

LAGOS BLUE LINE URBAN RAIL CONCESSION

PROJECT BRIEFING DOCUMENT



LAGOS STATE GOVERNMENT

NOVEMBER 2008

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Table of Contents

1	Introduction	5
1.1	Overview of Project	5
1.2	Project Stakeholders	6
1.2.1	Lagos State Government	6
1.2.2	LAMATA	6
1.2.3	Ministry of Works & Infrastructure	6
1.2.4	Nigeria Railways Corporation	6
1.2.5	CPCS Transcom	6
1.2.6	Dar Al Handasah	7
1.2.7	Steer Davies Gleave / AEC	7
1.3	Overview of Project Briefing Document	7
2	Country Background	8
2.1	Nigeria Overview	8
2.2	Lagos Economic Overview	8
2.3	Historical Development of Lagos	8
2.4	Current Urban Form of Lagos	10
3	Overview of Blue Line Development	12
3.1	Background on Badagry Expressway Project	12
3.2	Overview of Blue Line Corridor	12
3.3	Blue Line Station Overview	13
3.4	Red Line LRT Project Overview	15
3.5	Project Coordination	15
4	Blue Line Demand Analysis	16
4.1	Approach to Demand Analysis	16
4.2	Household Survey Methodology	16
4.3	Key Socio-Economic Findings from Survey	17
4.4	Key Trip Cost Data from Survey	17
4.5	Blue Line Traffic Forecasts	19
5	Overview of Blue Line Infrastructure	20
5.1	Description of Track Infrastructure	20
5.2	Description of Stations	20
5.3	Description of Depot	21
5.4	Infrastructure to be Provided by Concessionaire	21

Glossary

BOT	Build Operate Transfer
BRT	Bus Rapid Transit
CPCS	CPCS Transcom
Dar	Dar Al Handasah
DB	Design Build
DBFO	Design Build Finance Operate
DBOM	Design Build Operate Maintain
DMU	Diesel Multiple Units
ECA	Export Credit Agency
EMU	Electric Multiple Units
FGN	Federal Government of Nigeria
LAMATA	Lagos Metropolitan Area Transit Authority
LGA	Local Government Area
LRT	Lagos Rail Transit
LSG	Lagos State Government
MWI	Ministry of Works & Infrastructure
NPC	National Population Commission
NRC	Nigeria Railways Corporation
O&M	Operate and maintain
PPP	Public Private Partnership
RFEOI	Request for Expression of Interest
RFP	Request for Proposal
SDG	Steer Davies Gleave

1 Introduction

1.1 Overview of Project

The Lagos State Government (“LSG”), as part of its effort to relieve chronic congestion in this city of over 15 million people, has mandated the Lagos Metropolitan Area Transit Authority (“LAMATA”) to develop an urban rail system. LAMATA and the LSG have decided to develop the urban rail system as a public private partnership (“PPP”), a structure that they have successfully used in the past for bus and road transport projects in Lagos. The following figure depicts the proposed urban rail system:

Figure 1.1: Proposed Urban Rail System



LAMATA has commenced development of the first two urban rail lines for the LRT system:

- The Okokomaiko – Marina Line (“Blue Line”)
- The Agbado – Marina Line (“Red Line”)

Both projects are being undertaken as PPPs. The LSG has decided to enter into two separate contracts for each rail line, a design build contract for the rail infrastructure and stations, and a concession contract covering operations, maintenance and rolling stock:

- Contract 1: Detailed Design & Construction. This will include the design and construction of Blue Line infrastructure including track roadbed and structures, passenger stations, depot site preparation and access tracks.
- Contract 2: Operations & Maintenance Concession. The main focus of this contract will be the operations and maintenance of the Blue Line for a 25 year period. As well, the responsibility for design and construction of some infrastructure will rest with the concessionaire. This includes depot facilities and workshop structures; railway systems and equipment; and equipping and furnishing stations, workshop and other facilities. In addition, the concession contract will also include the procurement of rolling stock and maintenance equipment.

The LSG has committed to financing all costs related to the detailed design and construction contract.

The Blue Line will run East-West along a 27km corridor starting at Marina and finishing at Okokomaiko. The current design accommodates 13 stations along the line with a future extension planned on the western end to Ojo. The Red Line will utilize the existing Nigerian Railways Corporation (“NRC”) rail corridor from Agbado to Iddo and then continue over the lagoon to Marina, adjacent to the Blue Line. The alignments will split/converge at Iddo station. LAMATA envisions a common ticketing system so that commuters can move seamlessly between the two lines.

