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LAMPIRAN



Lampiran 1 Hasil Simulasi Vissim Bundaran Samata

SimRun	Timelen	Movement	Qlen	Qlenm	Vehs(all)	Pers(all)	LOS (All)	LOSVal(VehDelay(All)	PersDelay(Al	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmisssionsVOC	FuelConsumption
77	0-3600	1: samata 7 - 2: Jl.TunAbdulRazak-Jl.TunAbdR-MKS@48.6	126.32	143.7	49	49	LOS_C	3	22.184947	22.184947	15.22784	1.714286	51.62659	10.044658	11.964961	0.738578
77	0-3600	1: samata 7 - 2: Jl.TunAbdulRazak-Jl.AbdKad-Antang@42.2	117.07	165.6	989	989	LOS_D	4	26.082713	26.082713	12.235749	3.746208	1434.749116	279.150043	332.516963	20.525738
77	0-3600	1: samata 7 - 2: Jl.TunAbdulRazak- Jl.YasLimp-Gowa@43.8	126.32	143.7	905	905	LOS_D	4	28.065768	28.065768	12.887144	3.710497	1342.217899	261.14683	311.071959	19.201973
77	0-3600	1: samata 7 - 2: Jl.TunAbdulRazak - 9: Jl.MDB masuk@41.7	126.32	143.7	229	229	LOS_E	5	36.224934	36.224934	17.086188	5.759825	456.032521	88.727357	105.68994	6.52407
77	0-3600	1: samata 7 - 5: Jl.AbdKad- Jl.TunAbdR-MKS@48.6	78.436	89.18	140	140	LOS_C	6	529.02495	529.02495	440.73605	78.885714	935.868132	182.085931	216.896477	13.388671
77	0-3600	1: samata 7 - 5: Jl.AbdKad- Jl.AbdKad-Antang@42.2	78.436	89.18	0	0	LOS_A						0	0	0	0
77	0-3600	1: samata 7 - 5: Jl.AbdKad- 6: Jl.YasLimp-Gowa@43.8	78.436	89.18	520	520	LOS_C	6	513.595553	513.595553	420.03063	108.759398	3714.00264	722.609956	860.755977	53.133085
77	0-3600	1: samata 7 - 5: Jl.AbdKad - 9: Jl.MDB masuk@41.7	78.436	89.18	329	329	LOS_C	6	623.979755	623.979755	505.32805	152.26087	2612.105264	508.220767	605.380619	37.369174
77	0-3600	1: samata 7 - 7: Jl.YasLimp- 3: Jl.TunAbdR-MKS@48.6	138.67	156.2	615	615	LOS_A	1	8.424543	8.424543	1.218819	0.793496	418.188798	81.364344	96.919292	5.982672
77	0-3600	1: samata 7 - 7: Jl.YasLimp - 4: Jl.AbdKad-Antang@42.2	138.67	156.2	528	528	LOS_C	3	20.114001	20.114001	5.748892	2.82197	662.63216	128.92414	153.571402	9.479716
77	0-3600	1: samata 7 - 7: Jl.YasLimp - 6: Jl.YasLimp-Gowa@43.8	138.67	156.2	0	0	LOS_A						0	0	0	0
77	0-3600	1: samata 7 - 7: Jl.YasLimp - 9: Jl.MDB masuk@41.7	138.67	156.2	412	412	LOS_A	1	7.994445	7.994445	1.148522	0.604369	249.811845	48.604307	57.896307	3.573846
77	0-3600	1: samata 7 - 8: Jl.MDB- Jl.TunAbdR-MKS@48.6	148.32	166.3	353	353	LOS_A	1	7.496402	7.496402	2.541481	0.974504	209.737733	40.807341	48.608745	3.00054
77	0-3600	1: samata 7 - 8: Jl.MDB- 4: Jl.AbdKad-Antang@42.2	148.32	166.3	651	651	LOS_B	2	14.086301	14.086301	4.514077	2.193548	623.306643	121.272823	144.457334	8.917119
77	0-3600	1: samata 7 - 8: Jl.MDB-: Jl.YasLimp-Gowa@43.8	148.32	166.3	259	259	LOS_C	3	17.124047	17.124047	6.346081	2.640927	276.801877	53.855587	64.151508	3.95997
77	0-3600	1: samata 7 - 8: Jl.MDB-Jl.MDB masuk@41.7	148.32	166.3	0	0	LOS_A						0	0	0	0
77	0-3600	1: samata 7	121.76	166.3	5227	5227	LOS_E	5	43.199372	43.199372	27.610104	7.821121	12860.88093	2502.260094	2980.633348	183.989713

SimRun	Timelen	Movement	Qlen	Qlenm	Vehs(all)	Pers(all)	LOS (All)	LOSVal(VehDelay(All)	PersDelay(Al	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmisssionsVOC	FuelConsumption
13	0-3600	1: samata 8 - 2: Jl.TunAbdulRazak-Jl.TunAbdR-MKS@41.3	119.88	144.9	58	58	LOS_A	1	4.119302	4.119302	0.610276	0.448276	34.079129	6.63056	7.898167	0.487541
13	0-3600	1: samata 8 - 2: Jl.TunAbdulRazak- 4: Jl.AbdKad-Antang@36.5	110.61	135.5	1088	1088	LOS_A	1	6.391006	6.391006	0.452904	0.293199	560.725059	109.096721	129.953447	8.021818
13	0-3600	1: samata 8 - 2: Jl.TunAbdulRazak-: Jl.YasLimp-Gowa@52.1	119.88	144.9	918	918	LOS_A	1	6.661788	6.661788	0.483709	0.344227	527.578738	102.647651	122.271467	7.547621
13	0-3600	1: samata 8 - 2: Jl.TunAbdulRazak- 9: Jl.MDB masuk@54.0	119.88	144.9	244	244	LOS_A	1	8.549604	8.549604	1.176252	0.569672	164.895978	32.082765	38.216235	2.359027
13	0-3600	1: samata 8 - 5: Jl.AbdKad-: Jl.TunAbdR-MKS@41.3	71.872	86.28	135	135	LOS_C	6	351.499963	351.499963	282.69274	40.185185	349.758782	68.05035	81.059975	5.003702
13	0-3600	1: samata 8 - 5: Jl.AbdKad- 4: Jl.AbdKad-Antang@36.5	71.872	86.28	0	0	LOS_A						0	0	0	0
13	0-3600	1: samata 8 - 5: Jl.AbdKad-: Jl.YasLimp-Gowa@52.1	71.872	86.28	596	596	LOS_C	6	385.267963	385.267963	299.42083	78.067227	2533.656676	492.957522	587.199401	36.246877
13	0-3600	1: samata 8 - 5: Jl.AbdKad - 9: Jl.MDB masuk@54.0	71.872	86.28	305	305	LOS_C	6	392.141267	392.141267	304.05528	79.655738	1318.677184	256.566662	305.616171	18.865196
13	0-3600	1: samata 8 - 7: Jl.YasLimp- 3: Jl.TunAbdR-MKS@41.3	14.941	104.5	597	597	LOS_C	3	18.461665	18.461665	4.435097	2.432161	661.648717	128.732798	153.343479	9.465647
13	0-3600	1: samata 8 - 7: Jl.YasLimp - 4: Jl.AbdKad-Antang@36.5	14.941	104.5	415	415	LOS_D	4	26.219039	26.219039	6.787175	4.014458	652.866991	127.024193	151.30823	9.340014
13	0-3600	Jl.YasLimp - 6: Jl.YasLimp-Gowa@52.1	14.941	104.5	0	0	LOS_A						0	0	0	0
13	0-3600	Jl.YasLimp-: Jl.MDB masuk@54.0	14.941	104.5	413	413	LOS_C	3	18.260039	18.260039	4.680651	2.20339	449.627338	87.481142	104.205477	6.432437
13	0-3600	Jl.MDB- 3: Jl.TunAbdR-MKS@41.3	141.84	167.4	470	470	LOS_A	1	5.03047	5.03047	0.900761	0.495745	209.89039	40.837043	48.644125	3.002724
13	0-3600	Jl.MDB - 4: Jl.AbdKad-Antang@36.5	141.84	167.4	569	569	LOS_A	1	9.562521	9.562521	2.015646	1.507909	415.337595	80.809604	96.258498	5.941883
13	0-3600	Jl.MDB- 6: Jl.YasLimp-Gowa@52.1	141.84	167.4	269	269	LOS_B	2	10.271625	10.271625	2.18791	1.263941	195.632308	38.062938	45.339676	2.798745
13	0-3600	Jl.MDB - 9: Jl.MDB masuk@54.0	141.84	167.4	0	0	LOS_A						0	0	0	0
13	0-3600	1: samata 8	91.828	167.4	5248	5248	LOS_D	4	25.660125	25.660125	13.838931	4.095465	7900.199815	1537.09181	1830.947597	113.021457



SimRun	Timelen	Movement	Qlen	Qlenmi	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDelay(All)	PersDelay(All)	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
8	0-3600	1: samata 6 - 2: Jl.TunAbdulRazak - 3: Jl.TunAbdR-M	129.94	163.9	89	89	LOS_A	1	9.645975	9.645975	3.42018	1.460674	75.239808	14.638933	17.437552	1.076392
8	0-3600	1: samata 6 - 2: Jl.TunAbdulRazak-4: Jl.AbdKad-Anta	119.22	157.1	1080	1080	LOS_B	2	10.978088	10.978088	4.216813	1.452778	864.610783	168.22184	200.381898	12.369253
8	0-3600	1: samata 6 - 2: Jl.TunAbdulRazak- 6: Jl.YasLimp-Gow	129.94	163.9	1056	1056	LOS_B	2	11.63039	11.63039	4.178693	1.848485	962.886893	187.3428	223.158336	13.775206
8	0-3600	1: samata 6 - 2: Jl.TunAbdulRazak- 9: Jl.MDB masuk	129.94	163.9	403	403	LOS_B	2	14.607456	14.607456	5.382275	2.205955	418.523693	81.429503	96.996907	5.987463
8	0-3600	1: samata 6 - 5: Jl.AbdKad-3: Jl.TunAbdR-MKS@43.3	69.073	87.21	168	168	LOS_C	6	224.913184	224.913184	175.07871	55.628571	1008.038201	196.127604	233.622587	14.421147
8	0-3600	1: samata 6 - 5: Jl.AbdKad-4: Jl.AbdKad-Antang@38.0	69.073	87.21	0	0	LOS_A						0	0	0	0
8	0-3600	1: samata 6 - 5: Jl.AbdKad- 6: Jl.YasLimp-Gowa@49.6	69.073	87.21	638	638	LOS_C	6	232.581745	232.581745	184.08751	65.011952	4016.309116	781.427811	930.818422	57.457927
8	0-3600	1: samata 6 - 5: Jl.AbdKad- 9: Jl.MDB masuk@39.6	69.073	87.21	475	475	LOS_C	6	219.833036	219.833036	172.38435	60.306122	2207.00389	429.40276	511.494464	31.573732
8	0-3600	1: samata 6 - 7: Jl.YasLimp-3: Jl.TunAbdR-MKS@43.3	69.141	123.9	569	569	LOS_F	6	75.280885	75.280885	41.383872	21.966728	2928.261484	569.733279	678.652876	41.892153
8	0-3600	1: samata 6 - 7: Jl.YasLimp- 4: Jl.AbdKad-Antang@38.0	69.141	123.9	422	422	LOS_F	6	73.827396	73.827396	40.876048	23.218009	2539.116771	494.019858	588.464831	36.32499
8	0-3600	1: samata 6 - 7: Jl.YasLimp-6: Jl.YasLimp-Gowa@49.6	69.141	123.9	0	0	LOS_A						0	0	0	0
8	0-3600	1: samata 6 - 7: Jl.YasLimp-9: Jl.MDB masuk@39.6	69.141	123.9	421	421	LOS_F	6	70.55855	70.55855	39.902949	20.370546	2267.287543	441.131768	525.465783	32.436159
8	0-3600	1: samata 6 - 8: Jl.MDB- 3: Jl.TunAbdR-MKS@43.3	151.9	186.5	492	492	LOS_A	1	2.949633	2.949633	0.241959	0.264228	186.751055	36.334969	43.28136	2.671689
8	0-3600	1: samata 6 - 8: Jl.MDB-4: Jl.AbdKad-Antang@38.0	151.9	186.5	504	504	LOS_A	1	5.414788	5.414788	0.583062	0.700397	259.444789	50.478528	60.128835	3.711656
8	0-3600	1: samata 6 - 8: Jl.MDB-- 6: Jl.YasLimp-Gowa@49.6	151.9	186.5	84	84	LOS_A	1	6.767608	6.767608	1.623219	0.809524	49.918885	9.712401	11.569184	0.714147
8	0-3600	1: samata 6 - 8: Jl.MDB- 9: Jl.MDB masuk@39.6	151.9	186.5	0	0	LOS_A						0	0	0	0
8	0-3600	1: samata 6	107.85	186.5	5560	5560	LOS_E	5	43.823155	43.823155	27.379326	11.58741	17539.63172	3412.574983	4064.979024	250.924631

Lampiran Hasil Simulasi Vissim Bundaran Mandiri

SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
28	0-3600	1: mandiri jam 7 - 1: Jl..Riburane- Jl..Riburane	1.4658	33.821	137	137	LOS_A	1	7.044	7.044	1.86995	1.15329	113.707392	22.123327	26.352786	1.626715
28	0-3600	1: mandiri jam 7 - 1: Jl..Riburane- Jl.UPG	1.4658	33.821	551	551	LOS_A	1	0.672	0.672	0.08624	0.05989	229.480439	44.648555	53.184308	3.282982
28	0-3600	1: mandiri jam 7 - 1: Jl..Riburane-: Jl.Nusantara	1.4658	33.821	686	686	LOS_A	1	6.413	6.413	1.55628	1.08746	519.035502	100.985448	120.29149	7.425401
28	0-3600	1: mandiri jam 7 - 4: Jl.UPG- : Jl..Riburane	0.2341	62.101	597	597	LOS_A	1	3.554	3.554	0.74706	0.36181	277.963437	54.081584	64.420711	3.976587
28	0-3600	1: mandiri jam 7 - 4: Jl.UPG- Jl.UPG	0.2341	62.101	3	3	LOS_A	1	4.386	4.386	0.57988	0.33333	1.695089	0.329803	0.392853	0.02425
28	0-3600	1: mandiri jam 7 - 4: Jl.UPG- : Jl.Nusantara	2.2805	46.487	1736	1736	LOS_A	1	1.729	1.729	0.12864	0.10599	605.44124	117.796865	140.316854	8.661534
28	0-3600	1: mandiri jam 7 - 7: Jl.Nusantara- : Jl..Riburane	0.2341	62.101	1151	1151	LOS_A	1	0.696	0.696	0.00317	0.00869	290.799384	56.578993	67.395565	4.16022
28	0-3600	1: mandiri jam 7 - 7: Jl.Nusantara-: Jl.UPG	0.2341	62.101	11	11	LOS_A	1	3.831	3.831	0.53047	0.27273	4.426561	0.861248	1.025898	0.063327
28	0-3600	1: mandiri jam 7 - 7: Jl.Nusantara-: Jl.Nusantara	0.2341	62.101	0	0	LOS_A						0	0	0	0
28	0-3600	1: mandiri jam 7	1.3268	62.101	4872	4872	LOS_A	1	2.404	2.404	0.42115	0.2773	2043.990156	397.686211	473.714457	29.241633



