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## Campus Parking II Characteristics Analysis at Toraja Christian University in Indonesia

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Abstract. The need for parking space would grow in tandem with the number of students, employees, and lecturers, particularly at the Indonesian Christian University Toraja's Campus II, but owing to poor parking management, vehicles parked in the approved parking area may have problems. Students who use irregular parking areas, which occurs because the parking lot or unit that has not been created only provides a parking area, the second problem is parking alley lanes that are not in accordance with the needs, the alley is still very narrow and does not have this free space, which causes problems for vehicles going in and out of the campus II of the Indonesian Christian University Toraja.

The parking characteristics method was used to examine this data; nevertheless, the parking characteristics method is still broken down into various sections, including parking accumulation, parking volume, parking index, number of parking users, and parking availability. Parking accumulation to determine the maximum accumulation during the research period, parking volume to determine the volume of parking capacity to determine whether the parking area can still accommodate vehicles or not, and parking index to determine the percentage of comparison between total vehicles at a given time interval and the volume of available parking spaces. The availability of parking is determined by the number of parking users that occur in one parking plot per hour.

The analysis found that the parking area and basement on campus II of the Indonesian Christian University Toraja have 1151 parking space units (SRP) for two-wheelers and 28 SRP for four-wheelers, with a maximum number of parking vehicles for two-wheeled vehicles of 893 units with a parking index of 77, 59 percent and a maximum parking of 21 units for four-wheeled vehicles with a parking index of 75 percent, indicating that the parking area and basement are adequate. Vehicles are accommodated.

Keywords: University, Christian, Indonesia Toraja, Characteristics, Unit, Space, Parking.

#### **INTRODUCTION**

#### 1. Background

Parking is an integral part of the transportation network system. As a result of the high population density and high economic level, private automobile ownership is also high. The growth of parking issues necessitates a deeper understanding of parking by transportation specialists. Parking concepts and characteristics, parking demand analysis, parking lot geometric layout, and parking policies are examples of items that can be used to solve parking issues. Arrang, A. T., and Rangan, P. R., for instance, did research (2020). The City of Rantepao's Road Traffic Flow, Capacity, and Service Level.

UKI Toraja Campus II is North Toraja Regency's largest campus, consisting of three very large buildings: the old building has two stories, the second building has four levels, and the third structure is still under construction. With the construction of these three structures, it is expected that the number of students actively studying at the Indonesian Christian University Toraja's Campus II will increase, as indicated in table 1.1, from 2006 to 2020. As a result, it is necessary to encourage the campus to provide a larger parking area. As a result, the proper arrangement of parking areas should have been implemented in the parking area of the Indonesian Christian University Toraja's campus II to serve parking users who will continue to grow while maintaining a sufficient level of security and comfort. Parking facilities on campus II of the Indonesian Christian University Toraja that have not been processed in accordance with the technical guidelines for the implementation of parking facilities and students who do not pay attention to how to park vehicles properly, resulting in the designated vehicle parking area being underutilized. As a result, the available parking space must be analyzed for its characteristics by understanding the characteristics of the parking lot so that we can identify the real problems that occur in the parking area of the Indonesian Christian University Toraja's campus II and determine the appropriate parking pattern in accordance with the technical guidelines for the implementation of parking area of the Indonesian Christian University Toraja's campus II and determine the appropriate parking pattern in accordance with the technical guidelines for the implementation of appropriate parking area of the Indonesian Christian University Toraja's campus II and determine the appropriate parking pattern in accordance with the technical guidelines for the implementation of appropriate parking

facilities. According to the parking area of the Indonesian Christian University Toraja's campus II parking lot. The goals of this study are to determine the parking volume, parking index, level of parking users, and parking availability, as well as to determine the layout and management of parking lots with acceptable security and comfort.

