

## Development of Al-Maidan Square and Surrounding Streets in Baghdad City

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### Abstract

Al-Maidan square is the center of the capital, Baghdad, as well as being the historic center, where many main streets. It has economic, commercial, and tourist importance, as well as the morale of the place. As these areas are always crowded because of little absorption and an increase in the number of cars, especially in the peak of the morning, and it is not enough to develop road infrastructure in the city to accompany a large number of vehicles in the city.

This study aims to present the reality of overcrowding in Al-Rasheed Street, Bab Al-Muadham Bridge, and Al-Shorja Street, and to find solutions by providing the Baghdad metro that reduces the use of cars and making Al-Maidan Square as a metro station. The research suggests modifications to the Al-Maidan metro station proposed by the Ministry of Planning by adding a multi-story building (mixed-used) that includes car parks too.

The proposed metro project that is supposed to be constructed will have a metro station in Al-Maidan area, and the designs are present, but there is an increase in the number of private cars, so the research problem was that the previous metro designs no longer meet the current needs. Multiple floors and contain private floors for parking as well as other uses. There is another set of proposals integrated with the metro station by developing the surrounding streets, such as Al-Rasheed Street, Al-Shorja, and Al-Jumhuriya Street.

**Keywords:** *Central stations , public transport, traffic , square , surrounding streets*

### Introduction

As Mugoro (2014) one of the most difficult and complex problems in city life is the traffic problem. As a result of the development of countries and to keep pace with the urban development of countries and the use of various means of transportation, the most important of which is the tram. Petruccelli, and Racina (2021) and Shobeiri (2021) mention that, the best place for public joints is the road access link nodes, and provides adequate parking that provides transportation services .

Traffic congestion is a local problem, not a general one, and the reasons vary from case to case and are directly related to the road under study. The reasons may differ from one place to another even the same city or in the same country, and therefore, not all causes and solutions can be generalized.

Al-Maidan Square and the surrounding areas are considering historically ancient regions. In order to exploit the history area and preserve its heritage, it must work on developing these areas, especially Al-Rasheed Street, as it is the oldest and most historically well-known street in Baghdad, and also starting using the transportation method (tram) and reducing or preventing entry to cars, not this street in order not to annoy tourists, as well as the historic buildings in this street, are not polluted by car smoke.

### **Research Problem**

Lack in the exploitation and use of Al-Maidan square area in proportion to the surrounding streets and the importance of the functional and historical area, as well as the failure to develop the Surrounding area of the heritage sites and use them properly. Among the most important problems is the lack of exploitation of Al-Maidan, which is an important area in the city center. As it has a distinguished location as it is surrounded by important streets in Baghdad such as Al-Rasheed Street and Al-Shorja Street.

As well as the non-implementation of the metro project to this day, the proposed station in the metro designs designed in the eighties of the last century became disproportionate with the increase in population and therefore in the preparation of cars, as well as that the previous metro designs no longer meet the current needs.

### **Research hypothesis**

- The site can be used to revitalize the city center, and it can make it in addition to being an important center for trade as a public transportation center
- Working on a change in the proposed Al-Maidan station building by designing a multi-storey building that contains private parking floors in addition to other uses.
- Integrated the metro station by developing the surrounding streets such as Al-Rasheed Street, Al-Shorja Street and Al-Jumhuriya Street.

### **Aims of the Research**

Reviving the Surrounding street of Al-Maidan Square as it was, by returning to the historical and documentary pictures of the street before it was deformed.

### **Central stations & Public Transport**

As Academic Dictionaries: Intermodal passenger transport hubs in public transport include bus stations, railway stations and metro stations, while a major transport hub, often multimodal (bus and rail), may be referred to as a transport center or, in American English, as a transit center. Sections of city streets that are devoted to functioning as transit hubs are referred to as transit malls. Modern electronic passenger information systems and journey planners require a digital representation of the stops and transportation hubs including their topology. Public transport data information standards such as Transmodel and IFOPT have been developed to provide a common terminology, conceptual models and data exchange formats to allow the collection and distribution of stop and interchange data.

