

# A SURVEY OF DESIGN FEATURES AND PROVISIONS IN SURAUS AT PETROL STATIONS IN KLANG VALLEY

**Harlina Md Sharif, Khairuddin Abd Rashid, Jamilah Othman & Azila Ahmad Sarkawi**  
Kulliyyah of Architecture & Environmental Design (KAED)  
International Islamic University Malaysia (IIUM)  
*msharlina@iium.edu.my*

## ABSTRACT

*Suraus at petrol stations along the highways in Klang Valley have facilitated Muslims in performing their obligatory prayers (salat) especially during the peak hours while commuting home from their workplace. Given that a surau is a simpler form of a masjid, whereby the latter denotes a much more elaborate treatment to the facilitation of salat requirements, the surau has generally been accepted to provide the most basic and essential features (dharuriyat) for a Muslim prayer place. Although etymologically the word masjid only indicates the utility or place for performing salat and not the provision of a specific structure, the development of the mosque design from the time of the Prophet s.a.w. to our time today indicates that there are supplementary elements of design features that have become desirable provisions in enhancing user experience and the quality of salat. By conducting a visual survey on 13 suraus at petrol stations using non-randomised convenient sampling as an adopted methodology, this study documents three essential aspects of the surau: 1) design features, 2) supporting facilities, and 3) accessories provisions. The findings of the survey indicate the need for minimum standard requirements for design provisions of suraus at petrol stations.*

**Keywords:** *Surau, Masjid, Petrol Station, Design Features, Minimum Standard Requirements.*

## 1. Introduction

The Arabic word مسجد, pronounced 'masjid' (mosque), etymologically is derived from the letters ج-د-س (*sajada*), which is the root word for the action of 'prostration' (*yasjud*)<sup>1</sup>. The addition of the letter mim (م) in front of the word transformed it from being a verb to a noun to denote a place (to prostrate), a utility or a medium, which allows for the action (of prostrating) to be performed. The word *masjid*, thus, designates the place or the utility that facilitates for prostration to be performed (Ibn Manzur, III, 1941; Al-Zarkashy, 1384H, pp. 26-8). Based on the *hadith* of the Prophet Muhammad (s.a.w): 'The whole earth is made a *masjid* for me' (Al-Bukhari, *hadith* no. 438; Muslim, *hadith* no. 1161-7); Al-Qadhi Íyadh expanded the word to include every space on the earth, which has been made pure for the Muslims to perform their prayers (*salat*) is considered a *masjid*.

The generic meaning of the word *masjid* applies to all types of spaces used by Muslims to perform their obligatory prayers. Thus the word *surau* as used in Malaysia, according *Kamus Bahasa Melayu Dewan Bahasa dan Pustaka*, refers to 'bangunan yang lebih kecil dari masjid tempat orang-orang Islam beribadat' (a building smaller than a *masjid*, which is used by Muslims for liturgical activities).

Islam views the act of building a *masjid*, regardless of its size, as one of the most meritorious acts. Provision of prayer space is considered a pious work, as according to the Prophet (s.a.w) "for him who builds a *masjid*, God will build him a home in paradise" (Al Bukhari, *Salat*: 65). Even during the early years of Islam in Makkah, when the Muslim community had no special place for worship, the companions were known to have private prayer spaces in their houses. Abu Bakr (r.a) is said to have had a private *masjid* in the courtyard of his house. In Medina, the Prophet (s.a.w) used to conduct *salat* in the private *masjid* belonging to Abu Umama As'ad prior to the construction of Masjid al-Nabawi (Sirah Ibn Hisham: 246, al Bukhari, *Salat*: 86).

After the Prophet (s.a.w) passed away, many companions had built *masajid* (pl. *masjid*) in spots that he (s.a.w) used to pray on the road between Makkah and Medina (Al-Bukhari, *Salat*: 89). Along the road to Tabuk that the Prophet s.a.w had traveled in the year 9 Hijriyah, there were in total 19 *masajid* built (Ibn Hisham: 907). The number of *masajid* operated privately was known to have increased rapidly with the Islamic expansion. A census undertaken by al-Hakim in Egypt in the year 403H/ 1012-3 C.E. recorded the number of private *masajid* amounting to 800 (al-Makrizi, iv: 264). In Basra there were up to 7000 private *masajid* recorded around the same time. In Palermo, Ibn Hawkal counted about 200 *masajid* in a village alone; in some streets there were as many as 20 *masajid* 'within a bowshot of one another' (al-Ya'qubi: 361).

