	21,057	2,275	11,343	2,458	59	15,044	2,182	73	28,593	3,928	206	

Source: EKI

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Annex-3: EKI's Training Plan for 2021 (quote from previous study report)

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Target	Purpose	Sector	Description	Number of trainees per year	Duration of training per course	Number of training implemented per year	Number of trainces per course
		Import & Export	KAIZEN training targeting business persons in the manufacturing sector (including the import and export sector)	120	4 months	2	60
	To foster	Service	KAIZEN training targeting business persons involved in the service sector (including tourism) and public servants	80	3 wceks	4	20
External	keyperson to disseminate and install KAIZEN into each	Infrastructure	KAIZEN training targeting business persons involved in the civil engineering, construction and infrastructure sectors (including low-cost housing)	80	2 months	4	20
personn el	org.	TVET	KAIZEN training targeting TVET (vocational training schools) teachers	80	2 months	4	20
		University	KAIZEN training targeting university instructors	80	3 weeks	4	20
		School	KAIZEN training targeting school teachers (from the kindergarten to high-school level)	80	3 weeks	4	20
		Regional KAIZEN Institute	KAIZEN training targeting the RKI staff members	30	4 months	2	15
		A frican trainee	A third-country training participated from countries in Africa	20	1 month	1	20
	To foster	Basic KAIZEN at BSc/BA level (Bachelor's degree course)	Training targeting the prospective staff members who have just entered EKI, expecting to become regular employees.	20	l year	All year	20
Internal personn el (EK1 staff)	instructor	Intermediate KAIZEN at MSc level* (Master's degree course)	Training targeting the regular staff members who have worked for more than six months at EK1 to obtain intermediate skills as KAIZEN consultants	40	2 years	All year	20×2 years
		Advanced KAIZEN at PhD level* (Doctoral degree course)	Training targeting the staff members who have worked for more than two years to obtain advanced skills as KAIZEN consultants	30	3 years	All year	10×3 years
		Total		660			285

**EKI's Training Plan for 2021** 

Source: Prepared by JICA Study Team based on EKI's training plan * At a specific point in time, there are double participants for master course and triple participants for doctor course because these are 2-year program and 3-year program respectively.

Source: Previous Study report

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#### Annex-4: Plan of Action (2014-2023)

[			Baseline	Апл	ual out puts (the	number of comp	anies/organizati	ons)	T-4-1	F	urther estimatio	n
No.	Major activities	Indicators	2014	2016	2017	2018	2019	2020	TOLAI	2021	2022	2023
1	Implement KAIZEN in 160 export companies	Num	15	22	26	31	37	44	160	51	58	65
2	Implement KAIZEN in 95 imports substituting companies	»	12	13	15	18	22	27	95	32	37	42
3	Implement KAIZEN in 100 TVETs	>>	5	14	16	19	23	28	100	33	38	43
4	Implement KAIZEN in 20 Universities	»	2	2	3	4	5	6	20	5	5	5
5	Incorporating KA IZEN training curriculum in 20 Universities.	»	-	2	3	4	5	6	20	5	5	5
6	Incorporating KAIZEN training curriculum in 50 TVETs	»	*	7	8	9	12	14	50	16	19	22
7	Introducing KAIZEN in 30 low cost housing projects	»	5	4	5	6	7	8	30	5	5	5
8	Introducing KAIZEN in 10 Construction companies	»	2	~	2	2	3	3	10	4	4	5
9	Introducing KAIZEN principles in 120 Kindergartens schools.	»	-	-	22	24	36	38	120	40	42	44
10	Introducing KAIZEN principles in 120 elementary and secondary schools.	»	-	2	20	24	36	38	120	40	42	44
11	Implement KAIZEN in 60 service organizations	»	2	8	10	12	14	16	60	18	20	22
12	Implement KAIZEN in 30 tourism related organizations	»	*	4	5	6	7	8	30	9	10	11
13	Establishing KAIZEN institutions in 4 regions and two cities.	»	2	1	2	3	•	-	6	ι τ	1	1
1												r
14	Number of management and line workers trained by EKI on first level KAIZEN	Num	15,000	15,000	17,000	27,000	36,280	39,860	135,140	43,440	47,020	50,600
15	Number of KPTs established by EKI on first level KAIZEN	»	1,700	2,000	2,500	2,900	3,600	3,950	14,950	4,300	4,650	5,000
16	Consultants trained advanced KAIZEN by the project	»	30	30	30	30	30	30	150	30	30	30
17	Consultants trained advanced KAIZEN at MSc level	»	20	20	25	30	35	40	150	20	20	20
18	Consultants trained advanced KAIZEN at PhD level	»	÷	-	-	5	10	15	30	10	10	10
19	Management of EKI trained on advanced KAIZEN	»	5	5	6	7	7	-	25	(request base)	(request base)	(request base)

[Premise] According to the statistical data in 2015, (No.3) the number of TVETs in ETH is 437, (No. 4) the number of Universities in ETH is 34, (No.5) it is the same number of No.4, (No.6) it is the half number of No.3, (No.7) it depends on the annual number of housing projects, (no.8) the number of Kindergartens is 3688, (No. 10) the number of School is 30534 primary schools and 1912 junior high schools, (No. 13) the number of Regions/Cities is 11.

Annex-4-

# Annex-5: Land Ownership Transfer Agreement

..

በአዲስ አዘባ ከተማ አስተዳደር መራት ለማትና ማኒጅመንት ቤሮ የመራት የንክና ማስተላለፍ ጽሕት



Addis Anaba City and Development & Northmote हेनुसरम

13 Blizlen _

Date

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AAR & han here waar water a NB PAR PATI OLA ONANY ROUGH PAR PUNCA ठेडले विभिन्

የአዲስ አዘባ ከተማ አስተዳደር ነበሩ ላኔ 29 ቀን 2009 ዓም. ወዝዴው የመራት ሊዝ ጉዳይ ስብሰባ ለማስልሰነኛ ማስክል የሚሆን ቦታ ለመግንቤት የሚድገለዋል በከብተማችው በአዲሱ ወረዳ 10 ክልል የሚተኝ ስፋቱ 3735ኪሜትር የሆነ ዞታ ቤታል ታባሉ ቋዋር 17/2009 ለኢትዮጵያ ዝብቡን ኢንስቲትዩት ክስብ ክፍያ ነጻ አንጿስድ ሙካኔ ስግቷል።

ስለዚህ መኪአው ውጭራ ማስረት ኢንሱቲዮሌት ወደ ማንቢታው ይነው ዘንድ የተማቁው የሊዝ መለጉየቦታወጥ ፕላን ጨርማት እና የነበኋውን ታስ ንብኤ በድምፍ ማጽ ከዚህ ደብረክ. ጋር አባሪ ተደርሷ መላኩን አየንለጽን በአፍንተ መኮል ባለመዝቱ ቦታመን ተረክበው ወደ ግንባታ አንዲንዙ እንዲደረግ አንዲሁም ማልዓጫ የተደረጋላቸው የስራ ክፍሎች በሊዝ አዋጅ ቁጥር 721/2004 መስረት አስራላይውን

አንዲሬ.ምም፦ አሳፅባስተ።

ማልሞድ

adata has been hieras.c

- Auraquet/State
- ሰሱግ መራት ማስተላለፍ ጋላክራ ዓይት
- ለሲዝ ክሬዳሪዎና ከትቅል ገቡብ የስራ ፕደት
- hund in a this way wear wear get
- ለኢትዮጵያ ካይዘን ኢንሱይትዌት

አዲስ አበ^{4 ነ}

1. 100017 3. M.S. erere them seen Yothayet Teshome Taddese 下后望 加龙子 塑料中有新作 34月 1968 4.8.4 mil



Ø,

Annex-5-1 -A-5-9

anga ang heey hadebard

የመሬት ዋክሮ "የስተላለፍ አጨት

በሊዝ ምድዓ የቁሳለፊ ቦታ፣ የሊዝ ውል

Para 116 8. 5. 16/2039

ውል ሰጨ - > የአዲስ አዚባ ከተማ አስታዳዩር የመራት ጥክና ማስታላለፍ ጽቋት

አድራሻ ፣ አዲስ አበዛ ከፍለ ኪናምሃ አራዳ ተበል - ስለክ ቁዋር ወየተ-1- 570595

ውል ተቀቁደ ፦ የኢትዮጵያ ካይዘን ኢንስቲትዌት

(07.4 ..... 法要求资产 无线直 海图 轴后在 沉中"等

የሴት አ …… // ጣ ቀ …… ስለክ ቀድር …… … ቤማነት ኢትዮጵያዊ

ኒስስውል መራሪም

ይህ መል ጓሬ ንወት 05 ቀን 2009 ዓም ክዚክ በጋሳ ዉላ ሱም አየተማስ በሚብራው በአዲስ አበዓ ክተማ አስታዳዩር የመራት ባንክፍ ማስቀላለፍ ጽቋፉ እና ውል ቀቀባና አየተባለ በሚጠራው የኢትዮጵያ ካይዘን ኢንስቲትዩት መካከል

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- 2 ስለፅታው፦ መራታድና የሲዝ ዋጋ አክፋራል
  - 2.1 火払火払 5回り れたやり 5届連邦代記 Vonの連手 パッキュー パル・パル 20 4 2009年20 0.46 アリル・ホリビ 17/2009 ባካንደለው ስብለባ በልደታ ከፍለ ከተማ በአዲሱ ወረዳ 10 የሚገኝ ስራው 3735ኪኖኔ የሆኑ ቦታ ለማስልሰኝ ማዕከል አገልማሉ ት ለኢትዮጵያ ካይዘን ኢንዮጵትኖት እስ. ዘ ክፍደ ንኝ አንጂ ተሳሰፍ ወወቅክው መቁረት፣
  - ዋሊዝ በአቀማ 90 ዓመት መል ከተፈረመበት ከዝቤ 05 ቀን 2009 ዓ.ም እስከ ነገሌ 04 ቀን 2099 ዓ.ም ይሆናል።
  - 2.2 በዚህ መመሪት ወል ፅጪው በአዲስ አበባ ከተማ በልደታ ክፍለ ከተማ ወሬዳ 30 ውስዋ የሚዋዩ-የቦታው ደረጃ - 2/2 - onde stelle (PDP- 1025)
    - የበታመ አንልግስት ስግስልለነኛ ማዕክል
      - የቦታው ስፋት 3735ኪሜ.
    - . ሕንዋ ዘፍታታ Min G+10 -- MaxG+19 እንዲንካዊ በሊዝ የምስክር ወደቀት ሥርቀራኬት ቁኖር--------እና የክርታ ተዋር ······· ሳሊዝ ገቢ ዛሬ ······ ተን ····· ዓ.ም አስሪነቢል።
    - 3.የመለ ስጪው ማዲታ 3.1 - ሙል ስጨመ ስሙል ቀጥቢይ የሲዝ መጠቀ መለሱ ስመለኑ ተከበሮለት ይጠምምበት ዘንድ በሲዝ አዋጅ ቀጥር 721/2004 五年 五理莱芳 香叶指达来想。由中国市一天子田 玉字正 49/2004 五字元世史,《自于"生世史"相无用 机剂运用于约 በመጣመ መመራስ ቁጥር ነ 1/2004 መመሪት አስራላጊዜን ያደርጋል።
    - 3.2 ሙሉ ሲጨው ሰውስ ቀቀዛይ ያስረክቤው ቦታ ዓለተጠነተ ውኔታ ውሉ ክተቆመጣ ሆነሳ ክርክር ቢነሳ እና ቦታውን ማክሬትብ ካለተቻሉ ውል ሰጪው ተመመዋኘ ወታ ማስሪክት ወይም ውል ተቀባይ የዘራለውን ትድመ ኩድደ መመለስ እና መ<mark>ስን "</mark>የአሪን" ይናርዚታል።

**ふどの)広 小やりじ 75.**か

- 4.1. መል ተቀባይ ምንንዓታውን ንጽታ እና የወንጾ ክፍታን ለተመለኩተ በኩኮማው ማስተር ዋላንና በአካባቢው ዝርዝር ዋናት anural Pertur Print Arris and Poetaly" 75.4 Solds
- ውል ቀቃባይ ማንዚታ ማክፍታቅደ ጊዜን በተመለከተ በመመሪያ ቁዋር ተዘ2004 አንቀጽ 42 በተቀመጠው መሰረት 239.2 and 122.1 and 122.1 and 12

ፋ.3 የሙሉ ተባባይ በሊዝ ዚያው ሲካ ላይ የሚያንደዳቸው ማናቸውም ተምርናች የኩተማው ማስተር ፕላን፣ የሊዝ አዋጅ እና ሴሎት ተንቢነት ወቅገብ ሴታትና ደንወት ምርያበት መሠረት ይሆናል።

ት.ፋ የለ.ዝ መለተቱን የማስታላለፍ እና በምስትና የማስያዝ አፈንበመኑ በሊዝ አዎንት ቋዋነር 723/2004 አንቋም 24 እና ዘአዲስ AND REPORT OF THE HALL DAMESTARE HOUSE AND ALL APC 49/2004 AS IMPORT 11/2004 **公共10.9% (Emmander 水平で 12/2004 amilde)** 上世室為に

4.5. መል ተቀዋይ መሉን ክሬጸመውን ቀን ጀምሮ በመመሪያ ቀዮር 11/2004 አንቀጅ 42 በተቀመጠው መስራት ማንቢታਜቡን መጀመር አስፀት።

4.6. የመል ተዋዛይ መስከ ለርሶ እና እንዲ አንክልንሎት እና የህንጸ ከፍታ መለመሞ እይትልም * የኢትዮጵያ * የኢትዮጵያ



# 5 - ስለማንዚታ መጀመር እና ማክፍተቂያ የኒዜ ንዴብ የሚወለ ቅጣት

መሉ ተታባይ ወዝው ሙሉ ሙሉረት ማዝታውን ደብሞችተ አንደዋን ውሉ ይሰረበሉ። ቦታውን እስለ ሸነቶቻ ወገን እንዲታሳለፍ ይደደ 28 በማስተሳለፍ የመካከታ ወጣታ ተቀጋሶ ተራ ማዝብ ነለ ታሪው - ምዝብ ተመላሽ ይደረሻለታል። ተራ ምዝቡ የሚመስሰለት ዮስ ሀ ቂ ስ . ላፊሽ ሰቦግ በሚቀምለው የዘኛት ዓምታ ይሆንል። አራዳይምምም 86 ዝ አዋጽ እንቀጽ 23 ከንሎት አንቀጽ 5 እስት የ 我走得了起口,边站大空,当中五点中

×.

- ፍት የውስ መታደኑ የማቆወጣው በሰዝ አዋጅ የርቅጽ 19 መሆኖት ዓስይሆነው ውስ እንዲታደስ የውል ዘውኑ ከግለታ ከእስር እዕከ E HA WA WHEA
  - 6.2 ለስተዳደሩ የታሙት ለለብዛብ ጉንም ካልራሲለው መምታሪዊ ጉንን ሰውጥ ክሉለው እና ነው.ን ልማት በታው መንንሄስይታው በብተዋሪም የረግሞት የለጠበባ ተገኘት መመጠበም በተገኘ መስ ሲሆኑን መልግ መሪከት ወደ ትንግ በተከረዘራት ምክንድቶች ካልተቀበለው የልማት ደረጽ እና አምተዘ ሰምተዋር የሚቻል ሲሆኑን መስ ሲሆኑን ይችላል። ቆይሳቱን በተከረዘራት ምክንድቶች ካልተቀበለው भूरकेल महरहातके महरू केल्ल रहे करेंग लहें। ल्योतको ज्योतिः

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Annex-5- 4 -A-5-12

A-6 Minutes of Discussions 2

# Minutes of Discussions on the Additional Preparatory Survey for the Project on Construction of TICAD Human Resource Development Center for Business and Industry (Explanation on Draft Preparatory Survey Report)

On the basis of the discussions and field survey in Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia") in July and August 2017, and the subsequent technical examination of the results in Japan, the Japan International Cooperation Agency ("JICA") prepared a draft Preparatory Survey Report for the Project on Construction of TICAD Human Resource Development Center for Business and Industry ("the Draft Report").

