

Provision Studies Park And Ride Facilities In The Framework Arrangement Parking On Roads Hos Tjokroaminoto

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Abstract

Jakarta has a fairly complicated transport problems. The number of vehicles that do not correspond with the growth of the road causing traffic density in various way, khususnya during rush hour. Density caused by a number of vehicles entering the city around Jakarta such as Bogor, Bekasi, Depok, and Tangerang in particular. One effort to reduce the flow of vehicles from the area towards jakarta by applying the Park & Ride system. One point that has the potential for park & ride facilities provided are in ciledug, Tangerang city, at the site where there is a new corridor that Transjakarta bus corridor 13. Especially when Jakarta provincial government introduced a system of odd-even some roads in Jakarta. The purpose of this study was to determine the possibilities for the provision of park and ride facilities on the roads HOS Tjokroaminoto and what facilities should be provided for park & ride at that location. This study uses a mix method, with primary data obtained by conducting research directly to those locations. Based on the analysis used the location of the HOS Tjokroaminoto has the potential to place a facility park & ride because the site is integrated with the Transjakarta bus corridor 13 which serves five routes, namely Blok M - Ciledug (13A), Pancoran Barat - Ciledug (13B), Tosari - Ciledug (13C), Ragunan - Ciledug (13D), and Brass - Ciledug (13E). This study uses a mix method, with primary data obtained by conducting research directly to those locations. Based on the analysis used the location of the HOS Tjokroaminoto has the potential to place a facility park & ride because the site is integrated with the Transjakarta bus corridor 13 which serves five routes, namely Blok M - Ciledug (13A), Pancoran Barat - Ciledug (13B), Tosari - Ciledug (13C), Ragunan - Ciledug (13D), and Brass - Ciledug (13E). This study uses a mix method, with primary data obtained by conducting research directly to those locations. Based on the analysis used the location of the HOS Tjokroaminoto has the potential to place a facility park & ride because the site is integrated with the Transjakarta bus corridor 13 which serves five routes, namely Blok M - Ciledug (13A), Pancoran Barat - Ciledug (13B), Tosari - Ciledug (13C), Ragunan - Ciledug (13D), and Brass - Ciledug (13E).

Keywords: Park & Ride, Transjakarta, Odd-even

Introduction

The number of vehicles in Jakarta is growing every time to make the government issued a policy to limit the number of private vehicles into the streets of Jakarta city. And aware of the conditions of congestion in Jakarta, it is necessary to find an integrated solution to reduce congestion due to the density of private vehicle users.(Sidjabat, nd) The government is aggressively campaign to switch to public transport and one attempt to limit the number of vehicles coming into Jakarta is to apply even-odd system. This makes the use of private vehicles is slowly but surely leaving his personal vehicle and switch to public transport such as bus Transjakarta.

The number of levels of travel out of town around Jakarta city like Jakarta, Bogor, Depok, Tangerang, Bekasi make the Government through PT.Transjakarta create new corridors and Transjabodetabek Bus services serving the route from Jakarta to these towns. This will reduce the number of vehicles coming into Jakarta from these cities, because of their public transport facilities are convenient, safe, and affordable.

The solution provided by the Jakarta administration is an attempt to attract private vehicle users to switch to transport such as buses do park and ride concept implementation.(User et al., 2016) Park and ride is a system of transportation that use the parking facilities are generally available at bus stops or terminals mass public transport, then the modal transfer from private vehicles (cars and motorcycles) to use public transport.(Bekasi-Jakarta et al., 2017) Policies park and ride is one of the policies that have not received special attention related to the implementation efforts of park and ride. ("KRITERIA_FASILITAS_PARK_AND_RIDE_SEBAGAI," nd), Referring to the decision of the director general of land transportation number 27 / HK.105 / DrJD / 96 on technical guidelines for the implementation of the parking facility, park & ride is a concept in the off-street parking.