#### LITERATURE REVIEW

2.1 Parking Meaning According to the Technical Guidelines for the Implementation of Parking Facilities, the Directorate General of Land Transportation 1996 which states that parking is a stationary state of a vehicle that is not temporary. Parking according to the Big Indonesian Dictionary is a place is stop the vehicle for a while. Parking is defined as an immovable condition, a vehicle that is not temporary, including in the sense of parking is any vehicle that stops at certain places, whether stated with signs or not and solely for the purpose of raising and lowering people and goods (Directorate General of Transportation). Land, 1998).

#### **2.2 Parking Facilities**

Parking facilities are divided into four categories with the goal of providing a resting spot for vehicles while also assisting in the smooth flow of traffic:

- 1. It is divided into on-street and off-street parking based on its location.
- 2. It is classified into public parking, special parking, emergency parking, parking building, and parking area depending on its status.
- 3. Parking vehicles are divided into three categories based on the type of vehicle:
  - a. two-wheeled non-motorized (bicycle),
  - b. two-wheeled motorized (motorcycle),
  - c. tricycle, four-wheeler, or more (piracy, car, taxi etc).
- 4. Based on the type of parking destination, such as:

a. Passenger parking is a type of parking reserved for vehicles that transport people, such as buses, public transportation, and motorbike taxi drivers.

b. Items parking refers to parking that is used to load and unload goods. Their activities are purposefully divided so that they do not interfere with one another.

- 5. Based on the nature of ownership and operation, namely:
  - a. It is privately owned, with private management.
    - b. Parking is owned by the local government and managed by the government.

#### 2.3 Parking Characteristics

Parking accumulation, volume, turn over, parking index, parking duration, and parking capacity are all examples of parking characteristics. This information on parking characteristics will be critical for analyzing operational conditions and planning parking space development. The following are some of the parking characteristics that must be understood ahead of time:

1. Accumulation of parking spaces

The quantity of parked vehicles accumulated over a period of time is referred to as accumulation. The vehicle is the accumulating unit.

Accumulation = 
$$Q_{in}Q_{out} + QS$$
 (1)

Where Qin denotes a car that enters the parking place, Qou denotes a vehicle that exits the parking location, and QS denotes a vehicle that was in the parking location prior to observation.

#### 2. Parking Time Limits

The information needed to determine the length of time each car will be parked is known as parking duration. Observing the time a vehicle enters and exits provides this information.

$$Durasi = t_{out} - t_{in}$$
 (2)

Where  $t_{in}$  is the time the vehicle pulls into the parking spot and  $t_{ou}$  is the time the vehicle pulls out.

3. Index of Parking (IP)

<sup>2</sup>he parking index is a percentage of the difference between the total number of vehicles in a certain time interval and the total number of available parking spaces. One technique to determine the level of parking demand is to look at this attribute. The following equation can be used to compute the parking index:

$$IP = \frac{kp}{PP} \times 100\%.$$
 (3)

If IP represents the parking index, KP represents the number of parking vehicles (vehicles), and PP represents the number of parking lots (parking lots)

Provision:

- IP < 100% means that the parking facility is not problematic, where parking requirements do not exceed normal capacity.
- 🗣 100% means that parking needs are balanced with normal capacity/capacity.
- IP > 100% means that the parking facility has problems, where the parking requirement exceeds the normal capacity/capacity
- 4. Volume of Parking

The total number of vehicles using parking facilities, measured in parking vehicles in 1 (one) day, is referred to as parking volume. The number of vehicles included in the parking load, i.e. the number of parking vehicles per specific time period every day, is referred to as parking volume. The following formula is used to compute the total number of vehicles that use the parking lot over a given period of time:

$$V = Q_{in} + Q_S \tag{4}$$

Where V is the number of cars parked in a given amount of time, Qin denotes the number of vehicles entering the parking spot, and QS denotes the number of vehicles in the parking location prior to the observation.

#### 5. Parking usage rate or Parking Turn Over (PTO)

The level of parking utilization depicts the level of use of a single parking spot over time, as calculated by dividing the number of parking cars by the parking area/number of parking lots, or by applying the formula:

$$PTO = \frac{KP}{PP}$$
(5)

PTO stands for the number of parking users (vehicles/plot/hour), KP stands for the number of parking vehicles (vehicles), and PP stands for the number of parking lots (parking lots)

#### 6. Parking availability (parking supply)

The formula for calculating parking availability can be found here (McShane, Traffic Engineering, 1984)

$$P = \frac{KP}{PTO} \quad (6)$$

P represents parking availability, Kp represents the number of parked vehicles (vehicles/hour), and PTO represents parking turn over (vehicles/parking plots/hour).

