

CHAPTER VI

CONCLUSION AND RECOMMENDATION

Conclusion and suggestion of the research about “Performance Analysis and Requirement of Sidewalks Lane In Sungai Jodoh” with research limitation in Batam Island will be outlined as follows:

6.1 Conclusions

1. Based on pedestrian peak volume there are no sidewalks that need to be widened, instead it has to be reduced to 1.5 meters following the standard regulation.
2. The magnitude of the average speed at the observation location 1 is 54.16 meters / minute, at observation location 2 is 52.8 meters / minute, at observation location 3 is 52.32 meters / minute, at observation location 4 is 53,44 meters / minute. Sidewalks at observation location 1, 2, 3 and 4 have service levels A
3. The sidewalk performance in current day is already good in all observation point has no issue detected, there is no need to be repair and add another instruments.
4. According to analysis in current data it obtain only increasing about 0.80% and for the next 20 years as government predict, the sidewalk design is enough for the next 20 years, there is no need to be widened later, Prediction assumption LOS will decrease to B grade in all observation area.

6.2 Recommendations

According to the research, there is recommendation can be obtained:

1. Need to do similar research in different places with the right time when the area / island / province is doing a lot of sidewalk construction.

2. On the sidewalk path, should be provided with lighting so that pedestrians who pass at night can see the surroundings clearly and safely.
3. The height of each sidewalk at each observation location should be reduced to 0.20 meters so that it is following the regulations of the Direktorat Jendral Bina Marga 1999 concerning Guidelines for Planning, Provision, and Utilization of Pedestrian Network Infrastructure and Facilities in Urban Areas.

REFERENCES

- Iswanto, Danoe. 2006. *Pengaruh Elemen-Elemen Pelengkap Jalur Pedestrian Terhadap Kenyamanan Pejalan Kaki*. Cetakan Kelima. ENCLOSURE
- Limpong, Royke. 2015. *Pemodelan Arus Pejalan Kaki*. Cetakan Ketiga. ISSN: 2337-6732
- Rubenstein, Harvey M. 1987. *Central CityMalls*. New York : John Wiley & Sons.
- WHO Library Cataloguing-in-Publication Data. *Pedestrian safety: a road safety manual for decision-makers and practitioners*. ISBN 978 92 4 150535 2
- <https://binamarga.pu.go.id/index.php/berita/bina-marga-targetkan-susun-database-ipo-nasional-dalam-dua-bulan>
- https://pugpupr.pu.go.id/uploads/Produk_Pengaturan/Pedoman%20Teknik%20Penyandang%20Cacat.pdf
- <https://fdokumen.com/document/peraturan-menteri-pekerjaan-umum-nomor-03prtm2014-tentang-pedoman-perencanaan.html>
- <https://www.google.com/maps/place/Jl.+Raja+Ali+H.,+Sungai+Jodoh,+Kec.+Batam+Ambar,+Kota+Batam,+Kepulauan+Riau+29444/@1.1521006,104.0033853,17z/data=!3m1!4b1!4m5!3m4!1s0x31d98a2737d50a9f:0x37e5a3c1ad879bb0!8m2!3d1.1520952!4d104.005574>

APPENDICES

Total Pedestrian Volume

VP1

2nd	No	Time	Interval	Total (ped/15min)	Volume (ped/min/m)
	1	17:00-17:15	15	35	0.530
	2	17:15-17:30	15	30	0.455
	3	17:30-17:45	15	29	0.439
	4	17:45-18:00	15	37	0.561

VP2

2nd	No	Time	Interval	Total (ped/15min)	Volume (ped/min/m)
	1	17:00-17:15	15	30	0.455
	2	17:15-17:30	15	31	0.470
	3	17:30-17:45	15	29	0.439
	4	17:45-18:00	15	38	0.576