1.2 Project Stakeholders

1.2.1 Lagos State Government

Lagos State came into existence on May 27, 1967 through Decree No. 14 promulgated by the Federal Military Government. Lagos is the commercial capital of Nigeria and is led by the Governor, His Excellency, Mr. Babatunde Raji Fashola (SAN). His Excellency is the visionary behind the proposed Lagos urban rail system.

1.2.2 LAMATA

LAMATA has been established by the LSG to be the main instrument for transforming the state transport network and facilitating the development of a sustainable and effective integrated transport system. The authority to implement the mass transit system including construction of fixed infrastructure rests with LAMATA.

1.2.3 Ministry of Works & Infrastructure

The Ministry of Works & Infrastructure (“MWI”) is a State level ministry that reports to the Governor. The MWI is responsible for the Badagry Expressway Project.

1.2.4 Nigeria Railways Corporation

Nigeria Railways Corporation (“NRC”) is a federal state owned enterprise responsible for infrastructure and operations for Nigeria’s Eastern and Western Railways.

1.2.5 CPCS Transcom

CPCS is an interantional consulting firm specializing in private sector participation in the transport sector. CPCS is LAMATA’s transaction advisor for the Blue Line project was responsible for the feasibility study and conceptual design work.

1.2.6 Dar Al Handasah

Dar Al Handasah (“Dar”) is an international engineering firm. Dar is LAMATA’s transaction advisor for the Red Line project and was responsible for the feasibility study and conceptual design work.

1.2.7 Steer Davies Gleave / AEC

Steer Davies Gleave (“SDG”) is an international transport consulting firm. AEC is a Nigerian consulting engineering firm. SDG and AEC are partnered on the Badagry Expressway Project and are advising the MWI.

1.3 Overview of Project Briefing Document

This Project Briefing Document is designed to provide pre-qualified parties with an overview of the following key areas:

- Overview of Lagos
- Project stakeholders
- Demand for rail transit in Lagos
- Overview of Blue Line, including route and infrastructure

The information provided in this Project Briefing document is intended to provide background information only and it is not a substitute for interested parties own independent due diligence.

2 Country Background

2.1 Nigeria Overview

Nigeria is a democratic West African country with a nominal GDP of USD 136 billion (2007). The country is a major oil and gas exporter and has a population of 146 million people. S&P & Fitch have rated Nigeria BB-. The following figure provides an overview of key economic statistics and forecasts developed by Export Development Canada (EDC).

Figure 2.1: Nigeria Economic Indicators

Economic Indicators				
	2002-2006 avg	2007	2008	2009
GDP (% growth, real)	6.5	5.8	7.0	6.5
Inflation (% Chg, pa avg)	13.6	5.4	7.4	7.9
Fiscal Balance (% of GDP)	-2.5	-1.5	-1.2	-1.8
Exports (% comp. Annual growth)	23.9	7.2	27.9	-1.3
Imports (% comp. Annual growth)	20.1	21.2	14.8	5.2
Current Account (% of GDP)	2.3	5.0	9.2	6.2
Reserves (months of curr. Debits)	5.5	9.5	10.8	12.1
External Debt (% of GDP)	41.6	6.3	5.9	5.6
Debt Service Ratio (due)	12.1	1.7	0.6	0.3
Exchange Rate (to USD)	130.5	121.7	119.3	122.5

Source: EDC Economics

2.2 Lagos Economic Overview

Lagos is an historically important city in West Africa with an economic history extending from pre-colonial days. From a small fishing settlement in the 17th century, Lagos grew into an important port city during the slave trade of the 18th and 19th century.

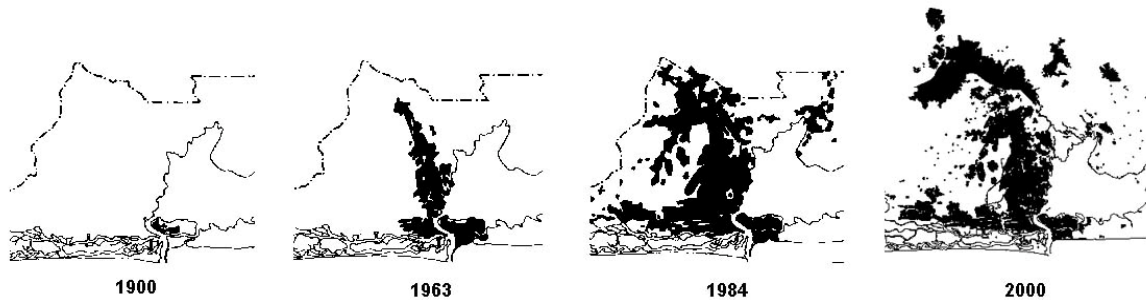
Lagos is now Nigeria's most prosperous city, and much of the nation's wealth and economic activity are concentrated there. The commercial, financial and business centre of Lagos and of Nigeria remains the business district of Lagos Island, where most of the country's largest banks and financial institutions are located. More than half of Nigeria's industrial capacity is located in Lagos's mainland suburbs, particularly in the Ikeja industrial estate. A wide range of manufactured goods are produced in the city, including machinery, motor vehicles, electronic equipment, chemicals, beer, processed food, and textiles.