### **RESEARCH METHODOLOGY**

#### A. Method

The following are some of the methods employed in this study:

1. Data Collection Techniques in the Field Using Observation, Literature Review, Documentation, and Direct Measurement.

2. Required Data

a. Primary information

Data on vehicle plate numbers entering and exiting the parking area of campus II, Indonesian Christian University Toraja, as well as parking area data and basement campus II, Indonesian Christian University Toraja, were collected directly from the field.

b. Secondary Information

This data is important to know the growth of students from year to year who study on campus II of the Indonesian Christian University Toraja, as well as data from the basement image to calculate the area of the basement, in the form of data obtained through admins from every faculty on campus II of the Indonesian Christian University Toraja, namely student data, employees, and lecturers from 2016 to 2020.

#### **B.** Research Stages

The following are the steps in conducting research:

- 1. Conduct a site survey
- 2. Pay attention to the title and the chosen problem to determine the problem's aims and constraints.
- 3. Study of the literature using literature and research-related materials
- 4. Gathering necessary tools and materials, such as pens, cameras, and tripods.
- 5. Data Gathering

6. The data collection period is set for six days, from 07.30 to 16.30 WITA. This is a one-time survey approach (cross-sectional survey) that collects data for a specific period of time in order to describe the state of the study place. From November 26 to December 2, 2020, data will be collected on Thursdays, Fridays, Saturdays, Mondays, Tuesdays, and Wednesdays.

#### **RESEARCH RESULTS AND DISCUSSION**

#### 4.1. Currently Available Parking Area

The researcher employs a tool in the form of a topographer mobile application to discover the parking area by searching for each coordinate point from each corner of the parking space to construct a closed polygon. The surveyed parking area for four-wheeled vehicles is  $4,35.57 \text{ m}^2$ , for two-wheeled vehicles it is  $2,258.53 \text{ m}^2$ , and for in-building parking that has not been decided for two-wheelers or four-wheelers it is  $1,608.54 \text{ m}^2$ .

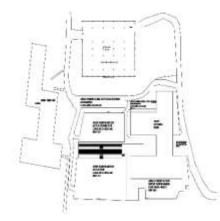


Figure 1. Sketch of the current

campus II parking area

SRP was calculated for two wheels and four wheels based on the results of a survey conducted at the parking area of UKI Toraja campus II, as shown in the table below.

Table 1. Current SRP				
No	Vehicle	Parking space unit (SRP)		
1	Motorcycle	Σ=1151		
2	Car	$\Sigma=28$		
Source: Research result				

#### Parking Accumulation Analysis

Tables 2 and 3 are tables for managing the analysis of vehicle accumulation in the UKI Toraja campus II parking lot. The analysis of vehicle accumulation can be determined using the Qin - Qout +QS formula.

	TWO WHEEL PARKING ACCUMULATED					
Time	DAY-	DAY-	DAY-	DAY-	DAY-	DAY-
	1	2	3	4	5	6
7:30-8:30	279	209	390	401	298	349
8:30-9:30	303	354	301	647	281	383
9:30-10:30	485	502	342	815	426	585
10:30-11:30	466	682	387	876	441	702
11:30-12:30	410	826	391	865	322	564
12:30-13:30	272	893	315	762	234	451
13:30-14:30	148	852	263	460	184	334
14:30-15:30	61	574	189	366	52	178
15:30-16:30	27	324	90	155	24	77
16:30-17:30	12	0	0	0	0	0

Tabel 2. Hasil Akumuluasi Parkir Roda dua

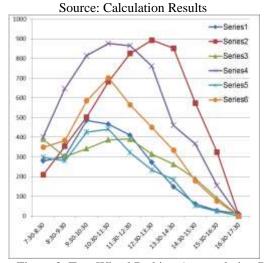


Figure 2. Two Wheel Parking Accumulation Results Source: Calculation Results

The accumulation of two-wheeled parking was obtained on the second day after taking data at the research location and then analyzing the data, with the maximum accumulation of two-wheelers occurring at 12:30-13:30, with a maximum number of vehicle parking 893 vehicles/hour, and the minimum accumulation occurring at 16:30-17:30, with a total of 0 vehicle units/hour.

