

## 【Appendice】

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## A. Liste des membres mission

### (1) 1er étude en Côte d'Ivoire

Nom	Désignation	Organisation
Yoshihiko KAKISHITA	Chef de mission	Département de l'infrastructure économique, JICA
Jitsuya ISHIGURO	Coordonnatrice de projet	Département de l'infrastructure économique, JICA
Tetsuro IZAWA	Chef de consultant/ planification routière	Oriental Consultants Co., Ltd
Eiji YONEZAWA	Conception des ouvrages liés au pont	Oriental Consultants Co., Ltd
Shinya TOYOSAKI	Conception de l'amélioration des routes et du carrefour	Central Consultant Inc.
Kazuto HONDA	Analyse de l'enquête du volume de trafic	Oriental Consultants Co., Ltd
Toru WATANABE	Étude sur les conditions naturelles	Asia Air Survey Co., Ltd.
Mikio KAJIMA	Conditions environnementales et sociales	Central Consultant Inc.
Hitoshi OKITA	Estimation du coût/ plan d'exécution	Oriental Consultants Co., Ltd
Rui HANEDA	Interprète	Oriental Consultants Co., Ltd

### (2) 2ème étude en Côte d'Ivoire

Nom	Désignation	Organisation
Tetsuro IZAWA	Chef de consultant/ planification routière	Oriental Consultants Co., Ltd
Eiji YONEZAWA	Conception des ouvrages liés au pont	Oriental Consultants Co., Ltd
Rui Haneda	Interprète	Oriental Consultants Co., Ltd

### (3) 3ème étude en Côte d'Ivoire

Nom	Désignation	Organisation
Tetsuro IZAWA	Chef de consultant/ planification routière	Oriental Consultants Global Co., Ltd
Mikio KAJIMA	Conditions environnementales et sociales	Central Consultant Inc.
Rui Haneda	Interprète	Oriental Consultants Global Co., Ltd

### (4) Explication préalable RF

Nom	Désignation	Organisation
Kenshiro TANAKA	Chef de mission	Prêt et de l'administration Grant,,JICA
Tetsuro IZAWA	Chef de consultant/ planification routière	Oriental Consultants Global Co., Ltd
Rui Haneda	Interprète	Oriental Consultants Global Co., Ltd

## B. Calendrier de l'étude

### (1) 1er étude en Côte d'Ivoire

Nb de jours	Date	Yoshihiko KAKISHITA	Jitsuya ISHIGURO	Tetsuro IZAWA	Eiji YONEZAWA	Shinya TOYOSAKI	Kazuto HONDA	Toru WATANABE	Mikio KAJIMA	Hitoshi OKITA	Rui HANEDA
		Chef de mission	Coordonnatrice de projet	Chef de consultant	Conception des ouvrages liés au pont	Conception de l'amélioration des routes et du carrefour	Analyse de l'enquête du volume de trafic	Étude sur les conditions naturelles	Conditions environnementales et sociales	Estimation du coût/plan d'exécution	Interprète
1	30 avr			NRT→ABJ			NRT→ABJ	NRT→ABJ		NRT→ABJ	NRT→ABJ
2	1er mai										
3	2 mai										
4	3 mai										
5	4 mai										
6	5 mai						Contrat de sous-traitance				
7	6 mai	NRT→ABJ									
8	7 mai										
9	8 mai	Discussion concernant procès-verbal									
10	9 mai									Étude	
11	10 mai	Étude en Côte d'Ivoire								en Côte	
12	11 mai									d'Ivoire	
13	12 mai	Discussion concernant procès-verbal									
14	13 mai	Chanter sur procès-verbal					Étude				
15	14 mai	Réunionss avec JICA CI et ADJ					en Côte				
16	15 mai						d'Ivoire				
17	16 mai	ABJ→HND									
18	17 mai										
19	18 mai										
20	19 mai										
21	20 mai										
22	21 mai									ABJ→HND	
23	22 mai										
24	23 mai										
25	24 mai										
26	25 mai							Étude			
27	26 mai							en Côte			
28	27 mai										
29	28 mai			Étude			ABJ→HND	d'Ivoire	NRT→ABJ		Étude
30	29 mai			en Côte							en Côte
31	30 mai			d'Ivoire							d'Ivoire
32	31 mai										
33	1er juin					LME→ABJ					
34	2 juin			Bref de EHS					Bref de EHS		
35	3 juin										
36	4 juin										
37	5 juin										
38	6 juin										
39	7 juin										
40	8 juin										
41	9 juin				NRT→ABJ						
42	10 juin									Étude	
43	11 juin									en Côte	
44	12 juin									d'Ivoire	
45	13 juin										
46	14 juin										
47	15 juin										
48	16 juin				Étude						
49	17 juin				en Côte						
50	18 juin				d'Ivoire						
51	19 juin										
52	20 juin										
53	21 juin										
54	22 juin							ABJ→NRT			
55	23 juin										
56	24 juin										
57	25 juin			Réunion avec AGERROUTE					ABJ→HND		
58	26 juin										
59	27 juin			ABJ→HND	ABJ→HND						
60	28 juin					ABJ→HND					ABJ→NRT
61	29 juin										