In order to explain the Draft Report and to consult with the concerned officials of the Government of Ethiopia on its contents, JICA sent the Additional Preparatory Survey Team ("the Team") to Ethiopia for the Explanation of the Draft Report, headed by Mr. Hiroyuki Tanaka, Senior Representative of JICA Ethiopia Office, from 18th November to 23rd November, 2017.

As a result of the discussions, both sides confirmed the main items described in the attached sheets.

Addis Ababa, 22 November, 2017

Hiroyuki Panaka Leader Additional Preparatory Survey Team Japan International Cooperation Agency SJe

Mekonnen Yaie Director General Ethiopian Kaizen Institute Federal Democratic Republic of Ethiopia

## ATTACHMENT

 Confirmation of contents of the Minutes of Discussions of the Previous Surveys Both sides confirmed that the contents of the following Minutes of Discussions, which have been signed during the Preparatory Survey and the Additional Preparatory Survey, are effective, except the updates mentioned in this attachment.

Minutes of Discussions signed on the 3rd September, 2015 Minutes of Discussions signed on the 13th May, 2016 Minutes of Discussions signed on the 15th August, 2017

- Contents of the Draft Report After the explanation of the contents of the Draft Report by the Team, Ethiopian side agreed in principle to its contents.
- 3. Cost estimation

Both sides confirmed that the cost estimation for the Project described in Annex 1 was provisional and would be examined further by the Government of Japan for its final approval.

- 4. Confidentiality of the Cost Estimation and Specifications Both sides confirmed that the Project cost estimation shown in Annex 1 and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until the procurement contract between Ethiopian side and Japanese contractor is concluded.
- 5. Project Implementation Schedule Both sides confirmed that the updated Project Implementation Schedule will be as shown in Annex 2.
- Expected outcomes and Indicators
   Both sides agreed that key indicators for expected outcomes are as follows. Ethiopian
   side has responsibility to monitor the progress of the indicators and achieve the target
   in year 2023.

## [Quantitative Effect]

The quantitative effect indicators' target year is settled in 2023; three years after the



completion of the construction (two years after the completion of soft component). By the social, economic, and technical results of this survey, the quantitative effect indicators are shown in the following Table

Indicator	Base (2017)	Target (2023) (2 years after completion of soft component)
Number of trainee	28,593	50,600

## [Qualitative Effect]

The qualitative effect indicator of the project is shown below:

- · Improve EKI's capacity for human resource development.
- · Contribute the improvement of quality and productivity in Ethiopia.
- 7. Undertakings taken by both sides

Both sides confirmed undertakings described in Annex 3. Ethiopian side (EKI) assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project shown in Annex 1. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

8. Schedule of the study

JICA will complete the Final Report of the Additional Preparatory Survey in accordance with the confirmed items and send it to the Ethiopian side around February 2018.

9. Issue on Building requirement for number of floors

EKI agreed to negotiate with the concerning authorities to accept current design of G+4 instead of the minimum building floors requirement of G+10 and report the negotiation outcome to JICA by middle of December this year.

Annex 1 Project Cost Estimation (Confidential) Annex 2 Project Implementation Schedule Annex 3 Major Undertakings to be taken by Each Government Annex 4 Project Monitoring Report

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# Annex 1 Project Cost Estimation (Confidential)

1. Expenses to be borne by Japan

This data is closed due to the confidentiality.

2. Expenses to be covered by the Ethiopia Side

Item to be burden	Item	Estimated cost (in thousand ETB)
	Removal of the debris in the site ( include existing sheds and plants) and site clearance	578
Facilities	Installation of electricity, water, sewage and telecommunication lines. Commission for construction permission.	2,112
	Planting, furniture and furnishings which are not include in Japanese works	4,950
Bank Commission	Bank Commission (Bank Arrangement B/A, Authorization to Pay A/P) 0.1% of Grant Amount	500
Saura HOAR	Total	8,140

Source: JICA Survey Team



3. Estimated Indirect Taxes and Direct Taxes

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This data is closed due to the confidentiality.

4. Condition of Cost estimation Timing of estimation: August 2017 Exchange rates: 1 ETB =4.090JPY 1 US\$ =112.83JPY 1 Euro =127.46JPY



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# Annex 2 Project Implementation Schedule



tal 34.5 months

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(8 months +26.5 months)



# Major Undertakings to be taken by Recipient Government for the Project

# 1. Before the Tender

NO	Items	Deadline	In charge	Cost	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	MOFEC /EKI		E/N and GA
2	To approve IEE/EIA	within 1 month after G/A	EKI		·
3	To implement EIA	before start of the construction	EKI		
4	<ul> <li>To secure the following lands</li> <li>project sites (Approx. 3,700m2) at Addis Ababa</li> <li>temporary construction yard and stock yard near the Project area</li> </ul>	before notice of the tender document	EKI		MD of Preparat ory study
5	To obtain the planning, zoning, building permit	before notice of the tender document	EKI		
6	To clear and level the following sites 1) existing facilities (Debris andFoundation) 2) leveling the sites at Addis Ababa	before notice of the tender document	EKI		MD of Preparat ory study

# 2. During the Project Implementation

NO	Items	Deadline	In charge	Cost	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		EKI		E/N and GA
	1) Advising commission of A/P	within 1 month after the singing of the contract	EKI		
	2) Payment commission for A/P	every payment	MOFEC /EKI		
2	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	EKI		
3	Regarding indirect taxes such as Custom Duties, VAT and Stamp duties etc., which may be imposed in Ethiopia with respect to the purchase of the products and the services to be exempted by MOFEC or borne by EKI. Regarding dierect taxes such as corporate tax and personal income taxes, both side s understand that further discussion will be continued between Government of Japan and Government of Ethiopia.	during the Project	MOFEC /EKI		
4	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment	during the Project	EKI		

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5	To provide facilities for the distribution of electricity, water supply, drainage and other			MD of
	incidental facilities.			Preparat
				ory study
	1)Electricity			
	-The distributing line to a swichboard(high-voltage cable laying, a breaker and transformer) of the site	during the Project	EKI	
	2)Water Supply			
	The city water distribution main to the site	during the Project	EKI	
	3)Drainage			
	The city drainage main ( for sewer and others ) to the site The rainwater from water channel of the frontal road to public gutter	during the Project	EKI	
	4)Telephone and Communication Line-Telephone line to a main distribution frame(MDF) via an intermediate distribution frame (IDF) Installing telephone switchboard and terephone	during the Project before start of the construction	EKI	MD of Preparat ory study
6	Planting of trees	during the Project	EKI	MD of Preparat
7	To implement Environmental Management Plan and Environmrental Monitoring Plan	during the Project during the construction	EKI	JICA Environm ental and Socialgui deline(20 10)
8	To submit results of environmental monitoring to JICA, by using the monitoring form on monthly basis as a part of Project Monitoring Report	during the Project	EKI	MD of Preparat ory study

#### 3. After the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of operation and maintenance cost 2) Allocation of operation and maintenance staff 3) Routine check/Periodic inspection	After completion of the construction	EKI		MD of Preparat ory study
2	To implement Environmental Management Plan and Environmrental Monitoring Plan	for a period based on EMP and EMoP	EKI		JICA Environm ental and Socialgui deline(20 10)
3	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative mpacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between EKI and JICA.	for three years after the Project	EKI		MD of Preparat ory study

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable, MOFEC: Ministry of Finance, Economy and Cooperation)



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# Project Monitoring Report

on

# The Project on Construction of TICAD Human Resource Development Center for Business and Industries

# Grant Agreement No. XXXXXXX 20XX, Month

# **Organizational Information**

Signer of the G/A (Recipient)	Person in Charge Contacts	(Designation) Address: Phone/FAX: Email:
Executing Agency	Ethiopian Kaize Person in Charge Contacts	n Institute (Designation) Director General <u>Mekonnen Yaie</u> Address: P.O.2292 Addis Ababa, Ethiopia Phone/FAX: Email: mekonnenyaie@gmail.com
Line Ministry	<u>Ministry of Pub</u> Person in Charge Contacts	lic Service and Human Resource Development (Designation) Address: Phone/FAX: Email:

# **General Information:**

Project Title	The Project on Construction of TICAD Human Resource Development Center for Business and Industries
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPYmil. Government of ():



1:	Project Description	
••••••••••••••••••••••••••••••••••••••		

# 1-1 Project Objective

## 1 Upper Level Plan

In Federal Democratic Republic of Ethiopia, the economic growth Past 10 years has been remarked average 10.9 %. It is quite obvious growth but its poor industrial structure due to the delay of the private sector development makes the country poor competitiveness. The weakness of the economic structure is seen in the fact that the second industry's proportion in GDP is 14.7%. (World Bank 2014) To solve the issue, the government of Ethiopia expressed in the Growth and Transformation Plan (GTP: 2010-2014, GTP2: 2015-2020) that they will shift from the Agriculture based economic to the manufacturing based economic. (Agriculture 42.7% in GDP, Industry 12.3% in GDP, 2014). As the concrete policy, the Ethiopian government focus on the human development through "KAIZEN (Japanese method and policy to the quality and productivity upgrade), in addition the implementation of the economic infrastructure and promotion of Foreign Direct Investment.

In the country assistance strategy paper to the Ethiopia (April 2012) mentions the importance of the private sector development and it says that "To realize the Ethiopian five years development plan, it is necessary to reinforce the related policy framework, upgrade the private manufacturing competitiveness, job creation and foreign direct investment. In such point of view, execution of the policy dialogue and cooperation to the private sector development through the spread of KAIZEN." This project matches the policy.

2 Current Condition and Problem of the Sector Ethiopia Kaizen Institute (EKI) was established by Ministry of Industry in 2011.EKI has been expanded and strengthen rapidly with Technical Assistance (Quality and Productivity upgrade, spread and development project). When EKI was established the number of staff was only 9 but it increased to 110 staff in 2015 and has plan to expand 218 staff in 2021. However, EKI's facility and equipment are very poor compare to its number of staff and activities. It is urgent need to implement and strength EKI's facility and Equipment.

## **3** Purpose of the project

This project aims to contribute to realize the Growth and Transformation Plan 2 its target is to shift the manufacturing economy and spread of KAIZEN by executing the construction of EKI's facility and procurement of the equipment.

# 1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

## Relevance

In view of the above, it is judged that the project is appropriate for technical assistance project, by using Japanese grant aid.

## (1) Object suitability

This project aims to construct the new building and procure equipment which can follow EKI's future expansion of its Kaizen activities.

The construction of new building and improvement of EKI's function such as its head office and training center have high suitability in view of contribution to improvement of quality and productivity and human resource development in Ethiopia.

## (2) Benefit target

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EKI is only an organization which conducts and promotes Kaizen activities in Ethiopia. The construction of the new building and procurement of equipment supports expansion of its activities and provides benefits human resource development in the future in Ethiopia.

# (3) Purpose of the project

EKI has currently its head office in private buildings for rent in Addis Ababa City. The use of the buildings had been changed from an apartment, the original use, to EKI's office and the area is not enough for the office use. Furthermore, the plan of the buildings is designed based on the use for EKI's head office and work space for trainers. The buildings do not have enough rooms for training or holding seminars. In addition, the number of staffs is currently assumed to increase due to expansion of Kaizen activities and function of EKI's Head office, that results in demand for construction of new building for them.

This project aims to contribute improvement of EKI's function such as its head office and training center to development of human resource in Ethiopia by construction of the new building and procurement of equipment which can follow EKI's future expansion of its Kaizen activities.

The construction of new building and

# (4) Mid- and Long-term Policies to Ethiopia

The Ethiopian government supports the necessity to improve quality and productivity in the 2nd Growth and Transformation Plan (GTP2). EKI, as the implementation organization, submitted "the Past Record and Future Plan prepared for JICA Mission" to JICA, which consists of its future plan regarding content of activity and organization system. This project corresponds to these policies.

The "Country Assistant Policy to Ethiopia" decides that the development of private sector, including promoting Kaizen activities, is one of priorities. This project corresponds to the policy.

## 1-3 Indicators for measurement of "Effectiveness"

Indicators	Original (Yr 2017)	Target (Yr 2023) 2 years after project completion)	
Number of trainee	28,593	50,600	
Qualitative indicators to measure to - Improve EKI's capacity	he attainment of project objectiv for human resource developmen	rest.	

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**Details of the Project** 

## 2-1 Location

2:

Components	Original	Actual		
	(proposed in the outline design)			
1.Construction Fitawari Damtew Street Woreda 10				
Equipment	Lideta Sub—City Addis Ababa			
Procurement	City Attachment(s):Map			

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Components	Original*	Actual*
	(proposed in the outline design)	
1.Consulting Services	Detail Design, Construction	
_	Supervision	
2 Construction of TICAD	Structure Rile foundation BC atmenture	
Human Resource	partly steel structure	
Development Center for	Training Office and lodging	
Industries	Floor area	
	-Building for training/office work	
	5,516 m ²	
	-Building for lodging: 2,979 m ⁴	
	Number of stories: : one underground	
	and five above-ground stories for each	
	building.	
	Mechanical & electrical work:	
	Generator, ventilation and firefighting	
	facilities.	
3.Equipment procurement	Electrical Display for Exhibition	
	(2)	
	LIPS for Computer Server (1)	
	Video Conference Server (1)	
	Presentation System (1)	
	Printing machine (2)	
	Photocopy Machine (3)	
	Presentation Equipment for Training	
	room (46)	
	Maid Wagon (3)	
	Linen cart (3)	
	Desk with drawers on both sides (5)	
	Chair with arm rest (5)	
	Desk with drawers on one side (155)	
	File Cabinet (21)	
	Browsing Table (2)	
	Chair for browsing (8)	
	Book Shelf (6)	
	Magazine rack (1)	
	Folding table for Auditorium (40)	
	Chair for Auditorium (120)	
	Table for training room (284)	
	Chair for training room (284)	
	File cabinet for training room (24)	
	Meeting table for TV meeting room (8)	
	Chair for TV meeting room (16)	
	Meeting table (14)	
	Dining table (20)	
	Dining table (20)	
	Single bed (60)	
	Desk for logging room (57)	
	Chair for logging room (57)	
	Wardrobe (57)	
	Chest (57)	
	Chair carrier (4)	
4.Soft Component	Technical assistant for Maintenance	
	and Operation.	

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#### 2-2 Scope of the work

Reasons for modification of scope (if any). (PMR)

#### 2-3 Implementation Schedule

	Orig		
Items	(proposed in the	(at the time of signing	Actual
	outline design)	the Grant Agreement)	
Cabinet Approval			
E/N			
G/A			
Detailed Design			
Tender Notice			
Tender			
Construction Period			
Equipment			
procurement			
Soft Component			
Defect Liability Period			
Project Completion			
Date			

Reasons for any changes of the schedule, and their effects on the project (if any)

# 2-4 Obligations by the Recipient

- 2-4-1 Progress of Specific Obligations See Attachment 2.
- 2-4-2 Activities See Attachment 3.
- 2-4-3 Report on RD See Attachment 11.

