

AFRICAN DEVELOPMENT FUND



KENYA

NAIROBI-THIKA HIGHWAY IMPROVEMENT PROJECT

PROJECT COMPLETION REPORT

(PCR)

RDGE/PICU DEPARTMENTS

October 2019



African Development Bank Group



Republic of Kenya

PROJECT COMPLETION REPORT (PCR)

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I BASIC DATA

A Report data

Report date	Date of report:	10 March 2016	
	Mission date:	From: 03 February 2016	To: 1 March 2016

B Responsible Bank staff

Positions	At approval	At completion
Regional Director	A. ORDU	G. NEGATU
Country Manager	D. BUZINGO	N/A
Sector Director	G. MBESHERUBUSA	AMADOU OUMAROU
Sector Manager	J. RWAMABUGA	ABAYOMI BABALOLA
Task Manager	A. OUMAROU	ZERFU TESSEMA
Alternate Task Manager		GEORGE MAKAJUMA
PCR Team Leader		ZERFU TESSEMA
PCR Team Members		G. MAKAJUMA E. NDINYA A. BABALOLA T. OPIYO (Consultant)

C Project data

Project name: NAIROBI - THIKA HIGHWAY IMPROVEMENT PROJECT		
Project code: P-KE-DB0-018	Instrument number: ADF Loan No. 2100150015544	
Project type: Infrastructure	Sector: Transport	
Country: Kenya	Environmental categorization (1-3): 1	
Processing milestones – Bank approved financing only (add/delete rows depending on the number of financing sources)	Key Events (Bank approved financing only)	Disbursement and closing dates (Bank approved financing only)
Financing source/ Instrument 1: ADF Loan No. 2100150015544	Financing source/ Instrument 1: ADF Loan	Financing source/ Instrument 1: ADF Loan
Date approved: 21 November 2007	Cancelled amounts: UA 1,839,059.93	Original disbursement deadline: 31 December 2012
Date signed: 26 November 2007	Supplementary financing: NIL	Original closing date: 31 December 2012
Date of entry into force: 11 July 2008	Restructuring: NA	Revised disbursement deadline: 30 September 2015 (For Terminal 2)

Date effective for 1 st disbursement: 3 June 2009	Extensions (<i>specify dates</i>): 2.5 years		Revised (<i>if applicable</i>) closing date: 30 June 2015 (For Terminal 2)	
Date of actual 1st disbursement: 10 July 2009				
Financing source/ Instrument 2: ADF Grant No.: 2100155010466	Financing source/ Instrument 2: ADF Grant		Financing source/ Instrument 2: ADF Grant	
Date approved: 21 November 2007	Cancelled amounts: UA 575,626.23		Original disbursement deadline: 31 December 2012	
Date signed: 26 November 2007	Supplementary financing: NIL		Original closing date: 31 December 2012	
Date of entry into force: 11 July 2008	Restructuring: NA		Revised disbursement deadline: 28 February 2015	
Date effective for 1 st disbursement: 7 June 2010	Extensions (<i>specify dates</i>): NA		Revised (<i>if applicable</i>) closing date: 30 November 2014	
Date of actual 1st disbursement: 10 July 2009				
Financing source/instrument (add/delete rows depending on the number of financing sources):	Disbursed amount (amount, UA):	Percentage disbursed (%):	Undisbursed amount (UA):	Percentage undisbursed (%):
Financing source/ instrument1: ADF Loan (117,850,000.00 UA) - 70% Costs for Lots 1 & 2	116,010,940.07	98.4	1,839,059.93	1.6
Financing source/ instrument2: ADF Grant (3,150,000.00 UA) for the Nairobi Metropolitan Transit System.	2,574,373.77	81.7	575,626.23	18.3
Government: GoK (54,100,000 UA)	110,391,667.99 ¹	204.05		
TOTAL	228,976,981.8	130.77²	2,414,686.16	1.38
Other external partners: Government of the Republic of Kenya and Export – Import Bank of China for Lot 3				
Executing and implementing agency (ies): Ministry of Roads and Public Works(KeNHA) & Ministry of Transport				

Note: - 1 UA = KES 103.371 = US\$ 1.5326; 1 RMB = KES 8.8423 (September, 2007)

D

Management review and comments

Report reviewed by	Name	Date reviewed	Comments
Country Manager	N/A		
Sector Manager	Abayomi Babalola		
Regional Director (as chair of Country Team)	Gabriel Negatu		
Sector Director	Amadou Oumarou		

¹ This amount is calculated as the remaining amount after the Bank's contribution has been deducted from the final total project cost at completion of Lots 1 and 2.

² The total percentage undisbursed is calculated as the ratio of original total commitments (Bank and GoK) and the actual disbursed for Lots 1 and 2.

II PROJECT PERFORMANCE ASSESSMENT

A Relevance

1. Relevance of project development objective

Rating*	Narrative assessment (max 250 words)
4	<p>The Government of Kenya prepared the “<i>ECONOMIC RECOVERY STRATEGY FOR WEALTH AND EMPLOYMENT CREATION 2003 – 2007</i>” (ERS) in June 2003 as the blueprint that was to guide the Government's economic policies over the next five years. Poor infrastructure was identified as a primary factor that made production cost excessively high, thereby undermining the competitiveness of locally produced goods. In particular, roads, railways and telecommunications were identified to have serious negative impact on production. One of the key strategies was therefore to rehabilitate and expand physical infrastructure.</p> <p>The rehabilitation and upgrading of Nairobi – Thika Road project established the foundation for infrastructure flagship projects in Kenya's Vision 2030, which is geared towards expanding the physical infrastructure with the aim of ensuring that it can support a rapidly-growing economy. Accordingly, the MTP 2008-2012 sought for accelerating and consolidating gains made in the ERS on infrastructure development, focusing on quality, aesthetics and functionality of the infrastructure services. The MTP targeted increased investments in the road network, water and sanitation services, rail, maritime, air transport and energy supply services. One of the flagship transport infrastructure projects under the MTP was the development of a Rapid Bus and light rail system in the Nairobi Metropolitan area. In addition, development of a legal framework to support Private Public Partnerships in the infrastructure sector was also included in the MTP. These two projects were of the components of the Nairobi – Thika highway project.</p> <p>The Nairobi – Thika road is an important link on the Great North Trans-African Highway (Cape Town to Cairo) and is part of the East Africa Community Regional Trunk Road Network (RTRN). The road section was one of the highest priorities in the NEPAD short-term action plan in 2007.</p> <p>The Bank's intervention in this project was informed by the need to bridge the infrastructure gap in Kenya with the view of sustaining economic growth, help Kenya achieve its infrastructure development goals, and promote regional transport and trade with Ethiopia and Tanzania.</p>

2. Relevance of project design

Rating*	Narrative assessment (max 250 words)
3	<p>The project was conceptualised on the broad vision of establishing a major arterial trunk road forming part of two international transport corridors i.e. the Tunduma – Dodoma – Namanga – Nairobi - Isiolo – Moyale Road Corridor and the Greater Trans-African Highway between Cape town and Cairo. The significance of the road as a regional road network is in line with development priorities of the wider East African Community countries and also with the Bank's strategy to support multinational programmes with a strong focus on regional integration among African states. At the national level, the project was part of the Government's infrastructure modernisation programme that was expected to lower the cost of doing business and increasing competitiveness of the country.</p> <p>The initial planning and diagnostic studies of the inadequacy of Nairobi-Thika highway were done within the context of the Nairobi Metropolitan Area Urban Transport Master Plan. The findings, among others, highlighted the generally inadequate urban transportation infrastructure and urban public transportation system. The study particularly mentioned the extremely poor level of service and shortage of capacity along the Nairobi-Thika corridor with low operating speeds, long delays, accidents and high operating costs.</p> <p>The project was designed as a 48.9km six/eight lane main carriageway (MCW) with full access control with 9 interchanges and 19-km of 2-lane service roads. However, at implementation a number of revisions were made to accommodate various conditions encountered. They include additional: lanes of MCW and service lanes; over- and underpasses; retaining walls and lighting; pedestrian footbridges, covers and lighting; maintenance of alternative roads; landscaping; and relocation of services and fences. The design revisions and changes were necessary for better performance of the project but ideally should have been considered at the design stage.</p>

