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## URBAN MOSQUES AMONG HIGH-RISE: THE ISSUE OF PARKING EFFICIENCY WITHIN COMPACT URBAN SETTINGS

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### ABSTRACT

Car park facilities was one of the concerns in mosque design especially when the mosque is situated among dense high-rise buildings. High number of worshippers during Friday prayers has been leading to a huge demand of parking areas around the mosque. Insufficient of parking areas might result in illegal parking happen around the mosque and produces trouble to the local citizens. This study will study on the efficiency of the parking areas in and around the mosque in urban area.

**Keywords:** *Parking efficiency, urban mosque, high-rise buildings.*

### INTRODUCTION

The bigger the town, the bigger the parking demands among the road users. Hence, it is important to provide sufficient parking lots for the road users. The main intention of this paper to determine the reason of parking issues occur around mosque in urban areas and its solutions. The reason of happening this problem would be the limitation of parking lots that are provide and the demand of it are too much higher than the lots that are provided. Furthermore, the parking issue becomes critical when the mosque users increase during Friday prayers and throughout the Ramadan month (Zhengan, et al., 2015). Moreover, parking issues not only bring trouble to the car drivers themselves but also causing inconvenient to the urban user around the mosque.

### DEFINITION OF PARKING

Parking can be defined as a space for the driver to leave a vehicle in a particular place for a period of time (Meaning of "parking" in the English Dictionary, 2017). Parking can also be defined as an area of land, usually in a large natural state for the enjoyment of the public from having the facilities for recreation, set apart and managed by a city. Term

in parking facilities are parking lots, parking demand, parking spaces, parking supply and so on.

## PARKING ISSUES

The growth of motor vehicles has been leading to various negative effects such as traffic congestion, increase in driver and passenger travel time and their cost used. Meanwhile, increase in the number of vehicles also results in the lacking of parking facility in the city. This is due to the number of parking provided are not sufficient to cater the road user. When parking near the mosque and surau to pray, people used to park at anywhere, as well as in the middle of road and blocking the traffic (Persoalan Tentang Parking, 2013). But at the other hand, people are able to park well at the other place such as shopping mall, shop offices and etc, and willing to walk to the destination after park their car at the parking lots. However, at the mosque, people tend to park as near as the mosque just to reduce the walking distance and some time the parking place might not be suitable and will cause problem to the other site users (Persoalan Tentang Parking, 2013).

### Parking Congestion and “Park & Ride” System in Putrajaya, Malaysia

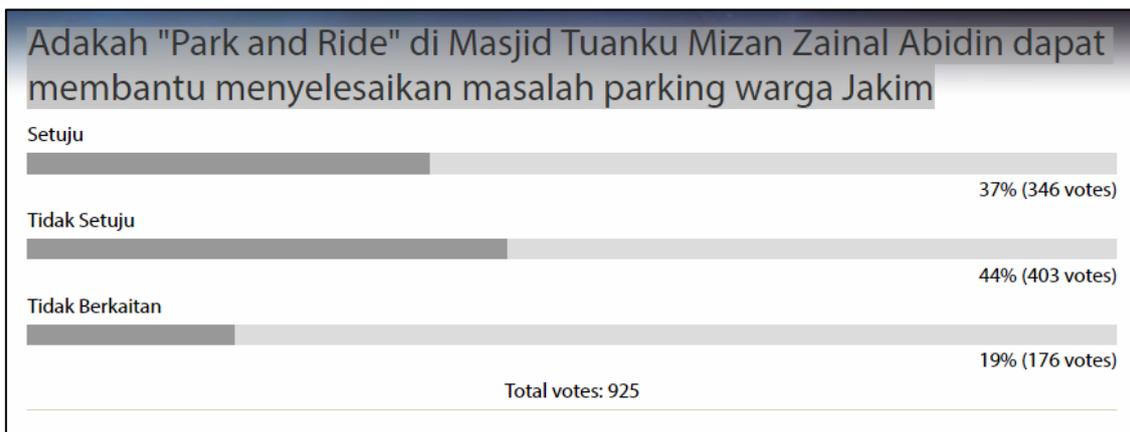
The problem of parking congestion at the Federal Government Administrative Center, Putrajaya is just as bad as it is. The officer and visitors have to travel for hours searching for parking lots. The lack of chronic parking also poses many other problems such as traffic jam, and also prevents garbage truck passage for collection works (Baharuddin & Kamarudin, 2016).



