Conference Paper

The Efforts to Improve the Traffic Pattern Settings for the Zonation System at Teluk Bungus Ferries Port

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Abstract

Teluk Bungus Ferries Port, located in West Sumatra, does not have a history of optimal functionality. This is due to the lack of a proper zoning system. Currently, people can enter and exit the dock area at will, and local residents’ livestock similarly violate established regulatory standards. Moreover, a number of inefficiencies exist – for example foot passengers and vehicles purchase ferry tickets from the same place, requiring vehicle drivers to leave their vehicles to purchase tickets – resulting in lengthy delays. This study evaluates the port and considers methods by which it could better confirm to government regulations and create a transportation system that is safe, comfortable and orderly.

Keywords: Efforts; Traffic Pattern; Zonation System.

1. Introduction

West Sumatra Province which is located on the west coast of central Sumatra, whose capital is Padang, with an astronomical location between 00.54 ° N and 30.30 ° S and between 98.36 ° - 101.53 ° East Longitude and is traversed by the equator with the northern boundary bordering Sumatra Province North and Riau, in the south and west by the Indian Ocean and in the east by the Provinces of Jambi and Bengkulu.

In the current condition, the Teluk Bungus Ferries Port is not functioning optimally. This is due to the fact that the zoning system has not been implemented in accordance with the prevailing regulations which causes people to freely enter and exit the dock area and moveable bridge operational space, as well as local residents’ livestock that can enter the Port area. At the Teluk Bungus Ferries Port, passengers and vehicles buy tickets at the same place, so that vehicle users must first get off the vehicle which causes the flow of passengers to become irregular.
This is due to the inconsistency in the Regulation of the Minister of Transportation Number PM 29 of 2016 concerning the Sterilization of Ferry Ports and the Decree of the Directorate General of Land Transportation No 242 of 2010 concerning Technical Guidelines for Ferry Traffic Management, where the purpose of issuing this Regulation is the government's effort to create a transportation system safe, comfortable and orderly

2. Research Methods

2.1. Primary Data

Primary data is data that is obtained directly from the source or based on direct observations in the field. Method of Calculation The surveyor counts / counts the number of objects in a certain period of time by using tools (such as counters, etc.). The data obtained are in the form of accurate quantitative data.

1. Daily Productivity Survey Calculating port productivity per day, this survey is conducted for 15 days from 12 March - 28 March 2020.

2. Port Area Measurement to measure the area of the port area and its facilities using measuring tools, clipboards, and pens. In this method the surveyor observes the condition of the object by using his five senses because in this method the surveyor reviews, monitors and directly observes conditions in the field. This method is very simple but requires precision to observe objects carefully within a certain period of time and to take direct documentation regarding port conditions.

2.2. Secondary Data

Secondary data is data that the researcher does not collect by himself. Secondary data is obtained from various agencies related to the object of research which is then processed and recapitulated so that it becomes one standard data. The methods used to collect secondary data include:

1. Literature Method (Library) Namely by studying the theory and literature and lecture modules in the Palembang River, Lake and Ferries Transportation Polytechnic library, as well as the legal bases related to the problems to be studied as a theoretical basis in analyzing and solving problems.

2. Institutional Method is done by collecting data from agencies related to this research. This secondary data was obtained from several related agencies.
2.3. Analysis

2.3.1. Analysis of Traffic Flow Patterns

Teluk Bungus Ferries port condition of Passenger and Vehicle Flow Patterns at the Teluk Bungus Ferries Port. Regulating the flow pattern of passengers and vehicles at the port is an important thing in order to improve service to service users. The following is the layout of the flow patterns of passengers and vehicles at the Teluk Bungus Ferries Port:

1. Flow patterns of passengers in and out of passengers. Current patterns of passenger traffic on board:

   (a) The passenger inflow pattern starts from the port entrance.

   (b) Passengers go directly to the counters in the office building to buy tickets.

   (c) Passengers then wait for the ship in the waiting room in the office building, but in existing conditions many passengers walk out of the waiting room to buy food at a shop outside the building and are free to wait for ships anywhere, due to the absence of supervision and instructions from officers or sign. Passengers also do not pass the road that has been provided.

   (d) Then the passengers go to the ship via the gangway.

   (e) Passengers board the ship via a moveable bridge.