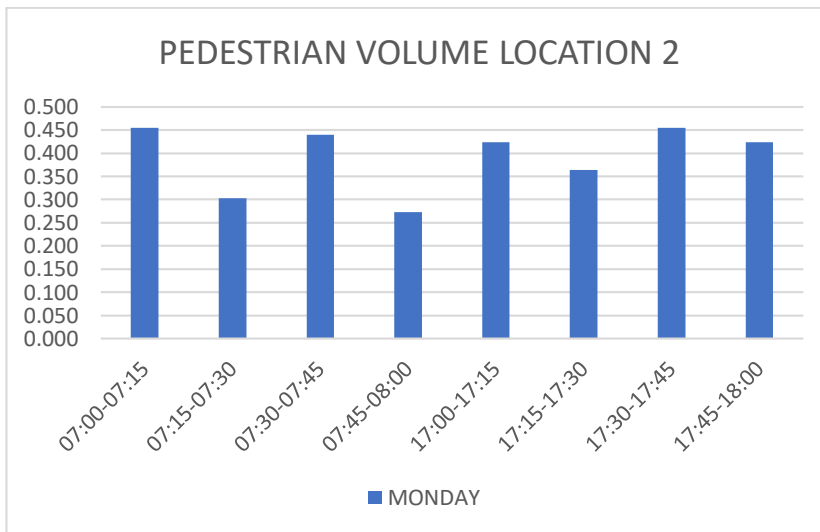
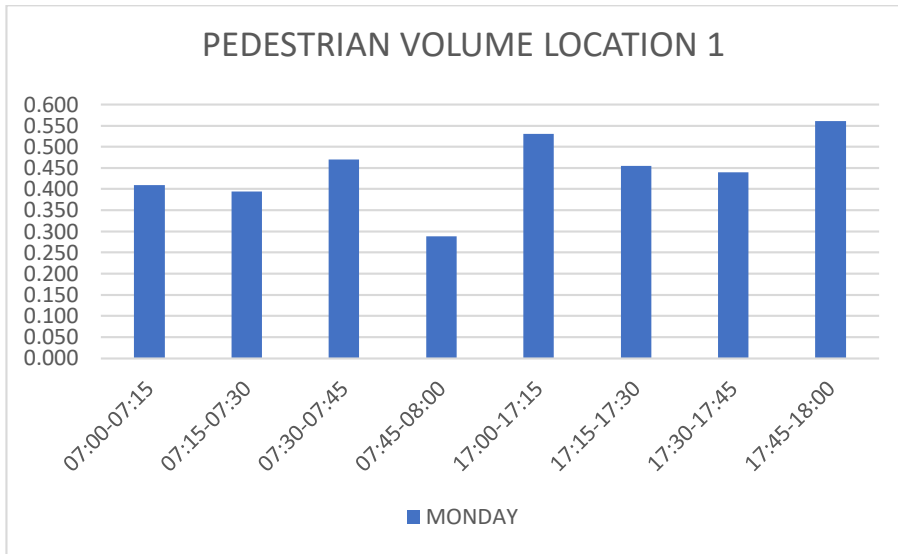
VP3

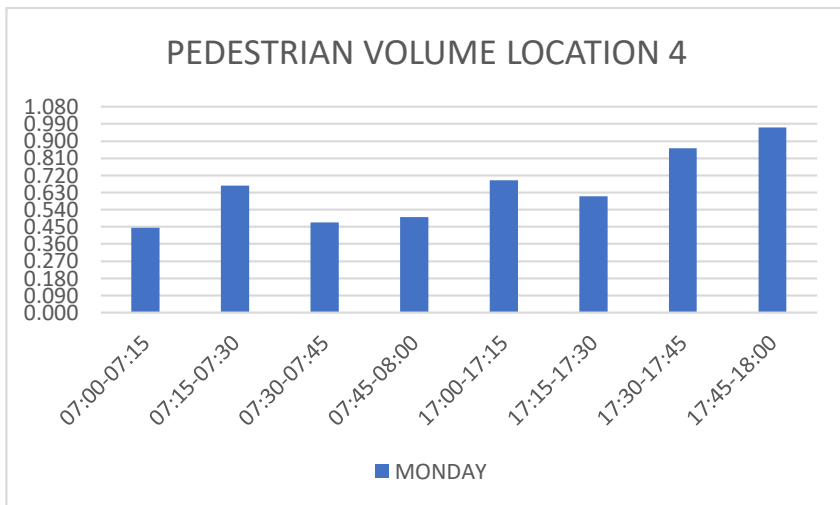
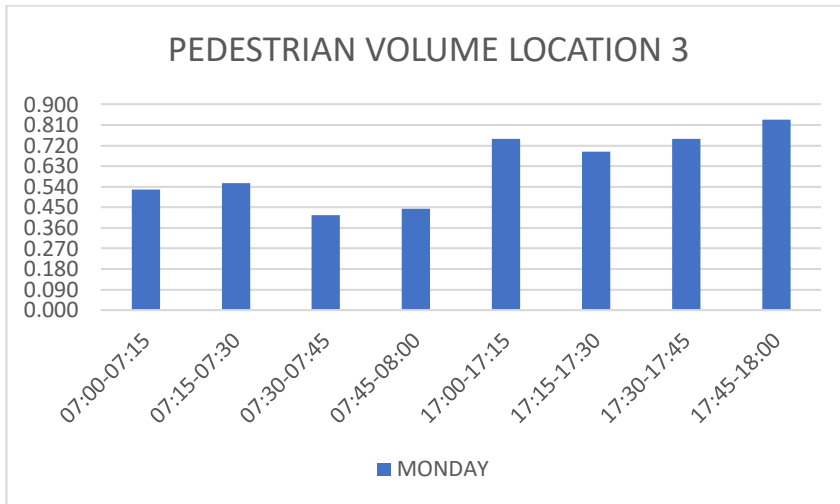
2nd	No	Time	Interval	Total (ped/15min)	Volume (ped/min/m)
	1	17:00-17:15	15	24	0.667
	2	17:15-17:30	15	26	0.722
	3	17:30-17:45	15	30	0.833
	4	17:45-18:00	15	36	1.000

VP4

2nd	No	Time	Interval	Total (ped/15min)	Volume (ped/min/m)
	1	17:00-17:15	15	23	0.639
	2	17:15-17:30	15	22	0.611
	3	17:30-17:45	15	36	1.000
	4	17:45-18:00	15	34	0.944