## 2. Research background

The *suraus* built at petrol stations facilitate Muslims in performing their obligatory prayers, especially if the time span for the prayers falls during their journey on the road. The prayer spaces provided by the petrol stations' operators become convenient transit spots especially during traffic congestions. Although the provision of *suraus* in Malaysia is governed by various guidelines issued by the Department of Town and Country Planning, Peninsula Malaysia under the Ministry of Housing and Local Government namely Planning Guideline for Masjid and Surau (GP008-A), as well as The Department of Standards Malaysia (MS 2577 Architecture and Asset Management of Masjid); the specificities of *suraus* at petrol stations have never been addressed. For prayer spaces with a minimum size of 20 square meters, guidelines provided in GP008-A as well as MS 2577 can be consulted and adapted to evaluate the standard of *salat* facilitation in these *suraus* (Azila Ahmad Sarkawi et al., 2016).

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<sup>1</sup> *Yasjud*: verb meaning 'he prostrates'. Refer to Ibn Manzur, *Lisan al-'Arab*, vol. III.

The provision of *suraus* at petrol stations is a complementary service initiated by private operators. Having an additional reason for customers to stop by at these stations is considered as part of marketing strategy and indicators for customers' loyalty (Hauwa Saleh Dutsenwai et al., 2015). A study conducted on customers' behaviours demonstrated that quite a number of visitors spent some time at the petrol station resting, wandering about in the shop and having a coffee break. A 10 to 15 minute visit at the petrol station is not unusual (Magdic & Sjöstrand, 2002). Thus the existence of *suraus* at petrol stations benefits both the operators as well as the customers.

### 3. Problem Statement

In order to perform the obligatory prayer, it is sufficient to have a dedicated space with knowledge on the direction of the *qibla*, as mentioned by the hadith: "Wherever the hour of prayer overtakes you, you shall perform the *salat* and that (place) is a *masjid*" (Muslim: Masjid). In this regard, the provision of *suraus* at petrol stations can be considered as a convenient response to fulfill the Muslims obligations for *salat*, especially during traffic congestion.

Given the absence of any reference towards a prescribed form of structure, there has been a kind of anticipation that the nascent characteristics of a *surau* are acceptable. As such, it is commonly accepted and expected that a *surau* only has to provide the most basic and essential features (*dharuriyat*) for a Muslim's prayer place. Preliminary observation on provision of *salat* facilitation at petrol stations reveals that there are glaring inconsistencies between one *surau* to the other on what is expected to be a minimum standard requirement.

On the contrary however, literature review conducted by this study suggests that the minimum quality expected of a prayer space is governed by the Islamic liturgical requirements, that may not be fully satisfied by the *suraus* at petrol stations.

### 4. Research Aims & Objectives

The objective of the survey is to visually document the physical features of the design provisions of *suraus* at petrol stations along major highways in Klang Valley. The existing design parameters in these *suraus* will be evaluated against the minimum requirements for *salat* facilitation as found in the *Qur'ān*, *al-Sunnah* and discourses of both classical and contemporary scholars. In addition, local policies and guidelines pertaining to the design of *masjid/surau* will serve as a reference in evaluating the presence of a minimum standard. The aim of the study is to address the current inconsistencies as found in the design provisions of the *suraus* in order to facilitate in devising a standard guideline that can assist petrol station operators in improving the quality of *salat* facilities. The outcome of the study will also be beneficial in providing a minimum standard requirements for privately owned *suraus* that are designed for public use.

### 5. Research Methodology

The research activities involved are:

- Literature review of primary sources i.e the *Qur'ān* and *al-Sunnah* as the main references. In addition both classical and contemporary literature pertaining to the intent of the Lawgiver (*al-Syari'*) on the provision of a prayer space are also consulted.
- A review on local planning guidelines of *masjid*, *musalla* and worship places issued by the Department of Town and Country Planning, Peninsula Malaysia under the Ministry of Housing and Local Government namely Planning Guideline for Masjid and Surau (GP008-A). The Department of Standards Malaysia also produces MS 2577 Architecture and Asset Management of Masjid.
- Primary data collection through field survey and visual documentations of *suraus* at petrol stations along the main highways in Klang Valley.