2. The current pattern of passenger traffic disembarking from the ship:

   (a) The passenger outflow pattern starts with the passenger exiting the ship through a moveable bridge.

   (b) Passengers pass the gangway and there are many passengers who do not pass the gangway when exiting the ship, passengers walk out of the trestle.

   (c) Passengers immediately walk out of the port area freely without any supervision and instructions from officers or directions from signs.

3. Vehicle Outflow Patterns

4. The current pattern of vehicle traffic flow to the ship:

   (a) The vehicle inflow pattern starts from the entrance gate.

   (b) Then head to the parking lot ready to load.

   (c) Then all the drivers parked in the parking lot ready to load, then walked to the counter located in the office building to buy tickets.
(d) Vehicles waiting for notification to enter the ship.
(e) The vehicle immediately enters the ship.

5. The current pattern of vehicle traffic disembarking from the ship:

(a) The vehicle outflow pattern starts from the vehicle out of the ship through the moveable bridge in turn.
(b) Then the vehicle immediately exits the port area through the exit, the existing vehicles that have come out of the dock often stop and park their vehicles in random places to shop at stalls. This is what causes the vehicle's outflow pattern to be slightly hampered. Lack of supervision of officers and instructions from signs is the cause of this situation.

6. The flow pattern of delivery / pickup vehicles.

(a) The delivery / pick-up vehicle outflow pattern starts from the entry vehicle through the entrance.
(b) Then the delivery / pick-up vehicle will park the vehicle in the shuttle parking area.
(c) Then the vehicle exits the Port area through the exit. Existing delivery / pickup vehicles are free to enter the ready-to-load area as well as the vital zone at the port. Many vehicles are parked in random places to speed up pick-up and delivery of passengers.

2.3.2. Zoning System Analysis

Ports According to the Minister of Transportation Regulation Number 29 of 2016 concerning Ferry Port Sterilization. The way to analyze the zoning system must compare the existing conditions with the regulation PM No. 29 of 2019 concerning Ferry Port Sterilization. From the picture above, it can be seen that the vehicles transporting bulk goods, namely motorized pedicabs, are free to enter and are free to park their motorized pedicabs in the vital zone (zone c), namely the moveable bridge. Conditions like this occur every day at the Teluk Bungus Ferries Port while ships are loading and unloading. This can hamper the loading and unloading process and can obstruct the flow pattern of vehicles into and out of the ship. Because the port zoning and sterilization system has not yet been implemented, these motorized pedicabs are free to enter this area. In the regulation of the Minister of Transportation Number 29 of 2016 concerning the Sterilization of Ferry Ports.
1. A Zoning for People

   (a) Zone A1 is for the placement of counters and vehicle parking and is only designated for delivering / picking up passengers (from the port gate to the counter.

   (b) Zone A2 is for the waiting room and is only for prospective passengers.

   (c) Zone A3 is for checking passenger tickets and is only designated for people Ferries.

2. Zoning B for Vehicles

   (a) Zone B1 is a port area for placing weigh bridges and toll gates for vehicles

   (b) Zone B2 is the port area for queuing vehicles to cross (already have tickets)

   (c) Zone B3 is a vehicle loading area ready to enter the ship


   (a) Bunker

   (b) MB house and Gangway

   (c) Water hydrant

   (d) Electrical Substation / Generator Set

   (e) Bolder’s Place

2.3.3. Analysis of Methods of Application of Zoning Systems and Management of Traffic Flow Patterns at the Teluk Bungus Ferries Port.

1. Analysis of zoning and sterilization systems at the Teluk Bungus Ferries Port in accordance with PM 29 of 2016 concerning Ferry Port Sterilization Namely by determining and dividing the boundaries of the areas listed in the Minister of Transportation Regulation Number 29 of 2016 concerning port sterilization as a guideline for problem solving.

2. Management analysis of traffic flow patterns at the Teluk Bungus Ferries Port namely by obtaining the existing conditions of the flow patterns of passengers and vehicles at the Teluk Bungus Ferries Port. These conditions will be adjusted accordingly SK.242 / HK.104 / DRDJ / 2010 regarding technical guidelines for Ferries traffic management.
3. Analyze the equipment and personnel requirements needed to implement a zoning and sterilization system as well as traffic management at the Teluk Bungus Port. Namely, by analyzing the procurement of signs, portals, road markings and personnel needed to support the process of implementing the zoning and sterilization system to regulating the flow pattern at the Teluk Bungus Ferries Port.