3. Lessons Learned related to relevance

Key issues	Lessons learned	Target audience
1. Design revisions due to new conditions during project implementation	Design changes due to new conditions are necessary but often affect project costs and time for completion. Project designs should be comprehensively reviewed well before project appraisal and award of works contracts.	KeNHA
2. Delays in land acquisition	Right of way should be made available before the Contractor possesses the site to avoid implementation delays and claims for extra time and costs.	GoK and KeNHA
3. Delays in relocation of services	Pilot trenching should be undertaken by the contractor soon after possession of site to aid in locating service lines based on maps provided by relevant utility companies. Ideally, KeNHA should approve the installation of these services, since they are within their right of way, and should also keep in its custody maps showing their locations.	KeNHA

B Effectiveness

1. Progress towards the project's development objective (project purpose)

Comments
<i>Provide a brief description of the Project (components) and the context in which it was designed and implemented. State the project development objective (usually the project purpose as set out in the PM) and assess progress. Unanticipated outcomes should also be accounted for, as well as specific reference of gender equality in the project. The consistency of the assumptions that link the different levels of the results chain in the PM should also be considered. Indicative max length: 400 words.</i>
The project development objectives were to contribute to: (i) improved accessibility, affordability, and reliability of the transport infrastructure system to promote economic growth and socio-economic development; and, (ii) greater regional integration.
The project objectives were to: (i) improve road transport services along the Nairobi-Thika corridor and enhance urban mobility within the metropolitan area by reducing traffic congestion; (ii) contribute to the development of a sustainable urban public transit system for the Nairobi Metropolitan Area; and, (iii) promote private sector participation in the management, operation, and financing of road infrastructure in Kenya.
The project had seven components: Civil Works for Nairobi City Arterial Connectors and the Nairobi – Thika Highway improvement; Consulting Services for Construction Supervision of the Civil Works; Consulting Services for Nairobi Metropolitan Transit System Study; Consulting Services for Private Sector Participation; Consulting Services for Project Technical and Financial Audits; and Compensation and Resettlement of Project Affected People.
The ADF loan financed 70% of civil works costs for the Nairobi City Arterial Connectors (12.5 km), and part of the Nairobi – Thika Highway from Muthaiga to Kenyatta University (14.1 km). The section from Kenyatta University to Thika (23.8km) was separately funded through a loan from the EXIM Bank of China and GoK. The ADF grant financed the costs towards the Feasibility and Engineering Studies for the Nairobi Metropolitan Transit System. The GoK financed the consultancy services for private sector participation, supervision of the civil works, financial audits, compensation and resettlement of Project Affected Persons, and costs of additional works.
To increase direct participation of women in the project, the Contractors were encouraged to give first priority to female applicants for the various employment opportunities that emerged from time to time. In spite of this attempt, the per cent of female employee (directly employed in the project) out of total did not improve much and remained low at about 3.5%. Some of reasons why there were few women employees were: limited experience in road construction; some shift working schedule was not preferred by women; and some cultural barrier. However, it was possible to see some qualified women workers who were trained on the project to be operator of construction equipment on the project.
Other direct beneficiaries included youth students (41% women) attending five universities and middle colleges along the road who benefitted from improved transportation; women who sold horticultural products between Nairobi and Thika area; roadside markets at Ngara and Githurai areas; and women who provided food and catering services to construction workers.
Training and technology transfer were the other outcomes. All the three contractors deployed some Kenyan senior engineers and a considerable number of trainee engineers, foremen, technicians and female operators/drivers and 100% unskilled local labour. These personnel were trained by the Contractors and exposed to modern road construction techniques and procedures as this was the first road

project with complicated structural and underground works in Kenya. In most of similar projects currently ongoing in the country, it is common to see skilled and semi-skilled staff who gained experience in the Nairobi – Thika Highway project.

Unanticipated outcomes included rapid development of land along the road corridor, which included manufacturing factories, shopping malls, mixed use developments, universities, social amenities, and residential estates.

2. Outcome reporting

Outcome indicators (as per PM)		Baseline value (Year)	Most recent value (A)	End target (B)(expected value at project completion)	Progress towards target(% realized) (A/B)	Narrative assessment (indicative max length: 50 words per outcome)	Core Sector Indicator (Yes/No)
1. Increase of regional GDP of Nairobi Metro Area (KES billion)*		450 (2010)	760 (2014)	1,030 (2025)	74%	GDP for Nairobi Area was expected to grow from KES 450 billion in 2010 to KES 1,030 billion by 2025. The actual GDP for Kenya in 2010 at current prices was KES 3,169 billion, so the contribution of Nairobi Metro was estimated at about 14.2% of the national total. Using the same percentage contribution, Nairobi metro should have contributed KES 760 billion in 2014. Some KES 310 billion had been achieved in 4 years, and at that rate the target will be achieved by 2022 instead of 2025.	Yes
2. Increased trade between Eastern & Horn of Africa regions (US\$ Million)**		40 (2007)	256 (2014)	175 (2011)	146%	Regional trade between Eastern countries (Kenya and Tanzania) & the Horn of Africa countries (Ethiopia, Eritrea, Djibouti, and Somalia) regions is recorded to have grown from US\$ 262.4 M in 2007 to US\$ 256.4 M by 2014. The target has been exceeded.	Yes
3. Travel time (hrs)	Nairobi to Thika	2.5 (2007)	0.71 (2016)	1.0 (2012)	141%	The travel time target has been achieved, and additional time savings can be realised if the speed humps and speed limits erected at various locations are removed. The main carriageway should be managed as a freeway with separated access for slow moving vehicles and Non-Motorised Traffic.	No
	Thika to Nairobi	NA	1.45 (2016)	NA			
4. Accident rate (no./yr)	Average annual accident rate	349 (2007)	370 (2012)	70 (2012)	529%	Average annual accident rate on the Nairobi - Thika Section was expected to reduce by 70% from 230 in 2007 to less than 70 in 2012. The actual average annual accident rate increased by 6% over the same period, and was more than 5 times the target. The increase in traffic volumes and speeds could have contributed to this increase. It is noted that the target was based on an incorrect base line.	No

Outcome indicators (as per PM)		Baseline value (Year)	Most recent value (A)	End target (B)(expected value at project completion)	Progress towards target(% realized) (A/B)	Narrative assessment (indicative max length: 50 words per outcome)	Core Sector Indicator (Yes/No)
	Fatalities	107 (2007)	61 (2015)	NA	43%	The number of fatalities reduced by 46, which can attributed to the provision of footbridges across the main carriageway for pedestrians; removal of bus stops to the service roads; and provision of lanes for pedal cyclists off the main carriageway. Pedestrians, passengers in public transport, and cyclist account for more than 80% of total fatalities in Kenya.	
5. Public Transport fare from Nairobi to Thika (KES)		80 (2007)	100 (2016)	56 (2012)	179%	Average public transport fare from Nairobi to Thika was expected to reduce by 30% at completion of the project. Current data shows that the average fare from Nairobi to Thika has increased by 25% over the last 9 years. This is a modest increase that can be attributed to increased vehicle operating costs.	No
6. Traffic Volumes (vpd)		45,730 (2007)	65,188 (2016)	51,307 (2012)	127%	Traffic was expected to grow to 1.12 times. The 2016 traffic data shows a higher growth rate of 13,880 vehicles per day over the last 4 years.	No

Notes:

**Data from Economic Surveys of Kenya (KNBS) and Project Appraisal Report.*

***Data from Economic Surveys of Kenya (KNBS) and Tanzania (NBS).*

- Data for 2016 Vehicle Delays and Speed studies and 2007, 2012 & 2016 para-transit fare obtained from the Consultant's Traffic Surveys
- Data for 2007, 2011 & 2012 Traffic Flows, Speed and Vehicle Delays, Number of Fatal Accidents obtained from Final Feasibility and Preliminary Engineering Report Nairobi-Thika Upgrading Project (2007) by CES & APEC.
- 2015 traffic flows obtained from Feasibility Study Report - Consultancy to Provide Transaction Advisory Services for the Operation and Maintenance of Nairobi-Thika (A2) Highway PPP Project, Kenya (February 2016) by ICT in JV with Grant Thornton India LLP in association with GEODEV (K) LTD in association with Chitale & Chitale Partners.
- Accident data from KeNHA's PCR and the NTSA.