(2) 2ème étude en Côte d'Ivoire

Nb de jours	Date	Tetsuro IZAWA Chef de consultant	Eiji YONEZAWA Conception des ouvrages liés au pont	Rui HANEDA Interprète
1	2 août	NRT→ABJ		
2	3 août	Réunions avec JICA CI et AGEROUTE		
3	4 août	Étude en Côte d'Ivoire		
4	5 août	Réunion avec BNEDD		
5	6 août	Étude en Côte d'Ivoire		
6	7 août	Réunions avec MEI et ADJ		
7	8 août			
8	9 août			
9	10 août	ABJ→HND		
10	11 août	Étude en Côte d'Ivoire		
11	12 août	ABJ→HND		
12	13 août	Étude en Côte d'Ivoire		
13	14 août			
14	15 août	ABJ→HND		
15	16 août			

(3) 3ème étude en Côte d'Ivoire

Nb de jours	Date	Tetsuro IZAWA Chef de consultant	Mikio KAJIMA Conditions environnementales et sociales	Rui HANEDA Interprète
1	18 octobre	NRT→ABJ		
2	19 octobre	Réunions avec JICA CI et AGEROUTE		
3	20 octobre	Étude en Côte d'Ivoire		
4	21 octobre	Consultation des parties prenantes		
5	22 octobre	Réunions avec ADJ		
6	23 octobre			
7	24 octobre	ABJ→HND		
8	25 octobre	ABJ→NRT		
9	26 octobre	ABJ→NRT		
10	27 octobre			

(4) Explication préalable RF

Nb de jours	Date	Kenshiro TANAKA Chef de mission	Tetsuro IZAWA Chef de consultant	Rui HANEDA Interprète
1	28 février	NRT→ABJ		
2	1 mars	Réunion avec MIE		
3	2 mars	Étude en Côte d'Ivoire		
4	3 mars	Réunion avec AGEROUTE		
5	4 mars	Chanter sur procès-verbal		
6	5 mars	Réunion avec ADJ		
7	6 mars			
8	7 mars	ABJ→HND		
9	8 mars	ABJ→HND		
10	9 mars	ABJ→NRT		

### C. Liste des personnes interrogées

Organisation	Poste	Nom
ADJ	Ambassadeur	M. SUSUMU INOUE
ADJ	Ambassadeur	M. HIROSHI KAWAMURA
ADJ	Premier secrétaire	M. HIDEO OMAGARI
ADJ	Conseiller	M. JUNJI GOMAKUBO
ADJ	Conseiller	M. YUKUO MURATA
MIE	Ministre	M. ACHI PATRICK
MIE	Directeur de cabinet	M. EKPINI GILBERT
MIE	Coordinateur	M. HENRI KANHEZA
MIE	Conseiller	M. BEL COULIBALY
AGEROUTE	Directeur général adjoint	M. TOURE ABOU
AGEROUTE	Directeur des études et des ouvrages	M. OUATTARA ISSA
AGEROUTE	Chef de project échangeur VGE	M. KOUDOU HERVE
AGEROUTE	Chargé des études routières	M. DOSSO BEN
AGEROUTE	Environnementaliste	M. GUEY GILBERT
AGEROUTE	Environnementaliste junior	F.AICHA TOUR
ANDE	Sous direction de l'EIE et l' audit Env.	M.KOUASSI B. N'GBIN AMALAMAN S.
CIAPOL	Spécialiste de la pollution	M. DJEDJE GLAOU TREUE
Bureau des Treichville Commune	Administrateur en chef	M LOGON FLOUENT