2.3 Historical Development of Lagos

Lagos grew throughout the 20th century due to a variety of factors such as natural population growth and urban migration. The city quickly developed into the economic, political, social, financial and administrative hub of Nigeria. In addition to being a governmental hub, it is also became a centre for manufacturing industries and of commercial activities, with the headquarters of major national and international manufacturing, business,

and financial institutions. Additionally, it possesses one of the best harbours in West Africa and has port facilities at Apapa and Tin Can Island. The employment generated by these activities and its opportunities for the supporting service sector have attracted both domestic and international migrants to Lagos and have continually fuelled the growth of the city. The city continued to grow throughout the twentieth century. By the end of colonial occupation in the 1960's the population was around 665,000 and by the 1991 census, the population had grown to around 5.3 Million.

Figure 2.2: Time Series Growth of Lagos (1900 – 2000)



Source: Ministry of Physical Planning/Environment (1900,1963, 1984); LAMATA GIS Database (2000)

In terms of land coverage, the city has also grown dramatically in the last century. From the historic centers around Lagos Island and Ikoyi, the city began to expand northwards along the railway corridor under colonial occupation from 1900 to the 1950's. Settlements such as Ebute Metta (the national headquarters of the Nigerian Railway Corporation) as well as other communities including Mushin, Yaba, and Agege grew up during this time. The national seat of government was located in Ikeja in 1914, consolidating the territorial administration roles into one area. Lagos remained the national capital after independence in 1960. When 12 federal states were created in 1967, the seat of administration remained in the Ikeja area of Lagos State.

Through the 1960s and 1970s, urban growth occurred laterally on suitable lands to the west of the corridor including what is now Alimosho (west of the airport), as well as along the western axis towards Amuwo Odofin. Settlements also grew to the east of the city in what is now Kosofe and Ikorodu, on the north side of the lagoon.

In the last 20 years, explosive urban growth has continued but has primarily occurred in the southern parts of the city including westward into Ojo; eastward in Eti-Osa (also called the Lekki Peninsula); and increasingly now into Ogun State north of the city and to the northwest of the airport. Expansion of the metropolitan area today appears as a patchwork as the city is constrained by numerous physical barriers including wetlands and dense forests.

In the future, it is predicted that the major growth axes will be to east and the west of the southern parts of the city especially in what are now remote areas like Ojo, Badagry, Ibeju-Lekki, and Epe. Growth has already begun to occur on the East side towards Lekki with the introduction of the Lekki Expressway.

2.4 Current Urban Form of Lagos

The last master plan developed for Lagos State was completed in 1980 and expired in 2000. In 2005, the Report on the Review to the 1980-2000 Lagos State Regional Plan was undertaken by the firm John Asiyanbi Associates. An updated Lagos State Transport Master Plan is being created by ROM Engineering Transportation Ltd and Phoenix Engineering and Research Ltd.

In the 1980-2000 master plan, one of the principle strategies for the city's development was to promote decentralization of the city's activities in order to promote balanced regional growth and decongestion of the urban core. To this end, the Federal Government of Nigeria (FGN) and the LSG have taken numerous steps in an attempt to decentralize the city's population. The main initiatives they have undertaken include:

