



Analysis Of Fast Ship Requirements In The Lembar Crossing Port - Padangbai In 2018

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Abstract. *Transportation needs in an area caused by the interaction between social and political activities, as well as tourism in the area. Transportation plays a very important role in the success of the development of an area, which has a role as a liaison between one region and another separated by the presence of water, the role of transportation is also very closely related to development, and stimulates new activities in the development of the transportation system into a very important and very useful role in the smooth development of the wheel, strengthening unity and unity that affects all aspects of life. The conditions of West Lombok Regency which is close to Bali Island which is separated by the Lombok Strait, this causes crossing transportation is the main transportation of goods or passengers that can be reached by the community in supporting equitable development. Crossing transportation has an important role to provide support for economic growth, especially crossing. The position of transportation becomes one of the decisive elements in order to guarantee the economic development of the community. As the economy progresses, the role of transportation increases. This is due to the economic dependence on transportation to be greater because it must always be guaranteed smoothness in the flow of goods and passengers quickly, cheaply and safely from Padangbai Port to Lembar Harbor or vice versa. Lembar Crossing Port is one of the Crossing Ports located in West Lombok Regency which serves the Lembar - Padangbai Crossing. At the Crossing Port Lembar there is a ferry transportation company operated by PT. Indonesia Ferry ASDP Branch of Lembar.*

Keywords: Analysis; Fast Ship Requirements; Lembar Crossing Port; Padangbai.

1. Introduction

Transportation needs in an area caused by the interaction between social and political activities, as well as tourism in the area. Transportation plays a very important role in the success of the development of an area, which has a role as a liaison between one region and another separated by the presence of water, the role of transportation is also very closely related to development, and stimulates new activities in the development of the transportation system into a very important and very useful role in the smooth wheels of development, strengthening unity and unity that affects all aspects of life.

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The situation in the area of West Lombok Regency which is close to Bali Island which is separated by the Lombok Strait, this causes crossing transportation is the main transportation of goods or passengers that can be reached by the community in supporting equitable development. Crossing Transportation has an important role to provide support to economic growth and development.

Lembar Crossing Port is one of the Crossing Ports located in West Lombok Regency that serves the Lembar - Padangbai Crossing. At the Crossing Port Lembar there is a ferry transportation company operated by PT. Indonesia Ferry ASDP Branch of Lembar.

With the increase in travel that is caused by population growth and increasing the standard of living of the community, furthermore it requires infrastructure and facilities and other supporting facilities so that the implementation of crossing transportation can be carried out safely, safely, quickly, smoothly, orderly, orderly, comfortably, and efficiently. To provide services that are fast, safe, convenient and inexpensive, it takes a fast ship transport that serves the cross Lembar - Padangbai. Whereas the Fast Ship company has now been banned from operating again due to improper facilities. Based on these considerations, the existence of a Fast Boat that serves the Padang - Padangbai route is needed.

In connection with the above, the writer tries to conduct a research that is motivated by the following things:

- 1) Fast ships that are suitable to be used to make time efficient;
- 2) The feasibility of operating a Fast Ship by reviewing the amount of demand and supply in order to achieve the operation of a Fast Ship.

Based on the background description above, the writer chooses the title "Analysis Of Fast Ship Requirements In The Lembar Crossing Port - Padangbai In 2018".

2. Formulation of The Problem

Based on the background of the problem outlined above, and so that the target does not deviate from the subject matter, a number of problem formulations are made, namely:

- 1) What are the steps taken to get the Fast Ship back into operation so that it can service the existing requests?
- 2) What are the steps to meet the needs of Fast Ship mode?
- 3) Analyzing the amount of demand and supply at the Lembar Crossing Port for the needs of Fast Boat facilities.

