

The Impact of Saad Qishra Market on the Intersection of Al-Ma'ouna Street and Nasrelddin Street, Khartoum Bahri Town, Republic of Sudan

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Abstract

This paper studies traffic congestion problem at the intersection of Al- Ma'ouna Street with Nasre Alddin Street near Saad Qishra market (see figure no1). The paper aims at solving problems that hinders vehicle movement in the street. Due to the lack of parking's, a great number of vehicles park along roadsides especially during peak hours.

Keywords: Saad Qishra Market, Nasrelddin Street, Khartoum Bahri Town, Traffic Congestion.

Moreover, many public transport lines to and from the central station of Bahri Locality pass through it. Hence, it plays an important role as a link road between the northern and southern parts the city. This has made it necessary to conduct a study to find out the negative and positive aspects of the street and come out with suitable solutions for the negative aspects in order the achieve traffic safety and optimum utilization of the street. (See figure no.1)

Introduction

Al-Ma'ouna Street is one of the major streets of Bahri city by virtue of its excellent location as it passes through a number of important landmarks.

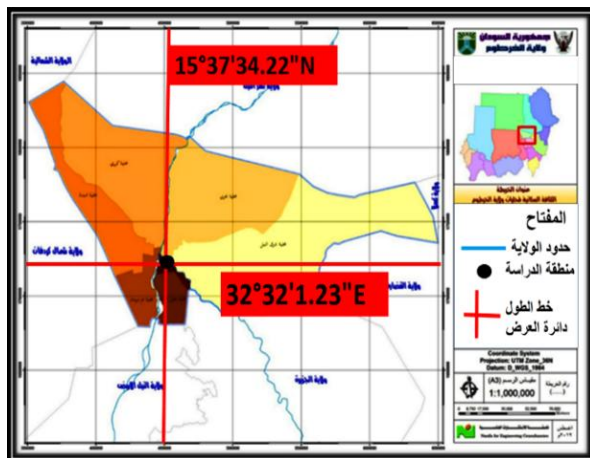


Figure 1: Shows Geographical Location of the Area of Study (Source: Researcher)

Methodology of Research

This study follows the analytical descriptive approach. It utilized a number of references, applicable computer programs and inputs of the field survey conducted by researchers in the area of study.

Results

After studying and analyzing traffic patterns in the area of study, the following description of traffic patterns and related problems has been identified:

Traffic Patterns in the Streets of the Study Area

1. Al- Ma'ouna Street:

It is a two-way double lane street running in a north south direction. Each lane is 12 m in width. The

middle island is 5m in width. It is the main entrance for the area of study. (See figure no.2)

2. Nasrelddin Street:

It is a two-way double lane street running east west in direction each lane is 12m in width. It is the main Entrance for those coming from Shambat Street to the area of study. The two streets meet at an intersection near Saad Qishra market (See figure no 2).

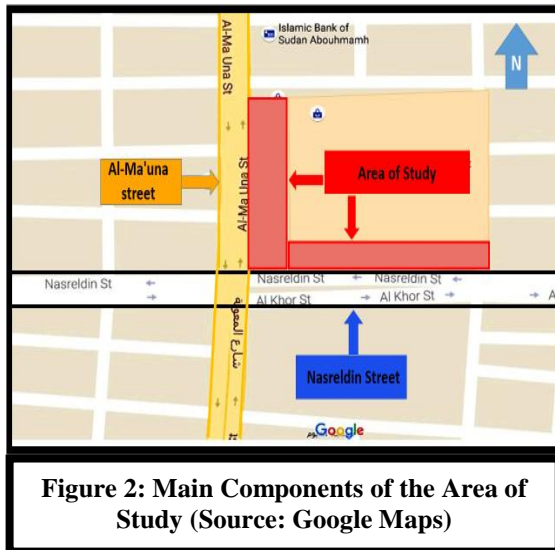


Figure 2: Main Components of the Area of Study (Source: Google Maps)

Traffic Problems in the Area of Study

All of these Traffic problems have been identified through field research and the results of counting the vehicles in the intersection by the researchers)

- Due to lack of car parking within the markets, the shoppers and traders park their cars on the roadsides.
- Public transport vehicles stop by the roadsides to carry passengers. (see figure no 3).
- Inadequate design and planning of old roads, which are too narrow for a commercial area. (See figure no 4).
- Traffic congestions lead to waste of time and energy.
- Lack of proper traffic control tools to regulate movement of vehicles and pedestrians.