- Relocation of the Federal Government to Abuja: The seat of the federal government was moved from Lagos to Abuja in 1991 in an attempt to decentralize the economic and political power base of the country and alleviate in-migration to Lagos.
- Increase in the number of Local Government Areas ("LGAs"): Since the 1970s LSG has been increasingly divulging power to the LGAs. From the original four administrative divisions, the LGAs in Lagos have been subdivided to the present day number of 20 LGAs. The division of LGAs has been undertaken with the intention of promoting more balanced development and access to services throughout the city.
- Creation of Industrial Estates: 22 industrial estates were created inside the city of Lagos and an additional group have been proposed for the rural LGA's including Badagry, Epe and Ikorodu.
- Construction of Housing Estates: In an effort to decentralize areas with high population densities housing estates have been constructed in various parts of the city.
- Improved infrastructure provision: Infrastructure has been improved in outlying communities surrounding Lagos including microwater, rural electrification and community health centres.
- Improved road infrastructure: Roads connecting the remote communities were improved to encourage decentralized development including numerous road dualization projects and expressway links between Apapa-Oshodi-Oworoskoki and the Third Mainland Bridge link between Lagos Island and the Mainland
- Lekki Toll Road: The Lekki Concession Company has recently completed a major section of the Lekki Toll Road, one of the first PPP transportation projects in the city. The project is a landmark as it has revitalized development on the Lekki peninsula with many Lagosians wanting to take advantage of the increased accessibility on the peninsula through this welcomed new form of public and private sector cooperation.
- Introduction of further public-private partnerships (PPP) to aid further development, particularly in transportation, water, waste management, and infrastructure.

Despite these efforts, Lagos has continued to suffer from inadequate infrastructure. The pressure of urban growth has limited the benefits of various attempts by the Government to

reduce congestion. The actual growth rates as reported by the LSG and National Population Commission (“NPC”) are displayed in the following figure.

Figure 2:3: LGA Population Growth Rates

Local Government Area	1991 Population Census	LSG 2006	Annual Growth Rate	NPC 2006	Annual Growth Rate
Agege	417,966	1,033,064	6.22%	459,939	0.64%
Ajeromi/Ifelodun	575,454	1,435,295	6.28%	684,105	1.16%
Alimosho	430,890	2,047,026	10.95%	1,277,714	7.52%
Amuwo/Odofin	164,586	524,971	8.04%	318,166	4.49%
Apapa	163,775	522,384	8.04%	217,362	1.91%
Badagry	119,267	380,420	8.04%	241,093	4.80%
Epe	101,464	323,634	8.04%	181,409	3.95%
Eti-Osa	151,589	983,515	13.28%	287,785	4.37%
Ibeju-Lekki	24,937	99,540	9.67%	117,481	10.89%
Ifako/Ijaiye	233,356	744,323	8.04%	427,878	4.12%
Ikeja	203,383	648,720	8.04%	313,196	2.92%
Ikorodu	184,674	689,045	9.17%	535,619	7.36%
Kosofe	418,452	934,614	5.50%	665,393	3.14%
Lagos/Island	269,575	859,849	8.04%	209,437	-1.67%
Lagos/Mainland	165,996	629,469	9.29%	317,720	4.42%
Mushin	539,783	1,321,517	6.15%	633,009	1.07%
Ojo	295,181	941,523	8.04%	598,071	4.82%
Oshodi/Isolo	449,781	1,134,548	6.36%	621,509	2.18%
Shomolu	352,742	1,025,123	7.37%	402,673	0.89%
Surulere	462,265	1,274,362	6.99%	503,975	0.58%
TOTAL	5,725,116	17,552,942	7.76%	9,013,534	3.07%

Source: Lagos State Transport Master Plan Progress Report (LSTMP) / Lagos State Government

A Lagos Strategic Master Plan is currently under preparation by ROM Transportation Engineering and Phoenix Engineering and Research Ltd. Preliminary guidance from the consultants identifies four main problems with the current state of transit in Lagos:

- Absence of a mass transit system
- No formalized transportation infrastructure linking low-income areas to the activity and employment centers
- Excess supply of vehicles for the current arterial road system
- Lack of formal traffic management

Many issues exist in Lagos due to the aforementioned state of transit. Traffic congestion levels are very high which also contributes to high levels of pollution. Unlike many other major cities, where traffic congestion is only an issue during certain hours, Lagos has congestion issues during peak and off-peak times.

3 Overview of Blue Line Development

As previously mentioned, the proposed Blue Line is a 27km urban rail line running from Okokomaiko to Marina. This particular corridor was chosen due to its high population density and strong traffic flows. The Blue Line project is being coordinated with the Badagry Expressway Project, a toll road project that is being developed by the Ministry of Works and Infrastructure ("MWI") using a PPP structure. The Blue Line will run down the middle of the Badagry Expressway and be accessible by passengers via overhead walkways.