3. Results and Discussion

3.1. River, Lake and Ferries Transportation (Inland Waterways) Infrastructure

Infrastructure is a supporting factor in activities for services in the implementation of ferry transportation activities, especially in the working area of the Teluk Bungus Ferries Port. It can be said that the condition of infrastructure at this port has suffered a lot of damage, such as the moveable bridge at this port which is no longer functioning due to damage and rust. So that it inhibits the flow pattern of vehicles in and out of and to the ship at high tide and low tide. Many facilities have been damaged and have not been repaired. Lighting facilities are also lacking because the street lights in the port area are damaged and no longer functioning. The following is the port inventory data at Teluk Bungus Ferries Port:

1. Guard Post and Entrance
2. Tollgate Vehicle
3. Employee Mess
4. Wipe. Pick up and drop off parking
5. Passenger and Vehicle Counters
6. Generator Room
7. Clean water reservoir
8. Islamic Prayer Room
9. Office Building and Waiting Room
10. Wipe. Parking is ready to load
11. Ticket checking post
12. Shop
13. Gangway

14. Trestle

15. MB's house

16. Moveable Bridge

17. Mooring Dolphin

18. Breasting Dolphin

3.2. Transport Productivity

The following is productivity data on the arrival and departure of passengers and vehicles in the last 5 (five) years at the Teluk Bungus Ferries Port:

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Trips</td>
<td>657</td>
<td>658</td>
<td>680</td>
<td>687</td>
<td>772</td>
</tr>
<tr>
<td>Adult</td>
<td>72,206</td>
<td>74,503</td>
<td>73,008</td>
<td>73,104</td>
<td>60,984</td>
</tr>
<tr>
<td>Children</td>
<td>3,460</td>
<td>2,622</td>
<td>4,693</td>
<td>6,475</td>
<td>5,331</td>
</tr>
<tr>
<td>Sub Total</td>
<td>75,666</td>
<td>77,125</td>
<td>77,701</td>
<td>79,579</td>
<td>66,315</td>
</tr>
<tr>
<td>Group I</td>
<td>163</td>
<td>39</td>
<td>85</td>
<td>133</td>
<td>161</td>
</tr>
<tr>
<td>Group II</td>
<td>9,003</td>
<td>8,022</td>
<td>7,803</td>
<td>7,014</td>
<td>6,350</td>
</tr>
<tr>
<td>Group III</td>
<td>77</td>
<td>25</td>
<td>42</td>
<td>77</td>
<td>83</td>
</tr>
<tr>
<td>Group IV A</td>
<td>676</td>
<td>745</td>
<td>744</td>
<td>618</td>
<td>489</td>
</tr>
<tr>
<td>Group IV B</td>
<td>0</td>
<td>0</td>
<td>249</td>
<td>366</td>
<td>643</td>
</tr>
<tr>
<td>VA class</td>
<td>300</td>
<td>391</td>
<td>892</td>
<td>1,969</td>
<td>4</td>
</tr>
<tr>
<td>Group VB</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3,155</td>
</tr>
<tr>
<td>Group VI A</td>
<td>107</td>
<td>133</td>
<td>763</td>
<td>1,040</td>
<td>0</td>
</tr>
<tr>
<td>Group VI B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>843</td>
</tr>
<tr>
<td>Group VII</td>
<td>46</td>
<td>40</td>
<td>185</td>
<td>64</td>
<td>81</td>
</tr>
<tr>
<td>Group VIII</td>
<td>24</td>
<td>43</td>
<td>83</td>
<td>31</td>
<td>23</td>
</tr>
<tr>
<td>Group IX</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>amount</td>
<td>10,396</td>
<td>9,438</td>
<td>10,846</td>
<td>11,313</td>
<td>11,902</td>
</tr>
</tbody>
</table>

Source: PT. ASDP Indonesia Ferry (Persero) Padang Branch (2020)