6	AKUMULASI PARKIR RODA DUA					
JAM	HARI	HARI	HARI	HARI	HARI	HARI
	KE-1	KE-2	KE-3	KE-4	KE-5	KE-6
7:30-8:30	14	4	2	2	5	12
8:30-9:30	14	14	5	5	5	19
9:30-10:30	3	16	5	7	8	20
10:30-11:30	1	13	11	6	8	21
11:30-12:30	2	12	11	6	9	19
12:30-13:30	1	10	10	5	6	20
13:30-14:30	3	6	11	5	5	19
14:30-15:30	3	4	6	4	3	19
15:30-16:30	2	1	5	4	2	9
16:30-17:30	0	0	0	0	0	0

Source: Calculation Results

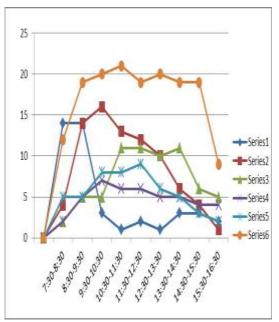


Figure 3. Result of Four Wheels Accumulations Source: Calculation Results

The maximum accumulation results occurred on the 6th day, with the maximum accumulation of four-wheeled parking occurring at 10:30-11:30 with a maximum number of vehicle parking 21 units per hour, while the minimum accumulation occurred at 16:30-17:30 with a total of 0 vehicles per hour, according to the results of the four-wheeled data analysis.

#### 4.2. Parking Volume

• Two-Wheel Vehicle Parking Volume

In the parking area of Campus II of the Indonesian Christian University Toraja, there are 1,136 automobiles parked on two wheels. According to the survey findings, the amount of two-wheeled parking in the parking area of the Indonesian Christian University Toraja's campus II can still support the number of vehicles that will be parked. At 12:30-13:30, there were 893 automobiles visible from the top of the two-wheeled parking lot.

• Parking Volume for Four-Wheeled Vehicles

In the parking lot of Campus II of the Indonesian Christian University Toraja, there are 21 automobiles with four wheels. At 7:30-9:30 a.m., this may be seen from the top of the four-wheeled parking lot. There could be as many as 14 vehicles.

#### Index of Parking (IP)

<sup>2</sup> he parking index is a percentage of the difference between the total number of vehicles at a certain time interval and the capacity of available parking spaces.

IP for Two Wheels 
$$=\frac{893}{1151} \times 100\% =77,59\%$$

IP for Four Wheels  $=\frac{21}{28} \times 100\% = 75\%$ 

In the parking area of campus II of the Indonesian Christian University Toraja, the index of parking for twowheelers and four-wheelers does not surpass 100%. This explains why two-wheelers and four-wheelers can still park in the campus two parking lot.

#### 4. Usage Rate of Parking Turnover (PTO)

- PTO for two-wheelers is 1.70 parking lots per hour
- PTO for four-wheelers is 1.14 parking lots per hour

Vehicles parked in one parking lot / hour occur once per hour, according to the level of parking users or PTO for twowheeled and four-wheeled vehicles.