3.1 Background on Badagry Expressway Project

Traffic congestion along the Lagos-Badagry corridor is an ongoing and ever increasing problem. The Badagry Expressway Project will rehabilitate the existing expressway into a showcase transportation corridor consisting of a tolled expressway, non-tolled service lanes, and provisions for BRT or LRT services along the 60 kilometer corridor. The expressway is being developed with a 15 meter reserve in the median for Blue Line LRT development. The Blue Line infrastructure being developed as part of this project will run between Iganmu and Okokomaiko. As part of the expressway project, the expressway contractor will:

- Rough grade to within 1 meter of the finished LRT roadbed
- Place concrete barriers on both sides of the 15 meter LRT reserve, separating the LRT from the expressway lanes

Plans for phasing of the project are to construct service lanes first. Traffic will then be diverted to the service lanes while the express lanes and the track roadbed are constructed. This will allow maintenance of the traffic flows through the construction period. More details about the Badagry Expressway Project will be included in the Request for Proposal documents.

3.2 Overview of Blue Line Corridor

The population base within the corridor is primarily lower-income inhabitants. The region is predominantly residential with less than 25% of the land being used for industrial activity, according to the Ministry of Physical Planning. The corridor has various commercial developments including some new banks, but otherwise remains dominated by semi-formal markets. The corridor serves as the primary international road link from Nigeria to Benin Republic, and onwards to Togo, Ghana and Cote D'Ivoire.

Much of the area is densely populated although there is currently a limit against constructing buildings that are more than 10 stories high and the state of the existing infrastructure limits development. Facilities are not in place to allow for massive developments, but rapid development could conceivably occur as it has on the Lekki Peninsula; driven by the construction of the Lekki Expressway over the past few years. With increased investment in infrastructure, it is possible that private estates may be developed depending on the capacity and capability of investors to rejuvenate the corridor.

Generally, there are two types of developments along the corridor: Government-Driven Development, which accounts for the minority of development along the corridor; and Market-Driven Development, which accounts for the majority:

Government-Driven Development: Government-driven development includes existing and planned large scale development and redevelopment projects for Lagos State that involve significant changes in density such as residential estates and industrial areas. Aside from the construction of the Badagary Expressway and Blue Line itself, plans for the corridor have been fairly limited aside from proposed initiatives such as the Energy City that is slated to be constructed in Badagary, housing developments in Alimosho, and a concept of a “Nollywood” village near the Benin Republic Border.

Market-Driven Development: – Market driven development includes formal and informal shopping plazas, markets and itinerant vendors, stall holders, private transport providers, street dwellers and others who occupy many areas within the right of way. The full diversity of these occupants is not known in detail, but it is clear that some may have acquired de-facto and/ or legal rights to occupy certain areas from market managers, local governments and others; or by paying rentals, stall license fees, market taxes or other rents for utilizing such space. Market-driven development is the dominant form of development along the Blue Line Project Corridor.

3.3 Blue Line Station Overview

The following are the proposed Blue Line stations along the Badagry Expressway corridor:

Figure 3.1: Blue Line Stations



Marina Station (Km 0) is located on Lagos Island. Existing structures around Marina consists of private offices, shopping malls/plaza, and government department offices which form the Central Business District. Indigenous Lagosians reside east of Marina in a clustered high density area running north towards Ebute Ero station. They form the bulk of the population statistics for Lagos Island Area.

Ebute Ero Station (km 1.5) has large retail markets of various goods at Jankara, Ebute Ero and Idumagbo, which serve the West African and Nigerian traders. The station is also closest to the major banking headquarters of the United Bank for Africa, Union Bank, Wema Bank as well as the central markets of Lagos Island.

Iddo Station (Km 3) is bordered on the east by a large retail market, as well as truck and inter-state bus parks. There is a sparsely populated area towards Ijora, west of Iddo. The Iddo Terminus is a major structure built for the NRC train system. This station currently facilitates three (3) commuter trains in each direction on each day from Iddo to Ijoko and a bi-weekly service to Kano. The station is expected to be the hub of both the Blue and Red Line projects and could be rejuvenated as a centre of activity in Lagos.

National Theatre Station (Km 4.6) has surrounding it, an existing National Theatre complex and a proposed development plan which includes the proposed Mainland Business District. The National Theatre itself is a location that has hosted various events in the past and will continue to host major cultural events in Nigeria.

Iganmu Station (Km 7.3) is located at an industrial zone that consists of manufacturing, packaging and logistics supply and oil & gas distribution companies.

Alaba Station (Km 9.9) is located near one of the major markets along the corridor that has both a major electronics section as well as a market for cattle and rams. The trading activities taking place at the Eleganza shopping plaza encourage extensive commercial transactions.