#### 2-5 Project Cost

#### 2-5-1 Cost borne by the Grant (Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original Actual (proposed in the outline design) (in case of any modification)		Original ^{1),2)} (proposed in the outline design)	Actual
Construction	Construction of TICAD Human R	Ditto		
Facilities	esource Development Center for I ndustries			
	Whole set of equipment	Ditto		
Equipment	Packing and shipping, installation, procurement supervision, and general administration	Ditto		
	- Detailed design	Ditto		
Consulting Services	-Procurement Management -Construction Supervision	Ditto		
	-Soft Component	Ditto		

(B) F 13 A-6-13

Soft Component	Technical assistant for Maintenance and Operation.	Ditto	
	Total		

Note: 1) Date of estimation: August 2017 2) Exchange rate: 1 US Dollar = 112.83 Yen

# 2-5-2 Cost borne by the Recipient

Components			Cost (1,000 ETB)	
	Original (proposed in the outline design)	Actual (in case of any modification)	Original ^{1),2)} (proposed in the outline design)	Actual
	Removal of the debris in the site ( include existing sheds and plants) and site clearance	Ditto	578	
Facilities/ Equipment	Installation of electricity, water, sewage and telecommunication lines. Commission for construction permission.	Ditto	2,112	
	Wiring, Planting, furniture and furnishings which are not include in Japanese works	Ditto	4,950	
Bank Commission	Bank Commission (Bank Arrangement B/A, Authorization to Pay A/P)	Ditto	500	
	Sub total		8,140	
Tax exemption and Refund			212,450	
	Total	1	220,590	
Mater 1) D .				

Note: 1) Date of estimation: August 2017 2) Exchange rate: 1 ETB = 4.090 Yen

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

# 2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

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Original (at the time of outline design) name: Ethiopia Kaizen Institute role: Improve productivity and quality by implementing Kaizen Management Principles into institutions and service providers

#### financial situation:

EKI Budget and Expenditure	(thousand ETB)
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Year	Survey in	Survey in 2017		Noto	
(Gregorian)	2015 Budget	Approved Budget	Expenditure Accomplish	INOLE	
2011/2012	4,000	4,646	3,832	Result	
2012/2013	12,000	18,885 (14,671 +4,214)	18,309 (14,095 4,214+)	Result (+4,214 was additional Budget for Tax purpose)	
2013/2014	15,000	15,526	15,231	Result	
2014/2015	18,000	18,917	17,776	Result	
2015/2016	21,000	26,215	23,021	New Result	
2016/2017	24,000	33,554	32,136	New Result	
2017/2018	27,000	36,870	-	Actual	
2018/2019	30,000	42,000	-	Estimation	
2019/2020	33,000	47,000	•	Estimation	
2020/2021	36,000	52,000	•	Estimation	
2021/2022	39,000	57,000	+	Estimation	
2022/2023	-	62,000	-	Estimation	
2023/2024	-	67,000	-	Estimation	

Source EKI

institutional and organizational arrangement (organogram):



Source: Source: Prepared by JICA Study Team based on the Past Record and Future Plan Organizational Chart of EKI (from 2016 and Onward)

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Division	Staff	Remarks
Director General Office	2	
Director General	1	
Director General Secretary & Staff	1	
Public Relation Office	5	
Audit and Inspection Directorate	1	
Gender Office	1	
Corporate Service and Operation Sector	34	
Deputy Director Office	0	
Secretary / Staff	1	
Human Resource Directorate	5	
Planning & Information Directorate	2	
Finance & Supply Directorate	9	
General Service Directorate	17	Invlude 15 staff of Drivers and Cleaners
lanufacturing Sector	37	
Deputy Director Office	1	
Secretary / Staff	1	
Textile Directorate	7	
Leather Directorate	6	
Agro Directorate	9	
Metal Directorate	6	
Chemical Directorate	7	
apacity Building Sector	24	
Deputy Director Office	(1)	Hold a post of Education and Training Directorate
Secretary / Staff	1	
University Directorate	5	
TVET Capacity Building Directorate	5	
School Directorate	7	
Region and City Directorate	4	
Education and Training Directorate	2	
frastructure, Utility, and Service Sector	28	
Deputy Director Office	(1)	Hold a post of Basic Utility Service Directorate
Secretary / Staff	0	
Construction Directorate	8	
Logistic and Supply Directorate	7	
Basic Utility Service Directorate	6	
Natural Heritage and Tourism	7	
earch and Certificate Sector	20	
Deputy Director Office	1	Deputy Director (0), Secretary (0)
Secretary / Staff	1	
Research and Best Practice	6	
Awarding, Recognition and Certification	7	
Teaching Aid Material Preparation	2	
Information Technology	3	
Total	152	Invlude 15 staff of Drivers and Classes

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#### 2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).

- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).

- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

# 3: Operation and Maintenance (O&M)

#### 3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

**Original** (at the time of outline design)

There is no O&M organization.

For operating and managing the new Center, EKI is going to establish its own O&M departments as listed below, consisting of 40 employees.

Department	Duties		
Administration	Supervision of O&M departments		
Front Office	Reception and lodging management		
Cleaning	Cleaning of the Center and house-keeping of guest rooms		
Security	Surveillance and security		
Mechanical/Electrical/IT	Management and operation of mechanical/electrical/IT equipment		
Mechanical/Electrical Inspection	Inspection of mechanical and electrical equipment		
Vehicle	Maintenance and driving of vehicles		
Gardening	Management of trees and plants		
Laundry	Laundry and ironing		
Classroom/Conference Room	Management of reservation and equipment of classrooms and conference rooms		
Dining	Operation of dining room and catering service within the Center		
Health & Childcare	Public health nurses, childcare persons		
Source: JICA Study Team			
peration manuals will be de	eveloped by the soft component		
tual (PMR)			

#### **EKI's O&M Departments (tentative)**

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#### 3-2 Budgetary Arrangement

Item	Rependiture Associated with Operation an	ia maintenance
	Revenue/Expenditure	Amount (ETB)
(including meals)	500Birr x 120 rooms x 365 x 0.7	15,330,000
	Total revenue	15,330,000
Expenditures		······································
Salaries	2,000Birr/month x 42 persons x 12 months	1,008,000
Laundry (bed sheets, pillow cases)	80Birr x120 rooms x 8/month x 12 months	921,600
Laundry (bath/face towels, bath mats)	115Birr x 120 rooms x 365x0.7	3,525,900
Restaurant (3 meals)	100Birr x 120 persons x 365 x 0.7	3.066.000
Utility charges		
Water	10 times the present cost x 1/2 (estimate)	430,000
Electricity	10 times the present cost x $1/2$ (estimate)	155,000
Telecommunication	10 times the present cost x 1/2 (estimate)	1.850.000
Operation and maintenance	10 times the present cost x 1/2 (estimate)	2,575,000
	Total expenditure	13,531,500
	Balance	1,798,500

#### - Required O&M cost and actual budget allocation for O&M

### 4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

### Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. Tax exemption issue.	Probability: L
Adequate execution of the tax exemption is	Impact: H
expected for the project.	Analysis of Probability and Impact:
	High probability of incomplete tax exemption.
	Expect the delay of the construction.
	Mitigation Measures:
	Monitoring the action of the related authorities.
	Action during the Implementation stage:
	Contingency Plan (if applicable):
2 Incomplete of EKI's feture also	
Z. Incomplete of EKI's future plan	Probability: L
To success the project, it is necessary to keep	Impact: L
the EKI's future plan.	Analysis of Probability and Impact:
	Probability; EKI's future expansion is not
	realize by social or economic condition.
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	Impact to the target number of the trainees.
	Mitigation Measures:
	Monitoring the EKI's activities annually.
	Action during the Implementation stage:
	Contingency Plan (if applicable):
3. Preparation for the construction	Probability: L
Execution of the Environment Assessment and	Impact: H
obtaining of the construction permits are	Analysis of Probability and Impact:
necessary before the constriction	Probability; incomplete obtain of necessary
commencement.	permission of the construction or
	Environmental Expertize.
	Mitigation Measures:
	Monitoring the process.
	Action during the Implementation stage:
	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

#### Evaluation and Monitoring Plan (after the work completion) 5:

#### 5-1 **Overall** evaluation

Please describe your overall evaluation on the project.

#### 5-2 **Lessons Learnt and Recommendations**

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

#### Monitoring Plan of the Indicators for Post-Evaluation 5-3

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

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#### Attachment

- 1. Project Location Map
- 2. Specific obligations of the Recipient which will not be funded with the Grant
- 3. Monthly Report submitted by the Consultant
- Appendix Photocopy of Contractor's Progress Report (if any)
  - Consultant Member List
  - Contractor's Main Staff List
- 4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
- 5. Environmental Monitoring Form / Social Monitoring Form
- 6. Monitoring sheet on price of specified materials (Quarterly)
- 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final )only)
- 8. Pictures (by JPEG style by CD-R) (PMR (final)only)
- 9. Equipment List (PMR (final )only)
- 10. Drawing (PMR (final )only)
- 11. Report on RD (After project)

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1. Initial Conditions (Confirmed)

		Initial Volume	Initial Unit	Initial total	1% of Contract	Condition of	of payment
	Items of Specified Materials	A	Price (¥)	Price	Price	Price (Decreased)	Price (Increased)
			В	C=A×B	D	E=C-D	F=C+D
1	Item 1	●●t	•		•	•	
2	Item 2	●●t	•	•			
3	Item 3						
4	Item 4						
5	Item 5						

Monitoring of the Unit Price of Specified Materials
 Method of Monitoring : ●●

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(2) Result of the Monitoring Survey on Unit Price for each specified materials

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1		Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
JU	1	Item 1						
A	2	Item 2						
<b>6</b> -2	3	Item 3						
1	4	Item 4						
	5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Actual Expenditure by Construction and Equipment each)

		Domestic Procurement	Foreign Procurement	Foreign Procurement	Total
		(Recipient Country)	(Japan)	(Third Countries)	D
		А	В	С	
Cons	struction Cost	(A/D%)	(B/D%)	(C/D%)	
	Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
	others	(A/D%)	(B/D%)	(C/D%)	
Equi	pment Cost	(A/D%)	(B/D%)	(C/D%)	
Desig	gn and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	·
	Total	(A/D%)	(B/D%)	(C/D%)	
L				(C/D70)	

A-7 Soft Component (Technical Assistance) Plan

# The Project on Construction of TICAD Human Resource Development Center for Business and Industry in Federal Democratic Republic of Ethiopia

Soft Component (Technical Assistance) Plan

December 2017

Nippon Koei Co., Ltd.

Koei Research & Consulting Inc.

The Project on Construction of TICAD Human Resource Development Center for Business and Industry in Federal Democratic Republic of Ethiopia Soft Component (Technical Assistance) Plan

#### Contents

1	Background of Soft Component Plan1
2	Objective of Soft Component1
3	Outputs of Soft Component1
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6	Implementation of Soft Component and Procurement of Resources
7	Implementation Schedule for the Soft Component
8	Outputs of Soft Component7
9	Outline Cost of Soft Component
10	Undertakings of the Recipient Country

#### 1 Background of Soft Component Plan

For this Grant Aid Project, the Government of Ethiopia has requested the construction of a Human Resource Development Center with lodging to provide necessary facilities for EKI (the Ethiopian counterpart of this Project) to conduct training. The new Center will be operated and maintained by EKI after completion of construction.

According to EKI's personnel plan, the operation and maintenance (O&M) staff of the new Center will consist of approximately 40 employees at the startup. A total floor area of about 8,379m² will house a wide range of facilities, including training rooms, office rooms for EKI staff, bedrooms for trainees, a dining hall and kitchen for trainees and staff, an exhibition space for visitors, and a laundry room.

When designing and constructing this type of multipurpose building, the capacity and sustainability of the organization, which will own and operate the building after completion, needs to be examined and taken into consideration from the start of the planning phase. Since EKI has never owned this kind of multipurpose building, it lacks the knowledge and experience necessary to properly operate and maintain the facilities. Therefore, it is essential to enhance the capacity of EKI towards properly operating and maintaining the new center under this Project.

Accordingly, technical training for EKI personnel in charge of O&M at the new center will be conducted. Specifically, technical guidance will be provided in order to assist: ① the establishment of O&M departments, and ② the preparation of O&M manuals.

#### 2 Objective of Soft Component

The objective of the Soft Component is to establish a solid foundation for ensuring sustainable operation and maintenance of the new Center after the completion of the Grant Aid Project. This will be implemented by providing technical guidance in order to ensure that training programs will be smoothly carried out at the new Center. More specifically, assistance will be provided for the Ethiopian counterpart towards establishing O&M departments, imparting necessary knowledge and skills and producing O&M manuals.

#### 3 Outputs of Soft Component

Implementation of the Soft Component will deliver the following outcomes:

- O&M plan of the new Center will be established.
- O&M staff of the new Center will acquire basic knowledge, and O&M manuals will be produced.

#### 4 Indicators of Outputs

The outcomes of the Soft Component will be verified by confirming the following:

- · O&M departments have been established at the new Center.
- Trainees have acquired basic knowledge as verified by written and oral tests at the end of training.
- · O&M manuals have been produced and are being applied to O&M activities at the new Center.

#### 5 Activities of Soft Component (implementation plan)

#### (1) Activities

Soft Component activities consist of support for the establishment of O&M departments and the production of O&M manuals, which will be used in order to build the O&M capacity for the Ethiopian counterpart. To achieve the objective, lectures for O&M training will be given to each of the following departments, and the results of which will be verified by written and oral tests.

- ① Administrative Department
- ② Front Office Department
- ③ Cleaning Department
- (4) Security Department
- (5) Mechanical/Electrical/IT Equipment Department
- (6) Vehicle Department
- ⑦ Gardening Department
- **(8)** Laundry Department
- (9) Classroom/Conference Room Department
- 10 Dining Department
- (1) Health & Childcare Department
- 12 Waste Management Department

In No.12 above, training for waste management will held which target capacity development of collection of waste in the new center, temporary storage and handling over to collector.

#### (2) Implementation Plan

In implementing the Soft Component, the consultant will appoint Japanese engineers, who are involved with the O&M of the JICA International Center (a similar training facility to the new Center), and have expert knowledge and skills in O&M as full-time trainers of the Soft Component program. The duration of the program is estimated at ① 1.00 month for the establishment of the O&M departments, ② 1.00 month for setting up the production of the O&M manuals and ③0.50 months for Support for extraction of problems and improvement of O&M.

For ①, the first 0.67 month will be spent for the training for capacity development of O&M. It targets trainees will be learn about the operations of each department such as lodgings, training programs, dining facilities and so on and acquire basic knowledge and skills necessary for performing O&M duties, through case studies such as a case of JICA Yokohama International Center in Japan. This phase will also includes visiting and observing some similar facilities to the new center such as hotels and training facilities in around Addis Ababa, which targets the trainees to get knowledge and skill efficiently. A written test will be held on the final day to evaluate the trainees' levels of understanding and skills. The subsequent 0.33 month will be used for organizing O&M departments at the new Center in Ethiopia.

In the training for waste management, management method of waste such as paper, waste stationery, bottles and so on, which are assumed to be generated in the new center will be learned based on the standards of Ethiopia and Addis Ababa City. The Draft of Technical Guidelines On Households Waste Management (2004 in Ethiopian calendar) shows policies of waste management as below:

- · Decrease the amount of waste;
- · Separate waste by category such as reusable, recyclable food waste and so on;
- Transport waste adequately.