3. Output reporting

Output indicators (as specified in the PM)	Most recent value(A)	End target (B) (expected value at project completion)	Progress towards target (% realized) (A/B)	Narrative assessment (indicative max length: 50 words per output)	Core Sector Indicator (Yes/No)
1. Six to eight-lane divided highway with full access control between Nairobi and Thika town built	50.38 km upgraded/ rehabilitated and taken over (2012)	48.78 km At the design stage	103%	The entire length of road was upgraded /rehabilitated to the designed standards. The works were extended to 2.28km beyond the Thika overpass, which was the initial end of the project.	No
2. Service and slip roads along the Highway built	39 km	19 km	205%	Service roads: some 7.50 km for Lot 1; 14.1km for Lot 2; and 17.4km for Lot 3 were built. Some 5.90 km of slip roads were also constructed. The works included: improvement of Kipande and Limuru link roads; construction of additional service/slip roads at Garden Estate, Kasarani and Githurai roundabouts; construction of a roundabout at EABL to ease manoeuvrability for trucks; provision of more service roads in Lot 3; and the construction of access roads to JKUAT, Mangu School some Government quarters.	No
3. Nine (9) traffic interchanges built	Lot 1: 5 No. Flyovers; 1 No. Overpasses; and 2 No. Underpasses	Lot 1: 5 No. Flyovers and 1 No. Underpass	133%	The structures were built at the following locations: Flyover at Ojijo R/A; Flyover at Limuru road junction; Flyover at Globe Roundabout; Underpass & Flyover at Pangani; Overpass & Underpass at Muthaiga; Underpass at Mathare Hospital; Underpass at Kiganjo Road; Overpass at GSU; Overpass at garden Estate junction; Flyover at Kasarani; Flyover at Githurai; Underpass at Kahawa Sukari; Flyover at Eastern bypass (Ruiru); Underpass at Survey of Kenya; Underpass at Gatundu road; and Underpass at Mangu Village. The additional works involved the construction of a flyover at Pangani and construction of a combination of an overpass/underpass in place of a flyover at Muthaiga Roundabout.	No
	Lot 2: 2 No. Flyovers; 2 No. Overpasses; and 3 No. Underpasses	Lot 2: 2 No. Flyovers; 2 No. Overpasses and 3 No. Underpasses	100%		
	Lot 3: 1 No. Flyovers; and 3 No. Underpasses.	Lot 3: 1 No. Flyovers; and 3 No. Underpasses	100%		
4. Feasibility & Detail Engineering Reports for Nairobi Transit System Resettlement & compensation plan implemented	Final report (submitted in June 2011 after 18 months)	Final Report (PAR estimated completion in 7 months)	100%	Nine (9) road corridors proposed for mass rapid transport. The corridors are: <ul style="list-style-type: none"> • Nairobi Railway Station (NRS) – Ruiru-Thika; • NRS – Juja Road – Kangundo; • NRS – Jogoo Road – Komorock; • NRS – JKI Airport- Athi River; • NRS – Langata Road – Karen; • NRS – Upper hill – Ngong; • NRS – Kabete – Kikuyu; • NRS – Gigiri – Limuru; and, • Outer Ring Road 	No

Output indicators (as specified in the PM)	Most recent value(A)	End target (B) (expected value at project completion)	Progress towards target (% realized) (A/B)	Narrative assessment (indicative max length: 50 words per output)	Core Sector Indicator (Yes/No)
5. Maintenance contract concluded between the GOK and a private entity	Private firm contracted to maintain the finished road	Private firm contracted to maintain the finished road	100%	Promote private sector participation in the management, operation, and financing of road infrastructure in Kenya	No
Rating* (see IPR methodology)	Narrative assessment				
4	<p>The expected physical outputs were fully achieved, and some exceeded. The length of service roads and the number of under- and over-passes exceeded what was planned. They were provided to ensure better performance due to new conditions and developments. Additional outputs included:</p> <ul style="list-style-type: none"> • A 2.28km dual section after Thika overpass to ensure smooth traffic flow and adequate capacity beyond the Thika overpass; • Accesses to government institutions, service roads to JKUAT and Mangu School, amongst other institutions; • Service and slip roads between Kenyatta University and Thika to ensure smooth traffic flow for better traffic circulation; • A flyover at Pangani junction to allow free movement of traffic between Forest Road and Kariakor road; and, • A combination of an overpass and an underpass at Muthaiga Roundabout in place of a flyover. <p>The two studies (Promotion of PSP in the management, operation, and financing of road infrastructure in Kenya and the Feasibility and detail engineering designs for Nairobi Mass Transit System(NMTS) were completed, adopted by the Government and recommendations refined for implementation. The NMTS corridors and technologies have been harmonised with other on-going projects in the metropolitan region, and an integrated MRTS in the NMA region developed. Detailed designs for the corridors are at advanced stages.</p> <p>Following the Private Sector Participation study, the Government enacted the PPP Act No. 15 of 2013 and is in the process of undertaking feasibility studies for PPP along the project road, and the Northern Corridor road from Mombasa to Nakuru, and the Southern Bypass in Nairobi.</p> <p>Average rating for the outputs is Highly Satisfactory.</p>				

4. Development Objective (DO) rating

DO rating (derived from updated IPR)*	Narrative assessment (indicative max length: 250 words)
3	The project met the sector outcomes and is rated Highly Satisfactory , met its development objectives and is rated Satisfactory , and is rated Highly Satisfactory in meeting the expected outputs. The combined development objective rating for the project is Satisfactory .

5. Beneficiaries

Actual (A)	Planned (B)	Progress towards target (% realized) (A/B)	% of women	Category (e.g. farmers, students)
1. Urban population residing along the road and residents in Kiambu; Ruiru; Juja and Thika urban centres were 1,215,000 in 2009 census.	1. The total population living along the road was approximately 843,526 in 1999 comprising 446,930 males and 397,019 females.	144%	49.2	General population in the project area of influence.
2. Transport operators, especially passenger vehicles, trucks transporting light and heavy goods (domestic and regional to Ethiopia and Somalia), and non-motorized road users.	2. Daily commuters: 89,500 residing in Kasarani, Kiambu and Thika and another 125,000 in the informal sector	>100%	NA	Commuters
3. Estimated number of students commuting daily from the two public universities (Kenyatta University and Jomo Kenyatta University of Agricultural Technology) and three private Universities (MKU, USIU and KCA) in 2014/2015 academic year was 28,000	3. Approximately 12,000 college students at two public universities (Kenyatta University and Jomo Kenyatta University of Agricultural Technology) commuting daily along the project road	233%	41	College Students

6. Unanticipated or additional outcomes

Description	Type (e.g. gender, climate change, social, other)	Positive or negative	Impact on project (High, Medium, Low)
1. Traffic level after project completion was much higher than predicted levels for most project road sections. This has seen the re-emergence of traffic congestion especially during peak periods into Nairobi city centre.	Economic	Positive/ Negative	Medium
2. New factories established e.g. Seven-Up Bottling Company (Pepsi Company), Sterling Kenya in Thika town, amongst others.	Economic	Positive	High
3. New shopping complexes developed e.g. Thika Road Mall, Garden City Mall, Mountain Mall, Ridgeways Mall, UNICITY mall at Kenyatta University, amongst others.	Economic	Positive	High
4. Social amenities and recreation facilities e.g. New Buffalo Hills Golf and Leisure Village and Tatu City, amongst others.	Social/Residential	Positive	High
5. Training and technology transferred to locals e.g. plant operation skills, new construction techniques, amongst others.	Social	Positive	High
6. Change in design to use solar lighting which is a renewable source of power that does not contribute to climate change	Climate	Positive	Medium