SimRun	Timelent	Movement	QJen	QJenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDela	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
1	0-3600	1: mandiri 8 - 1: Jl..Riburane - : Jl..Riburane	7.3909	51.09	195	195	LOS_A	1	5.485	5.485	1.15816	0.8359	146.715467	28.545498	34.002726	2.098934
1	0-3600	1: mandiri 8 - 1: Jl..Riburane - : Jl.UPG	7.3909	51.09	494	494	LOS_A	1	0.529	0.529	0.02361	0.02632	199.570815	38.829229	46.252464	2.85509
1	0-3600	1: mandiri 8 - 1: Jl..Riburane - : Jl.Nusantara	7.3909	51.09	446	446	LOS_A	1	5.454	5.454	1.2457	0.9148	317.202686	61.716116	73.514786	4.53795
1	0-3600	1: mandiri 8 - 4: Jl.UPG-: Jl..Riburane-	0.1775	31.912	572	572	LOS_A	1	2.704	2.704	0.39371	0.25874	240.156575	46.725743	55.658605	3.435716
1	0-3600	1: mandiri 8 - 4: Jl.UPG-: Jl.UPG	0.1775	31.912	16	16	LOS_A	1	3.373	3.373	0.40457	0.4375	8.579062	1.669174	1.98828	0.122733
1	0-3600	1: mandiri 8 - 4: Jl.UPG-: Jl.Nusantara	1.5601	80.784	1476	1476	LOS_A	1	1.287	1.287	0.05875	0.06978	470.80784	91.602098	109.114263	6.735448
1	0-3600	1: mandiri 8 - 7: Jl.Nusantara-: Jl..Riburane	0.1775	31.912	698	698	LOS_A	1	0.537	0.537	0.00802	0.0086	165.914458	32.280925	38.452278	2.373597
1	0-3600	1: mandiri 8 - 7: Jl.Nusantara-: Jl.UPG	0.1775	31.912	376	376	LOS_A	1	7.944	7.944	3.16203	1.04255	219.749573	42.755282	50.929086	3.143771
1	0-3600	1: mandiri 8 - 7: Jl.Nusantara-: Jl.Nusantara	0.1775	31.912	0	0	LOS_A						0	0	0	0
1	0-3600	1: mandiri 8	3.0428	80.784	4273	4273	LOS_A	1	2.487	2.487	0.53967	0.29019	1766.194036	343.63718	409.332523	25.26744

SimRun	Timelent	Movement	QJen	QJenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDela	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
13	0-3600	1: mandiri 9 - 1: Jl..Riburane- 2: Jl..Riburane-Jl.Ahmad	8.1861	64.868	142	142	LOS_A	1	7.064	7.064	2.16217	1.30282	123.165484	23.963528	28.54479	1.762024
13	0-3600	1: mandiri 9 - 1: Jl..Riburane- 5: Jl.UPG-Rotterdam@2	8.1861	64.868	616	616	LOS_A	1	0.945	0.945	0.13669	0.05844	262.264621	51.027165	60.782359	3.751997
13	0-3600	1: mandiri 9 - 1: Jl..Riburane- 6: Jl.Nusantara kiri dar	8.1861	64.868	601	601	LOS_A	1	5.552	5.552	1.22635	0.80865	418.276328	81.381374	96.939578	5.983925
13	0-3600	1: mandiri 9 - 4: Jl.UPG - : Jl..Riburane-Jl.Ahmad Y@3.	0.3277	40.82	251	251	LOS_A	1	2.973	2.973	0.53897	0.28287	109.155719	21.237737	25.297892	1.561598
13	0-3600	1: mandiri 9 - 4: Jl.UPG - 5: Jl.UPG-Rotterdam@29.9	0.3277	40.82	0	0	LOS_A						0	0	0	0
13	0-3600	1: mandiri 9 - 4: Jl.UPG - 6: Jl.Nusantara kiri dari bu	1.4677	59.63	487	487	LOS_A	1	1.449	1.449	0.08153	0.06982	146.702455	28.542967	33.999711	2.098748
13	0-3600	1: mandiri 9 - 7: Jl.Nusantara-BundranMob@4.8 - 2:	0.3277	40.82	1129	1129	LOS_A	1	0.847	0.847	0.0062	0.01152	305.033645	59.348463	70.694493	4.363858
13	0-3600	1: mandiri 9 - 7: Jl.Nusantara-BundranMob@4.8 - 5:	0.3277	40.82	329	329	LOS_A	1	8.887	8.887	3.60467	1.0152	199.858643	38.88523	46.319171	2.859208
13	0-3600	1: mandiri 9 - 7: Jl.Nusantara-BundranMob@4.8 - 6:	0.3277	40.82	0	0	LOS_A						0	0	0	0
13	0-3600	1: mandiri 9 - 10008: konektorUPGmot@9.9 - 2: Jl..Ri	0.3277	40.82	304	304	LOS_A	1	2.642	2.642	0.49317	0.28947	141.342624	27.500139	32.757518	2.022069
13	0-3600	1: mandiri 9 - 10008: konektorUPGmot@9.9 - 5: Jl.UP	0.3277	40.82	8	8	LOS_A	1	7.578	7.578	1.89853	1	5.628906	1.095181	1.304553	0.080528
13	0-3600	1: mandiri 9 - 10008: konektorUPGmot@9.9 - 6: Jl.Nu	1.4677	59.63	1003	1003	LOS_A	1	1.246	1.246	0.05915	0.06082	330.416598	64.287063	76.577237	4.72699
13	0-3600	1: mandiri 9	3.3272	64.868	4870	4870	LOS_A	1	2.54	2.54	0.55865	0.27023	2039.12864	396.740336	472.587754	29.172084

SimRun	Timelent	Movement	QJen	QJenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDela	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
7	0-3600	1: mandiri 10 - 1: Jl..Riburane-Bundaran@78.9 - 2: Jl	6.3392	65.366	126	126	LOS_A	1	6.254	6.254	1.58475	0.96825	98.730802	19.209427	22.881817	1.412458
7	0-3600	1: mandiri 10 - 1: Jl..Riburane-Bundaran@78.9 - 5: Jl	6.3392	65.366	520	520	LOS_A	1	0.598	0.598	0.07456	0.03462	208.009865	40.471161	48.208295	2.975821
7	0-3600	1: mandiri 10 - 1: Jl..Riburane-Bundaran@78.9 - 6: Jl	6.3392	65.366	465	465	LOS_A	1	5.176	5.176	1.27288	0.86882	315.041327	61.295594	73.01387	4.507029
		0 - 4: Jl.UPG - 2: Jl..Riburane-Jl.Ahmad Y@	0.3757	37.829	574	574	LOS_A	1	2.355	2.355	0.3769	0.21777	235.119927	45.745794	54.491314	3.363661
		0 - 4: Jl.UPG - 5: Jl.UPG-Rotterdam@22.1	0.3757	37.829	9	9	LOS_A	1	6.362	6.362	1.6583	0.55556	5.30683	1.032516	1.229909	0.07592
		0 - 4: Jl.UPG - 6: Jl.Nusantara kiri dari bu	1.3205	84.62	1307	1307	LOS_A	1	1.092	1.092	0.06166	0.05815	382.332782	74.388066	88.609314	5.469711
		0 - 7: Jl.Nusantara - 2: Jl..Riburane-Jl.Ahr	0.3757	37.829	1133	1133	LOS_A	1	0.759	0.759	0.00604	0.01589	279.978098	54.473564	64.887628	4.005409
		0 - 7: Jl.Nusantara - 5: Jl.UPG-Rotterdam	0.3757	37.829	359	359	LOS_A	1	6.683	6.683	2.04216	0.74652	185.210681	36.035268	42.924364	2.649652
		0 - 7: Jl.Nusantara - 6: Jl.Nusantara kiri d	0.3757	37.829	0	0	LOS_A						0	0	0	0
		0	2.6784	84.62	4493	4493	LOS_A	1	2.137	2.137	0.41891	0.23058	1707.239592	332.166788	395.669262	24.424029



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SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
4	0-3600	1: mandiri 11 - 1: Jl..Riburane-Bundaran@84.3 - 2: Jl..	12.206	95.579	442	442	LOS_A	1	6.456	6.456	1.24194	0.82579	333.349728	64.857744	77.257018	4.768952
4	0-3600	1: mandiri 11 - 1: Jl..Riburane-Bundaran@84.3 - 5: Jl..	12.206	95.579	624	624	LOS_A	1	1.144	1.144	0.06999	0.0593	264.030099	51.370663	61.191525	3.772255
4	0-3600	1: mandiri 11 - 1: Jl..Riburane-Bundaran@84.3 - 6: Jl..	12.206	95.579	540	540	LOS_A	1	5.345	5.345	0.83729	0.62037	358.189532	69.690667	83.013883	5.124314
4	0-3600	1: mandiri 11 - 4: Jl.UPG-BundaranMob@3.8 - 2: Jl..R	0.7429	63.013	465	465	LOS_A	1	3.544	3.544	0.68443	0.33763	201.495777	39.203756	46.698592	2.882629
4	0-3600	1: mandiri 11 - 4: Jl.UPG-BundaranMob@3.8 - 5: Jl.U	0.7429	63.013	10	10	LOS_A	1	8.446	8.446	2.63368	1.3	7.49312	1.457889	1.736603	0.107198
4	0-3600	1: mandiri 11 - 4: Jl.UPG-BundaranMob@3.8 - 6: Jl.N	2.74	76.301	1098	1098	LOS_A	1	1.915	1.915	0.18282	0.1357	368.208041	71.639905	85.335769	5.26764
4	0-3600	1: mandiri 11 - 7: Jl.Nusantara-BundranMob@5.5 - 2	0.7429	63.013	1012	1012	LOS_A	1	1.114	1.114	0.02459	0.04249	245.809744	47.825644	56.968782	3.516591
4	0-3600	1: mandiri 11 - 7: Jl.Nusantara-BundranMob@5.5 - 5	0.7429	63.013	436	436	LOS_B	2	10.9	10.9	4.81679	1.37156	300.036098	58.376122	69.536263	4.292362
4	0-3600	1: mandiri 11 - 7: Jl.Nusantara-BundranMob@5.5 - 6	0.7429	63.013	0	0	LOS_A						0	0	0	0
4	0-3600	1: mandiri 11	5.2295	95.579	4627	4627	LOS_A	1	3.494	3.494	0.80292	0.36676	2071.977017	403.131437	480.200682	29.642017

SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
5	0-3600	1: mandiri 12 - 1: Jl..Riburane - 2: Jl..Riburane-Jl.Ahm	10.301	49.321	341	341	LOS_A	1	5.115	5.115	0.8849	0.70381	244.241433	47.520508	56.605311	3.494155
5	0-3600	1: mandiri 12 - 1: Jl..Riburane - 5: Jl.UPG-Rotterdam@	10.301	49.321	587	587	LOS_A	1	0.77	0.77	0.03853	0.0477	240.736972	46.838667	55.793118	3.44402
5	0-3600	1: mandiri 12 - 1: Jl..Riburane - 6: Jl.Nusantara kiri da	10.301	49.321	437	437	LOS_A	1	4.811	4.811	0.90646	0.63616	283.574779	55.173347	65.721193	4.056864
5	0-3600	1: mandiri 12 - 4: Jl.UPG- 2: Jl..Riburane-Jl.Ahmad Y@	1.0073	107.86	436	436	LOS_A	1	2.309	2.309	0.23819	0.18578	171.119655	33.293667	39.658632	2.448064
5	0-3600	1: mandiri 12 - 4: Jl.UPG-5: Jl.UPG-Rotterdam@24.8	1.0073	107.86	2	2	LOS_A	1	3.733	3.733	0	0	0.871905	0.169641	0.202072	0.012474
5	0-3600	1: mandiri 12 - 4: Jl.UPG- 6: Jl.Nusantara kiri dari bu	1.3545	80.375	937	937	LOS_A	1	0.969	0.969	0.05857	0.06297	276.830322	53.861121	64.1581	3.960377
5	0-3600	1: mandiri 12 - 7: Jl.Nusantara - : Jl..Riburane-Jl.Ahma	1.0073	107.86	1121	1121	LOS_A	1	0.897	0.897	0.01085	0.02587	263.19748	51.208666	60.998558	3.765343
5	0-3600	1: mandiri 12 - 7: Jl.Nusantara - 5: Jl.UPG-Rotterdam	1.0073	107.86	503	503	LOS_A	1	9.427	9.427	3.78858	1.13917	313.464674	60.988835	72.648465	4.484473
5	0-3600	1: mandiri 12 - 7: Jl.Nusantara - 6: Jl.Nusantara kiri d	1.0073	107.86	0	0	LOS_A						0	0	0	0
5	0-3600	1: mandiri 12	4.2211	107.86	4364	4364	LOS_A	1	2.743	2.743	0.64094	0.29514	1788.843633	348.043969	414.581786	25.591468

SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
5	0-3600	1: mandiri 1			0	0	LOS_A						0	0	0	0
5	0-3600	2: mandiri 1 - 1: Jl.Riburane - 2: Jl..Riburane-Jl.Ahmad	8.2064	60.154	146	146	LOS_A	1	6.593	6.593	1.40215	0.91781	112.484768	21.885448	26.069431	1.609224
5	0-3600	2: mandiri 1 - 1: Jl..Riburane - 5: Jl.UPG-Rotterdam@27	8.2064	60.154	575	575	LOS_A	1	1.091	1.091	0.13531	0.08174	244.869903	47.642785	56.750965	3.503146
		- 1: Jl..Riburane - 6: Jl.Nusantara kiri dari	8.2064	60.154	529	529	LOS_A	1	5.732	5.732	1.21225	0.76371	362.278124	70.486159	83.961454	5.182806
		- 4: Jl.UPG- 2: Jl..Riburane-Jl.Ahmad Y@19	0.864	89.09	643	643	LOS_A	1	3.844	3.844	0.7888	0.46501	293.901326	57.182518	68.11447	4.204597
		- 4: Jl.UPG- 5: Jl.UPG-Rotterdam@27.2	0.864	89.09	8	8	LOS_A	1	5.073	5.073	1.16581	0.75	4.844746	0.942612	1.122817	0.06931
		- 4: Jl.UPG- 6: Jl.Nusantara kiri dari bund	3.159	87.108	1451	1451	LOS_A	1	1.935	1.935	0.1914	0.18952	485.579174	94.476063	112.537663	6.946769
		- 7: Jl.Nusantara-2: Jl..Riburane-Jl.Ahmad	0.864	89.09	996	996	LOS_A	1	0.862	0.862	0.02178	0.03313	237.895027	46.285728	55.13447	3.403362
		- 7: Jl.Nusantara - 5: Jl.UPG-Rotterdam@2	0.864	89.09	403	403	LOS_A	1	7.328	7.328	2.58231	0.86601	223.945695	43.571695	51.901577	3.203801
		- 7: Jl.Nusantara - 6: Jl.Nusantara kiri dar	0.864	89.09	0	0	LOS_A						0	0	0	0
			4.0765	89.09	4751	4751	LOS_A	1	2.895	2.895	0.58523	0.32562	1961.850519	381.704822	454.677803	28.066531



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SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
11	0-3600	1: mandiri 2 - 1: Jl..Riburane- 2: Jl..Riburane-Jl.Ahmad	8.0188	68.129	144	144	LOS_A	1	5.528	5.528	1.09043	0.77083	113.492512	22.081519	26.302986	1.623641
11	0-3600	1: mandiri 2 - 1: Jl..Riburane-5: Jl.UPG-Rotterdam@30.9	8.0188	68.129	498	498	LOS_A	1	0.744	0.744	0.08272	0.07631	212.699459	41.383586	49.295154	3.042911
11	0-3600	1: mandiri 2 - 1: Jl..Riburane-6: Jl.Nusantara kiri dari	8.0188	68.129	419	419	LOS_A	1	5.072	5.072	1.02612	0.74463	287.524223	55.941766	66.636515	4.113365
11	0-3600	1: mandiri 2 - 4: Jl.UPG- 2: Jl..Riburane-Jl.Ahmad Y@4	0.8522	73.515	315	315	LOS_A	1	2.714	2.714	0.47002	0.25397	140.067738	27.252092	32.462051	2.00383
11	0-3600	1: mandiri 2 - 4: Jl.UPG- 5: Jl.UPG-Rotterdam@30.9	0.8522	73.515	0	0	LOS_A						0	0	0	0
11	0-3600	1: mandiri 2 - 4: Jl.UPG- 6: Jl.Nusantara kiri dari bun	1.4445	59.609	556	556	LOS_A	1	1.343	1.343	0.12543	0.07734	171.087176	33.287348	39.651105	2.447599
11	0-3600	1: mandiri 2 - 7: Jl.Nusantara- 2: Jl..Riburane-Jl.Ahma	0.8522	73.515	1049	1049	LOS_A	1	0.99	0.99	0.01408	0.02955	306.424429	59.619059	71.016821	4.383754
11	0-3600	1: mandiri 2 - 7: Jl.Nusantara- 5: Jl.UPG-Rotterdam@	0.8522	73.515	529	529	LOS_A	1	7.007	7.007	2.1442	0.86578	295.038809	57.403831	68.378093	4.22087
11	0-3600	1: mandiri 2 - 7: Jl.Nusantara- 6: Jl.Nusantara kiri da	0.8522	73.515	0	0	LOS_A						0	0	0	0
11	0-3600	1: mandiri 2 - 10008: konektorUPGmot@8.9 - 2: Jl..Ri	0.8522	73.515	268	268	LOS_A	1	2.036	2.036	0.27664	0.1791	122.310063	23.797094	28.346538	1.749786
11	0-3600	1: mandiri 2 - 10008: konektorUPGmot@8.9 - 5: Jl.UP	0.8522	73.515	9	9	LOS_A	1	7.949	7.949	1.53068	0.77778	5.981753	1.163832	1.386329	0.085576
11	0-3600	1: mandiri 2 - 10008: konektorUPGmot@8.9 - 6: Jl.Nu	1.4445	59.609	532	532	LOS_A	1	1.164	1.164	0.07897	0.06391	177.877042	34.608409	41.224722	2.544736
11	0-3600	1: mandiri 2	3.4385	73.515	4319	4319	LOS_A	1	2.518	2.518	0.492	0.26904	1829.317763	355.918764	423.962057	26.170497

SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
8	0-3600	1: mandiri 3 - 1: Jl..Riburane-2: Jl..Riburane-Jl.Ahmad	11.034	64.228	145	145	LOS_A	1	5.751	5.751	1.32363	0.88966	113.098864	22.004929	26.211754	1.618009
8	0-3600	1: mandiri 3 - 1: Jl..Riburane-5: Jl.UPG-Rotterdam@18.5	11.034	64.228	723	723	LOS_A	1	1.02	1.02	0.09488	0.07054	291.823103	56.778172	67.632822	4.174866
8	0-3600	1: mandiri 3 - 1: Jl..Riburane-6: Jl.Nusantara kiri dari	11.034	64.228	537	537	LOS_A	1	5.203	5.203	1.01429	0.72626	352.665615	68.615914	81.733662	5.045288
8	0-3600	1: mandiri 3 - 4: Jl.UPG-2: Jl..Riburane-Jl.Ahmad Y@30	0.5833	102.88	469	469	LOS_A	1	2.015	2.015	0.22956	0.16418	191.807711	37.318811	44.453289	2.74403
8	0-3600	1: mandiri 3 - 4: Jl.UPG- 5: Jl.UPG-Rotterdam@18.5	0.5833	102.88	9	9	LOS_A	1	9.336	9.336	4.88335	1.22222	6.295733	1.224921	1.459097	0.090068
8	0-3600	1: mandiri 3 - 4: Jl.UPG- 6: Jl.Nusantara kiri dari bund	0.7673	75.393	946	946	LOS_A	1	0.914	0.914	0.05619	0.04228	265.463622	51.649575	61.523758	3.797763
8	0-3600	1: mandiri 3 - 7: Jl.Nusantara- 2: Jl..Riburane-Jl.Ahma	0.5833	102.88	1152	1152	LOS_A	1	1.093	1.093	0.02575	0.03212	307.618501	59.851382	71.293558	4.400837
8	0-3600	1: mandiri 3 - 7: Jl.Nusantara- 5: Jl.UPG-Rotterdam@1	0.5833	102.88	600	600	LOS_A	1	8.307	8.307	2.86578	1.04833	347.182394	67.549078	80.462872	4.966844
8	0-3600	1: mandiri 3 - 7: Jl.Nusantara- 6: Jl.Nusantara kiri dar	0.5833	102.88	0	0	LOS_A						0	0	0	0
8	0-3600	1: mandiri 3	4.1283	102.88	4581	4581	LOS_A	1	2.729	2.729	0.60229	0.29775	1870.707315	363.971666	433.554485	26.762623

SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
7	0-3600	1: mandiri 4			0	0	LOS_A						0	0	0	0
7	0-3600	2: mandiri 4 - 1: Jl..Riburane-2: Jl..Riburane-Jl.Ahmad	11.772	71.79	130	130	LOS_A	1	6.202	6.202	1.34886	0.89231	99.875686	19.432179	23.147155	1.428837
7	0-3600	2: mandiri 4 - 1: Jl..Riburane- 5: Jl.UPG-Rotterdam@1	11.772	71.79	750	750	LOS_A	1	1.007	1.007	0.0963	0.06933	301.801944	58.719691	69.945515	4.317624
7	0-3600	2: mandiri 4 - 1: Jl..Riburane-6: Jl.Nusantara kiri dari	11.772	71.79	597	597	LOS_A	1	5.142	5.142	1.12595	0.74539	405.771909	78.948469	94.041558	5.805034
		- 4: Jl.UPG-2: Jl..Riburane-Jl.Ahmad Y@2	0.5491	39.223	523	523	LOS_A	1	2.016	2.016	0.19537	0.14914	204.145447	39.719286	47.312679	2.920536
		- 4: Jl.UPG- 5: Jl.UPG-Rotterdam@18.2	0.5491	39.223	9	9	LOS_A	1	7.701	7.701	1.87095	0.44444	5.244002	1.020292	1.215348	0.075021
		- 4: Jl.UPG- 6: Jl.Nusantara kiri dari bun	0.5774	43.892	930	930	LOS_A	1	1.015	1.015	0.04728	0.04731	282.865619	55.035371	65.556839	4.046718
		- 7: Jl.Nusantara- 2: Jl..Riburane-Jl.Ahma	0.5491	39.223	1241	1241	LOS_A	1	1.135	1.135	0.02701	0.04513	312.706127	60.841249	72.472665	4.473621
		- 7: Jl.Nusantara- 5: Jl.UPG-Rotterdam@	0.5491	39.223	566	566	LOS_A	1	8.739	8.739	3.44663	1.06891	332.979824	64.785774	77.17129	4.76366
		- 7: Jl.Nusantara - 6: Jl.Nusantara kiri da	0.5491	39.223	0	0	LOS_A						0	0	0	0
			4.2996	71.79	4746	4746	LOS_A	1	2.75	2.75	0.64624	0.29499	1939.091753	377.276793	449.403239	27.740941



SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissonsionsVOC	FuelConsumption
5	0-3600	1: mndri 5 - 1: Jl..Riburane-2: Jl..Riburane-Jl.Ahmad Y	16.048	62.737	145	145	LOS_A	1	8.807	8.807	2.17115	1.42069	129.974306	25.288277	30.122801	1.859432
5	0-3600	1: mndri 5 - 1: Jl..Riburane- 5: Jl.UPG-Rotterdam@28.	16.048	62.737	1174	1174	LOS_A	1	1.663	1.663	0.18529	0.10477	514.981744	100.196734	119.351992	7.367407
5	0-3600	1: mndri 5 - 1: Jl..Riburane- 6: Jl.Nusantara kiri dari b	16.048	62.737	535	535	LOS_A	1	6.81	6.81	1.5959	1.10094	409.29153	79.633259	94.857265	5.855387
5	0-3600	1: mndri 5 - 4: Jl.UPG- 2: Jl..Riburane-Jl.Ahmad Y@28.	1.0624	37.764	619	619	LOS_A	1	2.706	2.706	0.3967	0.24879	266.248281	51.802241	61.70561	3.808988
5	0-3600	1: mndri 5 - 4: Jl.UPG- 5: Jl.UPG-Rotterdam@28.6	1.0624	37.764	11	11	LOS_A	1	4.577	4.577	0.1008	0.54546	6.352889	1.236041	1.472343	0.090885
5	0-3600	1: mndri 5 - 4: Jl.UPG-6: Jl.Nusantara kiri dari bunda	1.5965	62.362	1166	1166	LOS_A	1	1.135	1.135	0.06954	0.06604	376.163056	73.187662	87.179421	5.381446
5	0-3600	1: mndri 5 - 7: Jl.Nusantara- 2: Jl..Riburane-Jl.Ahmad	1.0624	37.764	1441	1441	LOS_A	1	1.613	1.613	0.05327	0.08119	401.845237	78.184481	93.131514	5.748859
5	0-3600	1: mndri 5 - 7: Jl.Nusantara-5: Jl.UPG-Rotterdam@28	1.0624	37.764	881	881	LOS_A	1	9.609	9.609	3.11813	1.43814	602.773872	117.277892	139.698666	8.623374
5	0-3600	1: mndri 5 - 7: Jl.Nusantara-BundranMob@1.7 - 6: Jl.	1.0624	37.764	0	0	LOS_A						0	0	0	0
5	0-3600	1: mndri 5	6.2355	62.737	5972	5972	LOS_A	1	3.468	3.468	0.75984	0.42515	2697.693318	524.873092	625.216477	38.59361

SimRun	Timelent	Movement	Qlen	Qlenmax	Vehs(all)	Pers(all)	LOS (All)	LOSv	VehDel	PersDel	Stops(All)	Stops(All)	EmissionsCO	EmissionsNOx	EmissonsionsVOC	FuelConsumption
1	0-3600	1: mandri 6 - 1: Jl..Riburane-Bundaran@73.6 - 2: Jl.R	14.23	65.579	111	111	LOS_A	1	7.013	7.013	1.55563	0.95496	89.990058	17.508795	20.856065	1.287411
1	0-3600	1: mandri 6 - 1: Jl..Riburane-Bundaran@73.6 - 5: Jl.U	14.23	65.579	1064	1064	LOS_A	1	1.311	1.311	0.11019	0.10482	421.432416	81.995434	97.671032	6.029076
1	0-3600	1: mandri 6 - 1: Jl..Riburane-Bundaran@73.6 - 6: Jl.N	14.23	65.579	613	613	LOS_A	1	6.42	6.42	1.52723	0.96085	443.581811	86.304902	102.804368	6.345949
1	0-3600	1: mandri 6 - 4: Jl.UPG-BundaranMob@18.9 - 2: Jl.Ri	0.6544	33.013	646	646	LOS_A	1	2.276	2.276	0.29267	0.17957	271.478616	52.819874	62.917791	3.883814
1	0-3600	1: mandri 6 - 4: Jl.UPG-BundaranMob@18.9 - 5: Jl.UP	0.6544	33.013	5	5	LOS_A	1	6.481	6.481	0.28	0.2	2.543356	0.494845	0.589447	0.036386
1	0-3600	1: mandri 6 - 4: Jl.UPG-BundaranMob@18.9 - 6: Jl.Nu	1.3745	76.816	922	922	LOS_A	1	1.114	1.114	0.06301	0.06833	281.954952	54.858188	65.345783	4.03369
1	0-3600	1: mandri 6 - 7: Jl.Nusantara-@8.2 - 2: Jl..Riburane-Jl	0.6544	33.013	1292	1292	LOS_A	1	1.356	1.356	0.03061	0.05341	359.196315	69.886551	83.247215	5.138717
1	0-3600	1: mandri 6 - 7: Jl.Nusantara-@8.2 - 5: Jl.UPG-Rotterc	0.6544	33.013	829	829	LOS_A	1	8.945	8.945	3.09507	1.22195	500.470422	97.373358	115.988853	7.159806
1	0-3600	1: mandri 6 - 7: Jl.Nusantara-@8.2 - 6: Jl.Nusantara k	0.6544	33.013	0	0	LOS_A						0	0	0	0
1	0-3600	1: mandri 6	5.4196	76.816	5477	5477	LOS_A	1	3.25	3.25	0.74484	0.37758	2363.111103	459.775551	547.673818	33.807026