Mile 2 Station (Km 11.7) existing development consists of the Amuwo Odofin Housing scheme which is comprised of low, medium and high end housing estates to the north of the station. At Mile 2 intersection, there are semi-permanent structures, sidewalk stalls, illegal markets and a bus stop. This fringe of the area is normally populated with street traders.

Festac Station (Km 14.4) Festac Town, a large metropolitan residential area, densely populated by low, middle and high income earners is located north of this station. South of this station is Old Ojo Road with residences stretching out to the KiriKiri area of the Apapa LGA.

Alakija Station (Km 16.1) is bordered to the south by a highly populated residential area called Satellite Town, Navy personnel residences (Naval base and barracks) and a link road to the Apapa area of Lagos.

Trade Fair Station (Km 19.3) North of this station is the National Trade Fair Complex which houses a vehicle and machinery spare parts plaza.

Volkswagen Station (Km 21.8) This station is close to the Volkswagen Assembly plant. The plant is not currently operating but there are plans to revive it. Between the Trade Fair and Volkswagen stations, to the north of the corridor, there is an Army base called the Ojo Cantonment where low and high ranking army officers and their families live.

LASU Station (Km 24.3) Traffic from arterial roads, such as Iyana Iba, will be deposited at this station, however, existing developments include sparsely populated area (but rapidly growing) to the south and the Lagos State University to the north of the station. New housing estates are planned farther north in Alimosho and although the road network between Ojo and Alimosho is limited, some traffic on the Blue Line is expected from Alimosho.

Okokomaiko Station (Km 25.8) This is the last proposed LRT station on the corridor. The Alaba International Market for electronic goods is near the station. This market serves as an electronic items market hub for Nigeria and other West African countries.

3.4 Red Line LRT Project Overview

The Red Line is a light rail transit line being developed concurrently with the Blue Line. The Red Line project is also being developed by LAMATA using a PPP structure. The Red Line will run from Agbado to Marina with a link to Murtala Mohammed International Airport. The right of way from Iddo Station to Marina will be shared with the Blue Line including three eastern stations. The shared infrastructure (roadbed, structures and stations) will be designed and constructed as part of the Red Line project. The Concessionaire will be expected to liaise with Red Line stakeholders to ensure that ticketing and the ability for passengers to easily transfer is coordinated. More details about the Red Line Project are available at www.lagosrail.com

3.5 Project Coordination

Coordination between the Blue Line project and the Lagos-Badagry Expressway project will be vis-à-vis the Blue Line Design-Build Contract and not the Concession Agreement.

In the case of the Red Line LRT Project, there will need to be coordination with both the design-construct contractor and the concessionaire. The Blue Line design-construct contractor will construct the Blue Line track from Iddo to Marina after completion of structures and roadbed by the Red Line contractor. The concessionaire will also need to access the alignment to install signaling, train control and communications equipment, and will finish and equip the three joint stations.

4 Blue Line Demand Analysis

4.1 Approach to Demand Analysis

A demand study was completed by CPCS Transcom in 2008. The study projected demand for the Blue Line over the concession period using various inputs, including vehicle counts and household surveys. The complete study, entitled Demand for Rail Transit Services will be made available to prequalified bidders. The key findings from the demand study are included in the following sections.

4.2 Household Survey Methodology

The Household Survey (HHS) forms the underlying data set used to estimate the demand for rail transit services. 5016 surveys were administered within the catchment area of the rail line. The catchment area is defined as the area within a 5 km radius along the proposed Blue Line.

The survey was designed by CPCS Transcom with close assistance from Geotrans Associates, a firm affiliated with the University of Lagos (UNILAG). It was based on similar surveys previously used in Nigeria. For the purpose of the study, the city was divided into 56 zones of varying size. The zones along the corridor in which interviews were given were geographically smaller than those not on a rail corridor. This was done to increase the resolution of the results obtained along the corridor.

Figure 4.1: Zone Assignments



Source: GeoTrans (2008)

The number of surveys to be administered in each zone was determined as a ratio of the estimated population of the zone to the total estimated population of the catchment area. In this way, a similar response accuracy for each zone can be assumed. The population estimates used for survey administration purposes were based on the 2006 Census Results for Lagos State at the LGA level. Within each zone, areas of higher population density were allocated more surveys. Maps were generated using GIS to identify each zone showing their streets and location. On each randomly selected street, every second house on the right and left was enumerated (depending on the length of the street). In each house/compound, one family was selected for an interview. Interviews were limited to those 15 years of age or older and a maximum of six people per household could be interviewed.