7. Lessons learned related to effectiveness

Key issues	Lessons learned	Target audience
1. Traffic generated due to unanticipated land use development	1. Total traffic was much higher (1.25 to 2 times) than expected at opening in 2012. The actual average traffic growth rate was 7.1% (varying from 3.9% to 10.3%) compared to 2.8% (between 1.9% and 5.5%) assumed at the design stage. This is attributed to generated traffic from new land use development along the corridor, which has prematurely contributed to congestion at some intersections and merging points. Generated traffic due to land use development along a transport corridor should be adequately accounted for at planning stages.	KeNHA
2. Travel times and delays are influenced by operational inefficiencies due to design deficiencies	2. The project road's main function is for rapid traffic flow, with full access control. However, pedestrian and cyclist access are permitted at some sections by introduction of speed humps, zebra crossings, and speed limits. Direct access should be provided from the service roads and full separation should be provided between motorised and non-motorised modes.	GoK, KeNHA
3. Targets should be defined better	3. Targets for accident reduction should be defined by number of accidents per number of vehicles as the traffic volumes are expected to increase and accidents will follow the same trend; Fares should also take into account normal increases due to factors such as vehicle operating costs.	KeNHA, Bank
4. Unanticipated outcomes should be evaluated better	4. Many commercial and residential developments took place during and after the project implementation whose impacts are beginning to undermine some of the positive outcomes. Such developments should be adequately catered for at the design stage, and their impacts managed at the operations stage.	GoK, KeNHA
5. Low uptake of roads construction jobs by women	5. Meeting the Government's requirement of 30% participation by any gender (female) requires extra effort in road construction works as currently being implemented. Affirmative action in making it a requirement to engage female employees should be considered. In addition some light construction works such as, laboratory technicians, traffic control, lining of side drains, landscaping, and office work can be targeted to women.	GoK, KeNHA

C Efficiency

1. Timeliness

Planned project duration – years (A) (as per PAR)	Actual implementation time – years (B) (from effectiveness for 1st disbursement)	Ratio of planned and actual implementation time (A/B)	Rating *
Lot 1: 30 months	41.94 months ³	72%	3
Lot 2: 30 months	41.96 months ⁴	71%	3
Lot 3: 30 months	41.93 months ⁵	72%	-
Narrative assessment (indicative max length: 250 words)			
Lot 1: Nairobi Arterial Connectors			
Implementation of this road section did not fully follow the planned implementation schedule. The project was approved on 21 st November 2007, first disbursement was effective on 3 rd June 2009 (≈2.5 years after approval) and the project was substantially			

³ **Additional works:-** Improvement of Kipande and Limuru link roads; Construction of an additional flyover at Pangani junction; Construction of 5 No. additional Foot of Bridges; Construction of a combination of an overpass and an underpass at Muthaiga in place of a flyover; and, Construction of 3 box culverts at Museum Hill.

⁴ **Additional works :-** Construction of 2km of retaining walls; Construction of an extra lane between Pangani and Kasarani; Construction of 2 No. additional Foot of Bridges; and, Construction of additional service/slip roads.

⁵ **Additional works:-** Construction of an extra lane and service roads up to Thika; Construction of 2 No. additional Foot of Bridges; Construction of 4 lanes beyond the Thika overpass to the end of the project; Construction of an extra 2 lane loop for Thika overpass; Construction of separate 3m wide concrete bridges on either side at River Thika and River Chania to accommodate NMT; Construction of access roads to JKUAT, Mangu High School and government quarters; and, Construction of an 8 lane instead of 6 lane interchange at Thika road/ Eastern bypass junction.

completed on 25th July 2012. Planned completion as per the implementation schedule was to be on 27th January 2011. Long extensions of time for completion were granted (11.94 months) to the contractor due to delays in land acquisition and relocation of services; inclusion of some additional works; and adverse weather in the year 2009-10 due to effect of El Nino phenomenon. Since the extension of time were evaluated and granted as per the Contract provisions, and the additional 1.5 years was necessary to complete works that would ensure the project fully met its development objectives, the efficiency rating for this lot is **Satisfactory**.

Lot 2: Muthaiga to Kenyatta University

Implementation of this road section also did not fully adhere to the planned implementation schedule. The project was approved on 21st November 2007, first disbursement was effective on 3rd June 2009 and the project was substantially completed on 24th July 2012. Planned completion as per project implementation schedule was to be on 24th July 2011. Long extensions of time were granted (11.96 months) to the contractor due to delay in land acquisition and relocation of services; inclusion of some necessary additional works; and adverse weather in the year 2009-10 due to effect of El Nino phenomenon. The 11.96 months extension of time was treated as part of planned time for completion. Efficiency rating is **Satisfactory** since the additional 1 year was necessary to complete works that would ensure the project fully met its development objectives.

Lot 3: Kenyatta University to Thika

Implementation of this road section also did not fully adhere to the project implementation schedule as planned at appraisal. The project was approved on 18th December 2009, first disbursement was effective on 3rd June 2009 and the project was substantially completed on 19th July 2012. Planned completion as per the project implementation schedule was to be on 21th July 2011. Long extensions of time (11.93 months) were granted to the contractor due to delay in land acquisition and relocation of services; inclusion of some additional works; and adverse weather in the year 2009-10 due to effect of El Nino phenomenon. The 11.93 months extension of time was treated as part of planned time for completion. Efficiency of this lot is also rated as **Satisfactory** although it was implemented through parallel financing by EXIM Bank of China and the Government.

2. Resource Use Efficiency

Median % physical implementation of PM outputs financed by all financiers (A) (see II.B.3)	Commitment rate (%) (B) (See table 1.C – Total commitment rate of all financiers)	Ratio of the median percentage physical implementation and commitment rate (A/B)	Rating*
105%	130.77%	0.8	2

Narrative assessment (indicative max length: 250 words)

Lot 1: Additional costs were incurred for:

- An additional flyover structure at the Pangani Junction which was added to make the junction fully conflict-free;
- Improvement and upgrading of some 1.2 km of Kipande and Limuru road;
- Construction of five additional footbridges instead of two.
- Conversion of Muthaiga roundabout to make the junction conflict-free; the proposed flyover in original contract was replaced with a combination of overpass and underpass structures and main carriageway in cutting;
- The interchange loop at the Museum Hill was shifted that necessitated construction of additional three (3) box culverts;
- Change from conventional to solar lighting system;
- Change of traffic signs design specifications; and,
- Landscaping of open spaces and islands.

Additional outputs are estimated at not more than 5% of the original outputs

Lot 2: Additional costs were incurred for:

- Main carriageway built to 4-lanes in each direction from Pangani to Kasarani roundabout instead of 3-lanes in each direction in the original contract. Total of extra 2.55km;
- Two additional footbridges and additional modifications for comfort;
- An overpass at EABL junction was introduced to enhance manoeuvrability;
- Lighting to Underpasses, Overpasses and Flyovers found necessary to provide safe environment for the road users;
- Improvement of roads damaged by diverted traffic during construction;
- Extra retaining wall to accommodate service roads and overpasses;
- Change in construction material to arrest capillary rise and free flow of sub-soil water in deep cut stretches;
- Landscaping of open areas and additional traffic circulation improvements for local traffic; and,
- Construction and relocation of fences and services to Government institutions along the road.

Additional outputs are estimated at not more than 5% of the original outputs.

The ratio is between 1 and 0.75 indicating that fewer outputs were achieved using higher financial inputs. Resource use efficiency is therefore rated as **Unsatisfactory**.

3. Cost Benefit Analysis

Economic Rate of Return (at appraisal)	Updated Economic Rate of Return (at completion)	Rating *
30.04%	24.9%	3

Narrative assessment (indicative max length: 250 words)

Economic re-evaluation was undertaken using the Highway Development and Management (HDM-4) model version 2.08 at 12% discount rate and analysis period covering 20 years of road service. Two maintenance strategies were considered: (i) *“Without project”* Do minimum case: Maintenance practice comprising routine maintenance, patching 100% potholes and overlay road at 5 m/km IRI. (ii) *“With project”*: Maintenance practice comprising of routine maintenance, single surface dressing when roughness reaches between 4.5 – 8 m/km IRI, and overlaying with 35 mm AC when roughness reaches between 5 - 8 m/km IRI. Accident costs were not taken into account as accident profiles and frequency were not available.

The HDM4 object files used at appraisal stage could not be obtained and therefore the assumptions in the table below were made in reconstructing the HDM4 workspace.

