Road Infrastructure Assessment In Selected Routes In Idah Local Government Area,Kogi State.

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ABSTRACT
The condition of road infrastructure in IdahL.G.A. is a major setback to the free flow of traffic in Idah L.G.A. This goal of study is to assess the road infrastructures in the study area so as to maintain and possibly improve on the existing road infrastructure.The objectives are; to identify road infrastructure in selected routes, to assess the provision and condition of road infrastructure using a checklist method and to improve on road infrastructure and connectivity.The method of data collection is based on carrying out survey using the checklist method to provide an inventory on road infrastructure ranging from street lights, traffic lights, traffic signs and symbols, pedestrian walkway and drainage system. Analysis was carried out using descriptive statistical tools. Result from the survey shows that roads in Idah town are in poor condition due to lack of maintenance and inadequateroad infrastructure. The study recommends that the government and stakeholders shouldimprove on the existing condition and maintenance of road infrastructure that will enhance the planning, development and overall aesthetics of Idah local government area.
Key words: Road, Infrastructure, Condition, Connectivity and maintenance.

I.   INTRODUCTION

In Nigeria today, the road transport subsector plays a dominant role in the internal movement of passenger and goods accounting for well over 95 percent of overland movement of passenger and freight (NISER 2003). Generally speaking, only about 30 percent of Nigerian roads are paved (NISER, 2003) while the rest are earth roads or with surface dressing (Oyesiku, 2002).Road infrastructure is the main element in road transport system. It can be defined as the basic facilities, services and installation needed for the functioning of transport highway, roads and streets. Implementation of road specific infrastructure can help to reduce road accident and improve the road safety level. The component of road infrastructure is road alignment, cross section, bridges tunnel, vulnerable infrastructure, road side safety and road surface.

The road infrastructure comprises of all types of roads in a given area, including various structure and service to transport passengers and goods. The road infrastructure includes all road categories, facilities, structures, signage and makings, electrical system and so on needed to provide for safe trouble-free and efficient traffic. Road infrastructure also includes fixed entity, flow entity and control mechanism.Road infrastructure affects the flexibility and mobility of the workforce, which is reflected in the employment level. Moreover, higher employment level makes the standard of living grow. The degree to which the road infrastructure is developed has an impact on several areas, such as for instance the development of tourism, flux of foreign investments, and regional development. (Ivanova and Masarova 2013).

Road networks support the majority of transport modes in the world with several development activities depending on them; unfortunately, thousands of lives are lost each year through road accidents. This makes it imperative for various countries and cities of the world to embark upon regular road care and beautification. Keep road

network in good shape and to enhance the welfare of the general public by minimizing casualties on roads, thereby ensuring efficient movement of people and goods, improving social equity, health, promoting cultural heritage and productivity of goods and services.(Aboagye and Collins 2013).

Infrastructure is the fundamental facilities and system serving a country, city or other area, including the services and facilities necessary for its economy (Wikipedia). Infrastructure contributes to economic development by increasing productivity and providing amenities which enhance the quality of life. (Akinyosoye, 2010).In modern society, road infrastructure has become an essential part of daily life. Individual road users, logistic firms, and public transportation agencies expect reliable and safe road infrastructure for traveling from one location to another and transporting goods and people. Road agencies need to properly plan, build, maintain and operate road infrastructure for it to create value for road users (Burde, 2008). The road infrastructure comprises of all types of roads in a given area, including various structures and serves to transport passengers and goods. The road infrastructure includes all road categories, facilities, structures, signage and markings, electrical systems, and so on needed to provide for safe, trouble-free and efficient traffic.Road transport and its infrastructure enable to carry people as well as materials, raw materials, semi-finished and finished products intended for sale. Infrastructure affects the flexibility and mobility of the workforce, which is reflected in the employment level. Moreover, higher employment level makes the standard of living grow. The degree to which the road infrastructure is developed has an impact on several areas, such as for instance the development of tourism, influx of foreign investments, regional development, etc. (Ivanova and Masarova, 2013).Road infrastructure makes a crucial contribution to economic growth and social benefits in communities and the nation at large. They are of vital importance in the area of access to various land uses and it is the most important of all public assets.