## a) Literature Review: Design Provisions of Masjid in the *Qur'ān* and *al-Sunnah*

The term '*masjid*' (place of prostration) appears twenty-eight times in the *Qur'ān* (Mu'jam al-Mufahras). In all 28 instances, the word refers to the characteristics of a *masjid* proper pertaining to administrative and/or devotional activities as well as sanctity issues (Harlina Md Sharif 2013, pp.92-4). With regard to the characteristics of *masjid* according to *al-Sunnah*, the most comprehensive collection of *aHadīth* pertaining to the topic was compiled by the 13<sup>th</sup> century scholar Al-Zarkashy (d.794 H). His work, "*l'lam as-sajid bi ahkam al-masajid*" is a treatise of the *masjid* consisting of hundreds of *aHadīth* of the Prophet (s.a.w) with commentaries from different scholars. His work serves as the main reference in providing theoretical premise for this study.

In capturing the attributes of the *masjid* and its physical manifestation as intended by the Prophet (s.a.w), the work of recent Muslim scholars such as Husayn Mu'nis in "*Al-Masajid*" and Abdullah Qasim al-Washli in "*Al-Masjid wa Nashathuhu al-Ijtima'i āla Madari al-Tarikh*" also complement the discourses of classical scholars. The design parameters for a *masjid*, as derived from the compilation from the verses in the *Qur'ān*, excerpts of the *Sunnah* and discussions found in the work of al-Zarkashy and contemporary scholars, can be found in the first author's doctoral thesis, "*Mosques in Island Southeast Asia 15<sup>th</sup>-20<sup>th</sup> century*" (Harlina Md Sharif 2013).

Based on these studies, the data collected from the field survey will be evaluated against three essential aspects as extracted from the sources above:

### i. Spatial orientation and the direction of qibla:

In a *masjid/surau* proper, the direction of the *qibla* is provided by the existence of the *qibla* wall, which runs perpendicular to the *qibla* axis. The existence of the wall also assists in determining the alignment of the *saf* in congregational prayers (Ibn Hajar al-'Asqalani 1989, Vol.1, p.760). As the *safs* are made of *ma'mum* standing in straight rows, the shape of the floor plan that comfortably caters for such arrangement is either a rectangular or a square. Consequently, the early *masajid* in Islam were found to have square or rectangular floor plans as only these forms accommodate for the linear arrangements required of the *masjid's* spatial organization (Harlina Md Sharif, 2013).

### ii. Clear demarcation between the sacred and the profane areas:

Once a space is designated as a *masjid/surau*, it instantly marks its vicinity by the conditions imposed upon those who enter the space. The conditions of entry demarcate the sacred from the profane zones. The legal status, which serves as the determinants of the zones of the *masjid's* sanctity, ranges between *mubah* (permissible), *makruh* (disliked), *istihbab* (encouraged) and *haram* (forbidden).

*Haram* (forbidden) and *makruh* (disliked) acts in the *masjid* are those that either relates to the actions or the purity conditions of the users. Any activities which desecrate the purity of the *masjid* such as spitting (Al-Bukhari 4:154), bringing in impure objects (Sahih Muslim 1:390; 'Umdat al-Qari 4:216), being in the state of impurity (Al-Zarkashy 1384H, pp.314-8) such as female having menstruation (Al-Zarkashy 1384H, p.383), are all considered as *haram*. Therefore a clear signage to indicate the existence of the *masjid/surau*, as well as design treatment to demarcate the designated area as a prayer space is highly desirable (*istihbab*) to fulfill the liturgical requirements of *salat*.

iii. **User comfort:**

Any activities that may cause impurity to the prayer space or distract worshipping activities and annoy the *masjid/surau* users, are often classified as *makruh* (disliked) such as bringing in animals and children to the mosque (Al-Zarkashy 1384H, p.312, 327, Al-Washli 1990, p.44-5); making noise and raising voice (Al-Bukhari, Al-Qurthubi); bringing in weapons; and making the prayer space as a thoroughfare (Al-Thabarani). Causing distractions to the activities of worshipping such as lavish decorations of the interiors and trading activities are all considered as *haram* (Al-Zarkashy 1384H, p.335-338). It is also encouraged to have the space always clean, scented and well-lit (Al-Zarkashy 1384H, p.339).

**b) Visual Documentation and Field Survey**

The study focuses on the *salat* facilitation as provided at petrol stations for commuters driving home during peak hours from Gombak to two primary destinations: Bangi and Shah Alam. The selection is based on non-randomized convenient sampling method for routes undertaken by the researchers to travel home from work during peak hours (between *Zohor* to *Isya'* prayers). A visual survey is conducted on *suraus* built at 13 petrol stations along two main highways; the Middle Ring Road 2 (MRR2) towards Bangi and New Klang Valley Expressway (NKVE) towards Shah Alam (see Table 1).