Services at the Teluk Bungus Ferries Port are still lacking, this is because there are too many ticket checks to passengers that are carried out at post 1 (one) and post 2 (two), namely at the ticket checking post and on the ship when the ship is about to depart, so that passengers feel uncomfortable with the services at the Teluk Bungus Ferries Port.
Port. The following is an analysis of where to check passenger and vehicle tickets can be seen in the image below. Passenger Introductory Limits Analysis. Currently, at the Teluk Bungus Ferries Port, there are no restrictions for transporting passengers, this situation causes people to enter the waiting room area and other facilitie at this time at the Teluk Bungus Ferries Port, it is necessary to arrange the layout of the zoning system to curb passengers and vehicles and also to support security, comfort, and order at the port in accordance with the Minister of Transportation Regulation Number 29 of 2016 concerning the Sterilization of Ferry Ports. In planning the layout of the zoning system should pay attention to:

1. Zone A
   (a) Zone A1: Delivery and Pick-up Parking Field Serves for the placement of counters and parking for delivery and pick-up vehicles (from the port gate to the passenger counter).
   (b) Zone A2: Passenger Waiting Room It functions as a waiting room for prospective passengers who board the ship. Before potential passengers are directed to board the ship, passengers are expected to wait in the waiting room. Here is the image for Zone A2:
   (c) Zone A3: Passenger Ticket Check. Serves for the passage of passengers who will enter the ship as well as a place for checking passenger tickets who will enter the ship. Below is the image for Zone A3

2. Zona B
   (a) Zone B1: Weighbridge and Tollgate for Vehicles. The area for placing weigh bridges and vehicle counters (tollgate), but at the Teluk Bungus Ferries Port there is no weigh bridge and the function of the tollgate at this Ferry Port is still not optimal. To support the zoning system at the port it is recommended to have a weighbridge. Here is the image for Zone B1:
   (b) Zone B2: Queue of vehicles that will cross. The parking queue area is ready to load the vehicle before entering the ship (already has a ticket). The queue of these vehicles is waiting in the parking lot ready to load before entering the loading area of the vehicle ready to enter the ship. Here is the image for Zone B2:
   (c) Zone B3: The vehicle loading area is ready to enter the ship. The road area is a queue of 4 or more wheeled vehicles before entering the ship directed by the port officer. Here is the image for Zone B3:
(d) Zone C Port area for the security and safety of important facilities that are prohibited from entering by service users except officers.

i. Water reservoir and. This area is an area that is prohibited for service users to be here, except for port officials who have an interest. The water reservoir functions to fill fresh water for ships in order to improve services on the ship. Below is the image for Zone C.

ii. Machine room

iii. A place to supply electricity to the port, especially when the ship is about to dock and the ship will be departed for service to service users because electricity from PLN often goes out. The following is a picture of the engine room located in Zone C.

iv. Movable Bridge House is a place to operate a Moveable Bridge for the smooth loading and unloading of vehicles. This MB house is located right beside the Moveable Bridge. Not everyone can enter this room, only MB operating officers can enter this room.

v. The bolder holder is placed in two places, namely Mooring Dolphin and Breasting Dolphin. In this port, there are 6 bolders located at 3 mooring dolphins and 3 breasting dolphins. The bolder serves as a place to tie or tie ship ropes and not just anyone can enter this area because this area is a vital zone and only officers can moor.

3.3. Analysis of Passenger and Vehicle Traffic Patterns

After Zoning System Layout Is Implemented lanes for passengers and vehicles are currently not running well and optimally. Therefore, in order to support servants at a Ferries port, there must be arrangements for traffic patterns for passengers and vehicles entering and leaving the port. The following is an analysis of passenger traffic and vehicles that will board the ship.

1. Passenger Traffic Pattern Analysis.

   The escorted passenger parked his vehicle in the delivery / pick-up parking lot and the passenger headed to the passenger counter to buy a ticket.