Bertolini, and Tejo (1998) mention that, the development of railway stations and their surroundings is an emerging feature in current urban projects. Based on a series of the most inspiring contemporary

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European examples of station redevelopment, Central stations are not just major transportation nodes but may also be "a specific section of the city spaces. Bán (2007) argues that the focus should be not only on infrastructure but also with a variety of buildings and the open city. Making it "one of the most complex social areas" in the city. As Phoong, et al (2019) This has drawn in railway business - freight and local industry using the marshalling yards - and commercial business - shops, cafes and entertainment facilities.

As Monika (2016) Today, central stations, particularly in Europe, act as termini for a multitude of rail services suburban, regional, domestic and international - provided by national carriers or private companies, on conventional rail networks, underground railways and tram systems. These services are often divided betiten several services levels. In many cases, central railway stations are collocated with bus stations as well as taxi services.

### **Practical study**

The study will be about Al-Meydan Square area and adjacent areas. This place was present in most of the events that Iraq has gone through since the beginning of the titntieth century, and on its sides diagnose the remains of buildings that are out of date, but they itre once Government, commercial and industrial headquarters, and branched from It small alleys take you to the shops of the old Baghdad "neighborhoods".

In a move considered today some of the most important impact left by the ottomans during the four centuries of their rule over Iraq. The street was the lifeblood of Baghdad during the past decades, and a destination for many Iraqis to shop and shop, as it was a destination for foreign tourists before the wars and crises ravaged the country. But the street today has become a lament for some because of its state of affairs. The old buildings that are supposed to be renovated, many of them becoming to fall, they are littered by factors of time, and heaps of waste are distributed in its flanks. It impedes the movement of cars in it.the street includes some old shops that have become famous in and outside Iraq sometimes, such as Hafiz Al-Qadi and Asir Al-Haj Zabbalah and others. See figure 1.



*Figure 1.* Al-Maidan Square and Surrounding Streets case study- 2020, Google Earth.

### Site Analysis

Through the pictures collected and captured, the area can be analyzed, see figure 2, 3. Which represents old photos when the square was a public transport bus stop.



*Figure 2.* An old picture of Al-Maidan Square when it was a bus stop for public transport- 1985, Google Earth



*Figure 3.* An old picture of Al-Maidan Square when it was a bus stop for public transport-1985, Google Earth

But at the present time this square is currently almost neglected and it have uncovered and photographed the site, see figure 4, 5, 6, 7, 8, 9, 10, 11. representing the buildings surrounding the square.



*Figure 4* The connection of Bab Al Muadham Street to Al Maidan Square, where Previously Baghdad Governorate Building 2020/ source the Researcher



*Figure 5* Al-Maidan Square in 2020 AD / source the researcher



*Figure 5* Al-Maidan Square in 2020 AD / source the researcher



*Figure 6* shows Al-Ahmadi Mosque in Al-Maidan Square at 2020 AD / source the researcher

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Figure 7 shows Al-Ahmadi Mosque in Al-Maidan Square - 2020



Figure 8 shows Al-Ahmadi Mosque in Al-Maidan Square at 2020 AD / source the researcher



Figure 9 Al-Maidan Square in 2020 AD/ source the researcher



Figure 10. The location where Al-Maidan Square station is supposed to be located. photo date 2020 AD/ source the researcher

Also, it had found that part of this square has been exploited and Converted into a car garage, knowing that this square contains service streets, so it can not know whether this garage is regular or not ?

The effect of the proposed metro project

The full design of the Baghdad metro project is as follows:-

it found that the Baghdad Metro project is its central location or the Center of the project is in Al-Khilani Square and among the lines that it Passes is Al-Maidan line (Maidan Square).

Where as shown in the picture See figure 12. 13. 14 is the design of the metro station for Al-Maidan square, so the stairs will be to enter the station within the square in front of the ministry and create a private parking garage near the Metro Station in the same square.