Table 1. Selected *suraus* for visual survey

Surau	Address	Routes travelled		Distribution based on company			
		Gombak – Shah Alam	Gombak-Bangi	A	B	C	D
1	2.4km Jln Duta	☐			☐		
2	Km 34.5 KESAS	☐		☐			
3	KESAS Eastbound	☐					☐
4	KESAS Eastbound	☐			☐		
5	Taman Desa Melawati		☐			☐	
6	Lot 5162 Jln Genting Klang		☐	☐			
7	Ulu Klang		☐		☐		
8	Taman Zooview		☐	☐			
9	Taman Hillview		☐				☐
10	Ukay Heights		☐	☐			
11	Kampung Cheras Baru		☐				☐
12	Bandar Tasik Selatan		☐		☐		
13	Bandar Puchong Jaya		☐	☐			
	<b>TOTAL</b>	<b>4</b>	<b>9</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>3</b>

The main aim of the visual documentation is to extract existing design parameters and provisions of the *suraus*. The *surau's* design features, supporting facilities, and accessories provisions

are analysed against the aforementioned essential features required by liturgical requirements of *salat*: 1) spatial orientation, 2) clear demarcation between the sacred and profane areas, and 3) user comfort. (see Table 2).

Table 2. Design parameters surveyed

	Design Aspects	Design Parameters
1	Design Features	<ul style="list-style-type: none"> <li>• Spatial layout</li> <li>• Orientation</li> <li>• Segregation of male/ female</li> <li>• Material Finishes</li> </ul>
2	Supporting Facilities	<ul style="list-style-type: none"> <li>• Ablution treatment</li> <li>• Ventilation</li> <li>• Hygiene</li> <li>• Privacy</li> </ul>
3	Accessories Provision	<ul style="list-style-type: none"> <li>• Interiors accessories</li> <li>• Decorative elements</li> </ul>

## 6. Survey outcome and findings

Based on the visual survey, the study finds the following:

### a) Design Features

All of the *suraus* are surveyed for their spatial layout, orientation, segregation treatment and material finishes. The results of the documentation are inventoried below:

#### i. Spatial layout

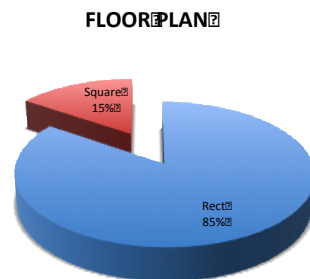


Chart 1. Shape of floor plan

All of the *suraus* surveyed have either rectangular or square floor plans (Chart 1). However, from 13 *suraus* surveyed, only 1 of the *suraus* (Surau 10) has a wall perpendicular to the *qibla* axis (Chart 2).

ii. Orientation

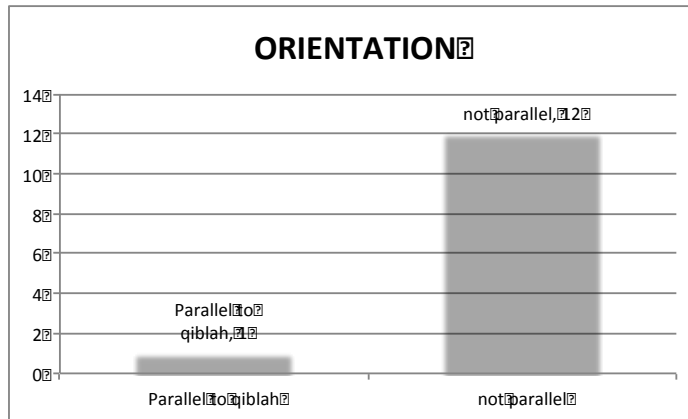
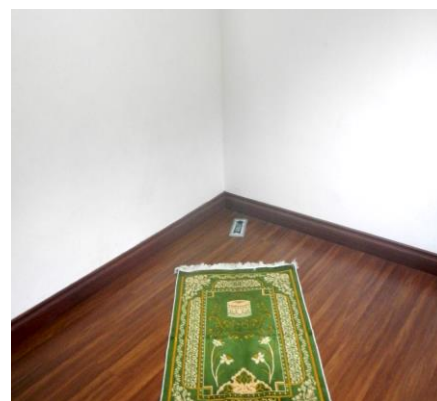


Chart 2. Orientation of space in relationship to qibla wall

The orientation of the *surau* not directly facing the *qibla* also means that *surau* users would have to rely on the signage of *qibla* instead of the *qibla* wall (see Figures 1(a)&(b)). As documented by the survey, in majority of these *suraus*, the Muslims will have to face towards the corner, while others face towards the door, passageway or *wudhu* area while praying (see Chart 3).