   Vehicles carrying cargo / goods that will cross first pass through the weighbridge before buying a vehicle ticket with the aim of knowing the amount of cargo carried on the vehicle. Here is an image analysis can be seen below. Vehicles that already
have tickets will be directed directly to Zone B2, which is a parking lot ready to load before going to the ship. The following is a picture of the analysis of the vehicle to the parking lot ready to load

Port officers, vehicles that have tickets are welcome to enter the ship based on the ticket queue. The following is a picture of the analysis of the queue of vehicles entering the ship. And get off the passengers

3. Plan of Vehicle Traffic Patterns Up and Down

Image caption getting on and off the vehicle:

(a) Get on the ship

i. All types of vehicles enter through the Ferry Port entrance to the weigh bridge and vehicle tollgate (zone B1).

ii. All vehicles enter the parking lot ready to load the queue of vehicles (zone B2).

iii. Before entering the area ready to load into the ship, the vehicle checks the ticket and goes to the area ready to load on board according to the port operator’s instructions (zone B3).

iv. Vehicles enter the ship through the movable bridge dock regularly according to the ship operator’s instructions (zone C).

(b) Get off the ship

i. All types of vehicles exit through the ship ramp door and dock (zone C) to zone B3.

ii. After arriving at zone B3, the vehicle heads out to zone B1.

iii. All Vehicles exiting through the Ferry Port exit (zone B1)

3.4. Analysis of Addition of Supporting Equipment and Number of Officers Needed

At the Teluk Bungus Ferries Port, a zone system is needed to support the smooth and orderly port. There is a need for signs, road markings, additional lighting and additional personnel for officers at the Teluk Bungus Ferries Port.

1. Analysis of Addition of Equipment and Signs

At the Teluk Bungus Ferry Terminal, additional signaling equipment is needed to support the smooth and orderly operation at the Ferry Port. Signs are needed
### TABLE 2: Zone Area Signs

<table>
<thead>
<tr>
<th>No</th>
<th>Zone Signs</th>
<th>Laying Signs</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>A ZONE A</strong>&lt;br&gt;Special Area of People</td>
<td><strong>Signs are placed in the area according to the zone placement area.</strong> A1 for passengers. A2 for the waiting room. A3 for ticket inspection Passenger.</td>
<td>Notification for passengers that they are in zone A.</td>
</tr>
<tr>
<td>2</td>
<td><strong>B ZONE B</strong>&lt;br&gt;Special Vehicle Areas</td>
<td><strong>Signs are placed in the zone placement area.</strong> B1 Weighbridge area and tollgate. B2 parking area Ready to load the vehicle, B3 ready vehicle area load into the ship.</td>
<td>Notification for passengers that they are in zone B.</td>
</tr>
<tr>
<td>3</td>
<td><strong>C ZONE C</strong>&lt;br&gt;Areas For Vital Facilities</td>
<td>**Signs are placed in the safety and security areas of important facilities. No entry except for officers. Among others: MB house, water hydrant, electricity substation / generator, bolder place.</td>
<td>Notification for passengers that they are in zone C.</td>
</tr>
</tbody>
</table>

To provide warnings, orders, prohibitions and instructions for service users, so to direct the flow of traffic and road equipment (road barrier) as a barrier or barrier to...
### Table 3: Placement of Signs at the Ferry Port

<table>
<thead>
<tr>
<th>No</th>
<th>Types of signs</th>
<th>Laying down</th>
<th>Amount Required</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>This sign is placed on the exit of the vehicle from the ship and on the road in front of zone A3.</td>
<td>2 pieces</td>
<td>These signs function so that unauthorized passengers do not enter the area where the signs are located.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>This sign is placed in front of the trestle.</td>
<td>1 piece</td>
<td>Warning for vehicles not to overtake each other.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>These signs are placed on the road to the port entry area and in the port exit area</td>
<td>2 pieces</td>
<td>Warning for passengers who have vehicles do not park along the road where the sign is placed.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Signs are placed in the parking area for delivery / pick-up passengers and a parking lot ready to load.</td>
<td>3 pieces</td>
<td>Notification for passengers who own a vehicle must park the vehicle in the area of the sign.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Placed at the entrance to the port area</td>
<td>1 piece</td>
<td>Notification for service users to comply with existing signs.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Put in front of the gangway.</td>
<td>1 piece</td>
<td>Notifications for passengers passing special passenger lanes.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Types of signs</td>
<td>Laying down</td>
<td>Amount Required</td>
<td>Function</td>
</tr>
<tr>
<td>-----</td>
<td>---------------</td>
<td>-------------</td>
<td>-----------------</td>
<td>----------</td>
</tr>
<tr>
<td>7</td>
<td>CANTEEN</td>
<td>Placed in the canteen area</td>
<td>1 piece</td>
<td>As a clue to the location of the canteen</td>
</tr>
<tr>
<td>8</td>
<td>R. WAIT</td>
<td>Placed in the waiting room area</td>
<td>1 piece</td>
<td>As a clue to the location of the waiting room</td>
</tr>
<tr>
<td>9</td>
<td>TOILET</td>
<td>Put in the toilet area</td>
<td>1 piece</td>
<td>As a guide to the location of the toilet</td>
</tr>
</tbody>
</table>