## D. Procès-verbal de discussions

**MINUTES OF DISCUSSIONS  
ON  
THE PREPARATORY SURVEY  
FOR  
THE PROJECT FOR IMPROVEMENT OF IVORIAN-JAPAN FRIENDSHIP  
INTERSECTION IN TREICHVILLE, ABIDJAN  
IN  
THE REPUBLIC OF COTE D'IVOIRE  
(Explanation of Draft Outline Design Report)**

On the basis of the preparatory survey started in April 2014, the Japan International Cooperation Agency (hereinafter referred to as "JICA") prepared a Draft Outline Design Report (hereinafter referred to as "the Report") on the Project for Construction of the Ivorian Japan Friendship Flyover (hereinafter referred to as "the Project").

The Preparatory Survey Team, headed by Mr. Kenshiro Tanaka, Advisor, Grant Aid Project Management Division 1, Loan and Grant Administration Department, JICA consulted with the concerned officials of the Government of the Republic of Côte d'Ivoire (hereinafter referred to as "RCI") on the contents of the Report.

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

Abidjan, 5<sup>th</sup> March 2015

  
Kenshiro Tanaka  
Leader  
Preparatory Survey Team  
Japan International Cooperation Agency



  
Gilbert Ekpini  
Cabinet Director  
Ministry of Economic Infrastructure  
Republic of Côte d'Ivoire



## ATTACHMENT

### 1. Components of the Draft Outline Design Report

- 1.1. The Ivorian side agreed in principle the contents of the Report explained by the Team. The Team examined and found out the best alternative.

The main components of the Project consist of the following.

- a) Flyovers (L=312m East-West direction, L=210m North-East Direction)
- b) Approach road with retaining walls (Gravity Type L=155.5m L Type L=30.0m East-West direction, Gravity Type L=53.74m L Type L=15.0m North-East direction,)
- c) Asphalt Concrete Pavement A=30,340m<sup>2</sup>
- d) LED Traffic Light Carriageway N=12 Pedestrian N=11
- e) LED Highway/Street Light N=64

- 1.2 The Team requested to submit comments if any for the Draft Outline Design Report by 20<sup>th</sup> March 2015.

### 2. Cost Estimation for the Project

- 2.1. The Japanese side explained to the Ivorian side the preliminary estimate of the Project Cost described in Annex-1; however, the final Project Cost described in the Exchange of Note (hereinafter referred to as "E/N") would be appraised by the Government of Japan (hereinafter referred to as "GOJ").
- 2.2. Both Sides further confirmed that the Project Cost in Annex-1, and details of the construction works in the Report should never be duplicated and/or disclosed to any third parties until all the contracts for the Project are concluded.

### 3. Undertaking by the Ivorian Side

- 3.1. The Ivorian side will undertake the items listed in Annex-2 at its own expenses based on the contents of the Report.

The Team explained that the necessary land acquisition for the project implementation and relocation of public services and facilities at the Project site must be concluded prior to the bidding.

- 3.2. The Ivorian side agreed to report the progress of the undertakings by the Ivorian side to the JICA Côte d'Ivoire office.

### 4. Operation and Maintenance of the Facilities

The Ivorian side will secure adequate number of staff and budgets necessary for operation and maintenance of the facilities constructed by the Project. The Ivorian and Japanese

side also confirmed that AGEROUTE will be responsible for bridge operation and maintenance and will strengthen AGEROUTE's capacity to protect their infrastructure assets from degradation.