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Lampiran Hasil Simulasi Vissim Bundaran Mandai

SimR	Timelen	Movement	Qlen	Qlenn	Vehs(a	Pers(all)	LOS (All)	LOSv	VehDelay	PersDelay	Stops	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
1	0-3600	1: mndai 7 - 1: TOL SUTAMI - 2: TOL SUTAMI@56.9	33.313	80	0	0	LOS_A						0	0	0	0
1	0-3600	1: mndai 7 - 1: TOL SUTAMI - 4: PERINTIS SUDIANG@55.4	33.313	80	605	605	LOS_E	5	75.31373	75.31373	52.15	3.99174	1539.49263	299.529323	356.792282	22.024215
1	0-3600	1: mndai 7 - 1: TOL SUTAMI - 7: PERINTIS MAROS@45.8	33.313	80	485	485	LOS_D	4	46.49517	46.49517	37.25	2.08866	756.578648	147.202713	175.344408	10.823729
1	0-3600	1: mndai 7 - 1: TOL SUTAMI - 9: POROS BANDARA@8.8	33.313	80	547	547	LOS_E	5	72.42067	72.42067	50.55	3.01645	1221.67839	237.694222	283.135765	17.477516
1	0-3600	1: mndai 7 - 3: PERINTIS SUDIANG - 2: TOL SUTAMI@56.9	28.058	67.5	370	370	LOS_C	3	25.71308	25.71308	19.15	3.21892	496.296835	96.56133	115.021584	7.100098
1	0-3600	1: mndai 7 - 3: PERINTIS SUDIANG - 4: PERINTIS SUDIANG@	28.058	67.5	276	276	LOS_D	4	39.20341	39.20341	31.51	3.24275	460.643779	89.624541	106.758644	6.59004
1	0-3600	1: mndai 7 - 3: PERINTIS SUDIANG - 7: PERINTIS MAROS@4	42.203	67.5	67	67	LOS_F	6	96.25006	96.25006	77.38	5.97015	212.385602	41.322521	49.222414	3.038421
1	0-3600	1: mndai 7 - 3: PERINTIS SUDIANG - 9: POROS BANDARA@8	42.203	67.5	682	682	LOS_F	6	95.17892	95.17892	71.35	6.70821	2433.62715	473.49541	564.016592	34.815839
1	0-3600	1: mndai 7 - 5: POROS BANDARA - 2: TOL SUTAMI@56.9	31.435	118	443	443	LOS_F	6	119.7063	119.7063	96.1	6.34763	1714.26249	333.533189	397.296887	24.524499
1	0-3600	1: mndai 7 - 5: POROS BANDARA - 4: PERINTIS SUDIANG@5	16.988	118	640	640	LOS_A	1	6.881689	6.881689	4.275	0.22813	362.515971	70.532435	84.016577	5.186208
1	0-3600	1: mndai 7 - 5: POROS BANDARA - 7: PERINTIS MAROS@45	31.435	118	136	136	LOS_F	6	119.678	119.678	94.12	7.10294	551.895975	107.378902	127.907222	7.895508
1	0-3600	1: mndai 7 - 5: POROS BANDARA - 9: POROS BANDARA@8.	31.435	118	0	0	LOS_A						0	0	0	0
1	0-3600	1: mndai 7 - 8: PERINTIS MAROS - 2: TOL SUTAMI@56.9	44.965	83.8	711	711	LOS_F	6	126.6675	126.6675	99.17	12.4669	3902.78372	759.339893	904.507814	55.833816
1	0-3600	1: mndai 7 - 8: PERINTIS MAROS - 4: PERINTIS SUDIANG@5	44.965	83.8	152	152	LOS_F	6	130.3478	130.3478	103	10.7237	749.105436	145.748697	173.612419	10.716816
1	0-3600	1: mndai 7 - 8: PERINTIS MAROS - 7: PERINTIS MAROS@45	44.965	83.8	0	0	LOS_A						0	0	0	0
1	0-3600	1: mndai 7 - 8: PERINTIS MAROS - 9: POROS BANDARA@8.8	32.386	83.8	217	217	LOS_D	4	40.26382	40.26382	30.61	5.65438	525.694471	102.281042	121.83477	7.520665
1	0-3600	1: mndai 7	26.882	118	5331	5331	LOS_E	5	73.48432	73.48432	55.86	5.21178	14911.7451	2901.283734	3455.940918	213.329686

SimR	Timelen	Movement	Qlen	Qlenn	Vehs(a	Pers(all)	LOS (All)	LOSv	VehDelay	PersDelay	Stops	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
3	0-3600	1: mndai 8 - 1: TOL SUTAMI - 2: TOL SUTAMI@57.7	30.881	66.1	0	0	LOS_A						0	0	0	0
3	0-3600	1: mndai 8 - 1: TOL SUTAMI - 4: PERINTIS SUDIANG@63.0	30.881	66.1	532	532	LOS_D	5	76.45711	76.45711	54.97	3.98872	1363.19963	265.229112	315.934678	19.502141
3	0-3600	1: mndai 8 - 1: TOL SUTAMI - 7: PERINTIS MAROS@68.3	30.881	66.1	697	697	LOS_F	5	56.90508	56.90508	44.45	3.55811	1476.64699	287.301846	342.227199	21.125136
3	0-3600	1: mndai 8 - 1: TOL SUTAMI - 9: POROS BANDARA@30.9	30.881	66.1	510	510	LOS_E	5	71.47701	71.47701	51.49	2.92745	1146.77078	223.119922	265.775202	16.405877
3	0-3600	1: mndai 8 - 3: PERINTIS SUDIANG - 2: TOL SUTAMI@57.7	28.671	76	395	395	LOS_C	3	29.526	29.526	22.47	1.61818	381.178689	74.163522	88.341842	5.4532
3	0-3600	1: mndai 8 - 3: PERINTIS SUDIANG - 4: PERINTIS SUDIANG@	45.184	76	141	141	LOS_E	5	74.91139	74.91139	63.72	8.22835	433.678265	84.378032	100.509126	6.204267
3	0-3600	1: mndai 8 - 3: PERINTIS SUDIANG - 7: PERINTIS MAROS@6	45.184	76	61	61	LOS_E	6	112.7191	112.7191	90.57	5.55738	206.655009	40.207555	47.894294	2.956438
3	0-3600	1: mndai 8 - 3: PERINTIS SUDIANG - 9: POROS BANDARA@3	45.184	76	668	668	LOS_E	6	104.2392	104.2392	80.2	8.26946	2755.4546	536.111337	638.603211	39.419951
3	0-3600	1: mndai 8 - 5: POROS BANDARA - 2: TOL SUTAMI@57.7	36.514	93.9	523	523	LOS_F	6	119.5525	119.5525	92.41	15.5296	3337.11519	649.281353	773.40867	47.741276
3	0-3600	1: mndai 8 - 5: POROS BANDARA - 4: PERINTIS SUDIANG@6	23.394	93.9	990	990	LOS_A	1	4.365067	4.365067	1.07	0.28586	564.245483	109.781668	130.769339	8.072181
3	0-3600	1: mndai 8 - 5: POROS BANDARA - 7: PERINTIS MAROS@68	36.514	93.9	210	210	LOS_E	5	73.11281	73.11281	51.68	5.96191	672.840778	130.910366	155.937348	9.625762
3	0-3600	1: mndai 8 - 5: POROS BANDARA - 9: POROS BANDARA@30	36.514	93.9	0	0	LOS_A						0	0	0	0
3	0-3600	1: mndai 8 - 8: PERINTIS MAROS - 2: TOL SUTAMI@57.7	28.826	60.3	638	638	LOS_F	6	87.41893	87.41893	65.74	9.98903	2775.66672	540.043883	643.287566	39.709109
3	0-3600	1: mndai 8 - 8: PERINTIS MAROS - 4: PERINTIS SUDIANG@6	28.826	60.3	170	170	LOS_D	5	73.46248	73.46248	57	4.46471	437.221121	85.067343	101.330217	6.254952
3	0-3600	1: mndai 8 - 8: PERINTIS MAROS - 7: PERINTIS MAROS@68	28.826	60.3	0	0	LOS_A						0	0	0	0
3	0-3600	1: mndai 8 - 8: PERINTIS MAROS - 9: POROS BANDARA@30	14.413	60.3	188	188	LOS_C	3	21.08009	21.08009	17.35	0.70745	149.394905	29.06682	34.623712	2.137266
3	0-3600	1: mndai 8	23.405	93.9	5699	5699	LOS_F	5	64.67911	64.67911	48.69	5.36024	15631.4606	3041.314222	3622.741941	223.626046



SimR	Timelen	Movement	Qlen	Qlenn	Vehs(a)	Pers(all)	LOS (All)	LOSv	VehDelay	PersDelay	Stops	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
3	0-3600	1: mandai 3 - 1: TOL SUTAMI@6.1 - 2: TOL SUTAMI@68.5	77.051	95.5	0	0	LOS_A						0	0	0	0
3	0-3600	1: mandai 3 - 1: TOL SUTAMI@6.1 - 4: PERINTIS SUDIANG@	77.051	95.5	270	270	LOS_E	6	221.6724	221.6724	189.1	8.89175	1126.56222	219.188072	261.091673	16.11677
3	0-3600	1: mandai 3 - 1: TOL SUTAMI@6.1 - 7: PERINTIS MAROS@7	77.051	95.5	765	765	LOS_E	6	233.4813	233.4813	198.9	12.9085	4007.24896	779.665034	928.718643	57.328311
3	0-3600	1: mandai 3 - 1: TOL SUTAMI@6.1 - 9: POROS BANDARA@	77.051	95.5	335	335	LOS_E	6	201.236	201.236	170.1	9.98947	1640.57912	319.197081	380.220053	23.470374
3	0-3600	1: mandai 3 - 3: PERINTIS SUDIANG@36.1 - 2: TOL SUTAMI	17.664	77.6	539	539	LOS_B	2	10.80239	10.80239	6.09	0.46382	246.441714	47.948602	57.115247	3.525633
3	0-3600	1: mandai 3 - 3: PERINTIS SUDIANG@36.1 - 4: PERINTIS SU	27.2	77.6	82	82	LOS_E	5	57.68285	57.68285	48.42	3.95122	172.462919	33.555017	39.969947	2.467281
3	0-3600	1: mandai 3 - 3: PERINTIS SUDIANG@36.1 - 7: PERINTIS MA	27.2	77.6	84	84	LOS_D	4	46.20195	46.20195	36.27	2.10714	138.172649	26.883377	32.022846	1.976719
3	0-3600	1: mandai 3 - 3: PERINTIS SUDIANG@36.1 - 9: POROS BAN	27.2	77.6	392	392	LOS_E	5	64.2257	64.2257	49.86	3.30867	878.342992	170.893629	203.56447	12.565708
3	0-3600	1: mandai 3 - 5: POROS BANDARA@117.6 - 2: TOL SUTAMI	21.326	97	439	439	LOS_E	5	62.36052	62.36052	46.32	2.69704	957.170946	186.230685	221.83361	13.693433
3	0-3600	1: mandai 3 - 5: POROS BANDARA@117.6 - 4: PERINTIS SU	11.945	97	1189	1189	LOS_A	1	4.465046	4.465046	0.684	0.24811	660.628389	128.534279	153.107009	9.45105
3	0-3600	1: mandai 3 - 5: POROS BANDARA@117.6 - 7: PERINTIS MA	21.326	97	250	250	LOS_E	5	59.1452	59.1452	42.74	3.948	624.745572	121.552787	144.790819	8.937705
3	0-3600	1: mandai 3 - 5: POROS BANDARA@117.6 - 9: POROS BAN	21.326	97	0	0	LOS_A						0	0	0	0
3	0-3600	1: mandai 3 - 8: PERINTIS MAROS@7.3 - 2: TOL SUTAMI@6	30.272	65.7	505	505	LOS_E	5	69.1374	69.1374	54.21	3.88317	1232.72821	239.844115	285.696666	17.635597
3	0-3600	1: mandai 3 - 8: PERINTIS MAROS@7.3 - 4: PERINTIS SUDIA	30.272	65.7	163	163	LOS_E	5	61.4072	61.4072	51.06	1.78528	271.66461	52.856061	62.960897	3.886475
3	0-3600	1: mandai 3 - 8: PERINTIS MAROS@7.3 - 7: PERINTIS MARC	30.272	65.7	0	0	LOS_A						0	0	0	0
3	0-3600	1: mandai 3 - 8: PERINTIS MAROS@7.3 - 9: POROS BANDAR	25.829	65.7	253	253	LOS_C	3	34.32461	34.32461	28	1.09091	272.205894	52.961376	63.086344	3.894219
3	0-3600	1: mandai 3	26.847	97	4965	4965	LOS_E	5	76.29405	76.29405	61.83	3.87311	12374.0366	2407.53788	2867.802475	177.024844