Assumptions

No.	Item	At Appraisal	At Completion
1	Construction period	3 yrs. (2008-2011)	4 yrs. (2008-2012)
2	Discount Rate	12%	12%
3	Analysis period	2007 - 2030 i.e. 20 yrs. after opening in 2011	2007 - 2031 i.e. 20 yrs. after opening in 2012
4	Annual Cost Stream	Year 1 - 30%; Year 2 - 40% & Year 3 - 30%	Year 1 - 20%; Year 2 - 30%; Year 3 - 30% & Year 4 - 20%
5	Salvage Value	-	30%
6	Final IRI after improvement	-	3
7	Standard Conversion Factor (SCF)	0.85	0.85
8	Cost in Million KES per Km	Nairobi City-Pangani: Economic = 679.1 & Financial = 798.9 Pangani - Kasarani: Economic = 521.3 & Financial = 613.3 Kasarani - Juja: Economic = 279.4 & Financial = 328.7 Juja - Thika: Economic = 200.3 & Financial = 235.6	Nairobi - Thika: Economic = 580.1 & Financial = 682.4

The marginal decline in EIRR can be attributed to the increase in project cost from about KES. 18.9 billion at appraisal stage to about KES. 35.9 billion at completion, and the rapid growth in traffic volumes that has resulted into congestion at some intersections in the Nairobi direction. The decline in EIRR is marginal and therefore the rating is **Satisfactory**.

4. Implementation Progress (IP)⁶

IP Rating (derived from updated IPR) *	Narrative comments (commenting specifically on those IP items that were rated Unsatisfactory or Highly Unsatisfactory, as per last IPR). (indicative max length: 500 words)
3.6	The last IPR rating was made at the time of preparing this PCR. The final ratings were derived at from an assessment of the Bank's Performance Criteria Monitoring filled after each of the 13 field supervision missions undertaken. The

⁶ For operations using the old supervision report and rating system in SAP, the IP ratings need to be converted from the 0-3 scale used in SAP to the 1-4 scale used in the IPR.

	<p>IP rating takes into account all applicable IP criteria assessed under each of the three main categories: (i) compliance with covenants; (ii) project systems and procedures; and, (iii) project execution and financing. The simple arithmetic average of the individual ratings was then calculated to derive the final rating. No IP criterion was rated unsatisfactory or highly unsatisfactory. The Supervision reports are attached with this PCR as Annex 1.</p> <p>The overall IP rating is 3.6 which is Highly Satisfactory.</p>
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5. Lessons learned related to efficiency

Key issues (max 5)	Lessons learned	Target audience
1. Government fulfilling conditions of the Loan	1. The Government took more than two years to fulfil some conditions of the loan. The delay was mainly due to compensation and relocation of project affected persons, and opening and depositing initial sum as counterpart funds for the civil works. Compensation of affected persons should be complete at appraisal of project. The Government should also improve on its negotiation of loans with Bank so that conditions that are finally included in the Loan Agreement are realistic and can be met on time.	GoK
2. Delay to project delivery due to relocation of services	2. Relocation of services often cause delays to start of civil works and therefore should be settled early enough before awarding contracts. At appraisal, the Bank should request for evidence that the services have been identified and an action plan for relocation is in place.	GoK, Bank
3. Cost and time overruns due to additional works	3. Final designs should be complete before appraisal of the project. Several additional works, although necessary for meeting the objectives of the project, were instructed project during implementation.	KeNHA, Bank
4. Evaluation of outcomes	4. Accurate evaluation of outcomes requires original design and as-built documentation, and accurate baseline and latest indicator data. Therefore, project design and as-built documents (e.g. the HDM-4 object files used at appraisal stage) should be safely kept, and indicator data collected regularly.	KeNHA
5. Financial performance of the Government	5. The Government should set aside funds in a separate account and provide account statements to the Bank at every field mission.	GoK, Bank

D Sustainability

1. Financial Sustainability

Rating	Narrative assessment (indicative max length: 250 words)
4	<p>The Government of Kenya through Kenya Roads Board (KRB) allocates road maintenance funds to KeNHA for maintenance of national highways. The Nairobi - Thika highway is managed by KeNHA as one of its international highways. KRB and KeNHA have placed highest priority to routine maintenance of all bitumen roads in maintainable condition. The project road is therefore assured to receive sufficient routine maintenance regardless of the total funding available. In addition, the ongoing 2-year routine maintenance contract signed between KeNHA and a Contractor in 2014 is a testimony of the importance of this road to the Government. Studies are also underway to introduce tolling along the road to fund its future maintenance and rehabilitation through a concession agreement.</p>

2. Institutional Sustainability and Strengthening of Capacities

Rating *	Narrative assessment (indicative max length: 250 words)
3	<p>The Executing Agency for the project was KeNHA which has successfully implemented many road projects while the implementing agency for the Nairobi Metro Study was the Ministry of Transport. Currently these two agencies are both under the Ministry of Transport and Infrastructure, and therefore fall under the same policy guidelines. The Ministry and KeNHA are well established and robust in terms of organization and management of their functions. They are well staffed and equipped to preserve the investment and sustain asset value of the project. The project significantly contributed to strengthening institutional capacities within KeNHA/MoTI. The existing Institutional set-up and staff capabilities are deemed sufficient to ensure the continued proper maintenance of the completed road.</p>

3. Ownership and Sustainability of Partnerships

Rating *	Narrative assessment (indicative max length: 250 words)
3	<p>All key partners were involved to varying degrees in the implementation of the project. They included Ministry of Transport, KeNHA, KURA, Nairobi City Council, the Ministry of Local Government, Kenya Railways Corporation and Local Administrators, amongst others. Local participation was quite visible: a local contractor was involved in the relocation of services; a local engineering consultancy firm was part of the studies and supervision of works team; and KeNHA engineers.</p> <p>The project offered an opportunity for training to KeNHA staff and transfer of expertise in road construction to local personnel working with the contractors and consultancy firm (more than 90% of works supervision personnel were local staff).</p> <p>The experience gained by local staff will be useful in future road projects and maintenance of the project road. On asset sustainability, vandalism of road signs and road furniture along the completed project road was initially a major challenge but the ban on scrap metal trade in 2013 by the Governor of Nairobi City County has reduced intentional vandalism.</p>

4. Environmental and social sustainability

Rating *	Narrative assessment (indicative max length: 250 words)
3	<p>The project was classified as Category 1. A full Environmental and Social Impact Assessment (ESIA), including an Environmental and Social Management Plan (ESMP) were prepared by GOK and used as a tool by KeNHA and the supervision consultant to monitor the Contractors' compliance. Environmental issues were generally well addressed: borrow pits were reinstated; embankments side slopes grassed; and erosion control measures instituted.</p> <p>On social matters, the project carried out a comprehensive HIV/AIDS programme that involved HIV awareness among the workers and the surrounding community. Issues of long term impact were addressed including: Voluntary medical circumcision; the increasing vulnerability of married couples to HIV infection; multiple concurrent partnerships; the need to focus more on under-served and most-at-risk populations such as sex workers; and persons living with HIV. A total of 89,300 male/female condoms and 5,774 awareness posters/pamphlets were distributed during the contract period. Also, some 1,476 people were tested for HIV and 3 No. clinics were established for each of the three lots. The HIV/AIDS programme further approached the HIV awareness from a communal level since project workers continually interacted with the community in one way or another. The impact of the HIV programme is believed to have long term impact to the community that is expected to last well beyond project completion.</p> <p>In terms of employment creation, the project generated about 2.65 million man-days for both unskilled and skilled labour, although the proportion of female employees stood at a paltry 3.5% of the total workforce.</p> <p>An independent post-construction Road Safety Audit was undertaken in 2012 to evaluate the traffic safety and operational features of the implemented design. The report was forwarded to the KeNHA for implementation.</p>

5. Lessons learned related to sustainability

Key issues	Lessons learned	Target audience
1. Road maintenance revenue	1. The Road Maintenance Levy Fund (RMLF) managed by the Kenya Roads Board (KRB) has increased annually from about KES 18.3 billion in 2008/09 to KES 25 billion in 2014/15, and projected to reach KES 29.18 billion in 2015/16, but is still inadequate to cover the whole road network. KRB estimates that about KES. 70 billion is required for the maintenance of the entire road network annually, of which periodic maintenance of paved roads alone requires KES. 45 billion. KRB is considering several options to increase the fund, including: long-term infrastructure bonds; public private partnerships; increasing axle load charges; introducing levies on motor vehicle insurance and annual licenses; and, levies on outdoor advertisements. Fuel levy was increased from KES 9 to KES 12 per litre in July 2015, which has made more resources to be available. The GoK should start tolling as experience has shown that it is a viable option for heavily trafficked roads like the Nairobi – Thika highway.	GoK, KeNHA
2. Vandalism of road assets	2. Road furniture should be made of materials which cannot be easily converted to other uses or find readily available market for sale.	KeNHA
3. Encroachment of right of way (ROW) and broken down vehicles on roads	3. Encroachment of ROW and occupation of carriageway lanes by traders or broken down vehicles reduce the capacity of roads and are safety hazards. They should be removed through improved surveillance using contracted service teams	KeNHA
4. Road safety and security of vulnerable roads users	4. Road safety and security countermeasures for vulnerable users should be adequately included at the detailed design stage and independently audited. The issue of including pedestrian footbridges and lighting of under-passes during implementation will often not fully address pedestrian and other non-motorised transport traffic needs.	KeNHA