3. Results and Discussion

3.1 Crossing Ship Conditions

1) Crossing Ship

The crossing facilities at the Lembar Crossing Port currently consist of Ro-Ro ferries. The characteristics of Ro-Ro ships operating at the Lembar Crossing Port are



Source: Field Survey Results, 2014

2) Fast Boat Conditions

Previously the Lembar-Padangbai route was served by a Fast Boat, the Suranadi express. Ships operating at these two ports are a type of Fast Boat (high speed craft) which is a special ship to carry passengers who have a high enough speed, because it is used specifically for passengers, passengers are only allowed to carry their luggage up to a maximum of 5 kg. if more luggage is charged an additional fee for the item itself which costs enough to make passengers think 2 (two) times if they want to carry more goods. Fast Ship Transport has service facilities that can provide a sense of satisfaction to service users so that passengers feel comfortable using Fast Ship services. Facilities available on the Fast Ship such as air conditioning, snacks, soft drinks, television, music and karaoke. Tariffs imposed on Fast Boat passengers are still affordable by the purchasing power of users of Fast Ship services and indeed it is specifically for the lower middle economic class with a balanced service quality with the rates imposed by the Fast Ship company so that even though the tariff that is applied is higher than the Ferry ship but passengers prefer to use the ferry type of fast ferry. The rates that apply on the Lembar-Padangbai Speedboat are for the executive class of Rp. 100,000, - and for the VIP class of Rp. 150,000. The last Suranadi Express Fast Ship was operational in 2009 and now the Fast Ship no longer operates due to the facilities used to transport passengers made of fiberglass and in international regulations SOLAS (safety of life at sea) states that Fast Ships used to transport passengers and goods must be made of aluminum alloy.

Table 1
Suranadi Express Fast Ship Specification Data
That ever operated On the Lembar Crossing – Padangbai

No	Suranadi Express Fast Ship Specification Data	
1	Name of a vessel	Suranadi Express
2	Call Sign	YB 4488
3	Vessel Type	Passenger Ship
4	Classification	-
5	Capacity	200 Passenger
6	Build / Place	Jakarta / 2003
7	GRT / NRT	185/56 Tons
8	Hull Material	Fiberglass
9	Speed Max	20 Knots



10	Length Over All	35.78 Meters
11	Breadth	06.80 Meters
12	Length of perpendicular	31.68 Meters
13	Draft	01.60 meters
14	Main Engine	MTU (3 x 1050 HP)
15	Auxillary Engine	Mitsubishi (2 units x 85 HP)
16	Number of Crew	11 Crew

Source: KSOP Port Lembars, 2014

Suranadi Express Fast Boat is a Jetty type Fast Boat which has a capacity of around 200 Lembars. has a speed of 20 Knots with a weight of about 56 Tons of Fast Boat capable of crossing the Lembar - Padangbai Crossing with time ± 2 hours.

The construction of the cross-Lembar fast ship port - Padangbai has been carried out by the company before and is owned by PT. Indonesia Ferry ASDP. The infrastructures are:

a. Up and down passenger facilities

At the port of Lembar and Padangbai there is a special jetty for Fast Ships with a jetty type jetty which is generally used for passenger ships at the jetty for fast ship transportation which does not require strong instructions to hold the cargo of passengers and goods to be transported by ship. The length of the pier is 30 meters because it is adjusted to the length of the ship and the width of the pier 2.5 meters serves as a liaison from the door of the ship to the mainland so as to facilitate the process of loading and unloading passengers and at the same time functions as a gangway to get on and off the ship.

b. Dock berth facilities

It is a facility needed for ships to lean on and dock to the dock for loading and unloading of all types of cargo, while the facilities at the port are:

- [1] Dolphin : 5 units
- [2] Fenders : 5 units.

3) Suranadi Express Fast Boat Operations

When the Suranadi Express ships operate at the crossing of the Lembar - Padangbai crossing only operates 10 trips / week. For the schedule of departure and arrival of fast boat cross Lembar - padangbai can be seen in the following table:

Table 2
Fast Boat Departure and Arrival Schedules
Who Ever Operated On The Crossing Lembars – Padangbai

No	Harbor Crossing of Lembars				Padangbai Ferry Port				Adv.
	Departure		arrival		Departure		Arrival		
	Day	Time	Day	Time	Day	Time	Day	Time	
1	Monday	10:0	Monday	12.0	Monday	4:00p.	Monday	18:00	The boat