4.3 Key Socio-Economic Findings from Survey

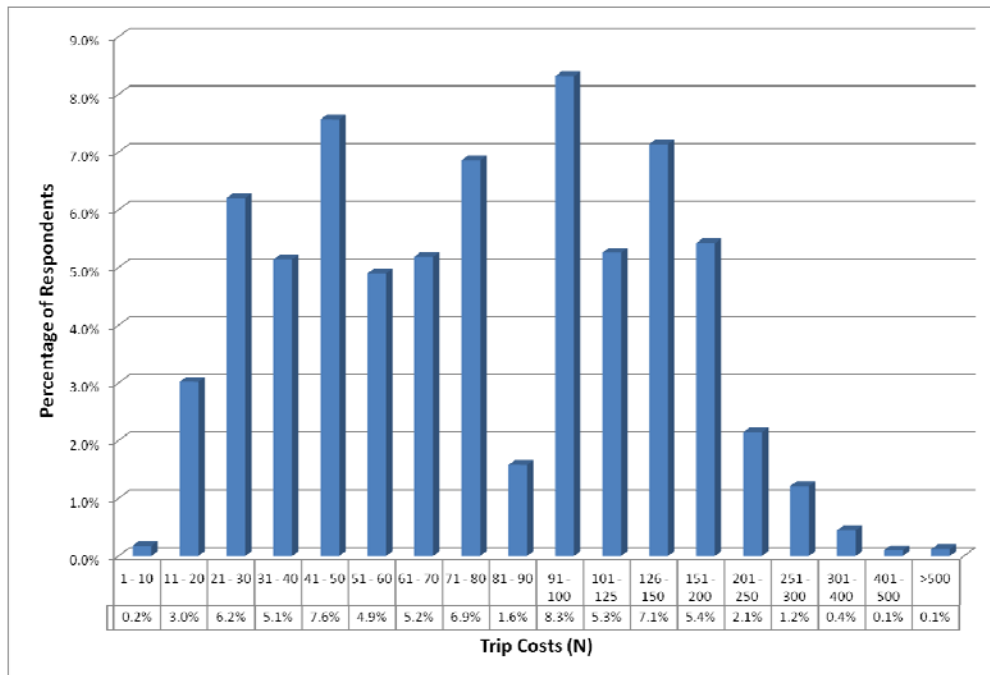
The Household Survey's revealed a large amount of socio-economic information about Lagosians living in the Blue Line's catchment area.

- 63% of households do not have a car (mostly on the western portion of line)
- 84% of households have at least one person using public transport
- Average household income is 40,000 – 60,000 Naira per month
- Incomes along the western end of the line tend to be lower
- 42% of respondents work in trades or are self employed, 19% are students
- 90% of respondents are between 15 and 55 years old
- 46% of trips are work related, 20% personal business and 18% school related
- 75% of respondents said they were highly likely to switch to Blue Line

4.4 Key Trip Cost Data from Survey

One of the key pieces of information gleaned from the household survey is the travel costs. The results are shown in the following figure. The highest number of trips was recorded in the 91-100N cost range (8.3%).

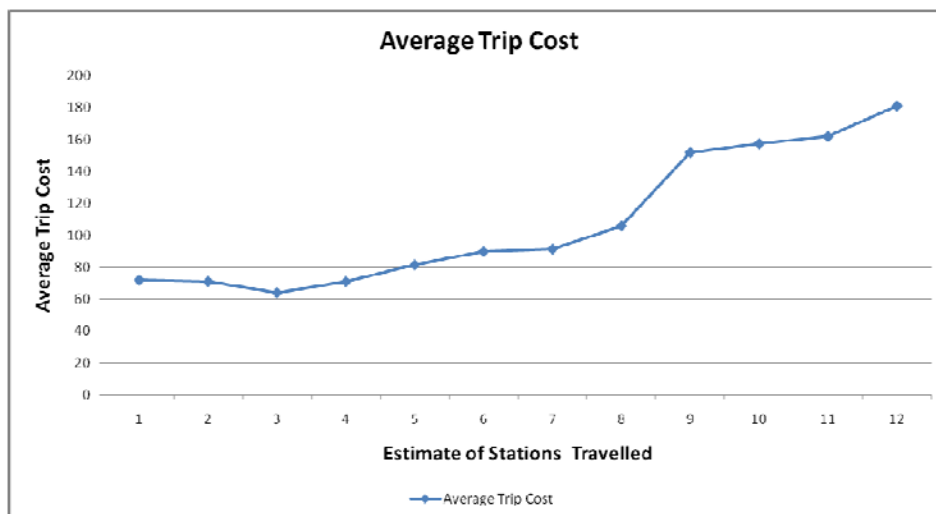
Figure 4.2: One Way Trip Costs



The Household Survey also provided information on the average trip length and the cost of each trip. Based on the responses provided, it was possible to determine the probable access and destination station.