(a)



(b)

Figure 1 (a) & (b). Arrow stickers used to indicate qibla axis

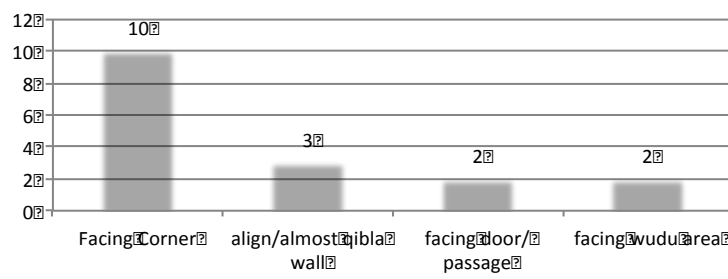


Chart 3. Condition of users when performing salat

iii. **Segregation of gender**

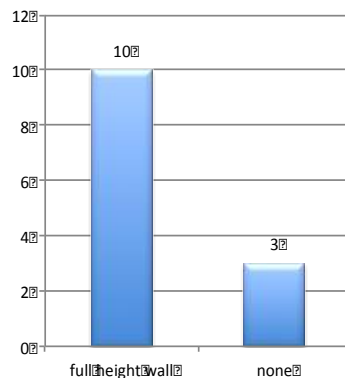


Chart 4. Segregation treatment between male and female

3 of the *suraus* (Surau 6, 10 and 12) surveyed do not have segregated spaces for each gender (Chart 4). They share the same space without any kind of segregation treatments.

iv. **Material Finishes**

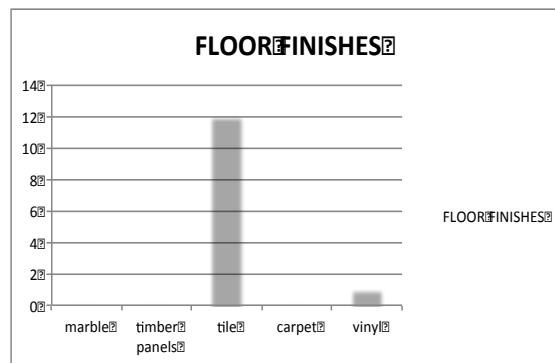
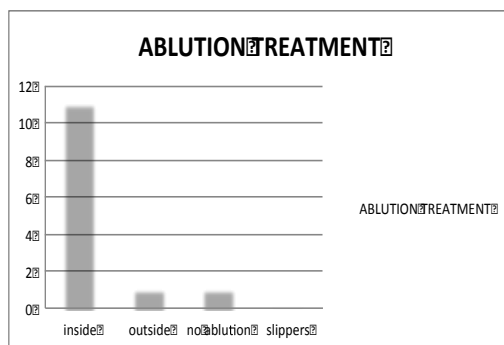


Chart 5. Floor finishes

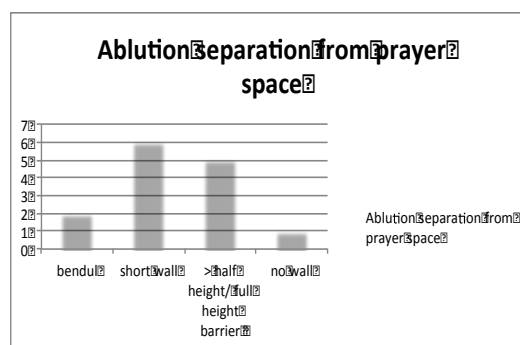
All of the *suraus* have tile finish on the floor (Chart 5). In general, floor was left bare without any covering. Only in 1 *surau* (Surau 5) that vinyl is used as the floor covering for the prayer space.

b) **Supporting facilities**

i. **Ablution treatment**



(a)



(b)

Chart 6 (a) & (b). Ablution facilities in suraus



The survey also looks for design supporting facilities of the *suraus*. Most of the *suraus* incorporated ablution area within the same space dedicated for prayer, with separation treatment using *bendul* (1-2 course brick demarcation), short/ half-height and full height wall (Chart 6). One *suraus* (Surau 12) is found to have no ablution space, another two (Surau 7 & 13) employed *bendul* to separate the ablution space from the prayer space (see Figures 2 & 3).