#### 5. Parking Availability (KP)

Availability of parking in the parking area of campus II of the Indonesian Christian University Toraja, for two wheels there are 1151 SRP or parking lots/hour while for four wheels there are 28 SRP or parking lots/hour

- KP for two wheels is 1,151 vehicles/parking plot/hour
- KP for four wheels is 28 vehicles/parking plot/hour

#### 6. Parking Area Arrangement

Knowing the characteristics of the parking lot ahead of time, considering the right parking pattern in accordance with the conditions of the available parking area, and following the technical guidelines for the implementation of parking facilities are all part of the correct parking area arrangement. The following are some things to keep in mind: A. Determining Parking Requirements

The following criteria were used to determine the requirement for parking spaces on the Indonesian Christian University's campus II:

- 1. For a broad parking area, a parking pattern with an angle of  $90^{0}$  should be employed, while for a narrow parking area, a pattern with an angle of  $30^{0}$  is more feasible.
- 2. Determination of SRP utilizing conventional technical parameters for parking spaces, such as 200cm x 175 cm for two wheels with a 90° angle pattern and 500cm  $\times$  250 cm for four wheels.
- 3. Determination of the alleyway width in accordance with the norm, for example, the width of the aisle lane for one-way parking for two wheels is 80 cm, for two-way parking, 160 cm, and for four-wheeled vehicles with one-way parking, 300 cm, and for two-way parking, 600 cm.
- B. Managing Parking Guests

To regulate parking users on campus II of the Indonesian Christian University Toraja, rules for parking automobiles will be established, and parking violators will face sanctions. Several factors must be addressed when creating parking regulations:

- Provide parking amenities, such as parking signs; and
- Create a parking pattern with defined lines.
- Ensure that each parking place has enough room for at least one person.

C. Parking Patterns in Compliance with Standard Technical Guidelines for Parking Facility Operation Detailed Basement

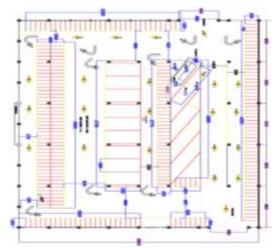


Figure 4 Sketch of Parking Pattern Arrangement for Campus II Toraja Christian University in Indonesia

#### Information:

- Basment area is 1608.54 m2
- > The area of the  $90^{\circ}$  corner parking pattern plot for cars is 135.945 m<sup>2</sup>
- > The area of 1SRP for the  $90^{\circ}$  corner parking pattern for cars in the basement is 5,105 m2, so for the  $90^{\circ}$  four-wheel parking corner pattern in the basement is 9 SRP
- > The area of the  $30^{\circ}$  corner parking pattern plot for cars is  $115,68m^2$
- > The area of the 90<sup>0</sup> corner parking pattern plot for two wheels in the basement is 379,5 m<sup>2</sup>
- > The area for 1 SRP for a  $90^{\circ}$  corner parking pattern for two wheels is 1.5m2, so for a  $90^{\circ}$  corner parking pattern for two wheels in the basement it is 253 SRP

Figure 5. Sketch of the Basement Parking Pattern Arrangement for Campus II Toraja Christian University in Indonesia Area Details P.1

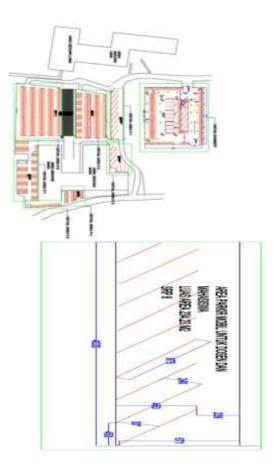


Figure 6. Sketch of Parking Pattern Arrangement for Parking Area 1 Campus II Toraja Christian University in Indonesia

Keterangan:

- Parking area 1 is 234.23m<sup>2</sup>  $\triangleright$
- ≻ The area of the 30<sup>0</sup> corner parking pattern plot for cars is 181.35m<sup>2</sup>
- The area for 1 SRP of the  $30^{\circ}$  corner parking pattern for four-wheeled vehicles is  $21m^{2}$ ≻
- ≻ So for the parking pattern angle of  $30^{0}$  for four wheels is 8SRP

Area Details P.2

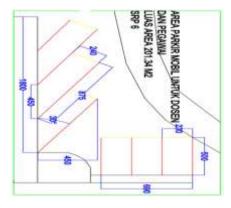


Figure 7 Sketch of Parking Pattern Arrangement for Parking Area 2 Campus II Toraja Christian University in Indonesia