Number of signs planned: 11 pieces

<table>
<thead>
<tr>
<th>No.</th>
<th>Present condition</th>
<th>Planned conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The community and hawkers are free to enter the Ferry Port area up to zone A3 and vital zone (zone C).</td>
<td>Zoning system is implemented so that unauthorized people and hawkers cannot freely enter the port area or other zones.</td>
</tr>
<tr>
<td>2</td>
<td>Delivery and pick-up vehicles are free to enter the Port area to zone B2 and B3.</td>
<td>After the implementation of the zoning, the delivery and pick-up vehicles are not free to enter other zones only limited to zone B1.</td>
</tr>
<tr>
<td>3</td>
<td>At this time, livestock belonging to local residents can enter the Ferry Port area.</td>
<td>After carrying out the sterilization of the Ferry Port, it is hoped that the residents’ livestock will not be able to enter the Ferry Port area anymore.</td>
</tr>
</tbody>
</table>

The following is an analysis of the addition of sign equipment, which can be seen below.

After arranging the placement of the signs as a means of supporting the zone system, then the placement of a traffic cone made of plastic or rubber measuring 50 to 90 cm is also planned, so that it seems lighter and easier to move, especially when the vehicle is parking or going to get on board. After that, it also regulates the placement of road markings in the form of a white line that divides between one vehicle and another in the parking area for delivery and pick-up vehicles as well as a parking lot ready to load.
TABLE 5: Comparison of passenger and vehicle traffic flow patterns current and planned conditions

<table>
<thead>
<tr>
<th>No.</th>
<th>Present condition</th>
<th>Planned conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>After buying a ticket, passengers are free to walk and wait anywhere.</td>
<td>Passengers are required to wait in a waiting room equipped with comfortable and sterile facilities from other unauthorized service users.</td>
</tr>
<tr>
<td>2</td>
<td>Lack of regular vehicle traffic patterns at this Ferries port and irregular ready-to-load vehicles in the parking lot.</td>
<td>It is hoped that after the addition of personnel and equipment that support the regulation of vehicle traffic patterns and the arrangement of vehicles in the parking lot, they are ready to load regularly.</td>
</tr>
<tr>
<td>3</td>
<td>Vehicles that are parked are hijacked due to unclear signs at this Ferry Port.</td>
<td>After installing the signs in each area, it is expected that service users and vehicles can obey the existing signs.</td>
</tr>
</tbody>
</table>

TABLE 6: Comparison of Existing Zoning and Planned Zones

<table>
<thead>
<tr>
<th>Zone</th>
<th>Which exists</th>
<th>Planned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone A1</td>
<td>The passenger counter still joins the vehicle</td>
<td>The passenger and vehicle counters are made separately</td>
</tr>
<tr>
<td>Zone A2</td>
<td>The waiting room is not used because passengers are more concerned with waiting outside the waiting room and the stalls outside.</td>
<td>It is sterilized by placing ticket inspection officers and the limit of prospective passengers who already have tickets to enter the gangway, so that prospective passengers can wait in the waiting room and preferably put the canteen facilities in the waiting room.</td>
</tr>
<tr>
<td>Zone A3</td>
<td>Ticket checks were carried out 2 (three) times</td>
<td>Ticket checks are only carried out once before passengers enter the gangway</td>
</tr>
<tr>
<td>Zone B1</td>
<td>Vehicle counters that are still joined to the passenger counters due to a malfunctioning tollgate.</td>
<td>Enabling the vehicle tollgate again so that vehicles no longer buy tickets at the passenger counter.</td>
</tr>
<tr>
<td>Zone B2</td>
<td>Vehicles in the parking lot are ready to load less regularly.</td>
<td>Assigning officers to arrange vehicles in the parking lot for loading.</td>
</tr>
<tr>
<td>Zone B3</td>
<td>Delivery / pick-up vehicles are free to park vehicles in any place that disturbs the traffic patterns of vehicles entering or leaving the ship.</td>
<td>Zone B3 is sterilized by placing officers in the area and directing delivery and pick-up vehicles only to zone A1.</td>
</tr>
<tr>
<td>Zone C</td>
<td>People can freely enter the Ferry Port area to the vital zone (zone C)</td>
<td>It is strictly forbidden and sterilized in zone C so that only officers can enter this zone.</td>
</tr>
</tbody>
</table>