The road hierarchy in Idah is of two types otherwise known as the state trunk roads which are also known as collector roads, are connected to other local governments such as Ibaji and Igalamela/Odolu local government areas. Lastly the access roads which provides accessibility to various land uses in Idah L.G.A.Most of the roads especially the access roadsare greatly affected by erosion. Accessible roads that have drainage system are blocked by the top soil which is washedinto the drainage system. Also,some roads are in poor condition due to lack of adequate maintenance.

Connectivity is the density of connections of road network and the directness of links. As connectivity increases, travel distance decreases but the route options increase, thereby allowing more direct travel between destinations, creating a more resilient, effective and accessible system. Road connectivity would reduce traffic volumes, and traffic congestion on major arterials (Ayo-Odifiri et al 2017).

Study Area

Idah is a town in Kogi State, Nigeria, on the eastern bank of the Niger River in the middle belt region of Nigeria during the 2006 census, the population figure of the area, whose landmass is approximately 36 sq km (14 sq miles), was put at 79, 815 people. On the globe, Idah Local Council Area of which Idah is the headquarters, can be located on coordinates 7o 05' N 6o 45' E / 7.083o N 6.750o E.

Statement of the Problem

The residents in IdahL.G.A. appear to be restricted in terms of free flow vehicular and pedestrian traffic movement, especially within areas that have the local access roads both during the day and at night. This is more pronounced during the rainy season and the number of private motorists appears reduced.

The Goal and Objectives

The goal is to assess the road infrastructures in the study area so as to maintain and possibly improve on the existing road infrastructure. The objectives are: to identify road infrastructure in selected routes, to assess the provision and condition of road infrastructure using a checklist method and to improve on road infrastructure and connectivity.