## 5. Environment and Social Considerations

- 5.1. Ministry of Economic Infrastructure (hereinafter referred to as "MEI") and the JICA Mission confirmed the information on environmental and social considerations including major impacts and relevant mitigation measures are summarized in the Environmental Checklist attached as Annex-3. MEI confirmed they will inform JICA of any major changes which may affect environmental and social considerations made for the Project by revising the Checklist in a timely manner.
- 5.2. MEI and the JICA Mission confirmed environmental monitoring will be conducted by AGEROUTE in accordance with the Environmental Monitoring Plan described in the Preparatory Survey Report.
- 5.3. MEI confirmed that the results of environmental monitoring will be provided to JICA as a part of Monthly Progress Report by filling in the monitoring results reporting form for construction attached as Annex-4 on a quarterly basis until the completion of the project, provided that there is no outstanding issue regarding the environmental and social considerations during operation of the Project.  
In case JICA finds that there is a need for improvement in a situation with respect to environmental considerations after the agreed monitoring period, JICA may request to extend the period of monitoring and reporting until JICA confirms the issues have been properly addressed in accordance with the agreement between MEI and JICA.
- 5.4. MEI agreed JICA's disclosure of provided monitoring results in the monitoring form (Annex-4) on its website.

## 6. Japan's Grant Aid Scheme

- 6.1. The Ivorian side fully understood the scheme of the Japan's Grant Aid and the necessary measures to be undertaken by the Ivorian side, which was explained by the Japanese side and recorded in the Minutes of Discussion signed on 13 May 2014.

## 7. Schedule of the Study

- 7.1. JICA will complete the Final Report of the Preparatory Survey both in Japanese and French, in accordance with the confirmed items and send it to the Ivorian side around April 2015.
- 7.2. The above schedule is tentative and subject to change.

## 8. Disclosure of Information

- 8.1. Both Sides confirmed that the study results excluding the Project cost will be disclosed



to the public after completion of the Preparatory Survey. All the study results including the Project cost will be disclosed to the public after all the contracts for the Project are concluded.

9. Construction Safety

The Team explained that the “Guidance for the Management of Safety for Construction Works in Japanese ODA Projects” shall be applied to the works for the Project to ensure the safety of the Project Stakeholders during construction works at site and protect nearby local residents, and any other third parties, from every potential accidental risk foreseen to arise from the construction works at site. AGEROUTE is to assume the duty as “the Employer” among other things to review and give suggestion on a construction safety plan and confirm the work being carried out in conformity with the safety plan.

10. Misconduct

If either JICA or Ivorian side receives information concerning suspected corrupt or fraudulent practices, the Government of RCI shall take necessary measures in accordance with the Procurement Guidelines in the competition for, or in execution of, the contract funded by the Grant:

- to provide JICA with such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations of RCI;
- not to treat unfairly or unfavorably the physical persons and juridical persons, that provide the information.
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11. Change of the Project Name

Both sides agreed to change the project name from the “Project for Solibra Intersection Improvement” to the “Project for Improvement of Ivorian Japan Friendship Intersection” as a result of the discussion between the Embassy of Japan and Ivorian side.

Annex-1: Project Cost Estimation

Annex-2: Major undertakings to be taken by the Government of Côte D’Ivoire

Annex-3: Environmental Checklist

Annex-4: Environmental Monitoring Form

Annex-5: Progress chart for the undertakings by the Ivorian side

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Annex-1: Project Cost Estimation

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Annex-2: Major undertakings to be taken by the Government of Côte D'Ivoire

No.	Items
1*	To secure following lands necessary for the implementation of the Project and to clear the site within six (6) months after signing of the E/N between the GOJ. Land for the flyover and roads (Refer to the Draft Outline Design Report for the locations of the plots) and temporary yards for construction, material storage and site offices.
2	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site.
3*	To relocate utilities and facilities which may be obstacles to the construction in the project site within six (6) months after signing of the E/N between the GOJ. (Refer to the Draft Outline Design Report for the locations)
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products.
5	To ensure that customs duties, internal taxes and other fiscal levies, which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted.
6	To accord Japanese physical persons and / or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the implementation of the Project.
7	To ensure that the Facilities be maintained and used properly and effectively for the implementation of the Project.
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project.
9	To ensure security for the personnel assigned to the Project and ensuring security at the Project site and temporary yards which include arrangement for traffic control for detouring to the project site.
10	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A - Advising commission of A/P - Payment commission
11	To give due environmental and social consideration in the implementation of the Project. - To conduct environmental monitoring. - To assign person(s) in charge of land acquisition until the completion of resettlement.
12	To obtain all necessary permits to coordinate and share necessary information with the organizations concerned regarding the construction of the flyovers and roads.
13	To cooperate in solving potential troubles with the local people or any third party in connection with the execution of the Project.