		0		0		m			takes hours	2
2	Wednesd ay	10:0 0	Wednesd ay	12.0 0	Wednesd ay	4:00p. m	Wednesd ay	18:00		
3	Friday	10:0 0	Friday	12.0 0	Friday	4:00p. m.	Friday	18:00		
4	Saturday	10:0 0	Saturday	12.0 0	Saturday	4:00p. m.	Saturday	18:00		
5	Sunday	10:0 0	Sunday	12.0 0	Sunday	4:00p. m.	Sunday	18:00		

Source: PT. Suranadi Express, 2009

Table 3
Travel Time, Loading, And Fast Boat Maneuvers
Who Ever Operated On The Crossing Lembars – Padangbai

Ship name	Traveling time	Unloading Time		Ship maneuver time	
		Dismantle it	Load	Depart	Come
SURANADI EXPRESS	2 hours	10 minutes	3 hours 45 minutes	10 minutes	10 minutes

Source: PT. Suranadi Express, 2009

Based on observations, and survey time Suranadi Express Fast Ship service with speeds between 27 to 30 knots can be known the vessel travel time so that it can know the service time of the ship.

4) Track Distance

The Harbor and Padangbai Crossing Port connects Lombok Island and Bali Island. Lembar Crossing - Padangbai has a distance of 36 miles and can be reached with a duration of 4 hours by using a ro-ro ferry and 2 hours by using the Fast Boat.



Source: PT. ASDP (Persero) Lembar Branch, 2013

Figure III.4
Map Distance of Track Lembars - Padangbai



5) Ferry Transport Tariffs

For the Crossing Transport Rates on ro-ro vessels at the Lembar Crossing Port are as follows:

Table 4
Vehicle and Ferry Passenger Fares
At the Harbor Crossing Lembar

NO	TYPES OF TICKETS	TOTAL RATES
1	2	3
I	Passenger	
1	Adult economy	40,000
2	Child economy	25,000
II	Vehicle	
1	Group I	57,000
2	Group II	112,000
3	Group III	232,000
4	Group IV pnp	733,000
5	Group IV brg	687,000
6	Group V pnp	1,484,000
7	Group V brg	1,213,000
8	Group VI pnp	2,513,000
9	Group VI brg	2,001,000
10	Group VII	2,567,000
11	Group VIII	3,834,000
12	Class IX	5,741,000

Source: PT.ASDP (Persero) Lembar Branch, 2013

Whereas the tariff determination on Fast Ships that have operated on the Lembar-Padangbai route is as follows:

Table 5
Suranadi Express Fast Ship Tariff Components
Who Have Operated On Cross Lembars - Padangbai

No	Ticket type	Total Rates
1	2	3
1	Executive	Rp. 100,000
2	VIP	Rp.150,000

3.2 Analysis Of The Condition That Is Working

1) Descriptive Analysis of Respondent Characteristics



a. Harbor Crossing Lembars

Questionnaire data retrieval can be done to respondents of the Crossing Transport services after the determination of the sample conducted by the author using the productivity data of ro-ro passenger in Lembar Crossing Port in 2013 where in the last 5 years there has been a significant surge. The characteristics of the service users the authors analyze using descriptive analysis which includes analysis of:

(1) Age

Based on the results of a descriptive analysis related to the age of the respondents at the Crossing Lembars Port, it can be seen that the majority of respondents are at the age interval of 31-40 years which is as much as 33.97%.

(2) Gender

Based on the results of descriptive analysis relating to the sex of the respondents, it can be seen that the majority of respondents at the Crossing Port of the Lembar are male (62%) and the rest are female (38%).

3) Crossing Transport Productivity

a. Port of Productivity Data Lembar 5 Years (2009-2013)

Table 6
Data on Productivity of 5 Years of Departure (2009 - 2013)
Padangbai Ferry Port

Year	Trip	Departure Passenger
2009	6,704	62,951
2010	7,078	75,613
2011	7,748	84,998
2012	8,530	85,114
2013	10,040	93,178

Source: PT. ASDP (Persero) Padangbai Branch, 2013

b. Data on Productivity of Survey Results

In addition to annual productivity data there are daily productivity data from passengers at the Crossing Lembars Port through the results of a survey conducted for 14 days. The passenger productivity data from the survey results on the Ro-ro Ferry is during the survey Thursday / April 24 2014 to Wednesday / May 7 2014 for 14 days a total of 1,597 loading, loading 2,548