- Traffic regulations are not respected by drivers and pedestrians. (See figure no. 3).



**Figure 3: Shows Traffic Congestion
Source: Researcher**



**Figure 4: Shows Bad Planning of Roads
Source: Researcher**

Analysis of Traffic in the Area of Study

Traffic in the intersection i.e. the area of study consists of the following entrances and exits as shown in (figure no. 3)

Entrances:

- Entrance from south to north.

- b. Entrance from west to east.
- c. Entrance from east to north.

Exits:

- a. Exit from south to north.
- b. Exit from east to west.

Peak Hours:

1. Morning peak from 9 am to 12 noon in the south- to- north entrance. This takes place during week days except on Fridays and Saturdays from 2 pm to 4 pm. Most vehicles passing through are private cars and buses (public transport).
2. Evening peak starts from 6 pm to 9 pm throughout the week except on Friday. It is noted that there is no traffic congestion from 7 am to 8 am as vehicles do not park on roadsides at that time.

Study Objective

The study aims at decreasing traffic congestion at intersections near markets especially in the area of study.

Location of the Study

The subject area is located in the middle of Bahri Deims district, which extends from Al-Mazad street in the east to Al-Ma'ouna Street in the west, Nasrelddin Street represent the southern boundary.

Recommended Solutions

This paper aims at solving the traffic congestion problems at the intersection of Al-Ma'ouna Street with Nasrelddin Street through the following solutions:

- Removing and relocating tents in the area of study (in front of Saad Qishra market). (See figure no. 5)
- Removing some buildings on the southern part of the market. (see figure no 5)

- Construction of temporary car parking for the market in the northern and southern and eastern parts of the market. (see figures no 6 & 8)
- Expansion of Al-Ma'ouna street by decreasing width of the middle island to facilitate traffic in front of the market.(see figure no 7 & 9)
- Installing "No-Parking" signs along the roadsides.
- Construct pedestrian lanes (see figure no 9).



Figure 5: Shows Parts to be Removed or Modified
(Source: Researcher)

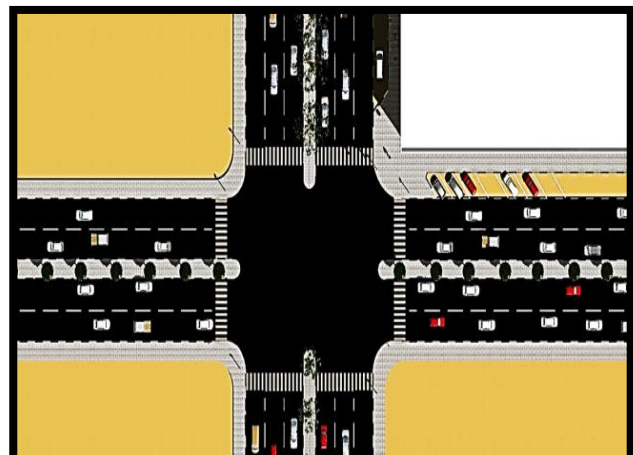
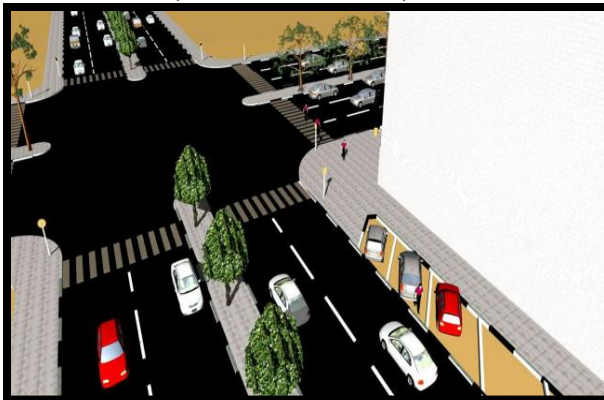


Figure 6: Shows Site Plan of Proposed Side Parking (Source: Researcher)



**Figure 7: Shows View of Proposed Road Expansion
(Source: Researcher)**



**Figure 8: Construction of Temporary Side Parking
(Source: Researcher)**



**Figure 9: Shows Pedestrian Lanes and Proposed
Side Parking (Source: Researcher)**

Recommendations

- Replan Saad Qishra market in the future as multistory building with underground parking.
- Increase traffic public awareness.
- Divert some lines of public transport to reduce traffic load in the area of study.

References

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