(B/A: Banking Arrangement, A/P: Authorization to Pay)

\* Marked items are regarded as preconditions to proceed to a bidding stage.

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Annex-3: Environmental Checklist

Category	Environmental Item	Major Items to be checked	Yes: Y No: N	Confirmation of Environmental Consideration
1. Permit and Explanation	(1)EIA and Environmental Permit	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports have been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (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?	(a) N (b) N (c) N (d) N	(a) AGEROUTE has been appointed as the executive agency of EIA and EIA report will be prepared based on the Environmental Survey Report prepared in the OD. (b) Approval is expected to be granted to the EIA Report by the ANDE. (c) Specific condition is not expected. (d) No other environmental permit is expected. If others however required, the AGEOUTE shall take necessary actions so as to grant permit.
	(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? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Y (b) Y	(a) A Stake Holder Meeting was conducted by AGEROUTE on 28 <sup>th</sup> October 2014. (b) Design considered provision of access to the Supermarket to be opened in 2015.
	(3) Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) Y	(a) Five (5) alternatives including zero option have been studied.
2. Pollution Control	(1)Air Quality	(a) Is there observation that air pollution emitted from traveling vehicles affects ambient air quality? Does ambient air quality comply with the country's air quality standards? Are any mitigating measures taken? (b) Will project make air quality worsen in case the existing air quality exceeds the air quality standard? Are any mitigating measures taken?	(a) Y (b) Y	(a) As there are currently 130,000 daily traffic along the project section, SPM exceeds standard value of IFC. (b) Slight air quality improvement is expected by decrease of traffic volume and reduction of idling time after opening to traffic on the flyover.
	(2) Water Quality	(a) Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas? (b) Is there a possibility that surface runoff from roads will contaminate water sources, such as groundwater? (c) Do effluents from various facilities, such as parking areas/service areas comply with the country's effluent standards and ambient water quality standards? Is there a possibility that the effluents will cause areas not to comply with the country's ambient water quality standards?	(a) N (b) N (c) Y	(a) No large scale earth work is designed (b) Surface water shall discharge after water quality is checked and adjusted. (c) Storm water shall discharge after water quality is checked and adjusted.
	(3) Waste	(a) Are wastes generated from the project facilities, such as parking areas/service areas, properly treated and disposed of in accordance with the country's regulations?	(a) Y	(a) Waste generated from the project will be properly controlled and treated during the project. Abidjan Autonomous District will be responsible for treatment of wastes after the project.
	(4) Noise and Vibration	(a) Do noise and vibrations from the vehicle and train traffic comply with the country's standards?	(a) Y	(a) Existing noise and vibration satisfy the IFC standard (commercial and industrial area), improvements of the condition are expected by smoothening traffic flow after the project.
3. Natural Environment	(1)Protected Areas	(a) Is the project site 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) Nature of project site is commercial and industrial area, no protected area exists.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral	(a) N	(a) Nature of project site is commercial and industrial area, lagoon extends at 1km

