A Proposed Solution for Traffic Jams at the Intersection of Al Wadey Street with Alsanaat Street in Omdurman City

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Abstract
The process of urban and town’s development lead to many problems and linked with transportation and roads, streets as to access arriving towards a various areas inside the town, and this created a traffic jam. So this paper tries to illustrate and clarify the necessity of identifying and addressing the traffic jams (over crowdedness), and congestion, namely at the intersection (crossroad) of Valley Street (Al wadey) and Al thawra (middle) street, also handling the problems of the intersections (crossroads) in general, and seeking an appropriate solution.

Keywords: Traffic Jams, Al Wadey Street, Alsanaat Street.

Introduction:
Transportation is considered as vital factors of life, especially the growing expansion of cities and towns, and increasing of population, that a matter required to provide and facilitate the means of transport.

The transport networks has developed and significantly expanded in Sudan, which led to traffic dilemma, such as traffic jam, environmental pollution, and flabby traffic safety on the roads and streets network, which causes road/street over crowdedness, accidents, it was therefore very important to identifying and remedying this problem, which clearly occurred at the crossroads (intersections). This study is purposed to find a suggested solution for this dilemma, namely at the Intersection (crossroads) of Valley Street (Al wadey) with Industries street in Omdurman city. (See figure No.1).

Figure 1: Astronomer Describes the Site of the Study Area
Source: Researcher Using Google Map

(The astronomical location contour map)

The traffic circle at (Crossroad) of Wad Bador in (Wad Nobawi Dist.)

Longitude: 24, 58  29 ° 32 East.
Latitude: 30.55 ° 15 North. (See the figure No.1).
The methodology of the study:

The study is adopted the descriptive approach, for demonstration and classification the data and information, and analytical method for analysis the outcome data, and the findings, through programs of (GIs – Gaps – Google earth).

The Findings of the Study:

1- Al Wadey (Valley) street considered as one of the major and vital street at Omdurman city, the average width of street is 40 meter, towards south to north, and consists of two directions, each direction have two tracks/lane with width of 3 meter.

2- The industries street (Al Sinaat), is joined between Al wadey street and Al thawra (middle) street, the width of the street is 30 meter, starts from east to west, and also consists of two directions, each one with one track, with width of 3 meter.

3- The crossroad (intersection) the subject of the study considered as a connection point of Al wadey street. (See the figure No. 2).

The existing problems at the crossroad (intersection):

The rush (peak) hours starts at morning period form 8: 9 a.m. And in the evening period from 3: 10 pm.

1- The numbers of cars and public transport vehicles, vans, and many kinds’ cars, reached to a number of (3000) at the rush hours, and this numbers as a matter of course affects and hindrance the flow of traffic at intersection/ crossroads.

2- The pedestrians, and street user’s faces difficult, while the crossing the street/road.

3- Lack of trees, streetlight, and sidewalk.

4- Absence of adequate tracks for cars.

5- Lack of crosswalks.

6- Lack of cars parking in either the roadside.

7- Blocking of traffic near the location of Ahmed Sharif’s tombs, due to cars congestion and over crowdedness. (See the figure No. 3).
Analysis of data/information:

The significance of the study:

The significance of this study rose from the importance of (Intersection) crossroad, which considered as a carrier of traffic from Al wadey street to Al thawra (middle) street, also this intersection played as an entrance and exit at the time for the cars moving towards Omdurman market through Karary Street.

The problem of the study:

The size of asphalted/ tarmac this main street, is only width of 15 meters, which does not allow the cars, public transport vehicles to pass freely.

The location of the study:

The intersection (crossroad) of Al wadey (valley) street is located near the industries street in Wad Nowbawi Dist. Bordered from the north with f Ahmed Sharfi` tombs , and from the east the location of Wad Nowbawi Dist., from the west located Al Omdah District. (See the figure No. 2).

The objectives of the study:

Organizing the tracks of the Intersection (crossroad), the subject of this study, as realize the most benefit.
Finding a solution for traffic jam at the intersection (crossroads).