SimR	Timelen	Movement	Qlen	Qlenn	Vehs(a)	Pers(all)	LOS (All)	LOSv	VehDelay	PersDelay	Stops	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
2	0-3600	1: mandai 4 - 1: TOL SUTAMI@14.8 - 2: TOL SUTAMI@78.8	96.788	119	0	0	LOS_A						0	0	0	0
2	0-3600	1: mandai 4 - 1: TOL SUTAMI@14.8 - 4: PERINTIS SUDIANG	96.788	119	410	410	LOS_E	6	239.4646	239.4646	202.6	11.6913	2017.36961	392.50682	467.544889	28.860796
2	0-3600	1: mandai 4 - 1: TOL SUTAMI@14.8 - 7: PERINTIS MAROS@	96.788	119	865	865	LOS_E	6	277.1524	277.1524	236.6	19.7024	5665.63948	1102.327568	1313.066662	81.053498
2	0-3600	1: mandai 4 - 1: TOL SUTAMI@14.8 - 9: POROS BANDARA@	96.788	119	470	470	LOS_E	6	239.9953	239.9953	202.2	10.2363	2206.97324	429.396795	511.487359	31.573294
2	0-3600	1: mandai 4 - 3: PERINTIS SUDIANG@28.3 - 2: TOL SUTAMI	44.467	78.5	460	460	LOS_D	4	47.59308	47.59308	38.1	1.87783	601.945688	117.116758	139.506726	8.611526
2	0-3600	1: mandai 4 - 3: PERINTIS SUDIANG@28.3 - 4: PERINTIS SU	56.551	78.5	115	115	LOS_E	6	86.798	86.798	74.84	2.82609	264.260722	51.415534	61.244974	3.780554
2	0-3600	1: mandai 4 - 3: PERINTIS SUDIANG@28.3 - 7: PERINTIS MA	56.551	78.5	75	75	LOS_E	6	103.0254	103.0254	88.01	2.4	186.743632	36.333525	43.27964	2.671583
2	0-3600	1: mandai 4 - 3: PERINTIS SUDIANG@28.3 - 9: POROS BAN	56.551	78.5	406	406	LOS_E	6	97.17811	97.17811	80.14	3.08621	1078.65595	209.867252	249.988933	15.431416
2	0-3600	1: mandai 4 - 5: POROS BANDARA@83.4 - 2: TOL SUTAMI@	21.732	111	465	465	LOS_E	5	56.19084	56.19084	42.8	2.82366	985.23902	191.691712	228.338657	14.094979
2	0-3600	1: mandai 4 - 5: POROS BANDARA@83.4 - 4: PERINTIS SUD	12.903	111	1219	1219	LOS_A	1	8.159063	8.159063	2.696	0.29779	744.205668	144.79538	172.47685	10.646719
2	0-3600	1: mandai 4 - 5: POROS BANDARA@83.4 - 7: PERINTIS MA	21.732	111	246	246	LOS_D	4	54.71881	54.71881	39.98	3.49594	558.081692	108.582418	129.340821	7.984001
2	0-3600	1: mandai 4 - 5: POROS BANDARA@83.4 - 9: POROS BANDA	21.732	111	0	0	LOS_A						0	0	0	0
2	0-3600	1: mandai 4 - 8: PERINTIS MAROS@15.9 - 2: TOL SUTAMI@	26.36	65.1	471	471	LOS_E	5	65.42907	65.42907	50.71	2.431	957.055014	186.208129	221.806741	13.691774
2	0-3600	1: mandai 4 - 8: PERINTIS MAROS@15.9 - 4: PERINTIS SUD	26.36	65.1	122	122	LOS_E	5	55.07359	55.07359	42.26	1.71312	189.29736	36.830388	43.871491	2.708117
		PERINTIS MAROS@15.9 - 7: PERINTIS MAR	26.36	65.1	0	0	LOS_A						0	0	0	0
		PERINTIS MAROS@15.9 - 9: POROS BANDA	22.584	65.1	247	247	LOS_D	4	40.85229	40.85229	33.98	1.37652	310.956381	60.500812	72.067144	4.448589
			36.671	119	5068	5068	LOS_F	6	98.74679	98.74679	81.11	5.12451	15961.1412	3105.458083	3699.148599	228.342506



Optimization Software:
www.balesio.com

SimR	Timelern	Movement	Qlen	Qlenn	Vehs(a)	Pers(all)	LOS (All)	LOSv	VehDelay	PersDelay	Stops	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
3	0-3600	1: mandai 5 - 1: TOL SUTAMI@5.7 - 2: TOL SUTAMI@68.9	82.855	95.7	0	0	LOS_A						0	0	0	0
3	0-3600	1: mandai 5 - 1: TOL SUTAMI@5.7 - 4: PERINTIS SUDIANG@	82.855	95.7	410	410	LOS_E	6	282.8713	282.8713	247.7	12.1579	1685.69205	327.974419	390.675411	24.115766
3	0-3600	1: mandai 5 - 1: TOL SUTAMI@5.7 - 7: PERINTIS MAROS@5	82.855	95.7	1220	1220	LOS_E	6	333.632	333.632	296	21.0258	6391.77001	1243.606183	1481.354424	91.441631
3	0-3600	1: mandai 5 - 1: TOL SUTAMI@5.7 - 9: POROS BANDARA@	82.855	95.7	401	401	LOS_E	6	264.9493	264.9493	230.9	9.98974	1292.67995	251.508545	299.59106	18.493275
3	0-3600	1: mandai 5 - 3: PERINTIS SUDIANG@32.7 - 2: TOL SUTAMI	25.122	78.3	381	381	LOS_C	3	23.48805	23.48805	17.45	1.18373	311.993962	60.702688	72.307614	4.463433
3	0-3600	1: mandai 5 - 3: PERINTIS SUDIANG@32.7 - 4: PERINTIS SU	35.888	78.3	164	164	LOS_E	5	61.24901	61.24901	53.77	1.60366	250.091626	48.658743	57.961149	3.577849
3	0-3600	1: mandai 5 - 3: PERINTIS SUDIANG@32.7 - 7: PERINTIS MA	35.888	78.3	102	102	LOS_E	5	62.70168	62.70168	51.17	2.5	191.479339	37.254921	44.377186	2.739332
3	0-3600	1: mandai 5 - 3: PERINTIS SUDIANG@32.7 - 9: POROS BAN	35.888	78.3	437	437	LOS_E	5	65.41913	65.41913	51.77	1.64302	790.070461	153.719002	183.106459	11.302868
3	0-3600	1: mandai 5 - 5: POROS BANDARA@126.4 - 2: TOL SUTAMI	27.777	142	461	461	LOS_D	5	59.18555	59.18555	44.66	3.55315	1060.07565	206.252201	245.682769	15.165603
3	0-3600	1: mandai 5 - 5: POROS BANDARA@126.4 - 4: PERINTIS SU	17.929	142	1370	1370	LOS_B	2	12.70002	12.70002	5.292	0.82774	1081.93371	210.504985	250.748585	15.478308
3	0-3600	1: mandai 5 - 5: POROS BANDARA@126.4 - 7: PERINTIS MA	27.777	142	258	258	LOS_E	5	60.91764	60.91764	45.19	3.44574	592.891009	115.355046	137.408217	8.481989
3	0-3600	1: mandai 5 - 5: POROS BANDARA@126.4 - 9: POROS BAN	27.777	142	0	0	LOS_A						0	0	0	0
3	0-3600	1: mandai 5 - 8: PERINTIS MAROS@20.7 - 2: TOL SUTAMI	28.371	54.3	471	471	LOS_E	5	63.22253	63.22253	50.61	2.80679	972.148135	189.144702	225.304718	13.907699
3	0-3600	1: mandai 5 - 8: PERINTIS MAROS@20.7 - 4: PERINTIS SUDI	28.371	54.3	157	157	LOS_E	5	59.18892	59.18892	46.9	3.51592	319.521815	62.167335	74.052266	4.571128
3	0-3600	1: mandai 5 - 8: PERINTIS MAROS@20.7 - 7: PERINTIS MAR	28.371	54.3	0	0	LOS_A						0	0	0	0
3	0-3600	1: mandai 5 - 8: PERINTIS MAROS@20.7 - 9: POROS BANDA	24.798	54.3	242	242	LOS_D	4	43.28195	43.28195	35.8	1.3843	298.874393	58.150096	69.267027	4.275742
3	0-3600	1: mandai 5	31.222	142	5085	5085	LOS_E	6	95.69332	95.69332	80.11	4.97385	15422.3464	3000.628205	3574.277715	220.634427

SimR	Timelern	Movement	Qlen	Qlenn	Vehs(a)	Pers(all)	LOS (All)	LOSv	VehDelay	PersDelay	Stops	Stops(All)	EmissionsCO	EmissionsNOx	EmissionsVOC	FuelConsumption
2	0-3600	1: mandai 6 - 1: TOL SUTAMI@30.4 - 2: TOL SUTAMI@63.6	106.76	125	0	0	LOS_A						0	0	0	0
2	0-3600	1: mandai 6 - 1: TOL SUTAMI@30.4 - 4: PERINTIS SUDIANG	106.76	125	412	412	LOS_E	6	261.8253	261.8253	219	11.8635	1750.96965	340.675067	405.804124	25.049637
2	0-3600	1: mandai 6 - 1: TOL SUTAMI@30.4 - 7: PERINTIS MAROS@	106.76	125	1004	1004	LOS_E	6	273.5072	273.5072	230.4	15.2258	5230.08522	1017.584536	1212.122756	74.822392
2	0-3600	1: mandai 6 - 1: TOL SUTAMI@30.4 - 9: POROS BANDARA@	106.76	125	402	402	LOS_E	6	257.0501	257.0501	214.7	8.47807	1422.58812	276.783955	329.698534	20.351761
2	0-3600	1: mandai 6 - 3: PERINTIS SUDIANG@46.6 - 2: TOL SUTAMI	38.38	84.1	346	346	LOS_D	4	44.51201	44.51201	35.83	1.91471	447.918499	87.148664	103.809438	6.40799
2	0-3600	1: mandai 6 - 3: PERINTIS SUDIANG@46.6 - 4: PERINTIS SU	49.379	84.1	218	218	LOS_F	6	81.86227	81.86227	69.87	3.50459	512.686618	99.750186	118.820074	7.334572
2	0-3600	1: mandai 6 - 3: PERINTIS SUDIANG@46.6 - 7: PERINTIS MA	49.379	84.1	107	107	LOS_F	6	90.96598	90.96598	76.32	3.8972	285.20373	55.490282	66.098719	4.080168
2	0-3600	1: mandai 6 - 3: PERINTIS SUDIANG@46.6 - 9: POROS BAN	49.379	84.1	418	418	LOS_F	6	84.42124	84.42124	68.13	3.93301	1163.5055	226.37589	269.653634	16.645286
2	0-3600	1: mandai 6 - 5: POROS BANDARA@74.9 - 2: TOL SUTAMI@	25.018	157	439	439	LOS_D	5	57.97063	57.97063	43.61	4.78588	1148.84494	223.523478	266.255908	16.43555
2	0-3600	1: mandai 6 - 5: POROS BANDARA@74.9 - 4: PERINTIS SUD	15.775	157	1385	1385	LOS_B	2	10.29328	10.29328	3.322	0.45054	961.736177	187.118913	222.891646	13.758744
2	0-3600	1: mandai 6 - 5: POROS BANDARA@74.9 - 7: PERINTIS MAR	25.018	157	234	234	LOS_E	5	66.53311	66.53311	50.77	5.31197	675.456921	131.419372	156.543664	9.663189
2	0-3600	1: mandai 6 - 5: POROS BANDARA@74.9 - 9: POROS BANDA	25.018	157	0	0	LOS_A						0	0	0	0
2	0-3600	1: mandai 6 - 8: PERINTIS MAROS@42.5 - 2: TOL SUTAMI@	28.279	65.9	505	505	LOS_E	5	56.97585	56.97585	44.92	2.05149	904.577438	175.997899	209.644556	12.941022
2	0-3600	1: mandai 6 - 8: PERINTIS MAROS@42.5 - 4: PERINTIS SUDI	28.279	65.9	205	205	LOS_E	5	59.0469	59.0469	46.78	1.95122	345.071026	67.138283	79.973543	4.936638
2	0-3600	1: mandai 6 - 8: PERINTIS MAROS@42.5 - 7: PERINTIS MAR	28.279	65.9	0	0	LOS_A						0	0	0	0
2	0-3600	1: mandai 6 - 8: PERINTIS MAROS@42.5 - 9: POROS BANDA	24.479	65.9	196	196	LOS_D	4	42.48655	42.48655	35.55	1.22449	255.536225	49.718064	59.222988	3.65574
2	0-3600	1: mandai 6	37.718	157	5184	5184	LOS_E	6	93.90374	93.90374	76.1	4.64043	15330.2245	2982.704625	3552.927568	219.316517

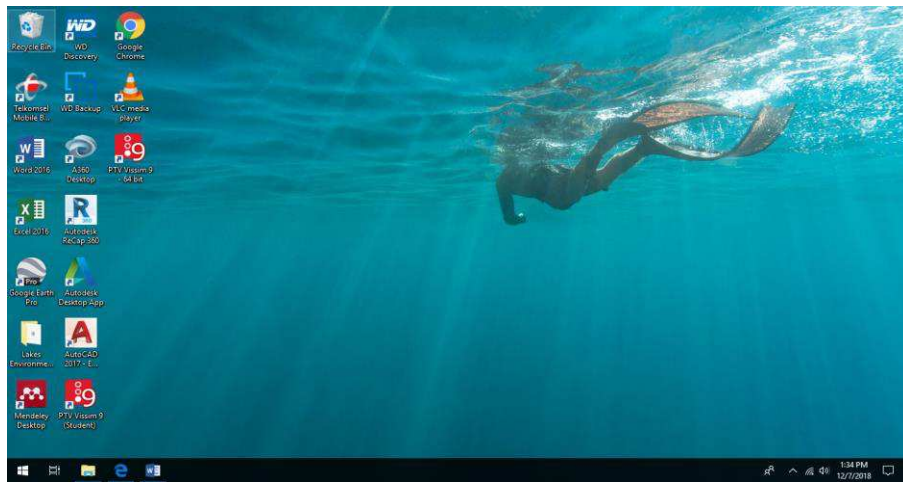


LAMPIRAN 2

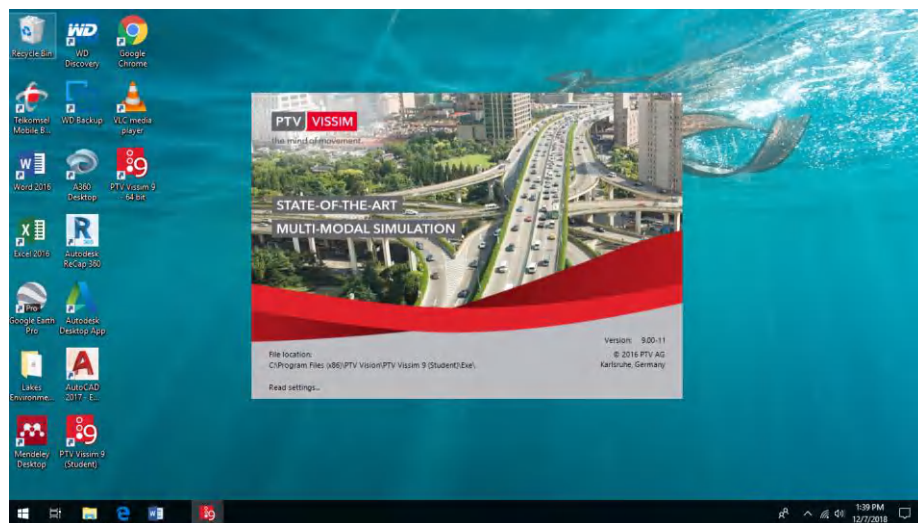
TUTORIAL PTV VISSIM 9

Langkah – langkah dalam penggunaan aplikasi *PTV Vissim 9.0* :

- 1) Instalasi Pengenalan Tampilan Layar Program Vissim
 1. Buka program PTV Vissim 9.0 yang ada pada desktop.