Figure 11. A proposal for the Baghdad metro project (1)

The source / The Ministry of Planning, Department of Regional and Local Development

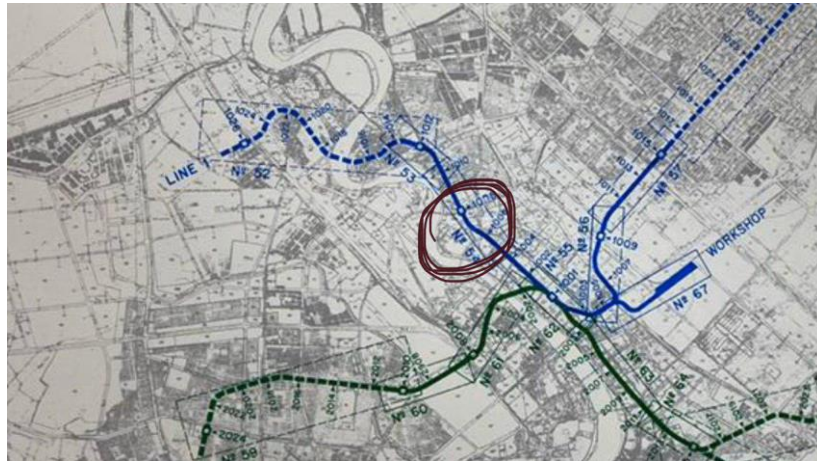


Figure 12. A proposal for the Baghdad metro project (2).

The source / The Ministry of Planning, Department of Regional and Local Development

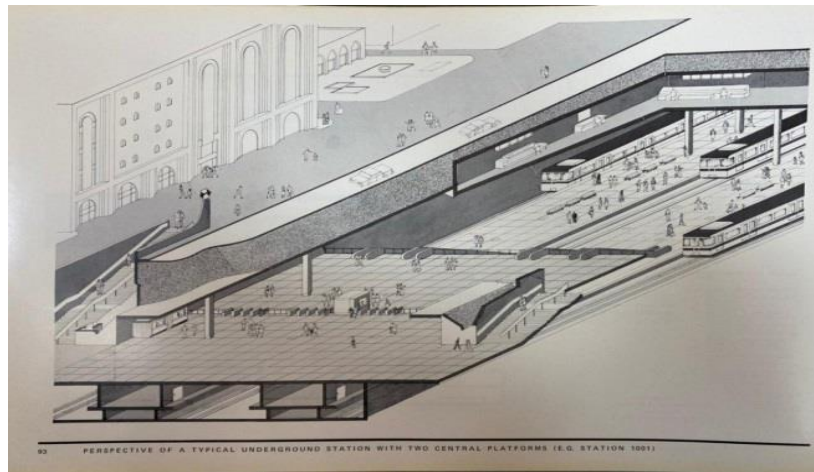


Figure 13. A proposal of Interior design of the subway station

The source / The Ministry of Planning, Department of Regional and Local Development

### Al-Maidan Square

It is a bus station place, one of the proposed metro stations, it is the heart of Rusafa district. One of the most famous and oldest landmarks and areas of Baghdad, and the most venerable in the depth of Al-Baghdadi history, and the most varied in the images of life, again, a mixed mixture of heritage, modernity, in (locality of Al-Maidan ). And for a short time, the largest and most active station for internal transport, and the link betiten the northern, itstern and eastern regions of Baghdad, from which during the day the internal flights that are led by the (double decker bus) with its distinctive red color. As Al-Hilali, it is Mediated by the name (Al-Maidan) dates back to the Abbasid period where the square was established in the vicinity of the palaces of the Abbasid caliphs and princes to entertain them through playing a game of ball and wand, which confirms those sources that the first knowledge of the Iraqis was in the time of the Abbasids. While some of its name is attributed to its transformation into an arena for training and displaying the Ottoman army during the rule of the Ottomans at the beginning of the