Needs Park and Ride in cities around Jakarta also is becoming very important for vehicle users who want to continue traveling towards Jakarta with mass transportation. That effort developed by the modal transfer facility by developing a Park and Ride facility. Location determination Park and Ride itself must be in a strategic area that allows to connect with other intermodal transport. The location and construction was done by paying attention to four issues, namely the General Spatial Plan Area (RUTRD), safety and smoothness of traffic, the environment, and convenience to road users. (Prayudyanto, Tamin, & Large, 2007)

Transjakarta Corridor 13 routes serving some areas of Jakarta to Tangerang city ciledug is one of mass transit that is preferred by the citizens ciledug to travel to get to the city of Jakarta. Services 13 corridor is the only corridor that uses special overpasses can only be passed by Transjakarta bus itself. This makes the travel time used by this bus to be very fast and accurate. It also makes use of private vehicles to leave the vehicle and switch to using Transjakarta bus.

But the problems faced in this case is the lack of adequate parking facilities. Facilities available at this time is a parking area managed by the community around the facility is only modest and the level of safety is still minimal. And could lead to a drop in performance due to poor public transport service. (Urban, 2017) Therefore, the author tries melakukan research on the provision of park and ride facilities at the Hos Tjokroaminoto roads at the site where there is a stop Transjakarta corridors 13. With the formulation of the problem, namely:

1. How the application of Park & Ride in Tangerang?
2. How management of parking in streets HOS Tjokroaminoto?
3. How can the potential provision of facilities Park & Ride on the road section Tjokroaminoto HOS?
4. How the Park & Ride facilities need to be provided?

Method

This study uses a mixture of qualitative and quantitative, or so-called mix method. Where in the research process is based on a phenomenon that occurs in reality. This method of data collection conducted in primary and secondary. The primary data is done by direct observation location to park on roads and secondary HOS Tjokroaminoto taken from literature-literature regarding the Park and Ride in Jakarta, Tangerang, and Malaysia. The data have been obtained will be analyzed by the fact the field with existing theories.

Discussion and Result

Application of Park and Ride in Tangerang

Currently existing in Tangerang City Park and Ride facility is one of them, Park and Ride located at Terminal Poris Plawad. This terminal has a location opposite with Batu Ceper Station. Park and Ride at Terminal Poris Plawad have the capacity of about 70 cars and 300 motorcycles. With rates Rp.3.000 / h and the maximum rate of 10,000, whereas if the vehicle was lodged charge to 15,000. As for the motor Rp.2000 / h with a maximum rate Rp.5000. Operating hours starting at 05:00 to 22:00 pm. With officers will stand guard as many as 22 people with two shift system. (News.metrotvnews.com, 2018)



Figure 1. Park & Ride Poris Plawad Bus Station

Source: (metrotvnews.com, 2018)

Parking management on roads HOS Tjokroaminoto

Currently there is a parking area on HOS Tjokroaminoto roads managed by a group of people around (Tangeks, 2018), The peg business rates amounted to 8,000 vehicles for a motor vehicle parking and 15,000 for a car park (Tribune Jakarta, 2018), Rates offered can be considered quite expensive when compared with the facilities provided. Land available is still not paved so that when it rains the location of the parking lot into a very muddy. This certainly reduces the comfort of the users of the parking lot, and can be harmful because of the slippery road can make the person or the vehicle is slipping. Then from the security aspect, seen from the large number of vehicles parked at this location the officer on guard by the authors observed just 4 people, in the absence of CCTV. Whereas the presence of CCTV is now very important to increase the security level of a place. This is evidenced by ever lost their case on the motorcycle helmet.



Figure 2. Location parking on the road section HOS Tjokroaminoto

Source: (tangerangekspress.co.id, 2018)

Potential supply of Park & Ride facilities on roads HOS Tjokroaminoto

Of course this is a potential location for a Park & Ride facility made. This will certainly increase the level of user satisfaction, and Transjakarta Corridor 13 will certainly reduce the number of vehicles coming into Jakarta from Tangerang in

particular through Ciledug. This is evidenced by the number of vehicles parked vehicle in the area as:

Table 1.

Date and time	Motorcycle	Car
Thursday, August 30, 2018	264	42
Friday, August 31, 2018	276	47

Source : Author

Table 2.