1. Bank performance

Rating *	Narrative assessment by the Borrower on the Bank's performance, as well as any other aspects of the project (both quantitative and qualitative). (indicative max length: 250 words)	
4	<p><i>Borrower's assessment of Bank's performance:</i> The Bank appraised the project and prepared the project on time, and ensured that it received the Board approval, and adequately advised the Borrower on meeting its loan conditions. Disbursement of the loan was undertaken as per the agreement and that enable the efficient implementation of the project.</p> <p>The Bank sent supervision missions (with mixed skills personnel) to the project at regular intervals. The purpose of the Bank's mission was to monitor, give timely technical guidance, promote stakeholders participation during site & wrap-up meetings and report on the project progress. The performance of the Bank's missions was good. The advice given by various Bank Missions was valuable to GoK during the implementation of the project. Among commendable actions taken by the Bank include the acceptance to extend the loan disbursement date to allow funding and implementation to completion of other projects such as the interim terminal at JKIA using the cost savings in the main project.</p> <p>The Bank closely monitored the project's progress through regular field review missions during which it provided practical and useful advice on many issues that were encountered during implementation. During these missions, which also involved site inspections and meetings, the Bank always gave advice to the contractors and consultants on the project on how they could address challenges and difficulties to the progress of work. Most of the time, the contractors' main challenge was delayed settlement of interim payment certificates. In this regard, the Bank worked closely with the Borrower in expediting settlement of contractors' invoices.</p> <p>Most importantly, the Bank worked closely with the Government in mobilising additional financing for Lot 3 when costs exceeded the ADF loan. Additional financing was required because the evaluated and awarded tender sums turned out to be more than the loan, mainly because of increase in scope of works in Lot 1: Nairobi City Arterials, after appraisal.</p> <p>The Bank's participation was not only limited to financial issues but also entailed effective monitoring and reviewing progress. The Bank also helped the Borrower in focusing on the critical activities that helped in achieving the development objectives of the project.</p> <p>The Bank's performance rating was Highly Satisfactory.</p>	
	Comments to be inserted by the Bank on its own performance (both quantitative and qualitative). (indicative max length: 250 words)	
	<p>The Bank throughout the project cycle deployed the right skills mix, which facilitated the provision of vital technical advice to the Borrower based on their experiences from similar operations in other member countries. By attending periodic progress meetings, the Bank was part of a broader stakeholder consultation forum where ideas were exchanged that helped in finding solutions to problems that faced the project. The close interaction enabled the Bank to undertake timely responses to Borrower requests.</p>	
Key issues (related to Bank performance, max 5, add rows as needed)		Lessons learned
1. No objections to Borrower's project documents		1. Documents from the Borrower for the Bank's "no objection" should be prepared in accordance with the Bank's guidelines for faster processing and progress of projects.
2. Team work		2. Supervision missions of the Bank should maintain close and cordial relationship with the Borrower's project officials for better project implementation.

2. Borrower performance

Rating *	Narrative assessment on the Borrower performance to be inserted by the Bank (both quantitative and qualitative, depending on available information). (indicative max length: 250 words)	
4	<p><i>Bank's assessment of Borrower's performance:</i> The Government and the implementing agency prepared the project design, financed the construction supervision and PSP consultancies, and acquired the necessary land and relocated the services within the right of way. This showed the Government's unwavering commitment to the project. In general, the Government produced good quality documents and performed these tasks satisfactorily well, although there was large cost and time overruns.</p> <p>The Government met and complied with all with covenants, agreements and safeguards, in line with the Bank's regulations. The Government signed the Loan and Grant within days after the loan was approved by the Bank's Board. However, it took more than 8 months to the entry into force due to delays incurred by the Government to comply with covenants of the Loan and Grant. This is rated unsatisfactory as the proceeds of the loan and grant could not be drawn for implementation of the project. The actual date of first disbursement was one year after entry into force.</p> <p>The timely Government's negotiation for own resources and a loan to finance the road section from Kenyatta University to Thika (Lot 3) must be commended. Without the loan some of the development objectives of the project may not have been met. Although there were many challenges the Government often met its financial obligations as far as provision of counterpart funding was concerned. The project progress was well documented in quarterly reports which were timely submitted to the Bank, and there was timely action on Bank's supervision recommendations.</p> <p>The Government has signed a performance based contract for maintaining the road that will ensure sustainability of the outcomes of the project. The executing agency is providing direct supervision of the Contract through its Regional Manager in charge of Nairobi County.</p> <p>In general, the Government and the executing agency performance is rated Highly Satisfactory.</p>	
Key issues (related to Borrower performance, max 5)	Lessons learned	
1. Delayed payments of counterpart funding	1. Delayed release of funds for payment of IPCs Borrowers portion results into unnecessary costs due to interest on delayed payments and extensions of time for completion. The Government should not only set aside the necessary funds, but also reduce the processing times for consultant and contractor invoices.	
2. Covenants of the Loan Agreement	2. The Government took too long in meeting loan conditions, causing delays in project implementation and delivery of objectives. The Government should improve on its negotiation of loan with Bank so that conditions that are finally included in the Loan Agreement are realistic and can be met in good time.	

3. Performance of other stakeholders

Rating *	Narrative assessment on the performance of other stakeholders, including co-financiers, contractors and service providers. (indicative max length: 250 words)	
3	Consultants: The quality of the original design work was unsatisfactory as there were many revisions undertaken during project implementation. These could have been factored into the designs if comprehensive investigations and consultations were made with key stakeholders along the road corridor. The quality of supervision services was satisfactory as they deployed experienced staff that were often responsive to the Government's and Bank's recommendations, and changed site conditions.	
3	Contractors: The quality of the outputs was satisfactory. They deployed experienced staff and appropriate equipment for the various work items. However the management of traffic during construction could be improved especially for non-motorised traffic.	
3	Local Administrators: They acted as a liaison between the Project Implementation Team and the residents and were therefore vital in promoting cooperation.	

Rating *	Narrative assessment on the performance of other stakeholders, including co-financiers, contractors and service providers. (indicative max length: 250 words)	
3	Social Service Providers (NGO/CBO's): Were actively involved in sensitization campaigns of the Project Affected Persons with respect to a wide array of issues amongst them HIV/AIDS awareness campaigns.	
3	Kenya Alliance of Resident Associations (KARA): They conducted a Social/Community Component Analysis of the Thika Highway Improvement Project from which Stakeholder Meetings/ Focus Group Discussions/Public Forum were held to collect views from the Project Affected Persons (PAP's) with view of improving involvement of the public in future projects.	
1	Utility companies: The performance of electricity, water and sewer line companies was highly unsatisfactory. In many cases they did not relocate their services in time, even after full payment is made to them. The performance of the Data cable companies in relocating their cables was highly satisfactory.	
Key issues (related to performance of other stakeholders, max 5)	Lessons learned (max 5)	Target audience (for lessons learned)
1. Involvement of utility companies	1. Utility companies should be involved/consulted at the detailed design stage so that some of the services can be avoided, and others identified for relocation before award of contract	KeNHA, Consultants
2. Stakeholder Consultations	2. Involvement of key stakeholders at the design stage ensures acceptance of the project, smooth implementation, and can result in cost reduction and timely completion of the project.	KeNHA, Stakeholders