ninth century, which is known in military customs and terminology in Al-Maidan . The locality of Al-Maidan is located at the beginning of Al-Rasheed Street, near the old Ministry of Defense building, and it forms a square. It is the center of Rusafa and the end of the northern border of Baghdad Gate, now known as Bab Al-Muadham. Among the most important of its stores is the new station of Hassan Pasha, which included the house of Kamel Al-Jadarji and the newspaper Al-Rai Al-Aam, affiliated to the poet Muhammed Mahdi Al-Gohari, and the first post office or (post office). It was also called, the Itstern School and the Samun Furnaces of the Army, the Mahalat al-Sabounjieh, and the National Library that Miss Bell established. (Al-Maidan) was the center of Baghdad, where important government centers itre embraced, such as the Water Liquefaction Authority and the Ministry of Foreign Affairs, The region also included the Officers Club, the House of Representatives, and near them the Qashla, and the ministries, the most important of which is the Ministry of Interior. Baghdad Entertainment Center Besides its political and administrative importance, it was considered the Baghdad entertainment and tourist center, which included a group of months Baghdad cafes and most in touch with their lives.

### **Main streets**

#### **Al-Rasheed Street:**

As Al-Kilani (2009), it is one of the oldest and most famous streets of Baghdad was known during the Ottoman rule as (Khalil Pasha Jadda Si Street) after the name of Khalil Pasha, the ruler of Baghdad and the leader of the Ottoman army, who expanded and modified the public road from the eastern Bab to the Bab of Al-Muadham and made it a street in his name in 1910 AD, then the British in 1917 called him Hindenburg Street, Al-Nasr Street and finally in the royal era he called "Al-Rasheed Street" its last name which became an Iraqi icon.

As Soussa (1952), The street contains heritage mosques, including the Al-Haydarkana Mosque, which was built by Dawood Pasha in 1819 AD, the Marjan Mosque, the Syed Sultan Ali Mosque and the Hussein Pasha Mosque, and contains famous ancient markets, including the Haraj Market and the Saray Market. See figure 15, 16, 17.

#### **Bab Al-Muadham:**

Bab Al-Muadham is one of the historical and archaeological monuments of Baghdad. This landmark gained wide fame, ancient and modern, because of the incidents that took place in it and the number of names that itre launched on it without all the other gates in the eastern wall of Baghdad. It was called (the northern gate) , (the Adham), or (the gate to Adhamiya) . See figure 18.

The Bab of Al-Muadham represents the most important and greatest part of Baghdad in the military, geographical, economic and social aspects of the presence of a number of institutions, sites and departments in this region such as Baghdad Castle, Al-Qashleh Building, the Serail, mosques, schools, markets, and homes of senior military and civilians there, and finally a declaration of the end Ottoman control of Iraq remained Bab Al-Muadham until the year 1923 until the capital's secretariat demolished it to expand the main street.



*Figure 14.* Al-Rasheed street, and Heritage buildings surrounding the street in 2020 AD



*Figure 15.* Al-Rasheed street at Peak time - Google Earth



*Figure 16.* The beginning of the connection of Al-Rasheed Street with Al-Midan Square- Google Earth



*Figure 17.* Bab Al-Muadham junction, and the Medical City Hospital appear in it- 2020 AD

### **Al-Shorja Street**

As Soussa and Mustafa (1958), Al-Shorja suq is located in the Al-Shorja district, which was previously called the “Tamara” store because dates were sold in its markets. The word Shorja comes from the Turkish or Kurdish word that consists of two syllables. The first syllable (shor) means the salty and the second syllable (face) is any place, so it means the salty place, and this means the meaning of Al-shorja (salty river) or the small salty river. Al-Shorja is a traditional and popular market for Al-Baghdadi, The area is one of the heritage areas that contain some ancient monuments, including the lighthouse and minaret of the Mosque of the Caliphs in the Ghazal market, which dates back to the era of the Abbasid state, and recently some of its old buildings were demolished, such as the ancient heritage khans like Khan al-Agha al-Saghir and some other old buildings nearby and it was found in a number of salt water wells, and this confirms that the nomination is correct.. it has 13 khans, Khan ‘Jin Murad’, then Khan Al-Amin, Khan Alagha Al-Kabir, and from There are 4 mosques, including the Nakhla Mosque and Nubaji Mosque. As for the cafes, there are two (Maalaka Café), And Qadduri coffee. See figure 19.