Date and time	Motorcycle	Car
Saturday, September 1, 2018	209	32
Sunday, September 2, 2018	205	38

Source : Author

From the table above it can be seen that the number of vehicles parked at the most, namely on weekdays than on weekends. Based on observations by the author this time the land is still enough to accommodate the number of vehicles about to be parked. According to officers keeping the location of the parking lot can accommodate up to 300 motorcycles and 50 cars. Naturally this location to be very potential to be converted into a Park & Ride facility, but in making this happen would happen rejection that comes especially from communities that currently manages the parking lot. However, for other alternatives, the site area is still a vacant lot that can still be released and made into a Park & Ride facility. To save the land to be acquired, can be made Vertical Park & Ride facilities such as Park & Ride facilities located in the Ragunan. Building on Park & Ride Ragunan carrying the knock down system, where this system can be overhauled(News.metrotvnews.com, 2018).This location is very potential to be made facilities Park & Ride for Transjakarta corridor 13 currently has routes are Blok M - Ciledug (13A), Pancoran Barat - Ciledug (13B), Tosari - Ciledug (13C), Ragunan - Ciledug (13D), and Brass - Ciledug (13E)(Tribune Jakarta, 2018)

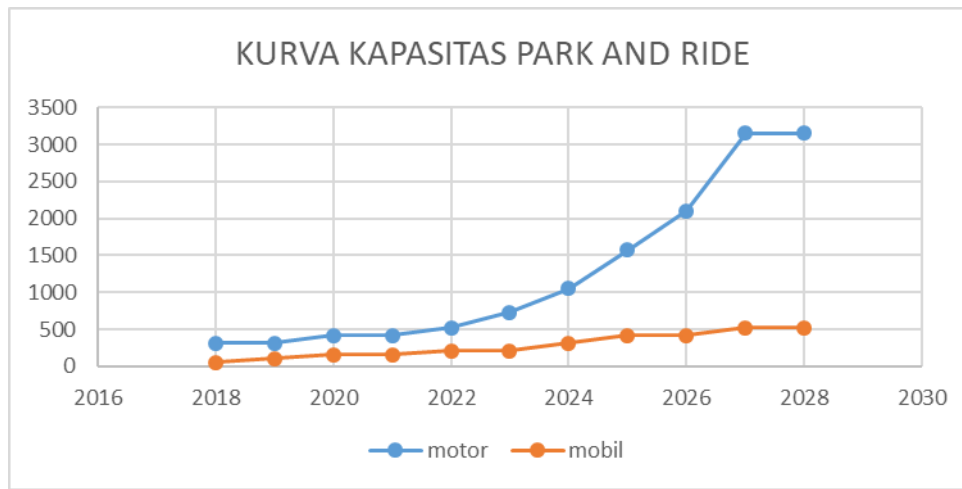


Figure 3. Projections Park and Ride in 2018 to 10 years to come

Source: Data processed writer

Based on Figure 1 curves above, explaining that by 2018 up to 10 years to come the potential of Park and Ride facilities will increase the capacity of the facility in terms of growing and progressing from year to year.

Amenities Park & Ride Need Supplied

To find out the facilities to be provided, we take two examples Park & Ride facilities in the two countries as a comparison. The first is:

Park & Ride Gombak LRT Station, Malaysia.

1. 24 operating hours
2. Available for women and disabled parking
3. Toilet
4. Sensor number of parking availability
5. CCTV
6. Cashless payment method
7. vertical building
8. Automated parking machines



Figure 4. Park & Ride Gombak Station Malaysia

Source: (Thestar.com.my, 2018)

Park & Ride Transjakarta Ragunan, Indonesia

1. 24 operating hours
2. CCTV
3. Vertical building (Knock down system)
4. Automated parking machines
5. Toilet



Figure 5. Park & Ride Transjakarta Ragunan Indonesia

Source: (News.metrotvnews.com, 2018)

From the comparison of the two facilities Park & Ride and based on complaints experienced by users of a parking lot in HOS Tjokroaminoto Street we found at HOS Tjokroaminoto street where on the road there is a parking lot for users of Transjakarta corridor 13 there should be facilities Park & Ride with management professional. Due to the Park & Ride facilities management professionals can present parking facilities such as 24-hours operation, because there is a car or motorcycle rider who may have other activities so that they lodged their vehicles in the parking lot. Then CCTV, CCTV pda present era is an obligation, especially in the location of parking due to the presence of CCTV manager can control the security at these sites because all activities can be recorded by CCTV. Then the automatic parking machines, computer-based parking system is now almost officially applied the parking location. Due to the use of these systems can provide many benefits such as providing real time data to facilitate transparency, improve safety for every vehicle and out recorded and recorded by the system, and also makes it easier to evaluate parking for parking area capacity development plan. And the last is the Cashless Payment Methode, it aims to facilitate users,