		reefs, mangroves, or tidal flats)?		away from the project site for south-north direction.
	(3) Hydrology	(a) Is there a possibility that alteration of topographic features and installation of structures, such as tunnels will adversely affect surface water and groundwater flows?	(a) N	(a) The project does not requires land modification
4. Social Environment	(1) Resettlement	(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) No involuntary resettlement is expected
	(2) Living and livelihood	(a) Where roads are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts? (b) Is there any possibility that the project will adversely affect the living conditions of the inhabitants other than the target population? Are adequate measures considered to reduce the impacts, if necessary? (c) Is there any possibility that diseases, including infectious diseases, such as HIV will be brought due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary? (d) Is there any possibility that the project will adversely affect road traffic in the surrounding areas (e.g., increase of traffic congestion and traffic accidents)? (e) Is there any possibility that roads will impede the movement of inhabitants? (f) Is there any possibility that structures associated with roads (such as bridges) will cause a sun shading and radio interference?	(a) N (b) Y (c) N (d) N (e) Y (f) Y	(a) Nature of the project is the improvement of existing intersection and the improvement will be given within existing ROW which does not make significant environment change. However, minor financial loss of existing KIOSK is expected. Further investigation of the financial loss by the project may be required. (b) Special consideration and arrangement such as diversion is required for the pedestrian during project as the number of pedestrian is large. (c) There will be a need that project relevant needs to be sensitized for expected risks. (d) The project will bring elimination of traffic congestion (e) Same as above(b) (f) There will be radio interference during the project which will be very limited and momentary.
	(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) No cultural heritage exists within the project site while there is a park owned by Abidjan Autonomous District near the project site.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) N	(a) There will be negative impact on landscape which will however be limited and momentary during the project.
	(5) Ethnic Minorities and Indigenous People	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	(a) N	(a) There are no ethnic minorities and indigenous peoples within project site.
5. Working Environment	(6) Working Environment	(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? (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? (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.? (d) Are appropriate measures being taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a) Y (b) Y (c) Y (d) Y	(a) Cote d'Ivoire follows IFC's labor guideline (b) EHS plan as regards to working environment will be prepared and implemented. In addition, the training will be carried out in order to avoid conflict with residents. (c) same as (b) (d) same as (b)

6. Others	(1) Impacts during construction	<p>(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p>	<p>(a) Y</p> <p>(b) N</p> <p>(c) Y</p>	<p>(a) The work generates noise / vibration will not be carried out during night. In addition, the watering to bare soil will be given to bare soil so as to prevent dust production.</p> <p>(b) There is no natural environment around project site</p> <p>(c) As there will be possibility that project brings effects on vehicle and pedestrian traffic for their passage, the diversion will therefore be provided.</p>
	(2) Monitoring	<p>(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>(b) What are the items, methods and frequencies of the monitoring program?</p> <p>(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>(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?</p>	<p>(a) Y</p> <p>(b) Y</p> <p>(c) Y</p> <p>(d) Y</p>	<p>(a) Monitoring of affected items will be planned and implemented.</p> <p>(b) As monitoring method and items have been studied in the OD, they will however be reviewed with due consideration to ANDE's comments.</p> <p>(c) AGEROUTE has experienced to carry out monitoring on past projects. The budget arrangement to the monitoring of this project is underway.</p> <p>(d) Monitoring results need to be reported to ANDE.</p>

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## Annex-4: Environmental Monitoring Form

### 1. Permit and Explanation

Monitoring Items	Actions to be taken
<ul style="list-style-type: none"> <li>ESIA and proposed monitoring plan need to be submitted: Approval from ANDE</li> <li>Monitoring shall be carried out according to approved plan</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring result: The result needs to be reported to ANDE</li> </ul>

### 2. Pollution Control

#### Air Quality

Items	Sampled Value (Average)	Sampled Value (Maximum)	Standard Value	Referred Standard	Sampling Point, Time, Method
SO <sub>2</sub>			50	IFC(2007)	<ul style="list-style-type: none"> <li>Nos. of Sampling: 1 point</li> <li>Sampling Items: SO<sub>2</sub>, NO<sub>2</sub>, CO, SPM, O<sub>3</sub></li> <li>Sampling Times: 4 times per year</li> <li>Others: Traffic Volume, Metrological Data</li> </ul>
NO <sub>2</sub>			20		
CO			200		
O <sub>3</sub>			-		
Suspended Particulate Matter			-		
Fine Particles			-		Physical Observation

#### Water Quality

Items	Sampled Value (Average)	Sampled Value (Maximum)	Standard Value	Referred Standard	Sampling Point, Time, Method
pH			5.5-8.5	-	During & After Construction <ul style="list-style-type: none"> <li>Sampling Point: 2</li> <li>Sampling Times: 2 times per year</li> </ul>
EC			mS/m	-	
Oil film			Non	-	
BOD/COD			100/300mg/L	-	
T-P			15mg/L	-	
T-N			50mg/L	-	
SS			50mg/L	-	
Petroleum Products			10mg/L	-	
Bacteria			-	-	
Heavy Metal			(mg/L)	Item without standard shall refer IFC(2007)	
Cd			-		
Cr			0.5		
Cu			0.5		
Pb			0.5		
Hg			-		
Ni			0.5		
Zn			-		
Water Temperature			40°C		