#### Information:

- Parking area 2 is 201.34m<sup>2</sup>  $\triangleright$
- ≻
- The area of the  $90^{0}$  corner parking pattern plot for cars is 34,5 m<sup>2</sup> The area of 1SRP of the  $90^{0}$  corner parking pattern for cars is 11.5 m<sup>2</sup>  $\triangleright$
- So for a four-wheel  $90^{\circ}$  corner parking pattern is 3 SRP ≻
- The area of the  $30^{\circ}$  corner parking pattern plot for cars is 63 m<sup>2</sup> ≻
- The area for 1 SRP of the  $30^{\circ}$  corner parking pattern for four-wheeled vehicles is 21 m<sup>2</sup> ≻
- $\triangleright$ So for a parking pattern of  $30^{\circ}$  angles for four wheels is 3 SRP

Area Details P.3

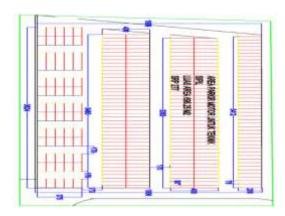


Figure 8. Sketch of Parking Pattern Arrangement for Parking Area 3 Campus II, Toraja Christian University in Indonesia

#### Information:

- Parking area 3 is 695.25m<sup>2</sup>  $\geq$
- The area of the  $90^{\circ}$  corner parking pattern for two-wheeled vehicles is 415.5 m<sup>2</sup>  $\triangleright$
- The area for 1 SRP of 90° corner parking patterns for two-wheeled vehicles is 1.5m<sup>2</sup>  $\triangleright$

> So for a  $90^{\circ}$  angle parking pattern, two wheels is 277 SRP

#### Area Details P.4

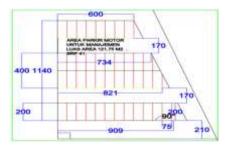


Figure 9. Sketch of Parking Pattern Arrangement for Parking Area 4 Campus II Toraja Christian University in Indonesia

#### Information:

- ➢ Parking area 4 is 121.75 m<sup>2</sup>
- > The area of the 90<sup> $\circ$ </sup> corner parking pattern for two-wheeled vehicles is 61.5 m<sup>2</sup>
- > The area for 1 SRP of 90° corner parking patterns for two-wheeled vehicles is 1.5  $m^2$
- > So for a  $90^{\circ}$  angle parking pattern, two wheels are 41 SRP.

Area Details P.5



Figure 10 Sketch of Parking Pattern Arrangement for Parking Area 5 Campus II Toraja Christian University in Indonesia

#### Information:

- > The area of parking area 5 is  $48.35 \text{ m}^2$
- > The area of the  $90^{\circ}$  corner parking pattern plot for two-wheeled vehicles is 37.5 m<sup>2</sup>
- > The area for 1 SRP of  $90^{\circ}$  corner parking patterns for two-wheeled vehicles is  $1,5m^2$
- > So for a  $90^{\circ}$  angle parking pattern, two wheels is 25 SRP

Area Details P.6

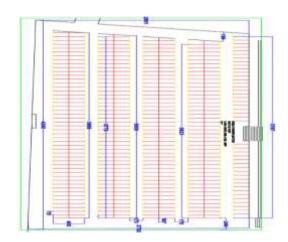


Figure 11. Sketch of Parking Pattern Arrangement for Parking Area 6 C ampus II Toraja Christian University in Indonesia

Information:

- $\blacktriangleright$  The area of parking area 6 is 985.4 m<sup>2</sup>
- > The area of the 90<sup> $\circ$ </sup> corner parking pattern for two-wheeled vehicles is 565.5 m<sup>2</sup>
- > The area for 1 SRP of 90<sup>0</sup> corner parking patterns for two-wheeled vehicles is 1.5  $m^2$
- > So for a  $90^{\circ}$  angle parking pattern, two wheels is 377 SRP