(a) Surau 7 with short wall separating wudhu area



(b) A *bendul* and a short wall separating wudhu area

Figure 2. Separation treatment for wudhu area



Figure 3. Ablution space with *bendul* only

## ii. Ventilation

The survey also looks for ventilation treatment for the prayer spaces. A well-ventilated space not only ensures air movement within the space, it also eliminates odour and give comfort to the users. Chart 7 shows the ventilation treatment for the *suraus* surveyed. None of these *suraus* are provided with air-condition as the cooling system. 12 of them are equipped with wall or ceiling mounted fan. One *suraus* (Surau 11) has no fan and only ventilated with high vent opening. Surau 12 has no windows or vents, and only ventilated using a single wall-mounted fan.

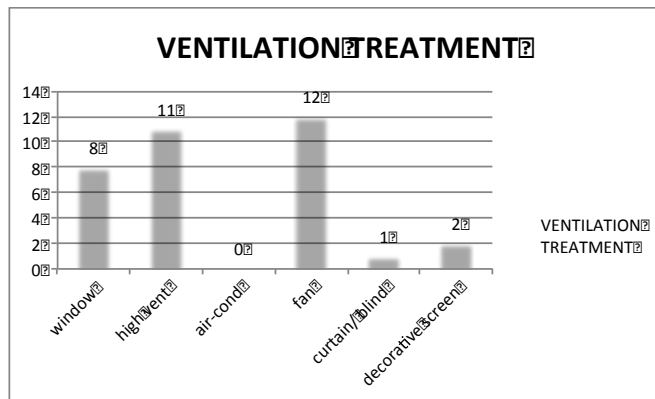


Chart 7. Ventilation treatment in suraus

### iii. Hygiene & Privacy

Three of the *suraus* surveyed had unpleasant odours from the prayer mats supplied. Surau 11 has no fan and ventilation is provided only through high vents. In addition the ablution space is also located at the external space, adjacent to the prayer space (Figure 4). Surau 12 does not have proper ventilation (no opening and no fan) and is not equipped with any ablution space.

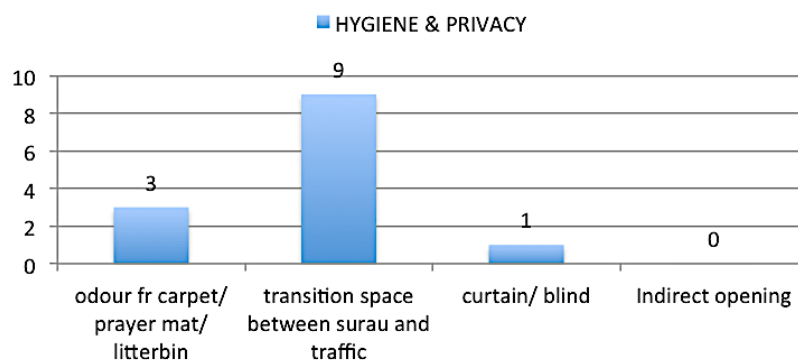


Chart 8. Hygiene and privacy treatments



Figure 4. Surau 11 with high vents and ablution space provided in walled area outside prayer space.

In analysing the provision of privacy (especially for female users), the survey looks at the plan layout of these *suraus*. All of the *suraus* have doors or windows that open out directly towards onlookers from the prayer or ablution space, without proper treatments to safeguard the *aurah* or privacy of the users (see Figure 5). Only Surau 5 has venetian blinds covering the windows.

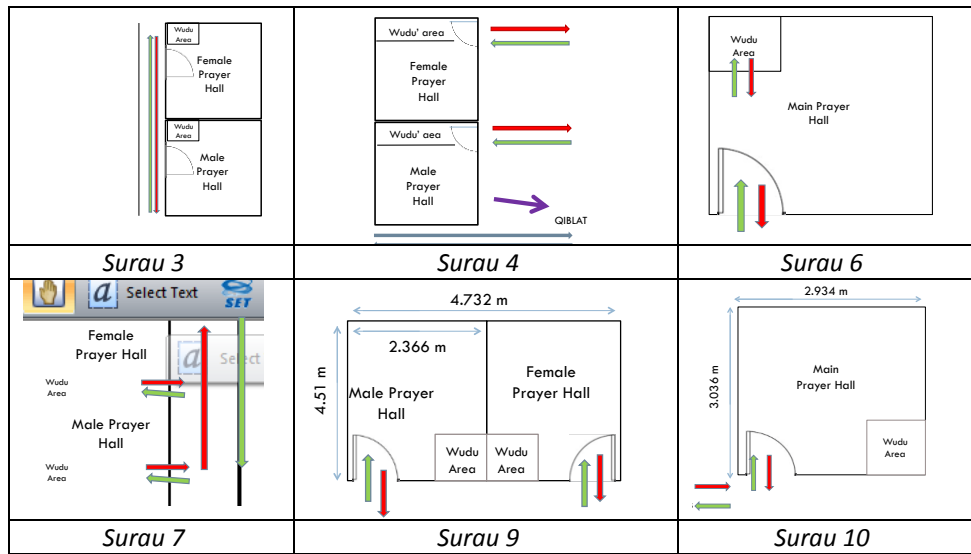


Figure 5. Selected plan layouts to show the lack of treatment for safeguarding aurah and privacy