2. Analysis of the number of additional officers

At the Teluk Bungus Ferries Port, additional guidelines are needed to support sterilization and traffic control at the Ferry Port. There is a need for signs to provide information and instructions for service users, so to regulate and direct traffic flow an officer is required at a designated location as a regulator and instructions for passenger and vehicle traffic. The following is an analysis of the addition of sign equipment, which can be seen below.
(a) Placement of officers at weigh bridges. After placing the weigh bridge, an officer is needed to measure the dimensions and weight of the vehicle. So that the vehicle that will be Ferries can find out whether the vehicle can board the ship or not.

(b) Placement of Officers in Zone B2 Zone B2 is required by officers to record the queue of vehicles and vehicle controllers in the parking lot ready to load who will enter the ship according to the queue of vehicles. So that vehicles Ferries can be in accordance with the queue and do not overtake each other.

(c) Placement of officers in Zone A3 Zone A3 is required by officers to check passenger tickets who will cross and direct passengers to the Gangway. So that checking passenger tickets is only done once and there are no more passengers who do not have a ticket.

(d) Placement of Officers in Zone B3. At the vehicle checkpoint, officers are required to check tickets, as well as arrange the vehicles that enter the ship so that the ship can take turns.

Based on the results of the analysis that has been obtained, the problem solving that will be recommended is as follows:

(a) Regulating the layout of land facilities for the zoning system at the Teluk Bungus Ferries port in accordance with PM 29/2016 on Sterilization at the Ferry Port.

(b) In order for the arrangement of the land facility layout system for this zoning system to run safely, orderly and smoothly, it is necessary to provide socialization and information to the public regarding the area zone system used for passengers and vehicles at the Teluk Bungus Ferries Port in accordance with the Decree of the Director General of Land Transportation No. 242/2010 concerning Technical Guidelines for Traffic Management for Ferries.

(c) Improve service and comfort to service users by checking passenger tickets only once, namely in zones A3 and B3.

(d) Sterilize, organize and order the delivery and pick-up of passengers, whether using a vehicle or on foot in accordance with the applicable zone system.

(e) In order to create a traffic condition that is safe, orderly, orderly and smooth, it is necessary to rearrange the lanes of vehicles, passengers and vehicle parking lots ready for loading and pickup, so that the smooth running of the Teluk Bungus Ferries Port is orderly.
(f) Arranging the placement of signs to improve services at the Teluk Bungus Ferries Port.

(g) Make additional officers at the Teluk Bungus Ferries Port to provide information and instructions for service users.

4. Conclusion

Services at the Teluk Bungus Ferries Port are still lacking, this is because there are too many ticket checks to passengers that are carried out at post 1 (one) and post 2 (two), namely at the ticket checking post and on the ship when the ship is about to depart, so that passengers feel uncomfortable with the services at the Teluk Bungus Ferries Port. The following is an analysis of where to check passenger and vehicle tickets can be seen in the image below. Passenger Introductory Limits Analysis. Currently, at the Teluk Bungus Ferries Port, there are no restrictions on transporting passengers. Regulating the layout of land facilities for the zoning system at the Teluk Bungus Ferries port in accordance with PM 29/2016 on Sterilization at the Ferry Port. In order for the arrangement of the land facility layout system for this zoning system to run safely, orderly and smoothly, it is necessary to provide socialization and information to the public regarding the area zone system used for passengers and vehicles at the Teluk Bungus Ferries Port in accordance with the Decree of the Director General of Land Transportation No. 242/2010 concerning Technical Guidelines for Traffic Management for Ferries.

References


[5] Regulation of the Minister of Transportation Number 29 of 2016 concerning the Sterilization of Ferry Ports.