For (2), the initial 0.67 month will be dedicated to supporting the production of an O&M manual for each of the administrative, front office, cleaning, and other departments that will be established during phase (1). Once these manuals have been compiled, the remaining 0.33 month will be spent on conducting practical tests in line with the manuals' contents in order to evaluate the trainees' levels of basic knowledge of O&M at the new Center. Support will be provided in such ways that will enable the Ethiopian staff to independently revise the manuals as necessary to cope with requests and problems that may arise in the future.

For ③, after a half year since starting of operation of the new center, it is dedicated to supporting extracting problems of O&M department and manual and improving them. It target O&M department to improve their organization and manual more practical and efficient by considering problems which were unforeseeable when they were established. The duration is 0.50 month.

The detailed schedule of technical assistance program in Ethiopia is as shown in Table 1.

Table 1	Detailed Schedule	of Technical As	ssistance Program	(in Ethiopia)
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(1) §	Support for	establishment	of O&M	departments
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Day no.	Description	Duration
1-1 Train	ing at JICA Yokohama International Center + written test	·
1	Travel (depart from Japan)	
2	Travel (arrive in Addis Ababa), Orientation/briefing on training program and site	
3	Basic knowledge required for O&M at New Center I	
4	Basic knowledge required for O&M at New Center II	
5	Administrative Dept.	
6	Front Office Dept.	
7	Cleaning Dept.	
8	Summary of training results, visit to similar facility (hotel)	
9	Visit to similar facility (hotel)	
10	Security Dept.	0.67 month
11	Mechanical/Electrical/IT Equipment Dept.	
12	Vehicle Dept., Gardening Dept.	
13	Laundry Dept.	
14	Waste Management Dept.	
15	Summary of training results, visit to similar facility (training facility)	
16	Visit to similar facility (training facility)	
17	Classroom/Conference Room Dept.	
18	Dining Dept.	
19	Health & Childcare Dept.	
20	Knowledge retention tests (written and oral)	
1)-2 Estab	blishment of O&M departments	
21	Organizing O&M Department I	
22	Organizing O&M Department II	
23	Organizing O&M Department III	
24	Knowledge required for managing an organization I	
25	Knowledge required for managing an organization II	0.33 month
26	Knowledge required for managing an organization III	0.55 monui
27	Establishment of O&M departments I	
28	Establishment of O&M departments II, confirmation	
29	Sorting out of training outcome, travel (depart from Addis Ababa)	
30	Travel (Arrive in Japan)	

Day no.	Description	Duration		
2-1 Production of O&M manuals				
1	Travel (depart from Japan)			
2	Travel (arrive in Addis Ababa), Orientation/briefing on training program and site			
3	Introduction & analysis of O&M manual examples I			
4	Introduction & analysis of O&M manual examples II			
5	Setting the content and objective of O&M manual I			
6	Setting the content and objective of O&M manual II			
7	Setting the content and objective of O&M manual III			
8	Sorting out of training outcome			
9	Administrative Dept., Front Office Dept.			
10	Cleaning Dept., Security Dept.	0.67 month		
11	Mechanical/Electrical/IT Equipment Dept.			
12	Vehicle Dept., Gardening Dept.			
13	Laundry Dept., Classroom/Conference-room Dept.			
14	Dining Dept., Health/Childcare Dept.			
15	Sorting out of training outcome			
16	Compilation of O&M manual I			
17	Compilation of O&M manual II			
18	Review of O&M manual I			
19	Review of O&M manual II			
20	Finalization of O&M manuals			
2-2 Pract	ical exercise/tests in line with O&M manuals			
1	Administrative Dept., Front Office Dept.			
2	Sorting out of training outcome			
3	Cleaning Dept., Security Dept.			
4	Mechanical/Electrical/IT Equipment Dept.			
5	Vehicle Dept., Gardening Dept.	0.33 month		
6	Laundry Dept., Classroom/Conference-room Dept.	0.55 1101111		
7	Dining Dept., Health/Childcare Dept.			
8	Summarize the outcomes of training			
9	Verify the use of manuals, Travel (depart from Addis Ababa)			
10	Travel (arrive in Japan)			

(2) Support for production of O&M manuals

③Support for extraction of problems and improvement of O&M

Day no.	Description	Duration
1	Travel (depart from Japan)	
2	Travel (arrive in Addis Ababa), Orientation/briefing on training program and site	
3	Understanding the actual conditions of O&M department and manual	
4	Extraction of problems of O&M department I	
5	Extraction of problems of O&M department II	
6	Extraction of problems of O&M manual I	
7	Extraction of problems of O&M manual II	0.50
8	Sorting out of training outcome	0.50 month
9	Suggestion for improvement of O&M department I	
10	Suggestion for improvement of O&M department II	
11	Suggestion for improvement of O&M manual I	
12	Suggestion for improvement of O&M manual II	
13	Comfirmation of starting improved O&M department & manual	
14	Sorting out of training outcome, travel (depart from Addis Ababa)	
15	Travel (Arrive in Japan)	

#### 6 Implementation of Soft Component and Procurement of Resources

EKI has no previous experience in operating a training center with lodging facilities. Since the new Center will be providing training, lodging, amenity, and a variety of other services, its operation and maintenance will also be complex. For this reason, experts with experience in operating and maintaining JICA's training facilities in Japan will be dispatched as teachers to train the O&M staff of the new Center. This will take by Japanese consultant, in which Japanese experts having experience in managing and maintaining multipurpose buildings will serve as teachers.

It is assumed that ten persons from EKI, who will be serving as managers of the O&M departments of the new Center, will be selected as trainees. It is assumed that training venues and office rooms, the latter used for producing manuals, will be provided.. However, in order to ensure smooth implementation of the Soft Component and effective and efficient O&M activities afterwards, it is essential for EKI's O&M staff to take initiative and make independent efforts. For this reason, a supervisor in charge of managing the trainees of the Soft Component program will be appointed from the EKI staff.

#### 7 Implementation Schedule for the Soft Component

Table 2 shows the relationship between the workflows of the hardware (construction of the new center) and the software (Soft Component) portions of this Project. The Soft Component will be implemented in two phases, spaced about seven months apart. Phase ① will be carried out during the construction work. Phase ② will take place during the completion of the new center. Phase ③ will be carried out six months after the operation of new building is started. Phase ①&② will last for 1.00 month respectively and phase ③ will take place for 0.50 month.



 Table 2
 Soft Component Implementation Schedule

Source: JICA Study Team

The training schedule and personnel dispatch plan (M/M) are shown in Tabl 3.

Itom	Duration of Dispatch (month)						No. of	мл
Item	1.00			1.00		0.5	Person	101/101
① Support for establishment of O&M								
departments			_					
1 Training at JICA Yokohama International Center + written test	20 days						2	1.33
2 Establishment of O&M departments	10 days						2	0.67
② Support for production of O&M manuals			1					
1 Production of O&M manuals				20 days			2	1.33
2 Practical exercise/tests in line with O&M manuals				10 days			2	0.67
③ Support for extraction of problems and improvement of O&M						15 days	2	1.00
Total		I			I			5.00
Source: JICA Study Team								

 Table 3
 Training Schedule and Personnel Dispatch Plan (M/M)

8 Outputs of Soft Component

Outputs or deliverables of the Soft Component are as follows:

#### 1) Deliverables to the Project Owner

As outputs of the Soft Component, the Project Owner will receive:

- Manual of Operation, Maintenance and Management for TICAD Human Resource Development Center
- Report (in English)
- 2) Deliverables to Japanese Government
  - (a) Progress Report of Soft Component
    - Initial targets / results
    - · Progress status of initially-planned inputs and activities
    - Results thus far (test results)
    - Project Owner's feedback
  - (b) Completion Report of Soft Component
    - Outline of Project (name of Project, signing dates of E/N and G/A, maximum grant amount stipulated in E/N and G/A, amount of Consultant Agreement)
    - Outline of Soft Component (costs, background, planned objectives, expected results, planned activities, assistance providers and participants, implementation schedule (timing and M/M), actual activities conducted, actual outcomes produced in comparison with planned outcomes)
    - Remaining tasks and recommendations for sustaining and developing the effects to meet the objectives.

- Attached documents (Soft Component implementation schedule, participants list, attendance record, list of outputs (document titles, names of authors, summaries))
- Packet of reference materials (outputs (Completion Report to the Project Owner, O&M manuals produced, textbooks used, results of retention tests, etc.) video clips, photos, and newspaper articles.)

#### 9 Outline Cost of Soft Component

The outline cost of the soft component is as shown in Table 4.

This data is closed due to the confidentiality.

#### 10 Undertakings of the Recipient Country

In order to achieve the objectives of the Soft Component, the Government of Ethiopia will allocate a necessary budget and personnel to ensure that O&M manuals, produced under the Soft Component program, will be effectively utilized and the intended effects of the Project will be realized.

A-8 Procedures of Environmental Impact Assessment

8-1	Major Regulations, Gu	idelines and Proclamations in Ethiopia
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No.	Title	No/	Description
1	Environmental Impact Assessment Proclamation	Proc.299/ 2002	This Proclamation states that no person shall commence implementation of any project that requires environmental impact assessment without the authorization from the Environmental Protection Authority. The same provision clearly spells out that any licensing agency shall, prior to issuing an investment permit, a trade or an operation license for a project, ensure that the Authority or the relevant regional environmental agency has authorized the implementation.
2	Environmental Impact Assessment Guideline Document (draft)	May 2000	This Guideline provides background to environmental impact assessment and environmental management in Ethiopia. In essence it aims at being a reference material to ensure effective environmental assessment and management practice for all parties who engage in the process. It has details o the required procedure s for conduction an EIA and the requirements for environmental management.
3	Environmental Impact Assessment Procedural Guideline Series 1	Nov, 2003	This guideline provides detail procedure for the EIA process including definition of terms, comprehensive description of EIA process, roles of stakeholders.
4	Environmental Management Plan (EMP) for the Identified Sectoral Developments in the Ethiopian Sustainable Development and Poverty Reduction Programme (ESDPRP)	May, 2004	In order to ensure the sustainability of the programme this EMP has been prepared specifically aimed at environmental management of the programmes and projects. This management plan is especially rational at a time when recognition of the necessity to preserve the quality of the environment and the consumption of the country's natural resources continues to grow rapidly for the purpose of achieving the objectives of the programme. Besides this, it would also have importance for the proper use, conservation, and development of the
5	Guideline for the Preparation of Environmental Management Plan	n.d.	It is a general guideline for the environmental management explanation.
6	Guideline Series 1: Documents for Reviewing Environmental Impact Study Reports	2003	This section raises a number of fundamental issues with regard to how Competent Authorities review environmental impact study reports, the approaches to be followed in reviewing the reports, a structured questionnaire (checklist) for interpreting the information as well as background information of the suggested review criteria (format) for compiling the review comments.
7	Environmental Assessment Reporting Guide	2004	The focus of this guidance is to facilitate and support the preparation and presentation of a standardized report that help assessors, proponents, reviewers and decision makers.
8	Expropriation of Landholdings for Public Purposes and Payment of Compensation Proclamation	455/ Jul, 2005	This Proclamation grants the power to specified local public bodies to expropriate landholdings for public purposes. The Proclamation sets out the procedure of expropriation and provides with respect to compensation which shall be paid in advance and appeals.
9	Solid Waste Management Proclamation	513/ Feb, 2007	This Proclamation states provision for the management of solid waste and for designation and implementation of solid waste management action plans at the lowest administrative units of urban administrations so as to ensure community participation.
10	Addis Ababa Environmental Protection Aughority	Dec. 2010	This document provides a common understanding and consistent approach to EIA in the preparation and review of EIA document for, condominium housing and real- estate housing projects including multi-storey apartment housing.

Source: arranged by the JICA Study Team based on the EPA documents

## 8-2 Review and Mitigation Measures for Housing Project using the List of Potential Negative Impacts of Housing (Addis Ababa EPA)

No.	Environmental Issues	Potential Negative Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
1	Soil erosion &degradation	<ul> <li>(i) Degradation of soil cover by</li> <li>erosion, or loss of soil structures due</li> <li>to compaction</li> <li>(ii) Loss of fertile top soil due to</li> <li>erosion and flood.</li> <li>(iii)Contamination of soil from spilling</li> <li>of hazardous construction waste</li> </ul>	<ul> <li>(i), (ii) The project site is a flat area and degradation is not anticipated.</li> <li>(iii) Construction waste is not hazardous.</li> </ul>	(iii) Appropriate treatment of construction waste will be mentioned in the TOR to the contractor.
2	Ecosystem and bio-diversity damage	<ul> <li>(i) Damage to sites and their</li> <li>immediate surroundings resulting</li> <li>from the disruption of the natural</li> <li>environment.</li> <li>(ii) Disposal of construction</li> <li>waste/debris near -by stream or</li> <li>river, open space or green area.</li> <li>(iii) Encroachment into ecologically</li> <li>sensitive areas.</li> <li>(iv) Drainage of wetland.</li> <li>(v) Destruction of vegetation cover.</li> <li>(vi) Loss of bio diversity i.e loss of</li> <li>wildlife habitats(small animals and</li> <li>microorganism, loss of some</li> <li>important flora, fauna and</li> <li>endangered species</li> <li>(vii) Degradation of habitats caused</li> <li>by fragmentation</li> <li>(viii) Loss or degradation of</li> <li>vegetation from unnecessary</li> <li>removal or mechanical damage</li> <li>(ix) Extinction of endangered and</li> <li>threatened species</li> </ul>	(i) – (ix) Not applied because the area is inside the city center and along a trunk road.	
3	Landscape deformation	<ul> <li>(i) Disturbance of landscape by land clearing, cuttings of slopes</li> <li>(ii) Pit and heap formation on pedestrian, green and open areas</li> <li>(iii) Fragmentation of landscape by gullies</li> <li>(iv) Landslide on loose soil/slope failures</li> </ul>	Not applied because the project site is a flat area to be used for construction of a building.	
4	Limitation of green area	<ul><li>(i) Inadequate area allocation for green belt</li><li>(ii) In proper species selection for green area</li></ul>	Not applied. Trees of appropriate species will be planted outside the new Kaizen Center building.	The project shall apply Addis Ababa building permit regulations No 17/2004.