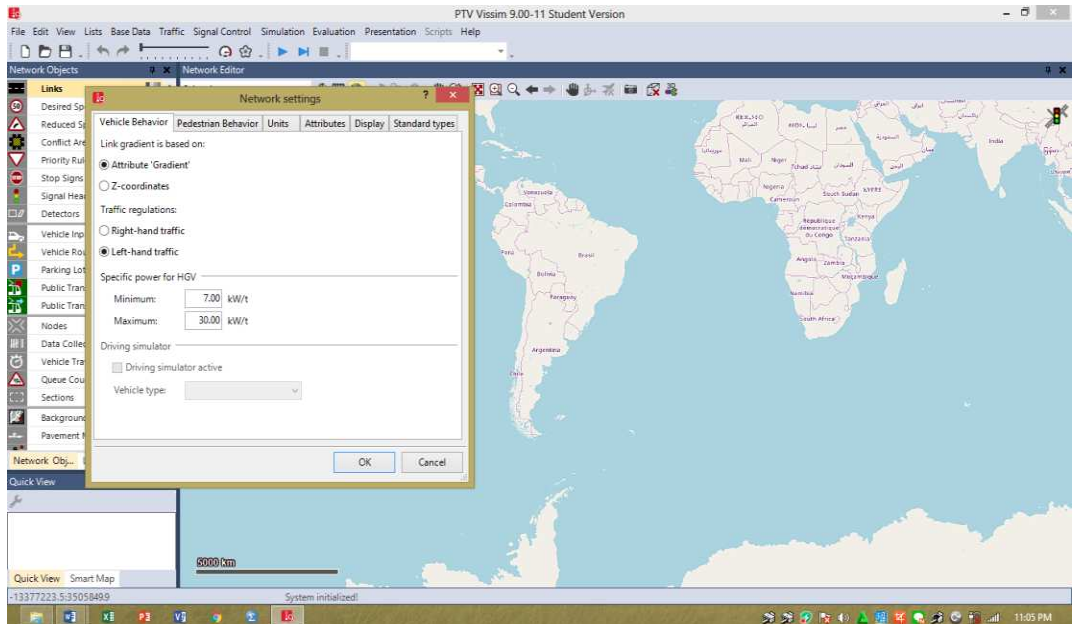
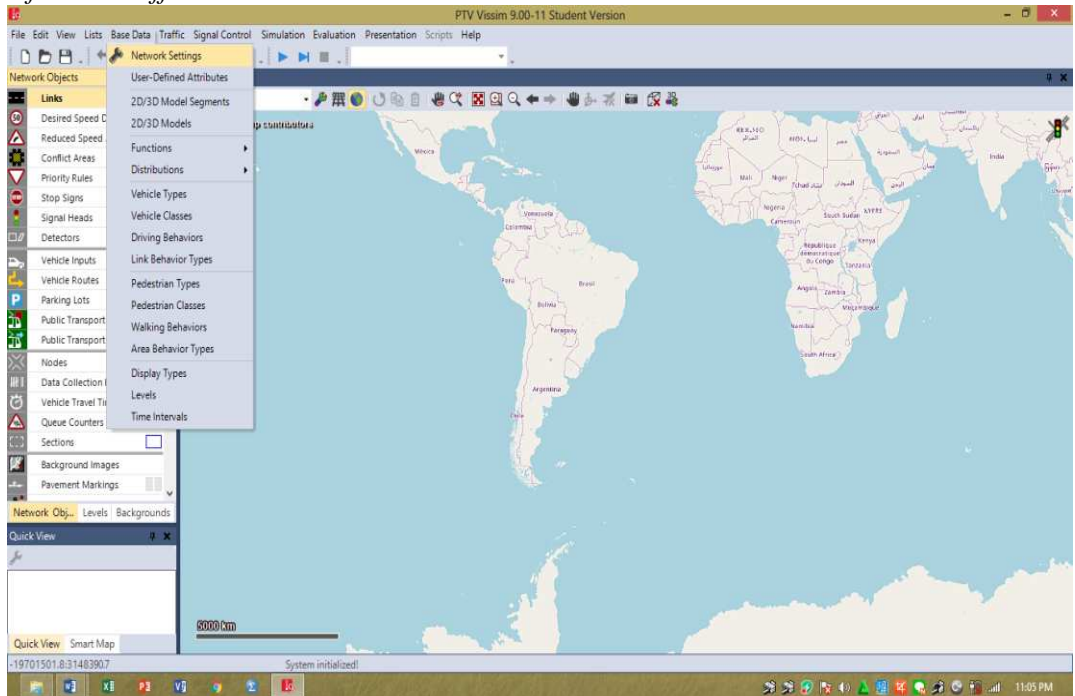


2. Selanjutnya kita menunggu proses *running*. *Catatan : Vissim hanya bisa dijalankan menggunakan Windows bawahan yang Original.*

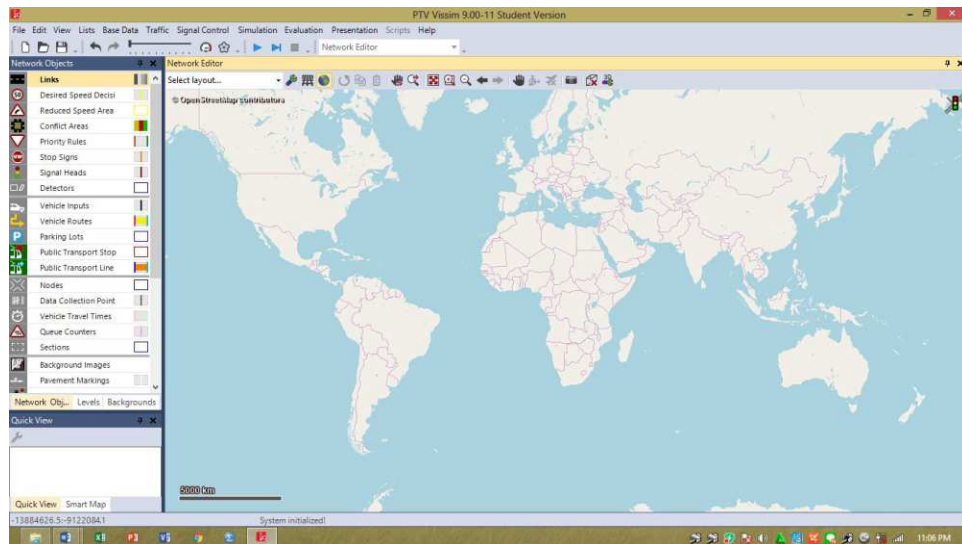


2) Pembangunan Jaringan Jalan

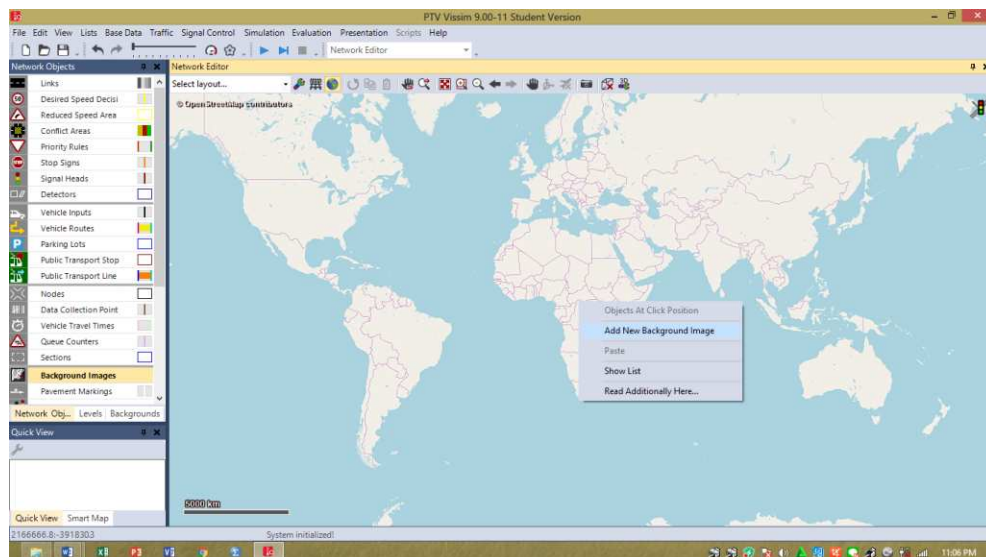
1. Mengatur terlebih dahulu *network setting*, setelah itu kita memilih *traffic regulation* yang di mana *traffic regulation* di Indonesia adalah sebelah kiri jadi kita memilih *left hand traffic*.



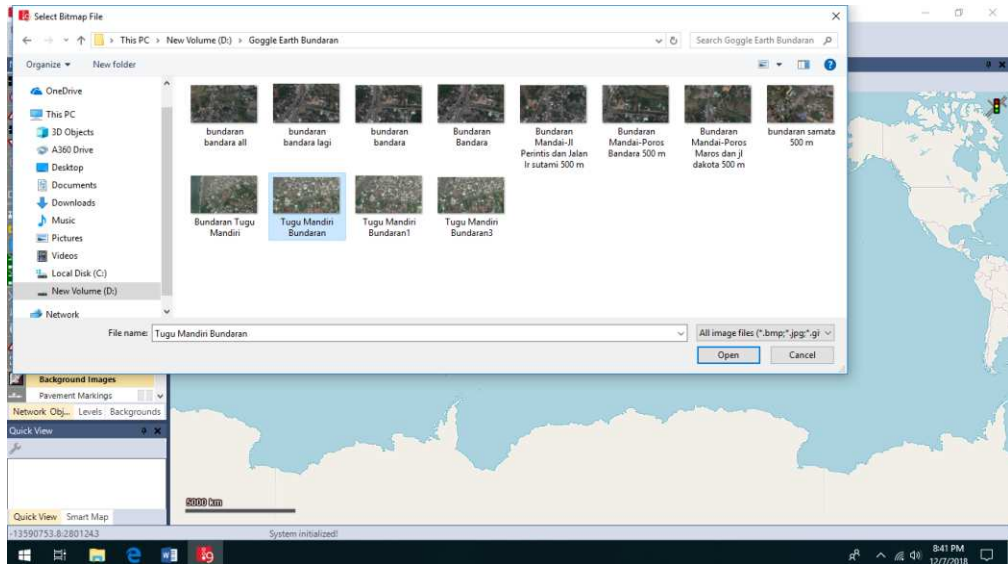
2. Selanjutnya mengatur skala display pada Vissim dengan meng-*scroll* kearah bawah pada mouse yang digunakan.



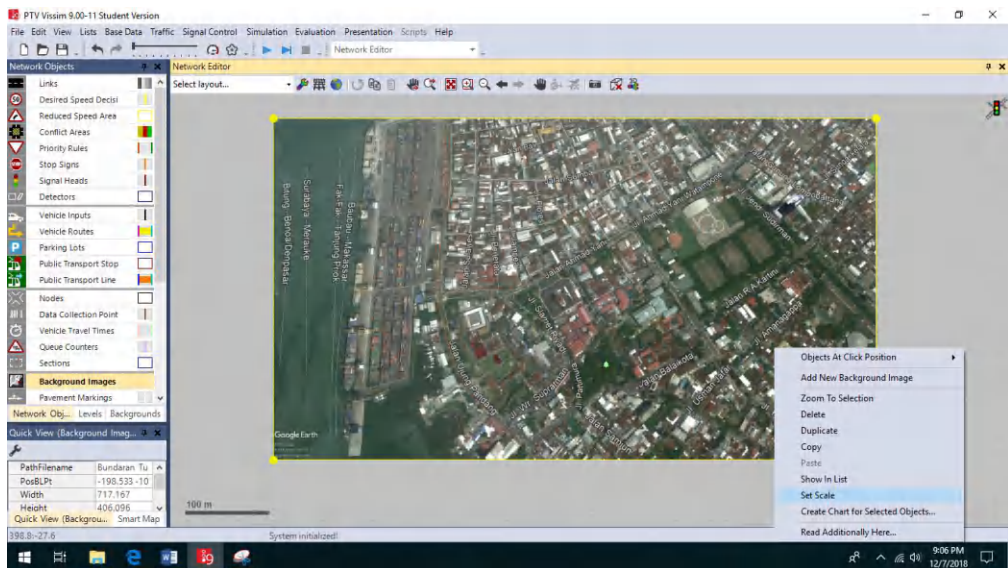
3. Langkah awal untuk membuat model simulasi yaitu memasukkan obyek atau layout gambar yang akan menjadi patron dalam membuat jaringan jalan pada vissim, jadi kita insert background  Background Images terlebih dahulu setelah itu kita memilih layout gambar yang akan dibuat jaringan jalan pada Vissim




Selanjutnya kita memilih gambar yang kita inginkan yang tersimpan.

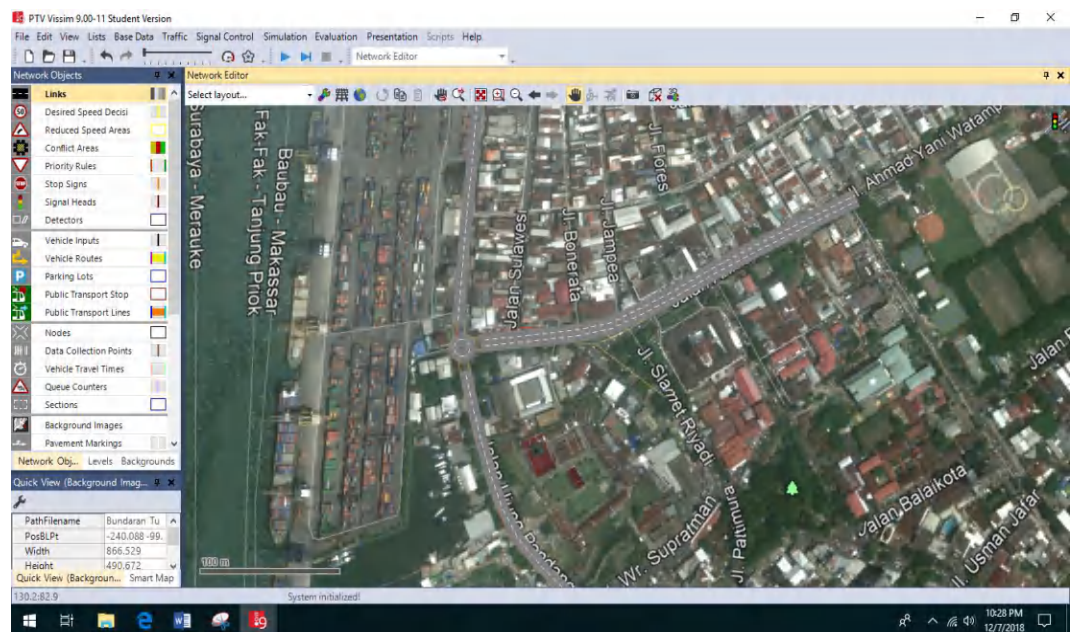
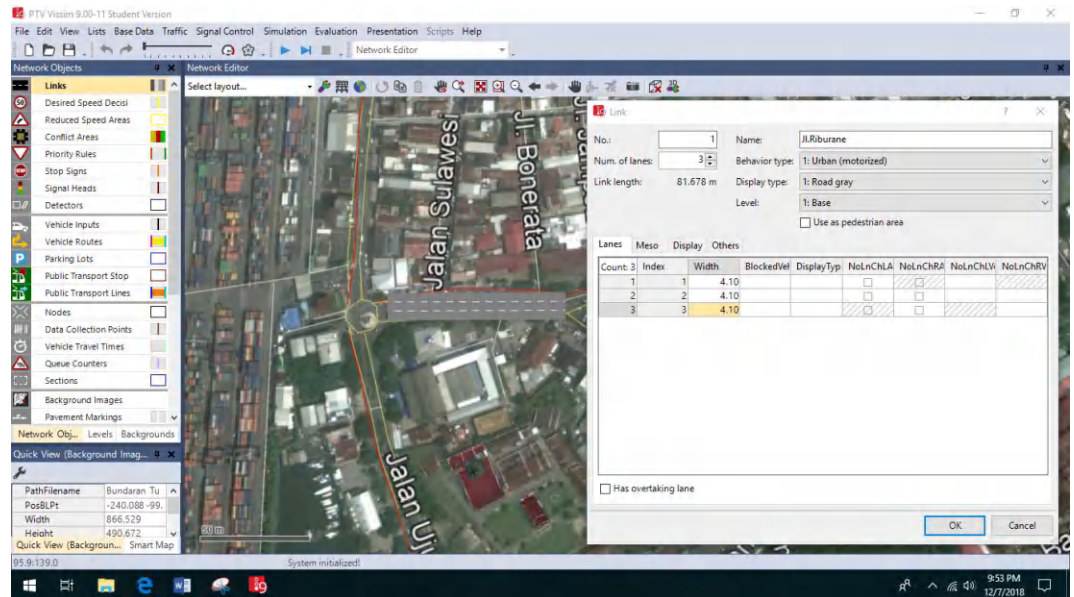