### c) Accessories Provision

The visual survey also documents design accessories and decorative elements provided in the *suraus* to evaluate how these elements may enhance the quality of the *suraus*' interiors. Based on the survey, the provision varies from one *suraus* to the other. Chart 9 shows that 6 out of 13 *suraus* are provided with wall clocks, 8 *suraus* have mirrors, 2 *suraus* have shelves provided for *Quran* and reading materials, and only 1 *suraus* (Surau 4) has litterbin. All of the *suraus* have arrow signages to indicate direction of qibla, and 12 *suraus* provide cabinet or hanging racks for *telekung*s and *sajadah*s.

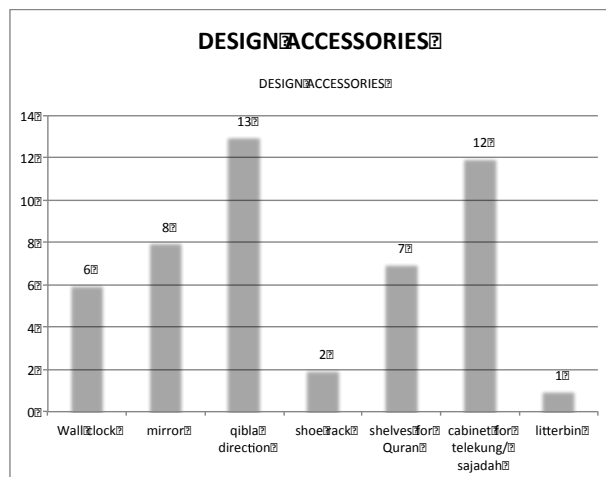


Chart 9. Interior accessories

In terms of quality of provision, the study finds that most of these items are provided without any design considerations. Due to lack of design thoughts, the outcome in many of these *suraus* is a messy and cluttered appearance as evident in Figure 6.



Figure 6. Accessories provisions in selected suraus

Most of the *suraus* are found to be simple spaces stripped of any meaningful decorations (Chart 10). Only 3 *suraus* have pierced screen works to cover the window openings in the form of geometric pattern, simple decorations on the wall and decorative tiles for the wall and floor (see Figure 7).

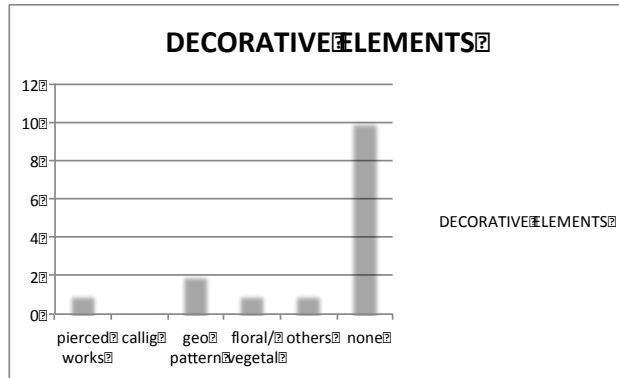
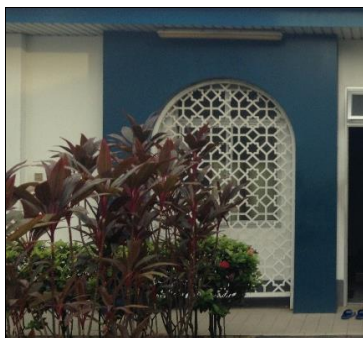
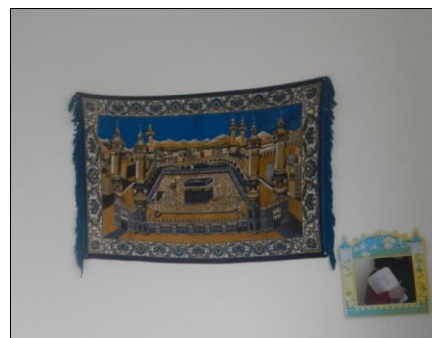