#### 8-2-1. Environment

No.	Environmental	Potential Negative Impacts	Possibility in the Kaizen Center	Mitigation Measures
	Issues		Project	
5	Danger to resident /population Inefficient infrastructures	<ul> <li>(i) Danger to residents from hazardous natural conditions</li> <li>(ii) Danger to residents from hazardous man-made conditions</li> <li>(iii) Hazard to residents from air, water or noise pollution from other adjacent or nearby land use</li> <li>(i) Overloading of existing infrastructures</li> <li>(ii) Lick consumption of uptor for</li> </ul>	Not applied because the project site is inside the city center and along the trunk road. (ii) Not applied after commencement of the use because the new Kaizen Center will not generate hazardous waste. Treatment of waste water and waste are planned. (iii) Not applied. (iii), (iii) As the project is construction of a new facility and increase of water use in	(ii) and (iii) As for the volume of water use, the project
	supply)	<ul><li>(ii) high consumption of water for construction purpose affects existing community.</li><li>(iii) Shortage of water for new residents</li></ul>	anticipated.	will consult Addis Ababa Water Supply and Sewage Authority at the basic design period.
7	Flooding	(i) Flooding (marsh and logging) due to poor construction of rain water collection drainage ditch.	(i) The new Kaizen Center will discharge certain amount of waste water.	<ul> <li>(i) Appropriate water</li> <li>discharge system will be</li> <li>applied in consistency with</li> <li>regulation on water drainage</li> <li>of Addis Ababa.</li> </ul>
8	Air pollution	<ul> <li>(i) Degradation of air quality by dust and vehicle emissions:</li> <li>(ii) Air pollution due to land clearing, operation of diesel engines, demolition, burning of and working with toxic materials.</li> <li>(iii) Dust particles will affect photosynthesis mechanism of plants as a result plant will dry and die.</li> </ul>	(i), (iii) Not applied (ii) Diesel engine will be used at the time of blackout of commercial line which will exhaust gas.	(ii) Contractor and the Kaizen Center will follow the regulation on air pollution of Addis Ababa and will use high quality of fuel.
9	Noise pollution	(i) Increase in ambient noise: Noise mainly from vehicles, heavy equipment and machinery, but also from people shouting and radios turned up too loud.	(i) A number of vehicles will be used during the construction period, which will increase noses. However, after commencement of the facility use, Kaizen Center will not generate remarkable noise.	<ul> <li>(i) The TOR to the contractor should prescribe to:</li> <li>- avoid noisy works after regular working hours,</li> <li>- use low sound construction equipment,</li> <li>- do careful handling of materials and equipment,</li> <li>- raise awareness of people living around the project site, and</li> <li>- apply strong rules and regulation,</li> </ul>
10	Visual pollution	(i) Light pollution (reflection) from buildings and glasses affect visual capacity human beings.	(i) The new Kaizen Center will have glass windows.	<ul> <li>(i) The JICA expert</li> <li>recommends</li> <li>Appropriate types of paints;</li> <li>i.e. paints with minimal</li> <li>reflection.</li> <li>Reduce the area of wall</li> <li>covered with glass</li> <li>Select glasses that do not</li> <li>affect the microclimate and</li> <li>having minimum reflection.</li> <li>Apply Ethiopian building</li> </ul>

No.	Environmental Issues	Potential Negative Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
				proclamation No 624/2009
11	Solid waste pollution (1) Communicable (infectious) diseases and breading of hosts (host breeding?)	<ul> <li>(i) Increase of incidence of bad common cold/ influenza</li> <li>(ii) Increase of Vector born- diseases like typhoid etc</li> <li>(iii) Increase of possibility of hosts breading environment for rats, rodents etc.</li> </ul>	(i) – (iii) Kaizen Centre will generate solid waste.	(i) JICA expert makes guideline for the facility management including appropriate treatment of solid waste and disseminates it.
	(2) Unwanted order and visual pollution	<ul> <li>(i) Causes a nuisance odor for the surrounding</li> <li>(ii) Reduce the quality of beauty feature of the surrounding</li> <li>(iii) Cause nasal disease deformation of embryo</li> </ul>	(i) Kaizen Centre will generate solid waste. (ii), (iii) Not applied	(i) JICA expert makes guideline for the facility management including appropriate treatment of solid waste and disseminates it.
	(3) Air pollution	(i) Production of the greenhouse gas by releasing the first lightest natural gas CH ₄ , C ₂ H ₆ , C ₃ H ₈ and C ₄ H _{10 and} other C, N and sulfur gasses at different proportion to the atmosphere.	Not applied	
	(4) Soil pollution and water pollution	(i) Increase of the unwanted chemical content of soil and water	<ul> <li>(i) Not applied because appropriate waste management will be taken as mentioned above.</li> </ul>	
	(5) Political and ecotourism disruption	<ul> <li>(i) Affecting citizen's right to lead quality of live.</li> <li>(ii) Reducing the smooth diplomatic relation with other country i.e. diplomatic complains of international community to live in the city.</li> <li>(iii) Reducing the number of incoming tourists affect the ecotourism.</li> <li>(iv) Affecting cultural and natural heritages</li> </ul>	(i) – (iv) Not applied	
	(6) Construction and demolishing waste	<ul> <li>(i) Disposal of these wastes along</li> <li>river buffer and green areas</li> <li>(ii) Hazardous nature of these</li> <li>wastes may affect the environment</li> </ul>	<ul> <li>(i) &amp; (ii) Not applied because appropriate waste management will be taken as mentioned above.</li> </ul>	
12	Liquid waste /sewage pollution (1) Unavailability of pit-latrine	(i) Total environmental pollution: pollution of ground water and surface water leads to diarrhea	(i) Not applied because flush toilet and waste water treatment facility is planned for the new Kaizen Center.	
	(2) Insufficient provision of storm or waste water drainage system	(i) The waste water/storm water can possibly direct its way to the lowest grade.	(i) Not applied because the JICA Study Team follows the Ethiopian building code and designs proper drainage system for the new Kaizen Center.	
	(3) Improper	(i) Frequent leakage through the weak point and damages the wall	(i) Not applied because the JICA Study Team designs proper	

No.	Environmental Issues	Potential Negative Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
	connection of internal sewerage pipe for toilet rooms		drainage system for the new Kaizen Center.	
	(4) Absence of vent pipe	(i) Unwanted bad odor because of absence of vent pipe	(i) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
	(5) Un properly organized conventional sewage treatment plan	<ul> <li>(i) Not economical.</li> <li>(ii) Consumes large area-required</li> <li>efficient and regular control.</li> </ul>	(i) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
	(6) Insufficient gradient of disposal drainage	(i) Main cause for sedimentation and overflow of sewage	(i) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
	(7) Poor construction of manholes	(i) Main cause for sedimentation and overflow	<ul> <li>(i) Not applied because the JICA expert will supervise construction works using Japanese construction standard.</li> </ul>	
	(8) Improper location of down pipe	(i) Usually disturbs the position of the lower level.	<ul> <li>(i) Not applied because the JICA</li> <li>Study Team designs proper</li> <li>drainage system for the new</li> <li>Kaizen Center.</li> </ul>	
13	Loss of natural &cultural heritages	(i) Damage or loss/ of natural and cultural heritages	<ul> <li>(i) Not applied because the project site is not designated as natural and cultural heritage.</li> </ul>	
14	Earth quakes (1) Vulnerability of building	(i) Life lost (ii) Property damage	(i) Not applied because the JICA study team designs the new Kaizen center following Ethiopian and Japanese construction standards and Japanese technology.	
	(2) Collapse and toppling of the structures	(i) Economic dislocation beyond physical damage of the structure.	<ul> <li>(i) Not applied because the JICA</li> <li>study team designs the new</li> <li>Kaizen center following Ethiopian</li> <li>and Japanese construction</li> <li>standards and Japanese</li> <li>technology.</li> </ul>	
	(3) Geotechnical hazard	<ul> <li>(i) Heavy overload soil amplifies</li> <li>seismic amplitude which exposes the</li> <li>structural failure.</li> <li>(ii) Trigger geo-technical hazard like</li> <li>landslides and subsidence</li> <li>(iii) Induces a liquefaction(mud flow)</li> </ul>	<ul> <li>(i) Not applied because the JICA study team designs the new</li> <li>Kaizen center following Ethiopian and Japanese construction standards and Japanese technology.</li> </ul>	
	(4) Subsidence	<ul> <li>(i) Charest and tunnel like geological structure can trigger the vertical sinking of structure after a certain period of its construction.</li> <li>(ii) Dissolution of carbonate rock basement can trigger subsidence.</li> </ul>	<ul> <li>(i) Not applied because JICA study team designs underground parking area in consistency with Japanese construction standards and Japanese technology.</li> <li>(ii) Not applied.</li> </ul>	

No.	Social &cultural	Potential Impacts	Possibility in the Kaizen Center	Mitigation Measures
	Issues		Project	
1.	Place for children and youth	<ul> <li>(i) Absence of enough playgrounds for children and youth; as a result, limited creativity, poor communication skill with peer groups and week health condition.</li> </ul>	(i) Not applied because the Kaizen center is used for capacity building.	
2.	Psychological impacts	(i) Psychological impacts such as fear associated with living in several storied buildings and depressions of settlers associated with discontinuity of already established social life	(i), (ii) Not applied because the Kaizen center is used for capacity building.	
3.	Communal way of life	<ul> <li>(i) Lack of awareness about</li> <li>communal way of life</li> <li>(ii) Absence of rules and regulation</li> <li>about communal way of life</li> </ul>	(i), (ii) Not applied because the Kaizen center is used for capacity building.	
4.	Dislocation	(i) Dislocation of people from their neighborhood and their livelihood	(i) Not applied because involuntary resettlement does take place.	
5.	Loss of existing community and living life	<ul> <li>(i) Loss of community based</li> <li>organization (<i>edir,eqube mahber</i>),</li> <li>which is considered as one of adverse</li> <li>social and cultural impact.</li> <li>(ii) The livelihood of the community</li> <li>that might depend on making the</li> <li>economic benefits through trade (pity</li> <li>trade) may be affected.</li> </ul>	<ul> <li>(i) Not applied because the project is construction of a building on a land of 3,700m².</li> <li>(ii) Not applied because there is no person living on the project site.</li> </ul>	
6.	Friendly to vulnerable people	<ul> <li>(i) Complex buildings and condominium houses are inaccessible for the disabled persons.</li> <li>(ii) Danger for children living in storied buildings</li> </ul>	<ul> <li>(i) Not applied because the JICA study team designs the Kaizen</li> <li>Center in consideration with the friendly to disabled people.</li> <li>(ii) Not applied because no children living in the Kaizen Center.</li> </ul>	(i) The JICA study team applies Ethiopian building proclamation No. 624/2009.
7.	Cultural change	(i) Change in the cultural lifestyle (eating, drinking and other cultures like weeding, burial ceremonies)	(i) Not applied because there is no person living on the project site	

#### 8-2-2. Social /Cultural Impacts

0-2-3.	пеани шрасі			
No.	Health Issues	Potential Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
1	Communicable disease	<ul> <li>(i) Communicable disease due to causative agents such as typhoid, bacillary dysentery ,cholera gastro enteritis</li> <li>(ii) Viral infections such as Infectious hepatitis, polyoma virus</li> <li>(iii) Protozoan infectious –amoebic dysentery, giardiasis</li> <li>(iv) Helminthes /worm infectious – hook worm, ascarasis</li> </ul>	(i) – (iv) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center. Also, tap water is prepared for hand washing after excretion.	
2	Non- communicable disease	<ul> <li>(i) Non- communicable disease due to organic matter composition</li> <li>(ii) Methamoglobineamia (high concentration of nitrate in water due to seepage)</li> </ul>	(i), (ii) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
3	Indoor air pollution	(i) Affect respiratory and visual organs of human beings	<ul> <li>(i) Not applied because the JICA</li> <li>Study Team designs proper</li> <li>ventilation for the new Kaizen</li> <li>Center.</li> </ul>	
4	Accidents	<ul> <li>(i) Damage caused by weak and unstable scaffolding</li> <li>(ii) Damage caused by incomplete buildings</li> <li>(iii) Poor safety requirement of the workers during construction</li> <li>(iv) Fire hazard</li> </ul>	<ul> <li>(i) Not applied because the JICA expert will supervise construction works using Japanese construction standard.</li> <li>(ii) Fire prevention equipment is installed to the Kaizen Center.</li> <li>(iii) Fire prevention management system will be introduced.</li> </ul>	

#### 8-2-3. Health Impact

A		
Aspect	Gaps between JICA Guidelines and Ethiopian Laws & Guidelines*	Mechanisms to Bridge Gaps
Criteria of EA	Less focus on social considerations, especially involuntary	The project proponent should adhere to the policies of
	resettlement and indigenous peoples in Ethiopian laws	the financial institutions and consider both environmental
	and guidelines.	and social factors.
Environmental	Categorization of project in the JICA Guideline is based	The project proponent should consult regional EPA and
Screening	on the degree of impact in consideration with project	explain JICA guideline.
	outline, scale or location. That of Ethiopian laws and	If a project is required RAP or IPP by the JICA guideline,
	guidelines is based on the activity. Therefore, there is a	project proponent shall adhere to the environmental
	possibility that the JICA guideline requires a full EIA and	policy of the lending agencies.
	that of Ethiopian laws and guidelines do not and vise-	
	versa.	
	There is discrepancy among them: independent multi-	
	story building is not prescribed in the guideline (2000)	
	as schedule I but it is the target of full EIA in the	
	Procedural Guideline (2003).	
	The preparing of a Resettlement Action Plan (RAP) and an	
	IPP is not mentioned.	
EA for Special	EA for the FI is not described in the Ethiopian laws.	For Category FI projects, the sub-project developer should
Project Types		adhere to the policies of the lending agencies and usually
		EIA framework is required.
Public Consultation	Public consultation is emphasized in the Ethiopian law	Since JICA emphasizes public consultation meetings with
	and guidelines; however, the detailed requirements are	stakeholders including indirectly/directly affected persons
	not specified; the preliminary screening consultation is	at the scoping stage and draft final report stage
	not a mandatory, and the public consultation at the later	specifically, project proponent should comply.
	stage is not clearly specified.	
Information	JICA guideline prescribes that, In principle, project	Project Proponent should to adhere to the framework of
Disclosure	proponents etc. disclose information about the	the lending agencies.
	environmental and social considerations of their	
	projects. Public disclosure of the EIA is not specified in	
	the Ethiopian law and guidelines, though the law requires	
	the EIA report needs to be accessible to interested and	
	affected persons.	
Monitoring	Details of monitoring requirements are not discussed in	As monitoring and feedback is indispensable for the
Implementation	the Ethiopian law and guidelines.	sustainability of project, the project proponent should
		implement monitoring in consistency with the
		requirement of lending agencies.