- Setelah muncul gambar pada monitor vissim kita kembali mengatur skala pada gambar dengan klik kanan pada gambar – Pilih Set Scale setelah itu seret garis sesuai pada skala yang diinginkan kemudian masukkan panjang atau nilai skala tersebut.



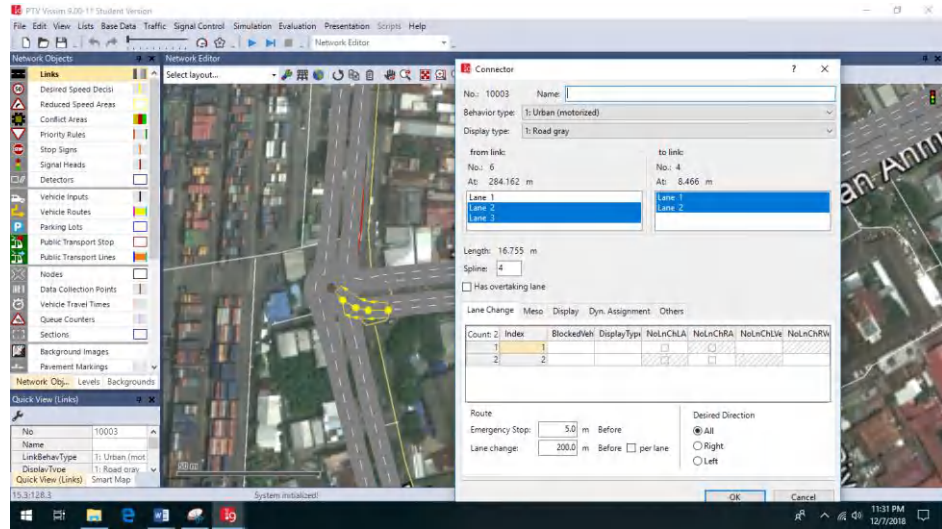
- Setelah gambar atau layout yang menjadi objek terskalakan selanjutnya kita membangun jaringan atau jalan di atas layout tersebut dengan memilih mode  Links insert link pada tools yang ada pada vissim, dengan memasukkan nama jalan, jumlah lajur, dan ukuran/dimensi lajur.



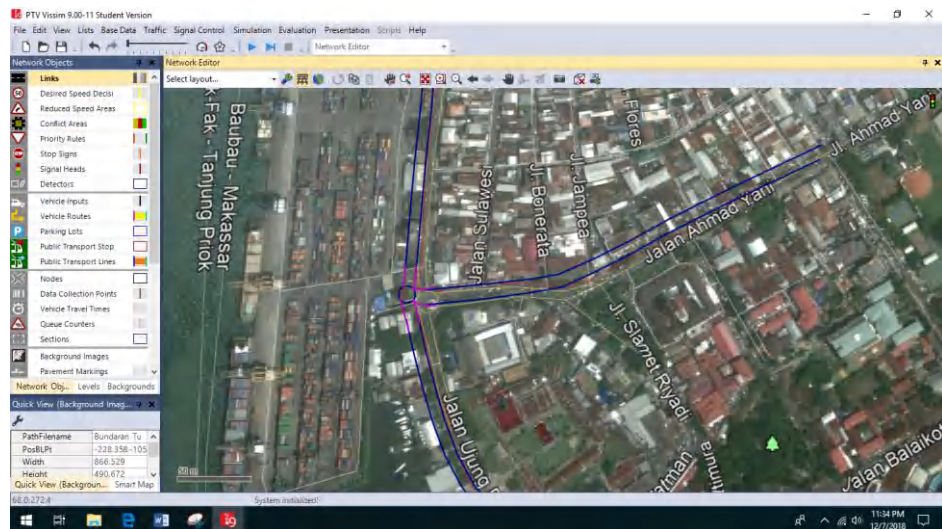


6. Setelah jaringan selesai dibuat seluruhnya, langkah berikutnya kita menghubungkan jaringan jalan tersebut dengan *mode connector*. Tiap jaringan dihubungkan satu sama lain dengan Klik Kanan + SHIFT setelah kita tarik penghubung dari link yang satu ke link yang lainnya sehingga semuanya dapat terhubung.



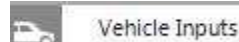


Selanjutnya ketika semua sudah terhubung kita menekan Ctrl + A untuk menunjukkan perbedaan antara jaringan utama dan penghubung pada gambar di bawah ini, garis biru menunjukkan jaringan utama sedangkan garis merah muda menunjukkan jaringan penghubung.

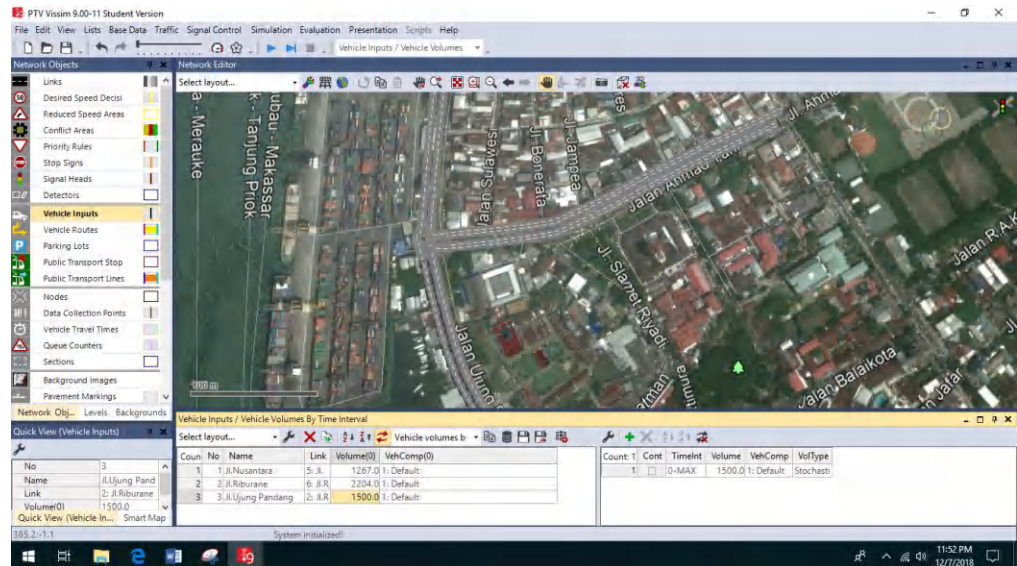



3) Pemasukan Data

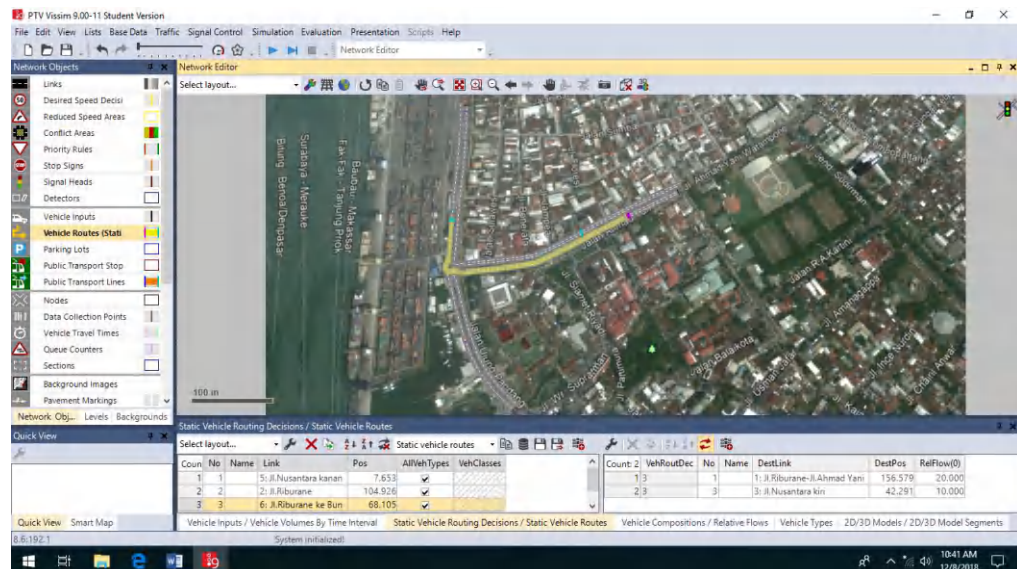
1. Tahap selanjutnya kita menginput jumlah kendaraan serta arah route kendaraan yang akan melaju pada jaringan jalan yang kita buat, untuk memasukkan kendaraan kita memilih mode Vehicle Input



catatan : jumlah kendaraan yang di Input dalam satuan kend/jam



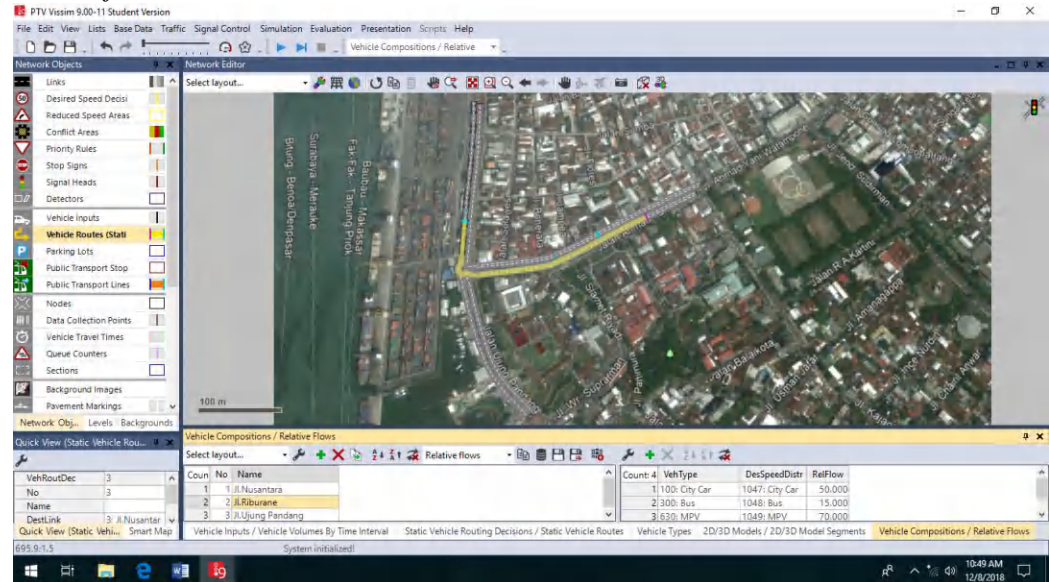
- Setelah kendaraan selesai di Input, selanjutnya mengatur route kendaraan, memilih mode  Vehicle Routes → Kemudian memilih mode *static*, setelah itu memilih link pertama sebagai route awal berikutnya klik kanan pilih *Add New Vehicle Routing Decition* selanjutnya insert route yang diinginkan lalu arahkan kearah pergerakan kendaraan yang sesuai dengan arah pergerakan lalu lintas.