MAP OF KOGI STATE SHOWING IDAH

SCALE: 1:1,500

ROAD NETWORK MAP OF IDAH

SCALE: 1:15000
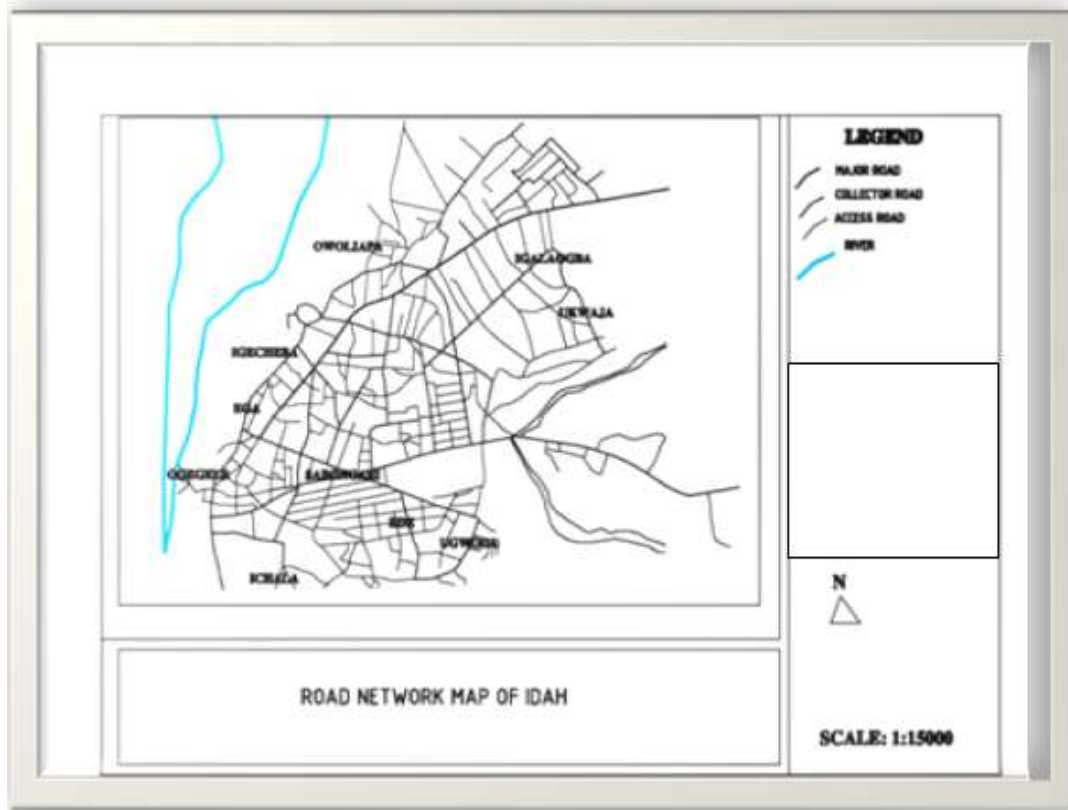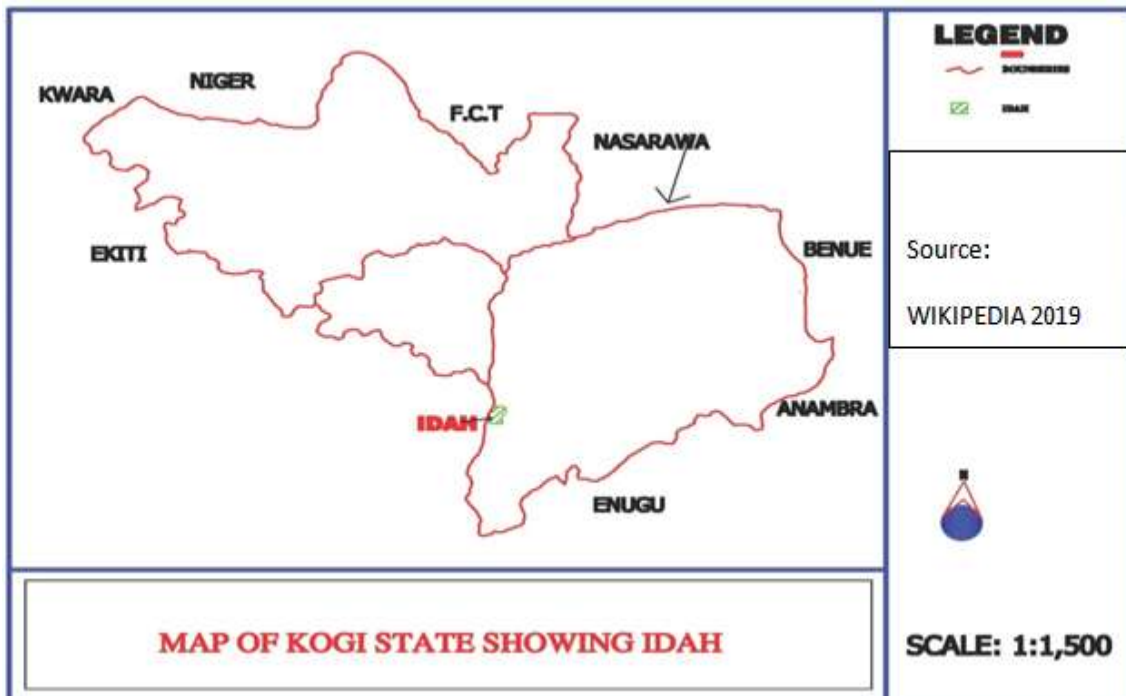
Source: Ministry of Works, Idah (Adapted)

Plate 1: showing blockeddrainage system.
Source: Researcher's Field Survey (2021)

II. METHODOLOGY

The study adopted qualitative research methodology, which involvesprimary sources of data collection via survey,personal observation and checklist method. Information on the identification of routes, road infrastructure, condition of the road, was sourced through observation which includes taking inventory on the available road infrastructure.The secondary sources of data collection include collecting data through articles, journals, internet, textbooks, newspapers,project work, published and unpublished materials.