8-3	Gans between <b>R</b>	elevant Laws and	Guidelines in	Ethionia an	d JICA	Guidelines
0-0	Gaps between K	cicvant Laws and	Guidennes m	i Bunopia an	u JICA	Guidennes

Source: Arranged by the JICA Study Team based on:

JICA. 2010. Japan International Cooperation Agency (JICA) Guidelines for Environmental and Social Considerations; Environmental Impact Assessment Proclamation, Environmental Protection Agency, 2003; EIA Procedural Guidelines (2003)

## 8-4 Project Scoping using the Check List 19 provided by the JICA Guidelines for Environmental and Social Consideration

Categor	Environ-	Evalua	tion	Anticipat	ted impacts	Confirmation of
у	mental	Before/	Operatio	Construction phase	Operational phase	Environmental
	Item	during	nal			Considerations
		constructio n phase	pnase			(Mitigation Measures)
Pollutio n Control	(1) Air Quality	n phase B-	C-	Due to transportation of construction materials and equipment as well as operation of construction machines, air quality becomes worse temporarily.	As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase. Also, it will use commercial power as main power source. However, installation of a low- pollution type diesel generator is planed as a measure to power failure occurring frequently.	<construction> PMU and supervising consultant shall instruct contractor to use unleaded fuel and maintain their vehicles to keep clean exhaust gas. They will implement periodical monitoring. <operation> The JICA study team will suggest EKI to use fuel of high quality having low emission factor for the</operation></construction>
	(2) Water Quality	В-	C-	Water contamination is anticipated by drainage of used water from construction works.	As Kaizen Center is not a production facility, it will not discharge large volume of waste water.	generator. <construction> PMU and supervising consultant shall instruct contractor to follow the Ethiopian laws and regulations on water drainage. <operation> The JICA study team plans that water used in the Kaizen Center will be drained into the public sewer system.</operation></construction>
	(3) Wastes	В-	C-	It is anticipated that waste lumber and waste materials are generated by construction works.	Waste from Kaizen Center is neither estimated a large amount nor consisted of hazardous matters.	<construction> PMU and supervising consultant shall instruct contractor to treat wastes properly according to the regulations and they shall implement periodical monitoring. <operation> The JICA Study Team plans to design a garbage collection point on the basement floor and the municipality garbage collection service will collect garbage. Also, the team plans that JICA expert will give training (as soft component) on the O&amp;M of facilities including waste management to the staffs.</operation></construction>
	(4) Soil Contaminati on	В-	D	Soil contamination is likely anticipated due to leakage of oil for construction and other materials from construction site to a certain volume.	Kaizen Center will be used only for the purpose of training and will generate no effluents or leachate.	<construction> PMU and supervising consultant shall instruct contractor to use construction machinery of the low leakage type. They will do periodical monitoring.</construction>

Categor	Environ-	Evalua	ition	Anticipat	ted impacts	Confirmation of
y	mental Item	Before/ during	Operatio nal	Construction phase	Operational phase	Environmental Considerations
		n phase	pnase			(Mitigation Measures)
	(5) Noise and Vibration	B-	D	Noise and vibration is anticipated and contractor needs to comply with Ethiopian noise standards.	Kaizen Center will not generate noises and vibrations at the operation phase.	<construction> PMU and supervising consultant shall instruct contractor to drive construction vehicles at low speed, and monitor the noise and vibration. They will conduct periodical monitoring.</construction>
	(6) Subsidence	D	D	Kaizen Center will not extract groundwater and will not cause subsidence.	-	-
	(7) Odor	D	D	No construction works are anticipated that cause bad smell.	-	-
Natural Environ ment	(1) Protected Areas	D	D	Kaizen Centre is located in t or adjacent to the designate	he urban area and not within ad protected areas.	-
	(2) Ecosystem	D	D	Kaizen Centre is located in t affect natural environment	he urban area and will not and ecosvstem.	-
	(3) Hydrology	D	D	As construction will not pump up ground water, it will not cause hydrologic changes.	Kaizen Center will not pump up ground water and will not cause hydrologic changes.	<construction> PMU and supervising consultant shall instruct contractor to follow Ethiopian regulations relating</construction>
	(4) Topography and Geology	D	D	Area of the Kaizen Center is about 3,700m ² and has no possibility to cause large-scale alteration.	-	-
Social Environ ment	(1) Resettleme nt (2) Living and Livelihood	C-	D B+	The building site is the land of other ministry and the land use right will be transferred to EKI. There is no objection. Addis Ababa Municipality is coordinating this matter. No residents live there but a ware house exists and EKI is arranging removal. Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction and will not disturb living and livelihood of surrounding community. JICA study team suggests EKI to inform construction to the inhabitants in the surrounding area before the construction work	- Kaizen Center is a training center aiming at enhancement of productivity of Ethiopian industry. It will contribute to strengthening economic competence of Ethiopia and her economic growth. Therefore, Kaizen Center will indirectly give positive impact on the livelihood or Addis Ababa people.	<construction> Confirmation of the progress of land right transfer -</construction>

Categor	Environ-	Evaluation		Anticipa	Confirmation of	
у	mental Item	Before/ during constructio n phase	Operatio nal phase	Construction phase	Operational phase	Environmental Considerations (Mitigation Measures)
				starts.		
	(3) Heritage	D	D	The project will not damage	e the local heritage	-
	(4) Landscape	D	D	There is no possibility that t affect the local landscape.	he project will adversely	-
	(5) Ethnic Minorities and Indigenous Peoples	D	C+	No ethnic minorities and indigenous peoples near to the project site.	Kaizen Center plans to give Kaizen training to trainees from different states (different ethnic groups).	-
	(6) Working Conditions	B-	C-	It is anticipated that construction works cause negative impact on workers.	Strong negative impact of working condition is not anticipated.	<construction> Safety and health measures at the construction shall be included in the terms of reference to the contractor. PMU and supervising consultant will instruct contractor to take measure to avoid accidents and conduct periodical monitoring of working condition.<operation> It is planed to give training on facility/equipment management to the EKI staff members to avoid industrial accident. Also, JICA study team suggests EKI to give proper instruction to their staff members to use</operation></construction>

#### 8-5 DRAFT TOR

Categor	Environment	Evalu	uation		Items of examination	Means of examination		
У	al Item	Constructi on	Operation					
Pollutio n Control	(1) Air Quality	B-	C-	1)	Confirmation of air quality standards of Ethiopia, and, if necessary, WHO.	Examination of existing documents		
				2)	Grasp of present condition of air quality.	Survey of existing documents; actual measurement if required		
				3)	Estimate of degree of contamination caused by increase of vehicles during construction period.	Examination of properness: items of construction, construction method, period, type of machinery, place, period and time of operation, number of construction vehicles, moving route		
	(2) Water Quality	B-	C-	1)	Confirmation of water quality standards of Ethiopia, and if necessary, WHO	Examination of existing documents		
				2)	Estimate of degree of impact caused by water use by the construction	BD document: quantity of water, construction method, period,		
	(3) Wastes	B-	C-	1)	Means of disposal of construction wastes.	BD document, hearing from related agencies		
				2)	Means of disposal from Kaizen Center	BD document, hearing from EKI		
	(4) Soil Contaminatio n	B-	D	1)	Measures to avoid oil leaking during the construction period	BD document		
	(5) Noise and Vibration	B-	D	1)	Confirmation of related standards of noise and vibration of Ethiopia	Examination of existing documents		
				2)	Estimate of degree of impact caused by construction.	BD report: construction method, kind of machines, period, type of machinery, place, period and time of operation.		
	(6) Subsidence	D	D		-	-		
	(7) Odor	D	D		-	-		
Natural Environ ment	(1) Protected Areas	D	D		-	-		
	(2) Ecosystem	D	D		-	-		
	(3) Hydrology	D	D	1)	Estimate of volume of ground water to be used for construction	BD report: source of water to be used for construction, scale of construction,		
				2)	Estimate of degree of damage	Analysis		
	(4) Topography and Geology	D	D		-	-		
Social Environ ment	(1) Resettlement	C-	D	1)	Progress of land title transfer	Hearing from EKI and Addis Ababa Municipality		

Categor	Environment	Eval	uation		Items of examination	Means of examination
У	al Item	Constructi	Operation			
		on				
	(2)	D	B+		-	-
	Living and					
	Livelihood					
	(3)	D	D		-	-
	Heritage					
	(4)	D	D		-	-
	Landscape					
	(5)	D	C+		-	-
	Ethnic					
	Minorities &					
	Indigenous					
	Peoples					
	(6)	B-	C-	1)	Confirmation of measures to be	BD report, hearing from EKI
	Working				taken for work safety during the	
	Conditions				construction period.	
				2)	Confirmation of measures to avoid	BD report, hearing from EKI
					industrial/ labour accident to be	
					taken during operation period	
				3)	Confirmation of capacity	BD report, hearing from EKI (soft
					development program to mitigate	component for organizational
					industrial/ labour accident and	management and facility management is
					enhance effectiveness of the	planed)
					Kaizen Center management	

Source: JICA Study Team

Rating A +/- Significant positive/negative impact is expected.

- B +/- Positive/negative impact is expected to some extent.
- C+/= Extent of positive/negative impact is unknown (A further examination is needed and the impact could be clarified as the study progresses.)
- D No impact is expected.
- 1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

#### 8-6 Draft Environmental Management Plan

Categor y	Environm ental Item	Evaluat ion	Anticipated impacts	Mitigation Measures (preliminary)	Implementer	Responsible Organization
Pollutio n Control	(1) Air Quality	В-	Due to transportation of construction materials and equipment as well as operation of construction machines, air quality becomes worse temporarily.	EKI/PMU and supervising consultant shall instruct contractor to use unleaded gasoline and maintain their vehicles to keep clean exhaust	Contractor	PMU, Municipality
				gas at the construction period. They will conduct periodical monitoring.		
	(2) Water Quality	В-	Water contamination is anticipated by drainage of used water from construction works.	EKI/PMU and supervising consultant shall instruct contractor to follow the Ethiopian laws and regulations on water drainage. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(3) Wastes	B-	It is anticipated that waste lumber and waste materials are generated by construction works.	EKI/PMU and supervising consultant shall instruct contractor to treat wastes properly. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(4) Soil Contamin ation	B-	Soil contamination is likely anticipated due to leakage of oil for construction and other materials from construction site to a certain volume.	EKI/PMU and supervising consultant shall instruct contractor to use construction machinery of the low oil leakage type. They will do periodical monitoring.	Contractor	PMU, Municipality
	(5) Noise and Vibration	В-	Noise and vibration is anticipated and contractor needs to comply with Ethiopian noise standards.	EKI/PMU and supervising consultant shall instruct contractor to drive construction vehicles at low speed and not to conduct construction work at night time. EKI/PMU will conduct periodical monitoring by installing sound-level meter and vibration meter at the boundary of the Center premises.	Contractor	PMU, Municipality
	(6) Subsidenc e	D	Kaizen Center will not extract groundwater and will not cause subsidence.	-	-	-
	(7) Odor	D	No construction works are anticipated that cause bad smell.	-	-	-
Natural Environ ment	(1) Protected Areas	D	Kaizen Centre is located in the urban area and not within or adjacent to the designated protected areas.	-	-	-
	(2) Ecosyste m	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.	-	-	-

#### 8-6-1. Construction Phase

Categor Y	Environm ental Item	Evaluat ion	Anticipated impacts	Mitigation Measures (preliminary)	Implementer	Responsible Organization
	(3) Hydrology	D	As construction will not pump up ground water, it will not cause hydrologic changes.	-	-	-
	(4) Topograp hy and Geology	D	Area of the Kaizen Center is about 3,700m2 and has no possibility to cause large-scale alteration.	-	-	-
Social Environ ment	(1) Resettlem ent	C-	The building site is the land of other ministry and the land use right will be transferred to EKI. There is no objection. Addis Ababa Municipality is coordinating this matter. No residents live there but a ware house exists and EKI is arranging	Confirmation of progress of transfer of the land title to EKI.	Municipality	PMU
	(2) Living and Livelihood	D	Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction and will not disturb living and livelihood of surrounding community. JICA study team suggests EKI to inform construction to the inhabitants in the surrounding area before the construction work	-	-	-
	(3) Heritage (4) Landscap	D	The project will not damage the local heritage There is no possibility that the project will adversely affect the	-	-	-
	e (5) Ethnic Minorities and Indigenou s Peoples	D	local landscape. No ethnic minorities and indigenous peoples near to the project site.	-	-	-
	(6) Working Condition S	B-	It is anticipated that construction works cause negative impact on workers.	Safety and health measures at the construction shall be included in the terms of reference to the contractor. EKI/PMU and supervision consultant will instruct contractor to take measure against traffic and industrial accidents. They shall conduct periodical monitoring of working condition.	Contractor	PMU, Municipality

Category	Environ- mental Item	Evaluat ion	Anticipated impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization	
Pollution Control	(1) Air Quality	C-	As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase. Also, it will use commercial power as main power source. However, installation of a low-pollution type diesel generator is planed as a measure to power failure occurring frequently.	JICA consultant team recommends EKI to use diesel of high quality for the generator.	EKI	EKI, Municipality	
	(2) Water Quality	C-	As Kaizen Center is not a production facility, it will not discharge large volume of waste water.	The BD Study Team plans that water used in the Kaizen Center will be drained to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).	EKI, Municipality	EKI, Municipality	
	(3) Wastes	C-	Waste from Kaizen Center is neither estimated a large amount nor consisted of hazardous matters.	The BD Study Team plans a garbage collection point on the basement floor and the municipality garbage collection service will collect it. Also, the team plans that JICA expert will give training (as soft component) on the O&M of facilities including waste management to the staffs.	EKI, Municipality	EKI, Municipality	
	(4) Soil Contami nation	D	Kaizen Center will be used only for the purpose of training and will generate no effluents or leachate.	-	-	-	
	(5) Noise and Vibration	D	Kaizen Center will not generate noises and vibrations at the operation phase.	-	-	-	
	(6) Subsiden ce	D	-	-	-	-	
	(7) Odor	D	-	-	-	-	
Natural Environ ment	(1) Protecte d Areas	D	Kaizen Centre is located in the urban area and not within or adjacent to the designated protected areas.	-	-	-	
	(2) Ecosyste m	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.	-	-	-	
	(3) Hydrolog Y	D	Kaizen Center will not pump up ground water and will not cause hydrologic changes.	-	-	-	
	(4) Topogra	D	-	-	-	-	

#### 8-6-2. Operational Phase

Category	Environ- mental Item	Evaluat ion	Anticipated impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization
	phy and Geology					
Social Environ ment	(1) Resettle ment	D	-	-	-	-
	(2) Living and Livelihoo d	В+	Kaizen Center is a training center aiming at enhancement of productivity of Ethiopian industry. It will contribute to strengthening economic competence of Ethiopia and her economic growth. Therefore, Kaizen Center will indirectly give positive impact on the livelihood.	-	-	-
	(3) Heritage	D	The project will not damage the local heritage	-	-	-
	(4) Landscap e	D	There is no possibility that the project will adversely affect the local landscape.	-	-	-
	(5) Ethnic Minoritie s and Indigeno us Peoples	C+	Kaizen Center plans to give Kaizen training to trainees from different states (different ethnic groups).	-	-	-
	(6) Working Conditio ns	C-	Strong negative impact of working condition is not anticipated. EKI will not use hazardous industrial materials.	EKI shall follow Ethiopian Labour Laws and Regulations. BD study team plans to install safety equipment. Also, they plan to construct nurse's room or the first-aid in the Center and JICA consultant will support EKI to prepare working manual to manage the center.	EKI	EKI, Municipality

Source: JICA Study Team

#### Legend

A +/- Significant positive/negative impact is expected.

B +/- Positive/negative impact is expected to some extent.

C+/- Extent of positive/negative impact is unknown (A further examination is needed and the impact could be clarified as the study progresses.)

D No impact is expected.

 Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.
 In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

#### 8-7 Draft Environmental Monitoring Plan

8-7-1. Construction phase

Category	Environment al Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Impleme nter	Responsible Organization
Pollution Control	(1) Air Quality	Temperature, humidity, wind velocity, dust, SO ₂ , NO ₂ , CO	Measurement	Ethiopian Air Quality standards	Construction sites	once/ three months	Contract or	PMU, Municipality
	(2) Water Quality	pH, colour, BOD, COD, N, Total P	Measurement	Ethiopian water quality standards	Outlets	once/ three months	Contract or	PMU, Municipality
	(3) Wastes	Kind of wastes, amount, record of collection	Observation	Ethiopian waste managemen t regulations	Construction sites	once/ month	Contract or	PMU, Municipality
	(4) Soil Contaminati on	Oil leaking	Observation	-	Construction sites	once/ month	Contract or	PMU, Municipality
	(5) Noise and Vibration	Noise (db)	Measurement	Ethiopian noise pollution regulations	Boundary of premises of the medical facilities	once/ three months	Contract or	PMU, Municipality
	(6) Subsidence	-	-	-	-	-	-	-
	(7) Odor	-	-	-	-	-	-	-
Natural Environm ent	(1) Protected Areas	-	-	-	-	-	-	-
	(2) Ecosystem	-	-	-	-	-	-	-
	(3) Hydrology	-	-	-	-	-	-	-
	(4) Topography and Geology	-	-	-	-	-	-	-
Social Environm ent	(1) Resettleme nt	progress of land title transfer	Interview and observation	-	-	At the beginning of construction work	Municip ality	PMU
	(2) Living and Livelihood	-	-	-	-	-	-	-
	(3) Heritage	-	-	-	-	-	-	-
	(4) Landscape	-	-	-	-	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Construction accidents, traffic accidents	Record of accidents, interview to labourers	Labour laws, regulations	Construction sites, route of vehicles used for transportati on of materials and other necessity	once/ day	Contract or	PMU, Municipality

	optimiona	I I Hube						
Category	Environ- mental Item	Monitoring Parameters	Means of Monitoring	Environmen tal Standard	Monitoring Point	Frequency of Monitoring	Implem enter	Responsible Organizatio n
Pollution Control	(1) Air Quality	Temperature, humidity, wind velocity, dust, SO ₂ , NO ₂ , CO; quality of gasoline	Actual measurement; record	Ethiopian Air Quality standards	Kaizen center	once/ three months	EKI	EKI, Municipality
	(2) Water Quality	pH, colour, BOD, COD N; bacteria, virus	Measurement	Ethiopian water quality standards	Outlets	Always	EKI, Municip ality	EKI, Municipality
	(3) Wastes	Kind of wastes, amount, cleanness, record of waste collection	Observation	Ethiopian waste managemen t regulations	Depository	once/ month	EKI, Municip ality	EKI, Municipality
	(4) Soil Contaminat ion	-	-	-	-	-	-	-
	(5) Noise and Vibration	-	-	-	-	-	-	-
	(6) Subsidence	-	-	-	-	-	-	-
	(7) Odor	-	-	-	-	-	-	-
Natural Environ ment	(1) Protected Areas	-	-	-	-	-	-	-
	(2) Ecosystem	-	-	-	-	-	-	-
	(3) Hydrology	-	-	-	-	-	-	-
	(4) Topography and Geology	-	-	-	-	-	-	-
Social Environ ment	(1) Resettleme nt	-	-	-	-	-	-	-
	(2) Living and Livelihood	-	-	-	-	-	-	-
	(3) Heritage	-	-	-	-	-	-	-
	(4) Landscape	-	-	-	-	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Health condition of staff members and workers	Periodical medical examination, accident report		Kaizen center	once/ six months	ЕКІ	EKI, Municipality

#### 8-7-2. Operational Phase
Category	Environmen tal Item	Main Check Items	Ye N NA ap	Yes: Y No: N NA: Not applied		Yes: Y Confirma No: N (F NA: Not applied		irmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	1(1) EIA and Environment al Permits	(a) Have EIA reports been already prepared in official process?	(a)	Ν	(a)	EIA reports are required after the determination of detailed design according to the Ethiopian Environmental Guideline. EKI will start EIA process after PMU is established.		
		(b) Have EIA reports been approved by authorities of the host country's government?	(b)	NA	(b)	-		
		(c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?	(c)	NA	(c)	-		
		(d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(d)	NA	(d)	-		
	1(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders?	(a)	Ν	(a)			
		(b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(b)	NA	(b)	-		
	1(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a)	N	(a)	-		
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, (such as sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken?	(a)	Y/N	(a)	It is likely anticipated that the vehicles used for transportation of construction materials at the construction phase will pollute air quality. As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase.		

8-8 Environment Check List 19 for Other Infrastructure Project

Category	Environmen tal Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(b) Are electric and heat source at accommodation used fuel which emission factor is low?	(b) Y	(b) The Kaizen Center will use commercial power as main power source. As power failure occurs frequently, install of a low- noise type diesel generator is planned. JICA team will suggest EKI to use fuel of high quality and low emission factor for the generator.
	(2) Water Quality	(a) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and ambient water quality standards?	(a) Y	<ul> <li>(a) These is no quality standard of water discharge.</li> <li>Waste water from the Kaizen Center is planned to discharge to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).</li> </ul>
	(3) Wastes	(a) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's regulations?	(a) Y	<ul> <li>(a) A garbage collection point is planned on the basement floor. The municipality service will collect garbage.</li> <li>The JICA team will give training (as soft component) on the O&amp;M of facilities including waste management to the staffs.</li> </ul>
	(4) Soil Contaminati on	(a) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachate from the infrastructure facilities and the ancillary facilities?	(a) N	(a) The Kaizen Center will neither be used for the purpose other than training nor generate effluents or leachate.
	(5) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	(a) Y	<ul> <li>(a) Noise will be made at the construction phase and contractor needs to comply with Ethiopian noise standards.</li> <li>The Kaizen Center will not generate noises and vibrations at the operation phase.</li> </ul>
	(6) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a) N	<ul> <li>(a) Kaizen Center will not extract groundwater and will not cause subsidence.</li> </ul>
	(7) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a) N	<ul> <li>(a) There are no odor sources generated by the Kaizen Center.</li> </ul>
3 Natural Environ- ment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) N	(a) The site is not located in the designated protected area.

Category	Environmen tal Item	Main Check Items	Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Conf	irmation of Environmental Considerations (Reasons, Mitigation Measures)
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?	(a)	Ν	(a)	The site of the Kaizen Center does not encompass in the any kind of forests.				
		(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	(b)	Ν	(b)	The site of the Kaizen Center does not encompass the protected habitats.				
		(c) Is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation?	(c)	Ν	(c)	The Kaizen Center will not have the possibility the change in micro- meteorological conditions.				
		(d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	(d)	N	(d)	The Kaizen Center will not use large amount of water.				
	(3) Hydrology	(a) Is there a possibility that hydrologic changes due to the project will adversely affect surface water and groundwater flows?	(a)	Ν	(a)	The Kaizen Center will not cause the hydrologic changes.				
	(4) Topography and Geology	(a) Is there a possibility the project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas?	(a)	Ν	(a)	Area of the Kaizen Center is about 3,700m2 and has no possibility to cause large-scale alteration.				
4 Social Environment	(1) Resettlemen t	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	(a)	N	(a)	The building site is the land of other ministry and the land use right will be transferred to EKI. Addis Ababa Municipality is coordinating this matter and there is no objection. No residents live there but a ware house exists and EKI is arranging removal.				
		(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?	(b)	NA	(b)	-				
		(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?	(c)	NA	(c)	-				

Category	Environmen tal Item	Main Check Items	Yes: Y No: N		Confirmation of Environmental Considerations (Reasons, Mitigation Measures)		
			NA	NA: Not applied			
		(d) Is the compensations going to be paid prior to the resettlement?	(d)	NA	(d)	-	
		(e) Is the compensation policies prepared in document?	(e)	NA	(e)	-	
		(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people living below the poverty line, ethnic minorities, and indigenous peoples?	(f)	NA	(f)	-	
		(g) Are agreements with the affected people obtained prior to resettlement?	(g)	NA	(g)	-	
		(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	(h)	NA	(h)	-	
		(i) Are any plans developed to monitor the impacts of resettlement?	(i)	NA	(i)	-	
		(j) Is the grievance redress mechanism established?	(j)	NA	(j)	-	
4 Social Environment	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a)	Ν	(a)	Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction. Construction will not start till EKI receives the building permission issued by Addis Ababa Municipality. EKI will inform construction to the inhabitants in the surrounding area before the construction work starts	
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a)	Ν	(a)	There is no heritage on the project site.	
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a)	Ν	(a)	The area of the project site is not the specified landscape.	
		(b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?	(b)	Ν	(b)	The area surrounding the project site is not the specified landscape. The construction plan including building heights follows Ethiopian construction regulations.	

Category	Environmen Main Check Items tal Item		Yes: Y No: N NA: Not applied		Confirmation of Environmental Considerations (Reasons, Mitigation Measures)		
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	(a)	Ν	(a)	No ethnic minorities and indigenous peoples near to the project site.	
		(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(b)	Ν	(b)	No ethnic minorities and indigenous peoples live in the construction site.	
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?	(a)	N	(a)	The project proponent (EKI) does not violate laws and ordinances associated with the working conditions.	
		(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?	(b)	Y	(b)	EKI considers safety measures at the construction. It is planned to install safety equipment and to construct nurse's room or the first-aid. EKI will not use hazardous industrial materials.	
		(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?	(c)	Υ	(c)	Soft component program is planned to support EKI in (i) establishment of management system and (ii) preparation of O&M manual for EKI.	
		(d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(d)	Y	(d)	JICA expert team shall ask EKI to give proper instruction to the security guards not to violate safety of other individuals and local residents as well as have appropriate human resource management.	
5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?	(a)	Y	(a)	It should be considered and included in the tender document to reduce and mitigate negative impact on the surrounding area during construction. Also Japanese consultant shall supervise the contractor to follow the TOR and regulations.	
		(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?	(b)	NA	(b)	-	

Category	Environmen tal Item	Main Check Items	Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Yes: Y No: N NA: Not applied		Confirm (	ation of Environmental Considerations Reasons, Mitigation Measures)
		(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(c)	Y	(c) Ad sh cc th cc sh	Jequate measure should be considered nould be include in the contract with ontractor to reduce negative impacts on ne social environment during onstruction. Also construction works nould be monitored.																						
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?	(a)	Ν	(a) JI( El in El pr	2A project team suggests EKI to start A procedure including monitoring plan accordance with Ethiopian guidelines. (I confirmed that they will start the rocedure after they get land use right																						
		(b) What are the items, methods and frequencies of the monitoring program?	(b) I	NA	(b) Eł pl	(I will prepare the detailed monitoring an based on the result of EIA study.																						
		<ul> <li>(c) Does the proponent establish an adequate monitoring framework</li> <li>(organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</li> </ul>	(c) I	NA	(c) JII es st	CA project team suggests EKI to stablish an adequate monitoring ructure.																						
		(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(d)	Ν	(d) Et no re	hiopian environmental guidelines do ot provide specific regulatory quirements.																						
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Roads, Railways and Bridges checklist should also be checked (e.g., projects including access roads to the infrastructure facilities).	(a) I	NA	(a) N	ot necessary																						
		(b) For projects, such as installation of telecommunication cables, power line towers, and submarine cables, where necessary, pertinent items described in the Power Transmission and Distribution Lines checklists should also be checked.	(b) I	NA	(b) N/	ot necessary																						
	Note on Using Environment al Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) I	NA	(a) N	ot necessary																						

Source: JICA Study Team

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

### 8-9 Environmental Monitoring Form (Preliminary)

### **8-9-1.** Construction Phase

Name of the construction site /	/
Date of monitoring //	Date of reporting //
Person in charge of monitoring /	/
Person in charge of reporting /	/

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal comments made by the public, if any	
Number and contents of responses from the Government agencies, if any	

Source: JICA Study Team

2.Pollution control

Item	Unit	Measur ed	Measured Value (max)	Ethiopian standards	Standards for contract	Referred international	Measureme nt points	Frequency
		Value				standards		
		(mean)		(1) Air a	l uality			
Tomporatura	°	1		(1) All q		1		Onco/throo
humidity	<u>د</u>							months
wind volocity	70							monuis
	111/S							
302 NO2	$\mu g/m^3$							
N02	$\mu g/m^3$							
DM10	$\mu g/m^3$							
PIVIIU	$\mu g/m^{2}$			-				
PD	µg/III*			(2) Masta wa	tor quality			
Color	Hazan	1		(Z) Waste wa		1		Onco/throo
Odor	паден							months
	-							monuis
µ⊓ Turbidity								
Tatal	NIU			* * *				
Dissolved	mg/l							
colida	ilig/i							
Total								
Hardnoss as	mg/l							
	iiig/i							
cacos				(3) Solid v	waste			
Kind of waste	Type			(5) 5010 1		1		Once/month
Amount	Ton/day							Once/month
Record of	Frequenc							
collection	v							
	1	1		(4) Soil conta	mination			
Oil & Grease	mg/l		[					
		1		(5) Noise and	vibration			
Noise (dB)	db							Once/three
	4.5							months
Source: JICA S	tudy Team							

3. Social environment		
Item	Monitoring results	Measures to be taken
	(6) Resettlement	
Progress of land title		
transfer		
	(7) Working Conditions	
Daily recording		
Construction accidents		
Traffic accidents		
Others		

Source: JICA Study Team

### **8-9-2.** Operation Phase

operation			
Name of the construction site /			/
Date of monitoring /	/	Date of reporting /	/
Person in charge of monitoring /		/	
Person in charge of reporting /		/	

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal comments made by the public, if any	
Number and contents of responses from_ the Government agencies, if any_	

Source: JICA Study Team

2.Pollution control

Item	Unit	Measured Value (mean)	Measured Value (max)	Ethiopia n standard	Standar ds for contract	Referred internation al	Measurement points	Frequency
		(	(	S		standards		
			(1)	Ambient Air	r quality			<u></u>
Temperature	°C							
humidity	%					-		
wind velocity	m/s					-		
SO2	µg/m³							
NO2	μg/m³					-		
СО	μg/m ³					-		
			(2)	Indoor Air o	quality			
SO2	µg/m³							
NO2	µg/m³							
СО	µg/m³							
Pb	µg/m³							
		(3	) Diesel Gener	ator Stack E	mission Mo	nitoring		
SOx	mg/Nm3							
NOx	mg/Nm3							
СО	mg/Nm3							
Pb	µg/m³							
				(4) Waste wa	ater			
Colour	Hazen							
Odour	-							
рН								
Oil & Grease	mg/l							
				(5) Solid was	stes	<b>_</b>		
Kind of waste	By type							
Amount	t/day							
Cleanness of collection	-							
points								
Record of collection	Frequency							

Source: JICA Study Team

### 3. Social environment

Item	Monitoring results	Measures to be taken
	(6) Working Conditio	ns
Daily recording		
Health condition of EKI		
staff and workers		
Labour accidents		
Traffic accidents		
Others		

Source: Prepared by JICA Expert in charge of environmental and social considerations

# A-9 Training Plan



A-10 Project Monitoring Report

# Project Monitoring Report

on

# The Project on Construction of TICAD Human Resource Development Center for Business and Industry

# Grant Agreement No. XXXXXXX 20XX, Month

# **Organizational Information**

<b>Signer of the G/A</b> (Recipient)	Person in Charge     (Designation)       Contacts     Address:       Phone/FAX:     Email:
Executing Agency	Ethiopian Kaizen Institute         Person in Charge       (Designation) Director General         Mekonnen Yaie       Mekonnen Yaie         Contacts       Address: P.O.2292 Addis Ababa, Ethiopia         Phone/FAX:       Email: mekonnenyaie@gmail.com
Line Ministry	Ministry of Public Service and Human Resource Development         Person in Charge       (Designation)         Contacts       Address:         Phone/FAX:       Email:

## **General Information:**

Project Title	The Project on Construction of TICAD Human Resource Development Center for Industries
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPYmil. Government of ():

# 1: **Project Description**

### 1-1 **Project Objective**

1

### Upper Level Plan

In Federal Democratic Republic of Ethiopia, the economic growth Past 10 years has been remarked average 10.9 %. It is quite obvious growth but its poor industrial structure due to the delay of the private sector development makes the country poor competitiveness. The weakness of the economic structure is seen in the fact that the second industry's proportion in GDP is 14.7%. (World Bank 2014) To solve the issue, the government of Ethiopia expressed in the Growth and Transformation Plan (GTP: 2010-2014, GTP2: 2015-2020) that they will shift from the Agriculture based economic to the manufacturing based economic. (Agriculture 42.7% in GDP, Industry 12.3% in GDP, 2014). As the concrete policy, the Ethiopian government focus on the human development through "KAIZEN (Japanese method and policy to the quality and productivity upgrade), in addition the implementation of the economic infrastructure and promotion of Foreign Direct Investment.