IV SUMMARY OF KEY LESSONS LEARNED AND RECOMMENDATIONS

1. Key lessons learned

Key issues	Lessons learned	Target audience
1. Changes in design at implementation	1. Detailed design review, audit and final decisions on new proposals, before project implementation commences, are key prerequisites to avoiding time and cost overruns in projects.	KeNHA
2. Lack of a clear land use development policy	2. To enable more accurate forecasting of future generated traffic, proposed future land use for various zones should be well defined at the design stage by the County Government. The project road has seen a rapid rise in traffic volumes due to developments that were not accounted for in the design stage, and some of the outcomes have not been fully realised.	KeNHA/GoK
3. Delayed payments of counterpart funding	3. The Government should set aside funds in a separate account and provide information to the status of funding of that account to the Bank at every mission. Delayed release of funds for payment of IPCs results into unnecessary additional costs due to interest on delayed payments and extensions of time for completion.	KeNHA/GoK
4. Variation of Prices (VOP) Clause	4. VOP payments contributed to cost overruns because they were under-estimated and sources of indices used for calculation of payments varied by source and from one contractor to another. Determination of VOP indices should be clearly stated in the works contract conditions and accurately included in the bills of quantities.	KeNHA
5. Delays in land acquisition and relocation of services	5. Right of way should be made available before the Contractor Possesses the sight to avoid unnecessary delays and claims. Pilot trenching to identify location of services should be conducted at the design stage whenever possible.	KeNHA

2. Key recommendations (with particular emphasis on ensuring sustainability of project benefits)

Key issue (max 10)	Key recommendation	Responsible	Deadline
1. Design revisions during implementation	Additional costs due to design revisions reduce economic benefits of projects and can be minimised if a comprehensive design is undertaken, an independent audit performed, and only those design revisions that improve performance approved.	KeNHA	Continuous
2. Roads maintenance financing	It is recommended that the GoK and KeNHA should continue to explore other opportunities, including tolling, to broaden revenue sources for road maintenance in Kenya. In particular, the Government should implement recommendations that will emerge from the on-going tolling study.	KRB/KeNHA	As soon as possible
3. Road safety	Road safety interventions should be built into detailed engineering designs and independently audited before construction stage. The barrier effect and the consequent risks of accidents to non-motorised users, of such a major urban highway should be clearly articulated and mitigated against.	KeNHA	Continuous
4. Environment Protection	Proper baseline studies should be undertaken before, during and after the completion of a project to enable proper documentation of a project's impact on the environment.	KeNHA	Continuous
5. VOP Clause	Use of FIRM prices for the first 3 years of works contracts, instead of the current 18 months in Bank funded projects, can help in managing project price escalations due to VOP, and maximise project benefits.	GoK, KeNHA	As soon as possible
6. Utilities within the road's right of way	KeNHA should control installation of utilities within its right of way; Utility companies should be involved/consulted at the detailed design stage so that some of the services can be avoided, and others identified for relocation	KeNHA	As soon as possible

V Overall PCR rating

Dimensions and criteria	Rating*
DIMENSION A: RELEVANCE	3.5
Relevance of project development objective (II.A.1)	4
Relevance of project design (II.A.2)	3
DIMENSION B: EFFECTIVENESS	3
Development Objective (DO) (II.B.4)	3
DIMENSION C: EFFICIENCY	3.0
Timeliness (II.C.1)	3
Resource use efficiency (II.C.2)	2
Cost-benefit analysis (II.C.3)	3
Implementation Progress (IP) (II.C.4)	3.6
DIMENSION D: SUSTAINABILITY	3.3
Financial sustainability (II.D.1)	4
Institutional sustainability and strengthening of capacities (II.D.2)	3
Ownership and sustainability of partnerships (II.D.3)	3
Environmental and social sustainability (II.D.4)	3
OVERALL PROJECT COMPLETION RATING	3.2

Overall project completion rating is **Satisfactory**

VI Acronyms and abbreviations

Acronym	Full name
AC	Asphaltic Concrete
ADB	African Development Bank
ADF	African Development Fund
AICD	Africa Infrastructure Country Diagnostic
CBD	Central Business District
C/way	Carriageway
DBM	Dense Bitumen Macadam
DLP	Defects Liability Period
DO	Development Objective
DO	Developments Objective (rating)
EABL	East African Breweries Limited
EAC	East African Community
EoT	Extension of Time
ERS	Economic Recovery Strategy for Wealth and Employment Creation (2003 – 2007)
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
EXIM	Export – Import
FIDIC	Fédération Internationale Des Ingénieurs-Conseils
FY	Financial Year
GDP	Gross Domestic Product
GoK	Government of Kenya
GCS	Graded Crushed Stone

Acronym	Full name
HDM4	Highway Development and Management tool (released in year 2000)
HIV/AIDS	HIV: Human Immunodeficiency Virus. AIDS: Acquired Immune Deficiency Syndrome.
IPC	Interim Payment Certificate
IPR	Implementation Progress and Results Report
IRI	International Roughness Index
JKIA	Jomo Kenya International Airport
JKUAT	Jomo Kenyatta University of Agriculture & Technology
KeNHA	Kenya National Highway Authority
KCA	Kenya College of Accountancy University
KES	Kenya Shilling
Km/h	Kilometre per hour
KNBS	Kenya National Bureau of Statistics
KRB	Kenya Road Board
mins	Minutes
MoTI	Ministry of Transport & Infrastructure
MKU	Mount Kenya University
NA	Not Applicable
Nbi	Nairobi
PAPs	Project Affected Persons
PCR	Project Completion Report
RAP	Resettlement Action Plan
RMLF	Road Maintenance Levy Fund
R/A	Roundabout
ROB	Rail Over Bridge
RTRN	East Africa Community Regional Trunk Road Network
RSIP	Roads Sector Investment Program
PM	Project Matrix
TA	Technical Assistance
UA	Unit of Account
USD	United States Dollar
USIU	United States International University
VPD	Vehicles per day

Required attachment: Updated Latest Project Supervision Implementation Progress and Results Report (IPR) – the date should be the same as the PCR mission.

VII References

1. Consulting Engineering Services (India) Pvt Ltd in association with APEC Ltd, Consulting Engineers, Kenya (March 2015).
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9. Aide Memoirs.
10. Implementation Progress and Results Report by the AFD Missions.
11. Kenya Alliance of Resident Associations (May 2012). Thika Highway Improvement Project: The Social/Community Component of the Analysis of the Thika Highway Improvement Project.

ANNEX 1

Latest Project Supervision Report for Nairobi - Thika Highway Improvement in Kenya



AFRICAN DEVELOPMENT BANK GROUP
SUPERVISION SUMMARY

NAIROBI – THIKA (A2) HIGHWAY IMPROVEMENT PROJECT

I. BASIC DATA

PROJECT NUMBER	P-KE-DB0-018
LOCATION	NAIROBI AND THIKA IN KENYA
SECTOR	ROAD TRANSPORT / HIGHWAYS
BORROWER	GOVERNMENT OF KENYA
EXECUTING AGENCIES	MINISTRY OF ROADS & PUBLIC WORKS (KENHA); NAIROBI METRO STUDY BY THE MINISTRY OF TRANSPORT
BENEFICIARIES	KENYA
DURATION	2.5 YEARS

LOANS ALLOCATED

LOAN NUMBER	SIGNED IN UA	AMOUNT in Loan Currency		INSTRUMENT	APPROVAL	SIGNATURE	Entry into Force	Disb. Deadline
2100150015544	117,850,000.00	117,850,000.00	UAC	PROJECT	21.11.2007	26.11.2007	11.07.2008	30.09.2015
TOTAL	117,850,000.00							

LOAN NUMBER	APPROVED in UA	SIGNED IN UA	CANCELLED in UA	NET LOAN in UA
2100150015544	117,850,000.00	117,850,000.00	0.00	117,850,000.00

II. SCHEDULE, COSTS, FINANCING AND DISBURSEMENT

A. PROJECT COSTS AND SCHEDULE (UA)

COST AT APPRAISAL	PRECEDING COST (SUP. SUMM.)	CURRENT COST (ESTIMATES)
175,100,000.00	--	175,100,000.00
COMPLETION DATE	PLANNED FIRST DISBURSEMENT DATE	PLANNED LAST DISBURSEMENT DATE
30.12.2012	03.06.2009	31.12.2012