Theoretical frame of the study:

The dilemma and problems of traffic jam and congestion in any country, eventually refers to two categories, which as follows:

1- A group of geometric (designing) reasons, such as roads network, and its absorptive capacity, as to soak up the size of daily traffic over crowdedness, also the parking of cars, and also related to sufficient engineering and designing means , traffic signals and equipment’s , which aimed to organize the traffic movement, and to grantee the safety of its using. Finally the conditions and general body. It engine and durability.

2- A group of behavioral and ethical reasons:

Intended to identify the defects and flaws of roads, street construction, the behavior of street users, which represented in: trespassing and violation of rules and regulation traffic. It was therefore necessary to face these challenges of engineering and behavioral/ethical reasons, as to enforce and applying the power of traffic law and its regulation, as to realize the following:

Firstly: With respect to the engineering reasons of traffic problems, it should be addressing the following:

To improve and rehabilitate the networks of roads and streets, as to be able to absorb and soak up the traffic jam and congestion, by safely speed, and necessary of making an amendments, such as reconstructing and reorganizing the existing networks of these roads and streets. Also Initiate and construct new roads and street, if the need required. Enhancing and widening the capacity of the existing of network of roads and streets. Realizing the optimal and best utilization of roads network, and make its engineering capacity parallel to the actual traffic movement, by using and applying several tools, equipment’s and the latest styles of traffic designing.
Applying a continuous verification and inspection campaigning for the cars/vehicles, buses, trucks’ to...
guarantee its safety for traffic, and to provide the agreed standards, criteria, of its safety and durability, through a periodic and technical inspection.

Secondly: With respect to the behavioral and moral reasons of traffic problems, also it should be finalizing the following:

The methods of confronting the behavioral and moral reasons, is revolves around complying with existing laws and rules, that the creation of law, and regulations is intended to protect and maintain the life of human being, and this associated to several practices, and duties, should be applied, such as organizing and monitoring the general order and the conduct of people, and everyone should comply with these laws and regulations, and in order to address these reasons, we should applying the following:
Making a feasibility study about the appropriateness and validity of existing traffic laws, and regulations, as to apply and issue the suitable punishment.
Promote, and upgrade the Awareness of people to abide by, rules, and regulations of traffic.
Monitoring and observing the behavior of drivers on the roads and streets.
To record and register the traffic violations, looking into consideration these violations occurred or happen due to flaws in roads/streets, or refer to the errors’ behavior of some roads users.
To notify and publicizing the defects and flaws of roads and streets. And applying the traffic laws and regulations against the violators of roads.
To monitoring and follow up the actual applying of punishment, against the violators, as to realize the targeted results.

Solution and recommendations of the study:
1- Reorganizing the sidewalks and tracks of roads, streets as to facilitate the flowing of traffic. (See figure No. 5).
2- Making crosswalks for pedestrians along the side of the road/street. (See the figure No. 6-7).
3- Initiating and demarcating the sidewalks. (See the figure No. 7-8).
4- Looking into consideration to the distribution of residential buildings, to be far from roads and street.
5- Activate, and actualize the governing of traffic law.
6- Allocating the appropriate, necessary funds, as to complete and finalize the eradication of traffic problems.
7- To support the similar and related previous studies in this field, in order to solve the jamming and congestion in all traffic and transport network.
8- Using the smart parking for of cars/vehicles in regularly periods along side of the roads/streets. Providing safety sidewalks/lanes for pedestrians, and road users.
9- Maintaining and conservation the roads and streets.
10- Encouraging, and promoting the public transports, by solving the related problems, by providing a comfortable vehicles and buses for daily commuter people, as to save money flues, effort and time, to motivate these people to use the public transports instead of using their private cars in their round-going to work.
11- Disseminate and awareness the people of the traffic culture.

![Figure 5: The Study Proposal](source: Researcher)
Conclusion

This study concluded that the need to address the main streets in the Omdurman area intersections to assist in the development of the state.

References


[9] Interviews.