#### Soil

Items	Sampled Value (Average)	Sampled Value (Maximum)	Standard Value	Referred Standard	Sampling Point, Time, Method
Heavy Metal			(mg/L)	Item without standard shall refer IFC(2007)	During & After Construction <ul style="list-style-type: none"> <li>Sampling Point: 2</li> <li>Sampling Times: 2 times per year</li> </ul>
Cd					
Cr					
Cu					
Pb					
Hg					
Ni					
Zn					
Petroleum Product					

#### Waste Material

Monitoring Items	Monitoring Point, Time, Method
<ul style="list-style-type: none"> <li>Physical observation of waste materials during the construction: Construction waste material, Deleterious material, Garbage</li> <li>Physical observation of waste materials after the construction</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of treatment of waste material and report: 1 time per month</li> </ul>

Noise and Vibration

Items	Sampled Value (Average)	Sampled Value (Maximum)	Standard Value	Referred Standard	Monitoring Point, Time, Method
Noise			Day:70dB (A) Night:50dB(A)		<ul style="list-style-type: none"> <li>• During and After Construction</li> <li>• Monitoring Points:2</li> <li>• Monitoring Items: Noise and Vibration 3times per monitoring day</li> <li>• Monitoring Times: 4 Times per year</li> </ul>
Vibration			Day:70dB Night:50dB		

3. Natural Environment

Ecosystem

Monitoring Items	Monitoring Point, Time, Method
1) Hydrometeor • Physical observation to storm water during rain • Condition of storm water discharge	• Monitoring of discharge condition at drainage system: 1time per month

4. Social Environment

Living and Livelihood

Monitoring Items	Monitoring Point, Time, Method
1) During Construction: Pollution status by Air quality, Noise, Waste material to residents 2) During Construction: Monitoring of Road Users and Residents	• During the construction: 1 time per month

Existing Social Infrastructure

Monitoring Items	Monitoring Point, Time, Method
1) During Construction: Pollution status by Air quality, Noise, Waste material to residents 2) During Construction: Monitoring of Road Users and Residents	• During the construction: 1 time per month

Road Safety

Monitoring Items	Monitoring Point, Time, Method
1) Grasping situation of intersection crossing by school children	• During the construction: 1 time per month

Working Environment

Monitoring Items	Monitoring Point, Time, Method
1) Grasping situation of EHS during the construction	• During the construction: 1 time per week

Traffic Accident

Monitoring Items	Monitoring Point, Time, Method
1) Grasping situation of traffic congestion during the construction 2) Grasping situation of traffic accident during the construction	• During the construction: 1 time per week

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Annex-5: Progress chart for the undertakings by the Ivorian side

Undertakings	Year Month	2015				2016				2017				2018				2019	
		3	6	9	12	3	6	9	12	3	6	9	12	3	6	9	12	3	
Project Implementation	Exchange Note and Grant Agreement		▼																
	Detailed design			■															
	Tender notice				▼														
	Contract with contractor					▼													
	Construction works						■	■	■	■	■	■	■	■	■	■	■	■	■
Securing budget	Approval of budget	▼																	
	Available timing for payment		▼																
Land Acquisition & Compensation for Structures	Agreement with land owners																		
	Payment of compensation for lands and structures																		
	Resettlement of traders along Project Road Section			■															
Environmental and Social Considerations	Submission of ESIA report to National Environment Agency		▼																
	Environmental permit for project implementation		▼																
Relocation of Utilities	Discussion with utility companies to prepare contract		▼																
	Contract with utility companies for relocation																		
	Telecommunication Duct				▼														
	Gas Pipe		▼																
	Water Pipe		▼																
	Electricity Duct				▼														
	Relocation of utilities																		
	Telecommunication Duct					■													
	Gas Pipe			■															
	Water Pipe			■															
Electricity Duct				■															
Provision of Temporary Construction Yard	Negotiation with land owners	▼																	
	Contract for land rent																		
	Removal of existing structures from the yards					■													
Provision of Borrow Pits and Quarries	Contract with borrow pits and quarry owners																		
Provision of Waste Disposal Area	Acquisition of approval of soil and construction waste disposal site owner																		
Payment for bank commission	Open bank account and arrange Authorization to Pay		▼																