Based on various considerations and analysis results of the author, then:



- a. There is a transportation demand (demand), based on the results of the survey of respondents' characteristics conducted by the author, that at the Lembar Crossing Port, the level of desire in the operation of the Fast Ship reaches 90%, while at the Padangbai Crossing Port, the level of desire in the Operation of the Fast Ship is 85%. This is based on samples taken based on the population growth of passenger ro-ro Ferry in 2013.
- b. The availability of Padangbai Crossing Lembars and Crossing Ports which are used as plans in the operation of Fast Boat Facilities.
- c. The increase in passenger growth for the Cross Lembar - Padangbai Crossing Transportation service in the past 5 years (2009 - 2013) makes the alternative of the Fast Boat service service user can be utilized by prioritizing the level of safety, comfort, and timeliness considering that service users want a fast and comfortable trip.

After an analysis of the existing problems, the efforts made to serve service users on the Crossing Lembars - Padangbai are:

- a) Reoperation of Lembar - Padangbai Crossing Fast Boat facilities for services to pedestrian service users.
- b) The need for Fast Boat facilities in 2018 Crossing Lembars - Padangbai increases to 2 (two) Fast Ships, due to exceeding the number of Load Factor plans by 70%. Load Factor with Passenger Movement at Lembar Crossing Port of 126,036 people is 143.2%, while at Padangbai Crossing Port of 128.5%.
- c) Well-arranged schedule arrangements that are appropriate for Fast Boat operational service hours on the Crossing Lembars - Padangbai. Within 1 (one) week the Fast Boat is planned to operate for 5 days and 2 days for anchoring.

From the results of the analysis conducted on the Crossing Crossing Lembars, recommendations that can be submitted are:

- a) Fast Boat Operation on Lembar - Padangbai Crossing with initial steps based on passenger movement forecasting from 2013 to 2018. From the results of the analysis conducted to predict the number of Fast Ships in 2018 with the Load Factor
- b) More than 70%, it takes 2 (two) Fast Boat facilities that serve the crossing of Lembar - Padangbai with the ability to trip only 4 trips / ship. Fast Boat operating time is 12 hours.
- c) Lembar Crossing - Padangbai can serve by using 1 (one) Fast Boat, by increasing the number of Fast Boat trips per day and reducing the Fast Ship Headway time.
- d) Arrangement of fast ship operational schedules that suit the needs of service users, especially during rush hour / peak passenger hours. By setting a regular schedule can facilitate service users in determining the departure plan using the alternative Fast Ship on the Crossing Lembars - Padangbai.



4. Closing

Based on the results of data analysis and discussion of the problems in the previous chapter section, the following conclusions can be drawn:

- 1) Based on International Maritime Organization (IMO) Regulations and SOLAS Amendments that Fast Operations are made of Aluminum Alloy. Therefore, Fast Ships that have operated on the Lembar - Padangbai Line, namely Suranadi Express, are prohibited from operating because the material is still made of Fiberglass and this does not meet Sea Sailing Safety Standards.
- 2) From the results of descriptive analysis on the crossing of the Padangbai crossing, based on the results of the survey of the characteristics of respondents conducted by the author, that at the Lembar Crossing Port, the level of desire in the operation of the Fast Ship reaches 90%, whereas at the Padangbai Crossing Port, the level of desire in the Operation of the Fast Ship is 85%. This is based on samples taken based on the population growth of passenger ro-ro Ferry in 2013.
- 3) In 2018, the number of Fast Boat facilities will be increased to 2 (two) Fast Ships to fulfill 143.2% and 128.5% Load Factor with 200 Lembar capacity and 4 trips per day for one Fast Ship.
- 4) For 2013 as an assumption of a base year, Lembar Crossing - Padangbai can be served by 1 (one) Fast Boat, by increasing the number of trips and shortening the Fast Boat Headway. But for the next few years, it is necessary to add a fleet of Fast Ships because of an increase in passenger growth every year.

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