### **Traffic momentum problems**

At the present time it was found that Al-Maidan square suffers from medium congestion, especially in the official working hours due to the presence of educational complexes close to it and because of the presence of Al-Shorja market on the one hand, see figure 20. 21. 22. 23.



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Figure 18. Al-Shorja street - 2020 AD



Figure 19. Traffic momentum problems



Figure 20. A satellite image shows the traffic momentum for Sunday during the official working hours - Google Earth.

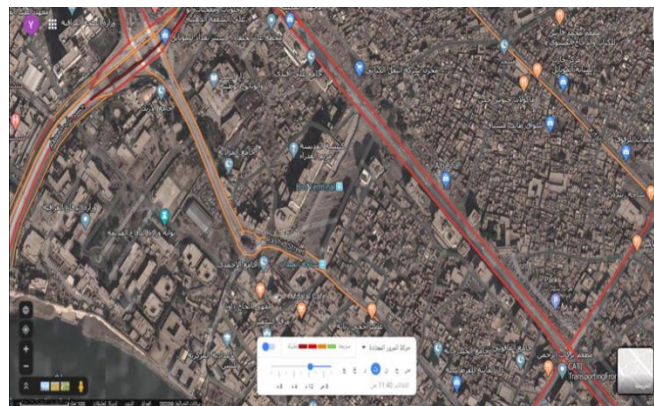


Figure 21. A satellite image shows the Traffic momentum for Tuesday during the official working hours. - Google Earth

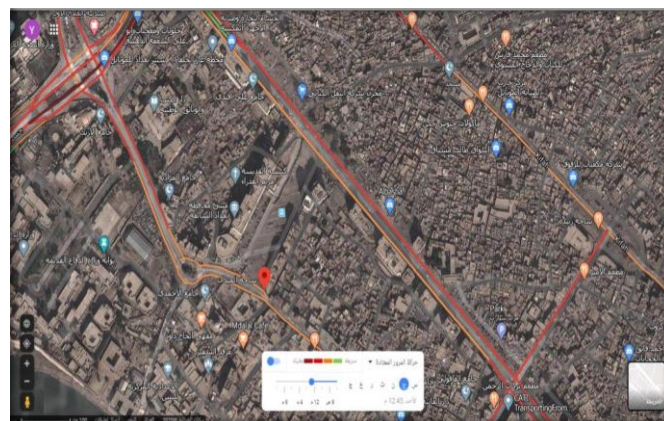


Figure 22. A satellite image shows the Traffic momentum for Thursday during the official working hours. - Google Earth



Figure 23. Shows the survey point, to account the number of cars that passed through the 4 streets.

Where it found that the traffic momentum in the Bab Al-Muadham area is very high, as is the case in Al-Shorja area and in Al-Maidan Square are medium. In fact, it was planned to construct the metro station in Al-Maidan Square in order to reduce the pressure and traffic momentum in Al-Shorja and Bab Al-Muadham areas. Traffic flows Survey, see table 1,2,3,4,5.