Chart 10. Decorative elements provided for surau's interiors



(a) Geometric pattern screen



(b) Kaabah wall tapestry



Calligraphy

Wall Tiles

(c) Decorative wall tiles motifs with qibla orientated floor arrangement

Figure 7. Decorative elements in suraus

## 7. Discussion on findings

Despite the absence of clear instructions, either from the Quran or the as-Sunnah, the liturgical requirements pertaining to the act of *salat* dictate, to a certain degree, the spatial arrangement and design support facilities for a *masjid/surau*. Based on literature review, the study established three critical criteria from which the design of a *surau* is evaluated; first: the spatial orientation towards the qibla; second: clear demarcation between the sacred and profane; and third: user comfort during the act of *salat*.

### a) Spatial orientation towards the qibla:

The study finds that in most circumstances, *surau* users will be facing either towards a corner or towards the area of *wudhu* and passersby. The absence of a *qibla* wall orientated correctly perpendicular to the *qibla* axis also means that *surau* users are solely reliant on the accuracy of the arrow signage usually fixed either to the floor, the wall or the ceiling for *qibla* direction. From design perspective, this spatial orientation creates wasted space due to the inefficiency of the floor plan to cater for *saf* alignment. In addition, the act of facing towards passersby or *wudhu* area may distract the concentration of one who is performing salat.

### b) Clear demarcation between the sacred and the profane:

The liturgical requirements of *salat* also dictates that the prayer space must be demarcated clearly. The survey finds that apart from signages indicating the existence of a *surau*, the space is not properly designed to cater for proper demarcation between the sacred and the profane. As a consequence, some *suraus* at petrol stations are found to have been placed at back lanes facing dumpster or by the roadside for fastfood drive-through that invites unwanted noise or distractions.

In ordinary *masjid* design, this requirement is satisfied through the provision of *rihab* i.e. an open space surrounding the mosque (Figure 8). In many *masajid* the boundary of the sacred area is marked by the provision of fences or gateways, preceded by an open area or courtyard. In the case of the *surau* at petrol stations, care must be taken to ensure that there is an easement surrounding the prayer space.

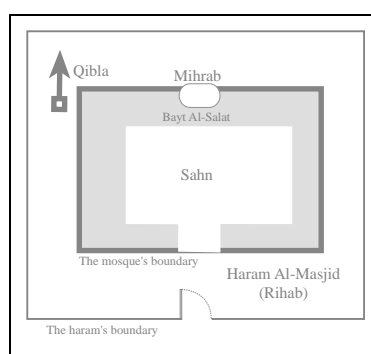


Figure 8. A schematic representation of spatial layout in a mosque proper based on design provisions of the Prophet Mosque. Note the easement (*rihab*) provided surrounding the prayer space (Harlina Md Sharif 2013).

The presence of this easement is crucial to ensure that the sanctity of the prayer space as a 'clean zone' is maintained. It is important to incorporate a properly designed circulation and access to the prayer space in order to keep it free of organic traces, unpleasant odour, or any other elements that may affect its suitability as a praying space (Ahmed Mokhtar 2005, p. 3). The design of this easement or zone can be made visible through of a change of material, a change in floor level, introduction of a barrier or demarcated through the treatment of openings (Ahmed Mokhtar 2005, pp. 4-7). The placement and design of the prayer space must be considered within the general site planning of the petrol station at an early stage.

### c) User comfort to increase the quality of *salat*:

The design treatments for both the factors above consequently affect the user comfort in the *surau*. Distractions such as people/ vehicle movement, unwelcomed noise or odour may reduce one's concentration during *salat*. In addition, the failure of some petrol station operators to provide

adequate ventilation or maintenance for cleanliness creates unpleasant odour of the space. The lack of openings also creates dark and gloomy atmosphere for people using the *sura*.

Proper segregation and privacy treatment must also be provided to ensure that liturgical requirements are met. Single space provision for both male and female in some of the *sura*s meant that users will have to take turn to use the small space. The absence any kind of treatment for the openings (doors and windows) also disregard the safeguarding of *aurah* for women.

## 8. Conclusion

Based on the visual survey conducted, there is a glaring inconsistency in satisfying the liturgical requirements for *sura*s at the petrol stations selected in this study. The provision of *sura* should be seen as an integral part of the petrol station complementary facilities, which requires proper planning, design, construction and maintenance. In the absence of any specific guidelines, this study therefore serves as an initiative to highlight the need to provide minimum standard requirements for privately operated *sura*s designed for public use.

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