Total Pedestrian Volume Graph





Pedestrian Travel Time

MONDAY													
P1													
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	12.5	9.99	10.14	10.72	10.34	10.27	11.2	10.07	10.87	10.27	10.637	56.407
2	07:15-07:30	9.98	10.02	12.89	10.77	11.32	10.63	10.89	9.23	10.2	9.96	10.589	56.663
3	07:30-07:45	10.77	10.33	11.25	10.71	9.89	9.73	10.02	10.44	10.61	9.94	10.369	57.865
4	07:45-08:00	13.23	11.56	10.37	12.17	11.11	10.3	10.28	9.9	12.63	11.72	11.327	52.971
												55.976	

P2													
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	13.02	10.23	10.71	9.98	11.12	12.43	11.81	10.66	10.09	9.81	10.986	54.615
2	07:15-07:30	11.04	10.15	11.66	11.36	10.77	13.38	10.9	11.99	10.14	10.89	11.228	53.438
3	07:30-07:45	10.01	10.61	9.74	11.35	11.97	13.43	14.39	11.9	11.9	13.72	11.902	50.412
4	07:45-08:00	13.23	11.56	10.37	12.17	11.11	13.31	10.28	11.23	12.63	15.32	12.22	49.100
												51.891	

P3													
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	13.78	10.89	13.23	10.14	11.18	11.44	11.99	12.32	10.99	9.98	11.594	51.751
2	07:15-07:30	11.04	10.15	11.66	11.36	10.77	13.38	10.9	10.33	9.65	10.87	11.011	54.491
3	07:30-07:45	10.01	10.61	9.74	11.35	11.97	13.43	14.39	11.9	10.67	11.78	11.585	51.791
4	07:45-08:00	13.23	11.56	10.37	12.17	11.11	13.31	10.28	11.23	12.76	12.88	11.89	50.463
												52.124	

P4													
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	12.77	12.81	13.88	14.81	9.18	10.42	11.24	12.32	9.99	10.74	11.816	50.779
2	07:15-07:30	9.04	10.11	9.67	12.11	9.77	13.88	10.97	12.01	14.33	11.55	11.344	52.891
3	07:30-07:45	9.44	11.34	13.47	13.91	12.34	10.31	11.99	12.71	11.53	10.74	11.778	50.942
4	07:45-08:00	13.23	11.22	10.79	10.94	11.71	12.18	10.83	10.22	9.11	12.67	11.29	53.144
												51.939	

TUESDAY													
P1		3rd session											
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	11.9	10.99	10.13	10.14	9.34	12.27	11.89	10.78	12.87	10.11	11.042	54.338
2	07:15-07:30	9.77	10.77	12.22	10.48	12.32	9.63	10.23	11.23	10.89	13.45	11.099	54.059
3	07:30-07:45	11.77	12.33	9.25	10.66	9.98	10.73	11.02	12.44	10.88	11.77	11.083	54.137
4	07:45-08:00	13.34	11.78	13.37	12.34	11.55	10.32	10.27	10.71	12.22	11.74	11.764	51.003
												53.384	

P2													
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	12.02	10.24	10.68	9.99	11.13	12.42	11.84	10.68	10.1	9.89	10.899	55.051
2	07:15-07:30	11.22	10.34	11.87	11.15	10.45	9.39	10.93	11.92	10.56	10.88	10.871	55.193
3	07:30-07:45	10.44	11.61	10.33	13.32	11.91	13.44	11.37	12.78	12.98	13.72	12.19	49.221
4	07:45-08:00	12.23	11.57	10.88	12.17	11.53	13.31	10.89	11.23	12.63	10.32	11.676	51.387
												52.713	

P3													
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	11.78	11.9	13.77	10.99	11.53	10.44	11.54	10.32	10.77	10.98	11.402	52.622
2	07:15-07:30	11.99	10.43	13.66	12.36	11.77	13.02	11.21	10.34	11.56	10.46	11.68	51.370
3	07:30-07:45	10.87	10.61	11.74	10.35	12.97	12.43	12.39	11.55	9.67	9.89	11.247	53.348
4	07:45-08:00	13.08	10.56	11.37	10.17	11.86	12.31	11.28	12.23	11.76	10.81	11.543	51.980
												52.330	

P4													
No	Time	Pedestrian Travel Time (second)										Average travel time (sec/10m)	s
		1	2	3	4	5	6	7	8	9	10		
1	07:00-07:15	11.77	12.08	12.88	10.81	9.18	10.89	10.24	9.32	9.98	10.11	10.726	55.939
2	07:15-07:30	10.04	10.18	11.67	12.14	10.77	12.88	10.99	10.33	11.33	10.55	11.088	54.113
3	07:30-07:45	10.44	11.02	12.47	11.91	10.37	9.87	11.18	12.05	11.08	10.74	11.113	53.991
4	07:45-08:00	12.23	11.77	11.79	10.09	10.71	11.09	10.87	10.59	10.11	12.6	11.185	53.643
												54.421	