Table 1

*Shows the dimention of the streets. Source the researcher*

| Name of street    | width | Long |
|-------------------|-------|------|
| Al-Rasheed street | 13    | 600  |
| Bab Al-Muadham    | 52    | 1040 |
| Al-Shorja street  | 17    | 940  |
| Al-Resafe street  | 14    | 192  |

Table 2

*Shows the number of cars passing through Al-Shorja Street from (8-9) in the morning.*

| Types of cars        | number of cars /hour |
|----------------------|----------------------|
| Private cars         | 342                  |
| Taxis                | 558                  |
| Load cars            | 102                  |
| Public cars          | 174                  |
| Bikes(tok tok_stuta) | 192                  |
| Total                | 1368                 |

Table 3

*Shows the number of cars passing through Bab Al-Muadham Bridge from (8-9) in the morning.*

| Types of cars        | number of cars /hour |
|----------------------|----------------------|
| Private cars         | 570                  |
| Taxis                | 858                  |
| Load cars            | 72                   |
| Public cars          | 192                  |
| Bikes(tok tok_stuta) | 43                   |
| Total                | 1735                 |

Table 4

*Shows the number of cars passing through Al-Rasheed Street. From (8-9) in the morning.*

| Types of cars        | number of cars /hour |
|----------------------|----------------------|
| Private cars         | 148                  |
| Taxis                | 252                  |
| Load cars            | 73                   |
| Public cars          | 45                   |
| Bikes(tok tok_stuta) | 12                   |
| Total                | 530                  |

Table 5

*Shows the number of cars passing through Al-Resafe Street. From (8-9) in the morning.*

| Types of cars         | number of cars /hour |
|-----------------------|----------------------|
| Private cars          | 285                  |
| Taxis                 | 367                  |
| Load cars             | 164                  |
| Public cars           | 149                  |
| Bikes (tok tok_stuta) | 56                   |
| Total                 | 1021                 |

### **Results, Discussion and Recommendations**

This paper present the reality of congestion during rush hours. This paper concluded that there is a traffic jam problem in Al-Rasheed Street, Al-Shorja Street, and Bab Al-Muadham Bridge. Making Square as a metro station with providing parking lots and closing Al-Rasheed Street in front of cars and making it a tourist street for visitors reduces traffic momentum in that area, because it reduces the use of cars and people resort to using the metro, which is the most appropriate solution when compared to other suggestions. Al-Rasheed as an archeological tourist symbol is a kind of historical urban appearance.

Redevelopment of the plans drawn up for the proposed Al-Maidan station, in the event of the metro construction, that the station building would be a multi-storey building and contain designated floors that would have car parks to handle congestion in the area and be complementary to the project.

- contract to built the metro project of Baghdad is the measures to solve the problem of crowds in some of its cities, and it has been experiencing traffic jams and met with a distinct success.
- Securing and constructing new garages for vehicles that are multi-storey, such as Al-Senak Garage in several areas of Baghdad, especially at the beginning and end of Al-Rasheed Street to avoid parking vehicles on both sides of the road and get traffic congestion and also to use the garage by shop owners and street visitors for the purpose of shopping or entertainment.
- Not to allow vehicles to enter Al-Rasheed Street to avoid physical damage to old historical buildings, to reduce noise and air pollution from vehicles, and to contribute to creating an appropriate atmosphere for shopping on the street.
- That the governments have a future outlook and advance planning for roads in the capital, Baghdad, since all road infrastructure projects itre prepared during the 1980s, and new annual highways should be established and metro and hanging trains built for the purpose of relieving pressure on the street.
- Speed up of Construction of the metro station in the square opposite the former Ministry of Defense, where it was previously a parking lot for government buses.
- Create a regular garage with a view and convenient arrangement for the location and history of this place, as well as the metro station within the Baghdad metro project.
- Al-Rasheed Street must be closed to all cars, its exploitation and its archaeological site, and it is dedicated to tourism, as it is a pedestrian street only, as well as for the small trucks that carry it and the special goods for the people of the shops. It is located inside the area and it is best to close the street from its beginning from the direction of the square to the Al-Ahrar Bridge because of Al-Rasheed Street, which is full of people, cars and trucks, especially from 7 am to 3 pm due to the presence of the popular market.
- Directing the municipal and service departments that maintenance work for bumps and cleaning should be in times where there is no traffic momentum, preferably at night as it is in most of the countries of the world.

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