*Figure 1. Traffic cone was place to remind driver does not park their vehicle at the road centre to avoid traffic congestion. (Source: Baharuddin & Kamarudin, 2016)*

If examined, this scenario can also be attributed to the attitude of the staff as well as the public itself. They are not only reluctant to use the available buses, even failing to fully

utilize the 'Park & Ride' system introduced. The Utusan Malaysia survey at the Park & Ride area at Presint 7 found that only a few vehicles were parked in the area, and the greatest number of passengers carrying bus drivers is five (Baharuddin & Kamarudin, 2016). People are more prefer to drive alone to their destination even though they need to spend hours to find parking (Baharuddin & Kamarudin, 2016). Online research results at the official website of Jabatan Kemajuan Islam Malaysia (JAKIM) also show that public feel that the existing "park and ride" system does not contribute to the parking problem at Masjid Tuanku Mizan Zainal Abidin, Putrajaya (Adakah "Park and Ride" di Masjid Tuanku Mizan Zainal Abidin dapat membantu menyelesaikan masalah parking warga Jakim, 2017).



*Figure 2. show that almost half of the voter feels that the existing "park and ride" system does not contribute to the parking problem at Masjid Tuanku Mizan Zainal Abidin, Putrajaya (Source: Adakah "Park and Ride" di Masjid Tuanku Mizan Zainal Abidin dapat membantu menyelesaikan masalah parking warga Jakim, 2017).*

#### Limited Parking Near Mosques at Abu Dhabi

Friday prayer is a special event that occur at every Friday among Muslim community. As the result, congestion occurs for Friday afternoon prayers as the vehicle are seen parked wrongly near a mosque in Abu Dhabi on Hamdan street, due to the lack of parking spaces (Zaman & AlTaher, 2013).



Figure 3. Double park near a mosque in Abu Dhabi on Hamdan street. (Source: Zaman & AlTaher, 2013)

It has been a huge demand to find a mosque within walking distance in the city. When the residents drive to the mosques, they report that it is very difficult to search a parking lots, especially at those mosques that have a very large number of worshippers. Below are some of the complains of the locals (Zaman & AlTaher, 2013).

“On normal days, I tend to pray at the neighbourhood mosque or use a prayer room at my workplace. But on Fridays, I drive to a mosque on Hazza Bin Zayed Street. Finding a parking spot then is not always easy,”

“Because I go in early, I usually manage to park my car. But just a while later, the surrounding streets get very crowded, and people tend to park on the main road, leading to a lot of congestion,” Adil Abdul Wahid, a 33-year-old Emirati, told Gulf News (Zaman & AlTaher, 2013).

“I practice this in order to extend my prayers, but it also helps me avoid the rush of cars on the main roads outside the mosque. I have noticed that the lack of spaces means that many drivers double park their cars, which can be very inconvenient,” F. Mohammad, a 47-year-old taxi driver from Pakistan, said he tries to reach early and then try to stay late at the mosque to avoid traffic congestion at the mosque where he performs Friday prayers (Zaman & AlTaher, 2013). He also mentioned that this problem is only occur at Friday (Zaman & AlTaher, 2013).

Traffic congestion and lacking of parking space also results in the business fall of the nearby shops.

“My shop is located right next to a popular mosque, and during the Ramadan night prayers, motorists park their cars in ways that block the street. And even though there is generally a greater demand for fabrics and clothes during Ramadan, my sales tend to fall by 20 per cent during the hours of the night prayer,” said K.D., the owner of a textiles store near Hamdan Street.

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## CASE STUDY

### A Mosque on Top of a Parking Lot, Kuala Lumpur, Malaysia

Masjid Jamek Abdullah Hukum is a mosque on top of a parking lot in Kuala Lumpur, Eco City.



*Figure 4. Masjid Jamek Abdullah Hukum (Source: Mosque above parking lot to be opened on July 31, 2016)*

The two-storey mosque on top of a seven-level car park podium, is located in one of Klang Valley's largest integrated mixed commercial and residential developments. This mosque is being developed to accommodate more than 1,000 worshipers at one time. Its sizes about 1,207.73 s.q. metre (13,000 square feet), able to accommodate about 3,000 people to the fullest. Moreover, this mosque also has 700 parking bays provide to the users and so it would not be a problem for those going for Friday prayer or for special events, like wedding ceremonies, sport events that held at the mosque.

#### St.Alban's church' s transport assistance

St.Alban's church has limited off-street car parking facilities for who attending the church. They provide free street parking: one-hour limit between 8.30am to 6.00 pm, form Monday to Friday and 8.30am to 12.30pm on Saturday. This church has adequate parking along the residential at Downing Street so the parishioner is encouraged to car pool. And for those who need transport assistance, or who can or willing to provide assistance to other can directly contact the Parish Office and the services are advertised to public at the brochures and internet (Associates, 2003).

#### Free valet services

The operating hours of Padri Restaurant in Aguora Road, USA is on Friday and Saturday night but with no space for the customers to park their car nearby. So the owner of the shop pays about \$ 1000 per month for the valet service, which is free for the customers. This prevent people from parking at the nearby shopping center parking lots which is near to the restaurant (Associates, 2003).