B. PROJECT FINANCING (in UA)

SOURCE OF FINANCE	FOREIGN CURRENCY	LOCAL CURRENCY	TOTAL
AFRICAN DEVELOPMENT FUND (LOAN)	98,840,000.00	19,010,000.00	117,850,000.00
AFRICAN DEVELOPMENT FUND (GRANT)	3,150,000.00		3,150,000.00
GOVERNMENT OF KENYA		54,100,000.00	54,100,000.00
TOTAL	101,990,000.00	73,110,000.00	175,100,000.00

C. LATEST DISBURSEMENT STATUS TO DATE (in UA)

LOAN NUMBER	NET Amount	Disbursed	%	Undisbursed	%	Commitment	%	First disb.	Latest Disb.
2100150015544	117,850,000.00	116,010,940.07	98.4%	1,839,059.93	1.6	116,011,000.00	98.40	10.07.2009	30.09.2015

III. PROJECT PERFORMANCE

INDICATORS	RATINGS													
	Field Supervision Mission Dates													This report
	22.11.2008	25.05.2009	23.11.2009	12.04.2010	06.12.2010	02.07.2011	06.12.2011	23.03.2012	16.08.2012	30.11.2012	07.04.2014	10.11.2014	15.4.2015	03.02.2016
A. PROJECT IMPLEMENTATION														
Compliance with loan conditions precedent to entry into force	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Compliance with General Conditions	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Compliance with Other Conditions	4	4	4	4	4	4	4	4	4	4	4	4	4	4
B. PROCUREMENT PERFORMANCE														
Procurement of Consultancy Services	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Procurement of Goods and Works	4	4	4	4	4	4	4	4	4	4	4	4	4	4
C. FINANCIAL PERFORMANCE														
Availability of Foreign Exchange	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Availability of Local Currency	4	4	4	3	3	3	3	3	3	3	3	3	3	3
Disbursement Flows	4	2	2	2	3	3	3	3	3	3	3	3	3	3
Cost Management	2	1	1	3	3	3	3	3	3	3	3	3	3	3
Performance of Co-Financiers														
D. ACTIVITIES AND WORKS														
Adherence to implementation schedule	4	3	3	3	3	3	3	3	3	3	3	3	3	3
Performance of Consultants or Technical Assistance	4	4	3	3	3	3	3	3	3	3	3	4	4	3
Performance of Contractors	4	4	3	3	3	3	3	3	4	3	4	4	4	4
Performance of Project Management	4	4	3	3	3	3	3	3	3	3	3	3	3	3
E. IMPACT ON DEVELOPMENT														
Likelihood of achieving development Objectives	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Likelihood that benefits will be realized and sustained beyond	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Likely contribution of the project towards an increase in	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Current Rate of Return														
F. OVERALL PROJECT ASSESSMENT														
IP	3.9	3.6	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.7	3.7	3.6
OD	4	4	4	4	4	4	4	4	4	4	4	4	4	4.0

RATINGS: 4 = Highly Satisfactory, 3 = Satisfactory, 2 = Unsatisfactory, 1 = Highly Unsatisfactory

IV. PROJECT SUMMARY AND ASSESSMENT

A. PROJECT MATRIX

1. PROJECT OBJECTIVE :

Sector Goal:

The sector goals of the project are to:-

Contribute to improve the accessibility, affordability, and reliability of the transport infrastructure system to promote economic growth and socio—economic development; and,

Contribute to Regional Integration.

Project Objective:

Improve road transport services along the Nairobi-Thika corridor and enhance urban mobility within the metropolitan area by reducing traffic congestion;

Contribute to the development of a sustainable urban public transit system for the Nairobi Metropolitan Area; and,

Promote private sector participation in the management, operation, and financing of road infrastructure in Kenya.

2. PROJECT OUTPUTS :

Increased and sustained economic growth;

Increased intra-regional trade;

Improved traffic level of service with reduced travel time reduced delays, and fewer accidents;

Policy measures, plans and investment programs to implement Nairobi Metro System prepared MOT contract concluded between the GOK and Private entity;

Six to eight-lane divided highway with full access control between Nairobi and Thika Town built;

Services Roads along the Highway built;

Nine (9) traffic interchanges built;

Feasibility & detail engineering reports for Nairobi Transit System;

Reports, procurement & advisory services for PSP in the project; and,

Resettlement & compensation plan implemented.

3. PROJECT ACTIVITIES :

Construction of Six to eight-lane divided highway with full access control between Nairobi and Thika Town;

Construction of Nine (9) traffic interchanges;

Procurement and delivery of service;

Compensation of affected people; and,

Feasibility & detail engineering reports for Nairobi Transit System.

4. PROJECT ASSUMPTIONS AND RISKS :

Government sustains its commitment to the Economic Recovery Strategy and Kenya vision 2030;

Rapid Economic growth continues in Kenya;

Planned development in tourism, industry agriculture takes place;

Government continued commitment to implement the Nairobi Urban Transport Master Plan and develop efficient and sustainable public transportation system in Nairobi;

Effective Public Private Partnership for Private Sector Participation in the project;

Recruitment of capable consultants and Contractors;

Government continued commitment to institutional reforms and adequate funding;

Timely disbursement of counterpart funds;

Good monitoring and supervision of the project by the GOK and the Bank to ensure quality and timing of civil works and consultancies;

Project affected people are compensated and resettled.

B. BRIEF ASSESSMENT OF PROGRESS

At this Supervision

Status of physical implementation

5.1 Substantial Completion of works had been accomplished by 25-07-2012, 24-07-2012 and 19-07-2012 for Lots 1, 2 and 3 respectively.

5.2 The EIAs and RAPs were approved by NEMA and permits issued. KeNHA submitted the documents for compensations to the Commissioner of Lands for valuation. The compensation payment has been effected say for the proposed future improvement of Ruiru Interchange. The compensation details are as summarised below:-

Lot/Location	No. of Parcels Affected	Compensation Paid in KES.
Lot 1 – City Arterial Roads	76	2,109,379,981/=
Lot 2 – Muthaiga-Kenyatta	79	1,199,656,624/=
Lot 3 – Kenyatta-Thika	174+88*	2,833,025,268/=

*Note: *Additional 88 Parcels of Land have been acquired for improvement of Ruiru Interchange but the compensation is yet to be paid. The amount also includes such additional cost to be paid for the land.*

Claims Submitted by the Contractor

5.3 The claims submitted by the three Contractors were all related to extension of time. The notices of claims involved 2 No. for Lot 1, 3 No. for Lot 2 and 3 No. for Lot 3. All the claims were analysed and extension of time granted as appropriate.

Environment and Social Management Plan

5.4 The Mission noted that HIV/AIDS related activities have been satisfactorily implemented in the project area.

Implementation by the Borrower

Conditions of the Loan

5.5 The project has fulfilled all the loan conditions. The previous closing date of the loan of 31 December 2012 has since been extended to 30 June 2015 to allow for the completion of the construction of Interim Terminal at the JKIA from the loan savings of the Nairobi- Thika road improvement project.

Project Implementation Team (PIT)

5.6 The members of the PIT included the project Team Leader, one procurement specialist, one financial specialist, one engineer (design), one engineer (contracts), one environmental officer, and a fulltime support staff. The Study Implementation Team (SIT) included the study Team Leader (MOT) and representatives of the Nairobi City Council, the Ministry of Local Government, the Ministry of Finance, The Attorney General Chambers, KEPSA, Kenya Railways Corporation, and The Ministry of Roads and Public Works.

Procurement

5.7 Procurement was done in accordance with the Rules and Procedures of the Bank.

Disbursements

5.8 The confirmed disbursement ratio as at 30 June 2015 is 98.4% with undisbursed amount in the loan of UA 1.839 Million.

Monitoring and Evaluation

5.9 The project had been submitting monthly and quarterly progress reports and site meeting minutes on a regular basis. The physical progress of works is properly covered in the quarterly reports submitted.

Audit Reports

5.10 Audit reports for all years were submitted and approved by the Bank.

V. ISSUES AND ACTIONS

ISSUES	PROPOSED ACTIONS	ACTIONS TAKEN / RESULTS
	A. MANAGEMENT	
..
	B. TECHNICAL	
	C. FINANCIAL	
..
	D. INSTITUTIONAL	
	E. GOVERNANCE	
	D. OTHERS	

APPROVAL

Author of the Report	Authorized by Division Manager	Approved by Department Director
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