For travel distances between 1 to 4 stations, the average cost per trip was approximately 70N. For trips of 4 or more stations, the price per station is approximately 15N per station; decreasing slightly for longer trips.

Figure 4.3: Estimate of Stations Travelled



4.5 Blue Line Traffic Forecasts

Based on the assumptions outlined in the Demand for Rail Transit Services Working Paper, CPCS projected the following daily ridership for the Lagos Blue Line.

Figure 4.4: Estimated Daily Ridership (Weekday)

Year	Daily Trips
2010	319,611
2015	380,344
2020	444,023
2025	512,557
2030	582,901

These numbers represent the number of one way trips anticipated on any given weekday for the year in question.

5 Overview of Blue Line Infrastructure

As previously mentioned, the design build contractor will be responsible for the majority of the fixed infrastructure, including:

- Track roadbed, including drainage, barrier walls and fencing
- Structural elements including bridges, viaducts, and retaining walls
- Utilities design and construction
- Track works including all mainline tracks, cross-over tracks and access into the depot
- Site preparation of the depot facility
- 10 Stations including site work, structures, interior and exterior finished, utilities and mechanical/electrical systems

The Concept Report and Drawings will be made available to shortlisted parties. They are summarized in the following sections.

A summary of the works to be provided by the Concessionaire are also outlined below.

5.1 Description of Track Infrastructure

The Blue Line will run a total distance of 27 kilometres, will be served by 13 passenger stations, and will include a maintenance depot located at the western limit of the corridor. The 27-kilometre corridor will be served by double track between Okokomaiko and Marina on Lagos Island. The track can be segmented, as follows:

- Iddo to Marina – 3.25 kilometres
 - Elevated track right-of-way shared with the Red Line (which is concurrently being developed).
- Iganmu to Iddo – 4.5 kilometres
 - Elevated track spanning 3 major and 6 minor roads, as well as marshland and waterways
- Okokomaiko to Iganmu – 18.25 kilometres
 - At-grade track positioned in the centre of the Badagry Expressway, which is currently under development.
- West of Okokomaiko – 1 kilometre
 - Termination of mainline track and access track into depot facility

5.2 Description of Stations

The line will be served by 13 stations designed with a unifying theme. Three of the stations will also serve the Red Line. The 10 stations exclusive to the Blue Line will be of one of three design types. The stations from east to west are listed below:

Figure 5.1: Overview of Stations

Station	Location (Km)	Comment
Marina	0.0	Shared with Red Line
Ebute Ero	1.5	Shared with Red Line
Iddo	3.0	Shared with Red Line
National Theatre	4.6	Station Type 3
Iganmu	7.3	Station Type 2
Alaba	9.9	Station Type 1
Mile 2	11.7	Station Type 1
Festac	14.4	Station Type 2
Alakija	16.1	Station Type 2
Trade Fair	19.3	Station Type 2
Volkswagen	21.8	Station Type 2
LASU	24.3	Station Type 1
Okokomaiko	25.8	Station Type 1

5.3 Description of Depot

The depot will be located at kilometre 26.91 and will house stabling tracks, rolling stock maintenance workshops, fuelling and cleaning facilities, infrastructure maintenance facilities and the operations control and administration facility.

5.4 Infrastructure to be Provided by Concessionaire

Infrastructure that will be designed, constructed, and financed by the Concessionaire includes the following:

- Rolling Stock
- Signalling, Control and Communications (SC&C) and SCADA Systems
- Depot, Workshops and Stabling Yard
- Operations Control Center
- Track Work
- Completion of Passenger Stations

The design requirements will be outlined in the RFP. It should be noted that these are the minimum requirements, and that the Concessionaire is responsible for ensuring that all works designed and constructed by him, specifications followed and material procured meet the basic requirements for efficient and safe operation of the Blue Line. The concessionaire is also required to ensure that all works execution, maintenance activities, materials, etc. meet the national requirements and standards for Nigeria.

The concessionaire should also review the design build contract for the fixed infrastructure thoroughly as it will be the responsibility of the concessionaire to design, build and finance all works or equipment not covered by the design build contract but that is necessary for the operation of the Blue Line. Of critical importance is the coordination of work between the contractor and the concessionaire.

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