Area Detail P.7

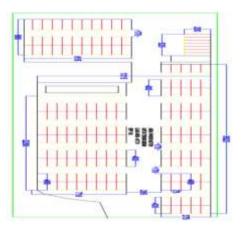


Figure 12. Sketch of Parking Pattern Arrangement for Parking Area 7 Campus II, Toraja Christian University in Indonesia

Information:

- ➢ Parking area 7 is 407.78m<sup>2</sup>
- > The area of the 90<sup>0</sup> corner parking pattern plot for two-wheeled vehicles is 273m<sup>2</sup>
- > The area for 1 SRP of 90<sup>0</sup> corner parking patterns for two-wheeled vehicles is 1,5 m<sup>2</sup>
- > So for  $90^{0}$  angle parking pattern, two wheeler is SRP

#### CONCLUSION

There are various things that can be concluded as a result of the discussion that has taken place, including the following:

A. Amount of parking

On the second day, the largest accumulation of two-wheeled peak hours happens at 12:30-13:30, with as many as 893 units of vehicles, while the maximum accumulation of four-wheeled peak hours comes at 10:30-11:30, with a

maximum number of vehicle parking 21 units per hour. With a parking index of 75% on the sixth day, the twowheeler parking index and four-wheel parking index are still at 100%. This explains why the parking space at the Indonesian Christian University Toraja's Campus II can still accommodate vehicles.

- B. The current parking condition is exiting
  - a). On-street parking and off-street parking are two of the parking models employed. Island parking patterns, oblique parking patterns, and one-sided parking patterns were employed, however none of the parking patterns had an obvious SRP
  - b). Every day, the maximum number of cars parked is 1958 for two-wheeled vehicles and 32 for four-wheeled vehicles. There is now 1151 parking spaces available for two-wheelers and 28 spaces available for four-wheelers.
- C. The parking area and subterranean parking space structure layout is separated into many groups, with the following types of parking patterns employed in each parking area:
  - a). For basement parking spaces included in the category of off-street parking (off-street parking using an island-shaped parking pattern, this pattern is very suitable to be applied in the basement parking space because it has a large enough space, 1608.54m2), this pattern is very suitable to be applied in the basement parking space because it has a large enough space, 1608.54m2. The right parking angle is employed for a variety of reasons. There are two parking corners for four-wheeled parking, with the parking plot to the right of the entrance to the exit using a 30<sup>0</sup>-degree angle, which can result in 5 SRP. All employ a parking pattern with an angle of 90<sup>0</sup> for two-wheel parking patterns, and the dimensions are in accordance with the technical criteria for the implementation of parking facilities that have a width of 0.75 cm and a length of 2 m with a one-sided parking pattern.
  - b). This parking area falls under the category of on-street parking, and the best parking pattern for this location is a one-sided oblique with a  $30^{0}$ -degree angle. This is because the parking area is right on the road leading to the old building and the building that is currently under construction, and it is important to avoid blocking vehicles passing by.
  - c). Parking area 2 is still classified as on-street parking; in this area, two types of parking pattern angles are used: one-sided oblique with a  $30^{0}$ -degree angle and one-sided rectangular; this pattern is used due to the insufficient space of 201.34m2.
  - d). Parking space 3, which is already included in the off-street parking category, is only for two-wheelers for civil engineering students. Because there is enough parking space, the right parking pattern is an island-shaped parking pattern with an angle of 90<sup>0</sup>. The alleyway used in this parking space has a width of 1.7 m and is present on all sides of the car parking lot.
  - e). Parking space 4, which falls under the off-street parking category, is only for two-wheelers and is reserved for management students. Because there is enough parking space, the right parking pattern is an island-shaped parking pattern with an angle of 90<sup>0</sup>. The applied alleyway width is the same as the 3. parking area
  - f). Parking area 5, this parking space uses a one-sided parking pattern, a two-meter alleyway, and a 25 SRP pattern for two wheels
  - g). Parking space six, which is part of the off-street parking category, is only for two-wheelers for students pursuing a degree in FKIP. Because there is enough parking space, the proper parking arrangement is the shape of the island with an angle of 90<sup>0</sup>. The applicable alleyway width is the same as the 3. parking area width.

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