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### Multi-Function Friday Surau



*Figure 5. Surau Wakaf Dawjee Dadhaboy at Menara Bank Islam (Source: Setiap Jumaat, tempat letak kereta bertukar surau wakaf, 2016)*

Surau Wakaf Dawjee Dadhaboy at Menara Bank Islam is a Friday Surau that able to accommodate 3500 at one time. This surau, which starts as a small surau that can accommodate about 600 people, is now able to accommodate Friday congregation up to 3,500 people (Setiap Jumaat, tempat letak kereta bertukar surau wakaf, 2016).

For Friday's prayer, the two floors of the building's basement were converted into a prayer room. What's stunning is that the basement is laid out on a clean bed every Friday. For the convenience of pilgrims, air conditioning is installed and, in every corner, there is also a fan (Setiap Jumaat, tempat letak kereta bertukar surau wakaf, 2016).

Readable sermons are also clearly heard because of advanced state-of-the-art systems as well as multimedia screen installation. In the corner of the basement of the basement there are al-Quran books neatly arranged for the convenience of pilgrims who come early and want to read the scriptures (Setiap Jumaat, tempat letak kereta bertukar surau wakaf, 2016).

### FINDING AND DISCUSSION

#### Insufficient Parking Areas.

As the population increase through year, but the land size still remain as before and hence the parking demand is increasing throughout the year. As the authorities was not able to build so much of parking at everywhere due to cost restriction and some consideration, hence the parking area become insufficient at cater the citizens' need.

### Less Usage of Public Transportation

The best way to cater parking problem will be using public transport or car pool. So that the vehicles on road can be reduced. However, public are more likely to drive on themselves. There are so much of public transportation such as transit bus and LRT. But the usage of them is comparative low.

Despite that the authorities should provide more parking spaces near mosque; the more suitable solution will be promoting public transport and walkability in the city. As the city is suitable to walk, then the road pedestrians will increase gradually. As the result of it, traffic and parking problem will decrease.

### Out-Of Town Parking

The majority of vehicles parking in residential area are from outside of the neighborhood as the driver can find any more suitable parking, or maybe the mosque is located near to the neighborhood.

### Illegal Parking

Sometime people tend to skip the parking fee; hence they will park illegally at those unsuitable places such as in front of residential gate, in front of the shoptlot or miss use of handicap parking. Therefore, will bring trouble to the nearby citizens.

### Time Restriction

When the worshippers are rushing to the mosque but facing parking problem, they might end up park their car anywhere. This is because some of them might travel a distance to reach the mosque at the lunch hour, and the moment they reached, the mosque parking lots already full. They need to spend time to find a parking place that might be quite far away and then need to walk to the mosque. Hence, they may decide to park illegally at a place that is near to the mosque.

However, the parking facilities have to be improved and increased to cater the huge demand of the worshippers. One of the solutions will be multi-story parking as its need the lesser land but provide more parking spaces.

## RECOMMENDATION

- Improve Information for Motorists

Create more signage, brochures and other information resources regarding parking availability and prices. Hence the user will able to find parking more efficiently.

- Reduce Automobile Dependency

By encouraging the usage of transportation alternatives such as car poll and public transports. Enhance the accessibility of public transport such as increase the number of bus stop and discounted bus fares.

- Mix-Used Parking
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Multi-storey car park is able to overcome the parking demand of the mosque at the peak hour. However, it will be leaving empty at the other time. Hence a mix-used parking is more suitable for religious uses, as it can share the parking area with nearby commercial establishments. This is because religious and commercial uses are typically having a different peak hour of parking demand. Beside sharing the parking facilities, the car park area can also be transformed into an event space such as sport areas.

- Advertise and Provide Shuttle Services

When a car park is too far away to the desired destination, people usually will not use that facility since it required a long-distance walk. So, shuttle services will overcome this issue for that mosque that having far car park. It is also very vital to advertise the shuttle service to the target group so they know it and try the services.

- Use of Intelligent Parking Systems/ Smart parking

Smart parking refers to the use sensor, real-time data and application that allow the users to track the available parking lots. It reduces the time spend to go around and round in the city in order to find an empty lot. It also provides services such as online payment, parking time notification, CCTV and car searching.

## CONCLUSION

As most of the mosque are having the Friday prayer parking issue, it is vital to solve this problem. This is because mosque is a scares place for worshippers to have their worship prays. It also is a community and social areas for Muslims in their daily life. However, not only the authorities should improve and provide the parking facilities around the mosques, but the mosque users also need to contribute to reduce traffic congestion at the area. For example, worshippers might reduce the number of automobiles by carpooling. When conflict happen due to the parking insufficiency, being tolerate helps to settle the conflict fast and peace. When the parking issue have overcome, the users' experiences will be improved.

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