The data obtained is being analyzed through the descriptive statistics such as tabulation, percentages and pictorial method of presenting data. Pictorial will give better understanding of the presentation. The sample frame for the purpose of this study are selected routes withinIdah Local Government Area. The routes include the Idah – Ajaka road, Owoli-apa – Igecheba – Ega route, Sabongari – ministry of works junction route, Sabongari – Ede route, and Multi-stage sampling method was adopted in this study.

III. RESULTS AND DISCUSSION

Safe road infrastructure may involve planning, design, implementation and maintenance in every level of activity. Therefore, proper management are needed to ensure all the element of road infrastructure is well built and equipped according to the standard which enable them to function properly or not. Many lives could be saved and many accidents avoided if the existing road infrastructure was managed according to the best practice of safety engineering. It is important to have a proper road infrastructure such as clear signs and road markingswhich are essential, if road users are to know what they are expected to do.

Road	`Street Lights			Traffic Signs and Symbols		Pedestrian Walkways			Traffic Lights			Drainage System		
	Available &Functional	Available &Not Fully Functional	Not Available	Available	Not Available	Available &Functional	Available & Not Functional	Not Available	Available &Functional	Available & Not Fully Functional	Not Available	Available &Functional	Available &Not Fully Functional	Not Available
Idah – Ajaka road	✓			✓				✓			✓		✓	
Owoli-apa – Igecheba - Ega		✓			✓			✓			✓		✓	
Sabongari – Ministry of Works	✓			✓				✓			✓		✓	
Sabongari - Ede			✓	✓				✓			✓		✓	
Water Board junction – Water Board	✓			✓				✓			✓	✓		

Table 1.0 The Road Infrastructure Identified in Selected Routesin Idah L.G.A.

Source: Researcher's Field Survey (2021)

IV. THE FINDINGS

The survey revealed that Idah – Ajaka road is the only dual carriage way in Idah L.G.A. with kerbs that demacate the road into a dual carriage way, a section of the road also has recently installed functional street lights and drainage system. Some sections of the drainage system are blocked with heap of sand, filled with refuse dump and grown grasses along some portions of the road. Sabongari – Ministry of Works route also has a drainage system which is available but not fully functional, this shows that most of the tarred roads have drainage system but lack proper maintenance. The survey revealed that there exists barricade from the general hospital to Ega market and Ega market to Owoli-apa (Attah of Igala's palace) to restrict large vehicles from passing through. There is the non-availability of drainage system in some sections of the road, and where they exist, it is not fully functional. The Sabongari – Ede route lacks street lights, drainage system and other street furniture.The study revealed that the condition of the road is poor as a result of potholes and cracks on the surface of the road.Based on the observation carried out and inventory taken the study area lacked road infrastructure and the drainage system is blocked with heap of sand, grown grasses and dumping of refuse which leads to stagnation and over flow of water on the surface of the road.Most of the road intersection in the study area do not have roundabout that will guide the movement of vehicles to any direction of their choice.The non-existence of pedestrian walk way,inadequate and non-functional street lights in some areas, lack of traffic signals and improper use of intersections.

Most roads are unpaved and the paved roads have been greatly affected by erosion and the non-existence of drainage system. Where the drainage system exists,it is either blocked or collapsed. Poor maintenance culture. After a couple of years in the provision of road infrastructure, the wear and tear set in and reverses back to its previous condition, if not worse.

V. CONCLUSION

The unplanned and uncoordinated pattern of development has impeded traffic flow, constrained road connectivity and condition and limits the growth of IdahL.G.A.. The road infrastructure promotes form and pattern of distribution of structures in terms of health, accessibility, convenience, aesthetics andother land uses in an environment are functions of the rights and methods of dealing with land.

Recommendations: The road should be rehabilitated and maintained to prevent damage on vehicles and ensure convenient movement of vehicles.
1. It is recommended that drainage system should be constructed and paved to prevent dumping of refuse which may affect the health of people within the environment and to also serve as pedestrian walk way.
2. Roundabout should be constructed at the middle of the road intersection where necessary, in order to guide the movement of vehicles to any direction of their choice.
3. Government and stakeholders should ensure maintenance of all road infrastructure ranging from street lights, provision of traffic lights, traffic signs and symbols that will enhance free flow of traffic and road condition.

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