In the country assistance strategy paper to the Ethiopia (April 2012) mentions the importance of the private sector development and it says that "To realize the Ethiopian five years development plan, it is necessary to reinforce the related policy framework, upgrade the private manufacturing competitiveness, job creation and foreign direct investment. In such point of view, execution of the policy dialogue and cooperation to the private sector development through the spread of KAIZEN." This project matches the policy.

2 Current Condition and Problem of the Sector Ethiopia Kaizen Institute (EKI) was established by Ministry of Industry in 2011.EKI has been expanded and strengthen rapidly with Technical Assistance (Quality and Productivity upgrade, spread and development project). When EKI was established the number of staff was only 9 but it increased to 110 staff in 2015 and has plan to expand 218 staff in 2021. However, EKI's facility and equipment are very poor compare to its number of staff and activities. It is urgent need to implement and strength EKI's facility and Equipment.

### Purpose of the project

This project aims to contribute to realize the Growth and Transformation Plan 2 its target is to shift the manufacturing economy and spread of KAIZEN by executing the construction of EKI's facility and procurement of the equipment.

### **1-2 Project Rationale**

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

### Relevance

3

In view of the above, it is judged that the project is appropriate for technical assistance project, by using Japanese grant aid.

### (1) **Object suitability**

This project aims to construct the new building and procure equipment which can follow EKI's future expansion of its Kaizen activities.

The construction of new building and improvement of EKI's function such as its head office and training center have high suitability in view of contribution to improvement of quality and productivity and human resource development in Ethiopia.

### (2) Benefit target

EKI is only an organization which conducts and promotes Kaizen activities in Ethiopia. The

construction of the new building and procurement of equipment supports expansion of its activities and provides benefits human resource development in the future in Ethiopia.

### (3) **Purpose of the project**

EKI has currently its head office in private buildings for rent in Addis Ababa City. The use of the buildings had been changed from an apartment, the original use, to EKI's office and the area is not enough for the office use. Furthermore, the plan of the buildings is designed based on the use for EKI's head office and work space for trainers. The buildings do not have enough rooms for training or holding seminars. In addition, the number of staffs is currently assumed to increase due to expansion of Kaizen activities and function of EKI's Head office, that results in demand for construction of new building for them.

This project aims to contribute improvement of EKI's function such as its head office and training center to development of human resource in Ethiopia by construction of the new building and procurement of equipment which can follow EKI's future expansion of its Kaizen activities.

The construction of new building and

### (4) Mid- and Long-term Policies to Ethiopia

The Ethiopian government supports the necessity to improve quality and productivity in the 2nd Growth and Transformation Plan (GTP2). EKI, as the implementation organization, submitted "the Past Record and Future Plan prepared for JICA Mission" to JICA, which consists of its future plan regarding content of activity and organization system. This project corresponds to these policies.

The "Country Assistant Policy to Ethiopia" decides that the development of private sector, including promoting Kaizen activities, is one of priorities. This project corresponds to the policy.

Quantitative indicators to measure the attainment of project objectives		
		Target (Yr 2023)
Indicators	Original (Yr 2017)	2 years after project
		completion)
Number of trainee	28,593	50,600
Qualitative indicators to measure the	attainment of project objectiv	es
- Improve EKI's capacity for	r human resource developmen	t.

### 1-3 Indicators for measurement of "Effectiveness"

- Contribute the improvement of quality and productivity in Ethiopia

# 2: Details of the Project

### 2-1 Location

Components	Original	Actual
	(proposed in the outline design)	
1.Construction	Fitawari Damtew Street Woreda 10	
Equipment	Lideta Sub-City Addis Ababa	
Procurement	City Attachment(s):Map	

Components	<b>Original</b> * (nronosed in the outline design)	Actual*
1.Consulting Services	Detail Design, Construction	
	Supervision	
2. Construction of TICAD	Structure: Pile foundation, RC structure	
Human Resource	partly steel structure.	
Development Center for	Floor area:	
industries	-Building for training/office work:	
	5,516 m ²	
	-Building for lodging: 2,979 m ²	
	Number of stories: : one	
	stories for each building.	
	Mechanical & electrical work:	
	Generator, ventilation and firefighting	
2 Equipment programment	facilities.	
3.Equipment procurement	(2)	
	Computer Server (1)	
	UPS for Computer Server (1)	
	Video Conference System (1)	
	Printing machine (2)	
	Photocopy Machine (3)	
	Presentation Equipment for Training	
	room (46)	
	Linen cart (3)	
	Desk with drawers on both sides	
	(5)	
	Chair with arm rest (5)	
	Chair (155)	
	File Cabinet (31)	
	Browsing Table (2)	
	Chair for browsing (8)	
	Magazine rack (1)	
	Folding table for Auditorium (40)	
	Chair for Auditorium (120)	
	Table for training room (284)	
	File cabinet for training room (284)	
	Meeting table for TV meeting room (8)	
	Chair for TV meeting room (16)	
	Meeting table (14)	
	Dining table (20)	
	Dining chair (80)	
	Single bed (60)	
	Desk for logging room (57)	
	Wardrobe (57)	
	Chest (57)	
	Chair carrier (4)	
4.Soft Component	Technical assistant for Maintenance	
	and Operation.	

# Reasons for modification of scope (if any).

#### Implementation Schedule 2-3 Items

Original Actual

	(proposed in the outline design)	(at the time of signing the Grant Agreement)	
Cabinet Approval			
E/N			
G/A			
Detailed Design			
Tender Notice			
Tender			
Construction Period			
Equipment			
procurement			
Soft Component			
Defect Liability Period			
Project Completion			
Date			

Reasons for any changes of the schedule, and their effects on the project (if any)

### 2-4

- 4 Obligations by the Recipient2-4-1 Progress of Specific Obligations See Attachment 2.
- 2-4-2 Activities See Attachment 3.
- 2-4-3 Report on RD See Attachment 11.

#### 2-5 **Project Cost**

### 2-5-1 Cost borne by the Grant (Confidential until the Bidding)

	Components		Co (Millio)	ost n Yen)
	Original (proposed in the outline design)	Actual (in case of any modification)	Original ^{1),2)} (proposed in the outline design)	Actual
Construction Facilities	Construction of TICAD Human Resource Development Center fo r Industries	Ditto Ditto		
Equipment	Whole set of equipment Packing and shipping, installation, procurement supervision, and general administration	Ditto Ditto		
Consulting Services	- Detailed design     -Procurement Management     -Construction Supervision     -Soft Component	Ditto Ditto Ditto		
Soft Component	Technical assistant for Maintenance and Operation. Total	Ditto		

Note:1) Date of estimation:August 20172) Exchange rate:1 US Dollar = 112.83 Yen

### 2-5-2 Cost borne by the Recipient

	Components		Cost	
			(1,000 EI	ГВ)
	Original	Actual	Original ^{1),2)}	Actual
	(proposed in the outline design)	(in case of any	(proposed in	
		modification)	the outline	
			design)	
	Removal of the debris in the site	Ditto		
	(include existing sheds and plants)		578	
	and site clearance			
	Installation of electricity, water,	Ditto		
Facilities/	sewage and telecommunication		0.110	
Equipment	lines.		2,112	
1 1	Commission for construction			
	permission.			
	Wiring, Planting, furniture and	Ditto	4.050	
	furnishings which are not include in		4,950	
	Japanese works	5		
Bank	Bank Commission (Bank	Ditto	500	
Commission	Arrangement B/A, Authorization to			
	Pay A/P)			
	Sub total		8,140	
Tax			212,450	
exemption				
and Refund				
	Total		220,590	

Note: 1) Date of estimation: August 2017 2) Exchange rate: 1 ETB = 4.090 Yen

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

### **2-6** Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

### Original (at the time of outline design) name: Ethiopia Kaizen Institute role: Improve productivity and quality by implementing Kaizen Management Principles into institutions and service providers

### financial situation:

### EKI Budget and Expenditure(thousand ETB)

Year	Survey in	Surve	y in 2017	Nete
(Gregorian)	Budget	Approved Budget	Expenditure Accomplish	Note
2011/2012	4,000	4,646	3,832	Result
2012/2013	12,000	$18,885 \\ (14,671 \\ +4,214)$	18,309 (14,095 4,214+)	Result (+4,214 was additional Budget for Tax purpose)
2013/2014	15,000	15,526	15,231	Result
2014/2015	18,000	18,917	17,776	Result
2015/2016	21,000	26,215	23,021	New Result
2016/2017	24,000	33,554	32,136	New Result
2017/2018	27,000	36,870	-	Actual
2018/2019	30,000	42,000	-	Estimation
2019/2020	33,000	47,000	-	Estimation
2020/2021	36,000	52,000	-	Estimation
2021/2022	39,000	57,000	-	Estimation
2022/2023	-	62,000	-	Estimation
2023/2024	-	67,000	-	Estimation

### Source EKI

### institutional and organizational arrangement (organogram):



Source: Source: Prepared by JICA Study Team based on the Past Record and Future Plan Organizational Chart of EKI (from 2016 and Onward)

human resources (number and ability of staff):

Division	Staff	Remarks
Director General Office	2	
Director General	1	
Director General Secretary & Staff	1	
Public Relation Office	5	
Audit and Inspection Directorate	1	
Gender Office	1	
Corporate Service and Operation Sector	34	
Deputy Director Office	0	
Secretary / Staff	1	
Human Resource Directorate	5	
Planning & Information Directorate	2	
Finance & Supply Directorate	9	
General Service Directorate	17	Invlude 15 staff of Drivers and Cleaners
Manufacturing Sector	37	
Deputy Director Office	1	
Secretary / Staff	1	
Textile Directorate	7	
Leather Directorate	6	
Agro Directorate	9	
Metal Directorate	6	
Chemical Directorate	7	
Capacity Building Sector	24	
Deputy Director Office	(1)	Hold a post of Education and Training Directorate
Secretary / Staff	1	
University Directorate	5	
TVET Capacity Building Directorate	5	
School Directorate	7	
Region and City Directorate	4	
Education and Training Directorate	2	
Infrastructure, Utility, and Service Sector	28	
Deputy Director Office	(1)	Hold a post of Basic Utility Service Directorate
Secretary / Staff	0	
Construction Directorate	8	
Logistic and Supply Directorate	7	
Basic Utility Service Directorate	6	
Natural Heritage and Tourism	7	
Research and Certificate Sector	20	
Deputy Director Office	1	Deputy Director (0), Secretary (0)
Secretary / Staff	1	
Research and Best Practice	6	
Awarding, Recognition and Certification	7	
Teaching Aid Material Preparation	2	
Information Technology	3	
Total	152	Invlude 15 staff of Drivers and Cleaners

Actual (PMR)

### 2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).

- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).

- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

### 3: Operation and Maintenance (O&M)

### 3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

**Original** (at the time of outline design)

There is no O&M organization.

For operating and managing the new Center, EKI is going to establish its own O&M departments as listed below, consisting of 40 employees.

Department	Duties				
Administration	Supervision of O&M departments				
Front Office	Reception and lodging management				
Cleaning	Cleaning of the Center and house-keeping of guest rooms				
Security	Surveillance and security				
Mechanical/Electrical/IT	Management and operation of mechanical/electrical/IT equipment				
Mechanical/Electrical Inspection	Inspection of mechanical and electrical equipment				
Vehicle	Maintenance and driving of vehicles				
Gardening	Management of trees and plants				
Laundry	Laundry and ironing				
Classroom/Conference Room	Management of reservation and equipment of classrooms and conference rooms				
Dining	Operation of dining room and catering service within the Center				
Health & Childcare	Public health nurses, childcare persons				
Source: JICA Study Team					
Operation manuals will be developed by the soft component					
Actual (PMR)					

### EKI's O&M Departments (tentative)

### 3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Item	Revenue/Expenditure	Amount (ETB)				
Trainees lodging fees (including meals)	15,330,000					
· <b>x</b> ·	Total revenue	15,330,000				
Expenditures						
Salaries	2,000Birr/month x 42 persons x 12 months	1,008,000				
Laundry (bed sheets, pillow cases)	80Birr x120 rooms x 8/month x 12 months	921,600				
Laundry (bath/face towels, bath mats)	115Birr x 120 rooms x 365x0.7	3,525,900				
Restaurant (3 meals)	100Birr x 120 persons x 365 x 0.7	3,066,000				
Utility charges						
Water	10 times the present cost x $1/2$ (estimate)	430,000				
Electricity	10 times the present cost x $1/2$ (estimate)	155,000				
Telecommunication	10 times the present cost x $1/2$ (estimate)	1,850,000				
Operation and maintenance	10 times the present cost x $1/2$ (estimate)	2,575,000				
	Total expenditure	13,531,500				
	Balance	1,798,500				

# 4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

### Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment		
1. Tax exemption issue.	Probability: L		
Adequate execution of the tax exemption is	Impact: H		
expected for the project.	Analysis of Probability and Impact:		
	High probability of incomplete tax exemption.		
	Expect the delay of the construction.		
	Mitigation Measures:		
	Monitoring the action of the related		
	authorities.		
	Action during the Implementation stage:		
	Contingency Plan (if applicable):		
2. Incomplete of EKI's future plan	Probability: L		
To success the project, it is necessary to keep	Impact: L		
the EKI's future plan.	Analysis of Probability and Impact:		
	Probability; EKI's future expansion is not		
	realize by social or economic condition.		

	Impact to the target number of the trainees.		
	Mitigation Measures:		
	Monitoring the EKI's activities annually.		
	Action during the Implementation stage:		
	Contingency Plan (if applicable):		
3. Preparation for the construction	Probability: L		
Execution of the Environment Assessment	Impact: H		
and obtaining of the construction permits are	Analysis of Probability and Impact:		
necessary before the constriction	Probability; incomplete obtain of necessary		
commencement.	permission of the construction or		
	Environmental Expertize.		
	Mitigation Measures:		
	Monitoring the process.		
	Action during the Implementation stage:		
	Contingency Plan (if applicable):		
Actual Situation and Countermeasures	1		
(PMR)			

# 5: Evaluation and Monitoring Plan (after the work completion)

### 5-1 **Overall evaluation**

Please describe your overall evaluation on the project.

### 5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

### 5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

### Attachment

- 1. Project Location Map
- 2. Specific obligations of the Recipient which will not be funded with the Grant
- 3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)

- Consultant Member List
- Contractor's Main Staff List
- 4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
- 5. Environmental Monitoring Form / Social Monitoring Form
- 6. Monitoring sheet on price of specified materials (Quarterly)
- 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final )only)
- 8. Pictures (by JPEG style by CD-R) (PMR (final)only)
- 9. Equipment List (PMR (final )only)
- 10. Drawing (PMR (final )only)
- 11. Report on RD (After project)

### 1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C-D	Price (Increased) F=C+D
1	Item 1	●●t	•				
2	Item 2	●●t					
3	Item 3						
4	Item 4						
5	Item 5						

Monitoring of the Unit Price of Specified Materials
 Method of Monitoring : ●●

### (2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st • month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Actual Expenditure by Construction and Equipment each)

		Domestic Procurement	Foreign Procurement	Foreign Procurement	Total
		(Recipient Country)	(Japan)	(Third Countries)	D
		А	В	С	
Construction Cost		(A/D%)	(B/D%)	(C/D%)	
	Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
	others	(A/D%)	(B/D%)	(C/D%)	
Equip	ment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost		(A/D%)	(B/D%)	(C/D%)	
	Total	(A/D%)	(B/D%)	(C/D%)	