Conclusion

Currently the park & ride in Tangerang city is in Poris Plawad terminal with a capacity of 100 cars and 300 motorcycles with a maximum tariff of Rp. 10,000 to 15,000 for a motorcycle and a car. As for the management of parking in streets HOS Tjokroaminoto managed by the local community with 8,000 tariff for motorcycles and 15,000 cars with the facilities provided are not balanced with the rates given. Potential provision of facilities for park and ride on the road hos Tjokroaminoto big enough for these locations contained Shelter Transjakarta bus corridor 13 which serve some routes such as Blok M - Ciledug (13A), Pancoran Barat - Ciledug (13B), Tosari - Ciledug (13C), Ragunan - Ciledug (13D), and Brass - Ciledug (13E) (Tribune Jakarta, 2018), And for a park and ride facility to be provided to the site is by applying professional management of high standard both for the safety and comfort of the park & ride.

References

- Bekasi-Jakarta, K., Planning, J., Engineering, F., Technology, I., November, S., Arief, J., ... Indonesia, S. (2017). Factors Determining Selection Park & Ride, 6 (1).
- KRITERIA_FASILITAS_PARK_AND_RIDE_SEBAGAI. (Nd).
- Users, K., Transportation, J., Loyalty, UM, Saribanon, E., Tall, S., Trisakti, MT, ... Trisakti, T. (2016). Transport Service User Satisfaction Loyalty To Improve the Satisfaction of Transportation'S Customers To enhance Loyalty. *Transportation & Logistics Management Journal*, 03 (03), 317-326. <https://doi.org/http://dx.doi.org/10.25292/j.mtl.v3i3.81>
- Urban, AU (2017). Study of Characteristics and Patterns of Urban Public Transport Passenger Travel (Case Study: Urban Transportation Yogyakarta), (June).
- Prayudyanto, MN, Tamin, OZ, & Big, G. (2007). Park and ride, 7 (2), 169-178.
- Sidjabat, S. (nd). Revitalization of public transit to reduce congestion jakarta, 309-330.
- News.metrotvnews.com. (2018). [Online] Available at: <http://news.metrotvnews.com/daerah/ybDOqOmN-tarif-parkir-di-terminal-poris-plawad-jelang-uji-coba-ganjil-genap> [Accessed Sept. 2 2018].
- Tribune Jakarta. (2018). Passengers Complain Costly Parking Rates Transjakarta Corridor 13 Ciledug - Tribune Jakarta. [Online] Available at: <http://jakarta.tribunnews.com/2018/06/01/penumpang-keluhkan-mahalnya-tarif-parkir-transjakarta-koridor-13-ciledug#gref> [Accessed 6 Sept. 2018].
- Tangeks, R. (2018). City Government Not to Manage Transjakarta parking | Tangerang Express. [Online] tangerangekspres.co.id. Available at: <https://www.tangerangekspres.co.id/2018/02/21/pemkot-belum-kelola-parkiran-transjakarta/> [Accessed 10 Sept. 2018].
- Thestar.com.my. (2018). More bays and park-and-ride facilities being built - Community | The Star Online. [Online] Available at: <https://www.thestar.com.my/news/community/2013/07/29/solution-under-way-more-bays-and-parkandride-facilities-being-built/> [Accessed Sep. 12 2018].

News.metrotvnews.com. (2018). [Online] Available at:
<http://news.metrotvnews.com/metro/Gbm6p79k-park-and-ride-ragunan-masih-perbolehkan-warga-inapkan-kendaraan> [Accessed Sep. 7 2018].

Tribune Jakarta. (2018). Transjakarta Corridor 13 Add Service These -Brass Ciledug - Tribune Jakarta. [Online] Available at:
<http://jakarta.tribunnews.com/2018/06/27/transjakarta-koridor-13-tambah-layanan-rute-ciledug-kuningan#gref> [Accessed Sep. 14 2018].