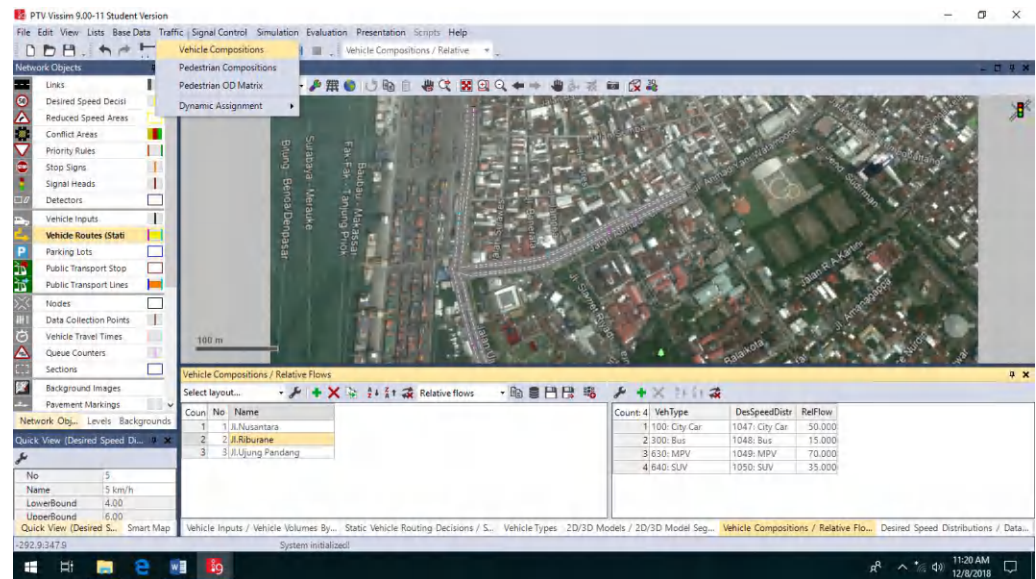
- Selanjutnya kita akan mengatur komposisi kendaraan yang bergerak lurus dan berbelok sesuai arah route pergerakan yang di insert masuk pada



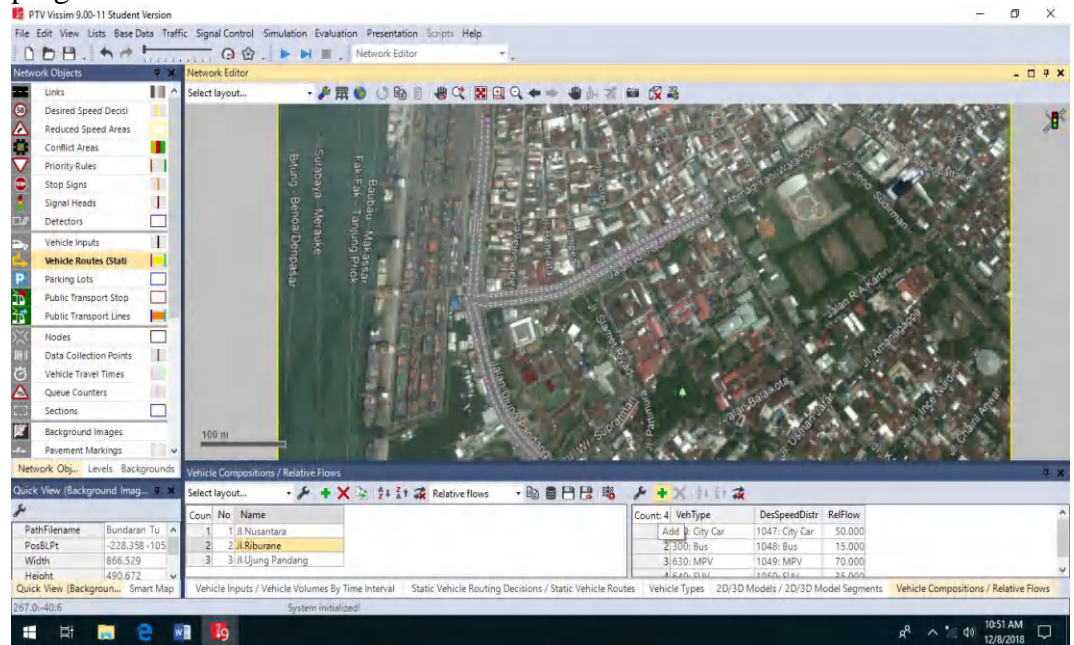
jaringan jalan catatan : komposisi kendaraan bisa dalam satuan % atau satuan jumlah kendaraan



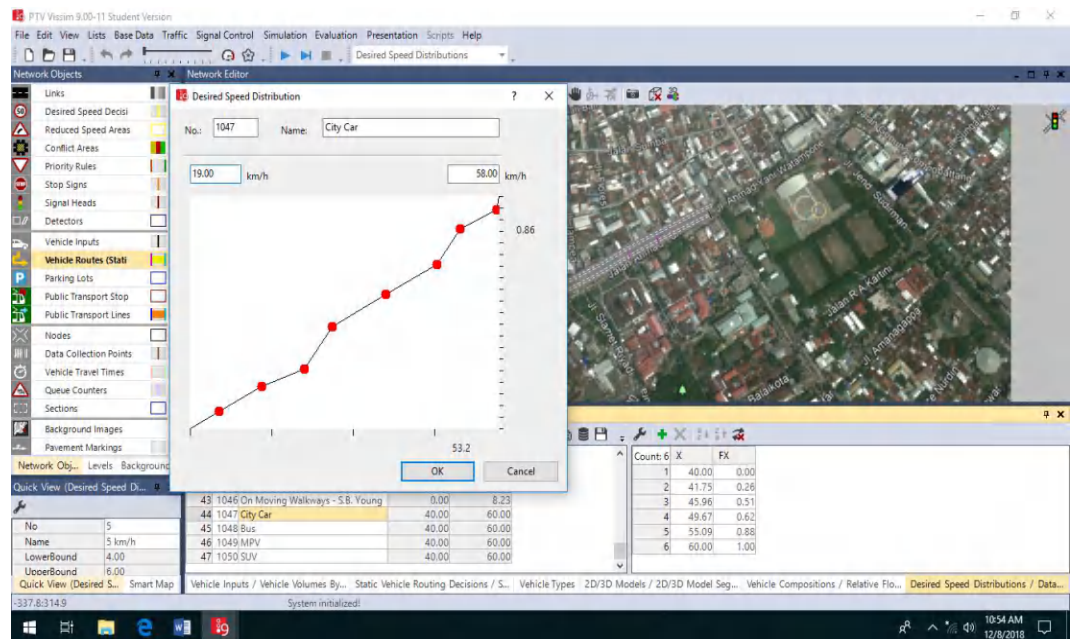
- Setelah insert volume kendaraan dan arah pergerakan kendaraan selesai selanjutnya kita mengatur komposisi jenis kendaraan yang melintas. Jenis – jenis kendaraan pada Vissim dibagi enam yaitu Car, HGV, SUV, Bus, Bike, dan Tram pada kasus kali ini kita memasukkan City Car, Sedan, MVP, SUV, Angkutan, PickUp, Bus, Truk, Motor Matic, Motor Bebek, Motor Sport sebagai objek, langkah awal kita memilih tools *Traffic – Vehicle Composition*.



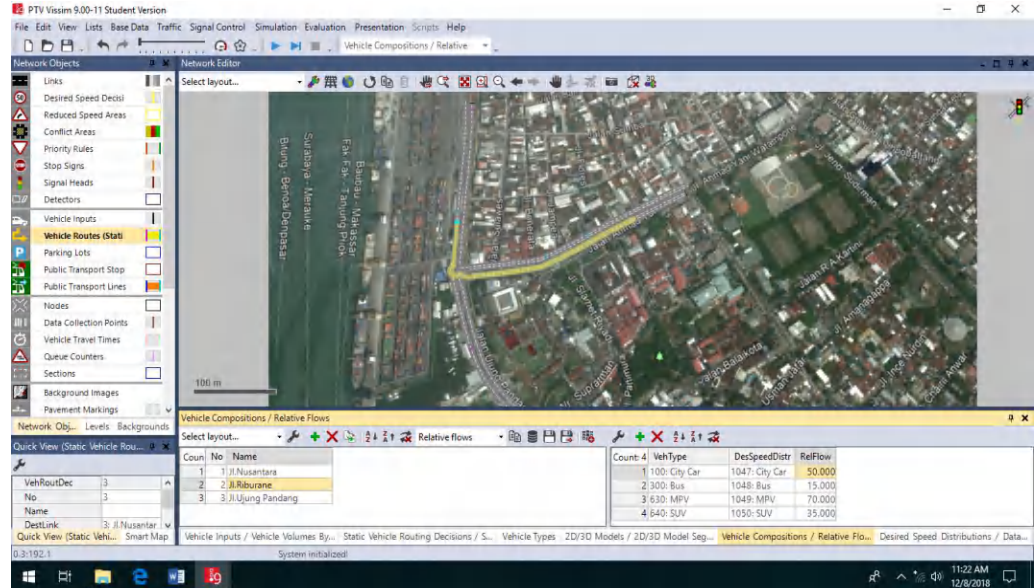
- Setelah masuk kedalam text boxnya atau menu kita dapat menambahkan jenis kendaraan yang kita inginkan dengan cara klik kanan kemudian pilih add selanjutnya kita pilih jenis kendaraan yang ingin kita masukkan pada program vissim.



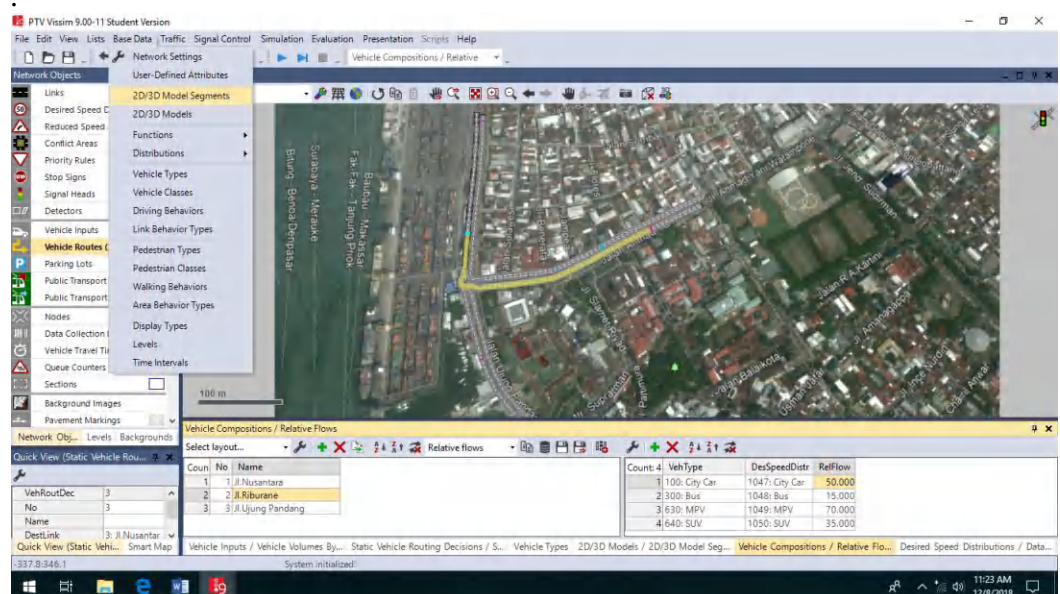
- Kemudian kita mengatur kecepatan kendaraan pada *desired speed distribution*



- Setelah selesai selanjutnya kita mengatur komposisi jenis kendaraan pada *relatif flow*. Catatan : satuan digunakan % kendaraan

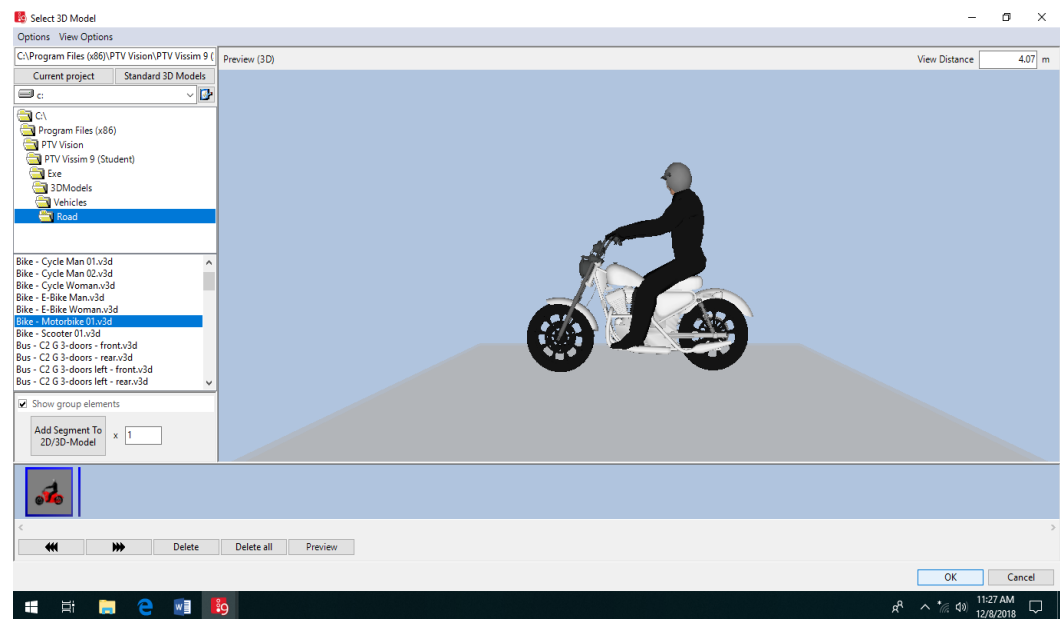
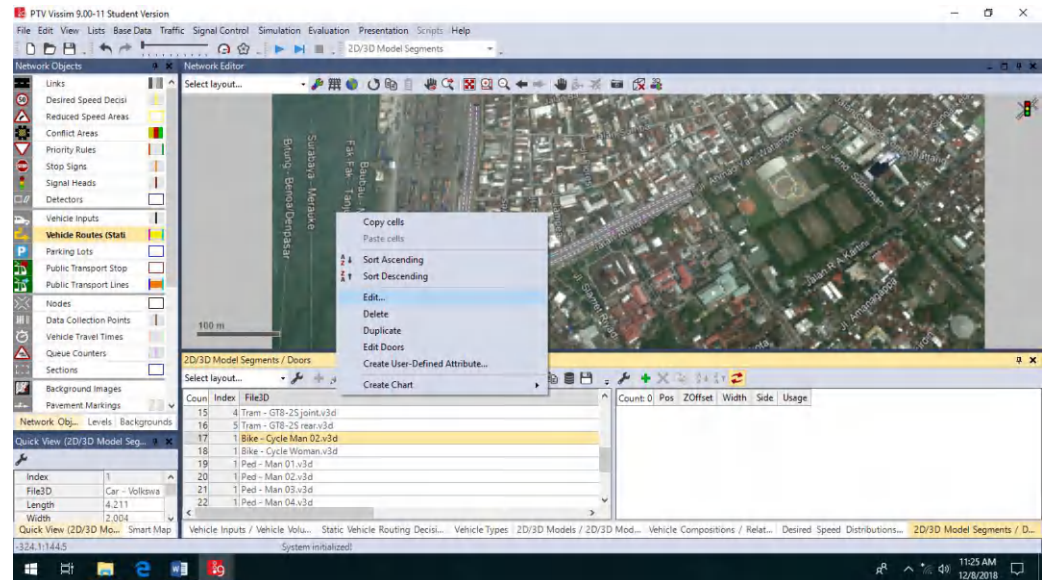


- Karena default display jenis kendaraan bike itu adalah sepeda roda dua jadi kita harus menginput ulang display kendaraan bike tersebut dengan display sepeda motor dengan masuk ke menu *Base data – 2D/3D Models Segment*



Setelah masuk menu *2D/3D Models Segment* kita mencari jenis kendaraan bike kemudian klik kanan + edit selanjutnya kita pilih display kendaraan

bermotor yaitu *motorbike* kemudian pilih ok ,catatan : dapat juga ditambahkan display jenis sepeda motor yang lain seperti motor matic

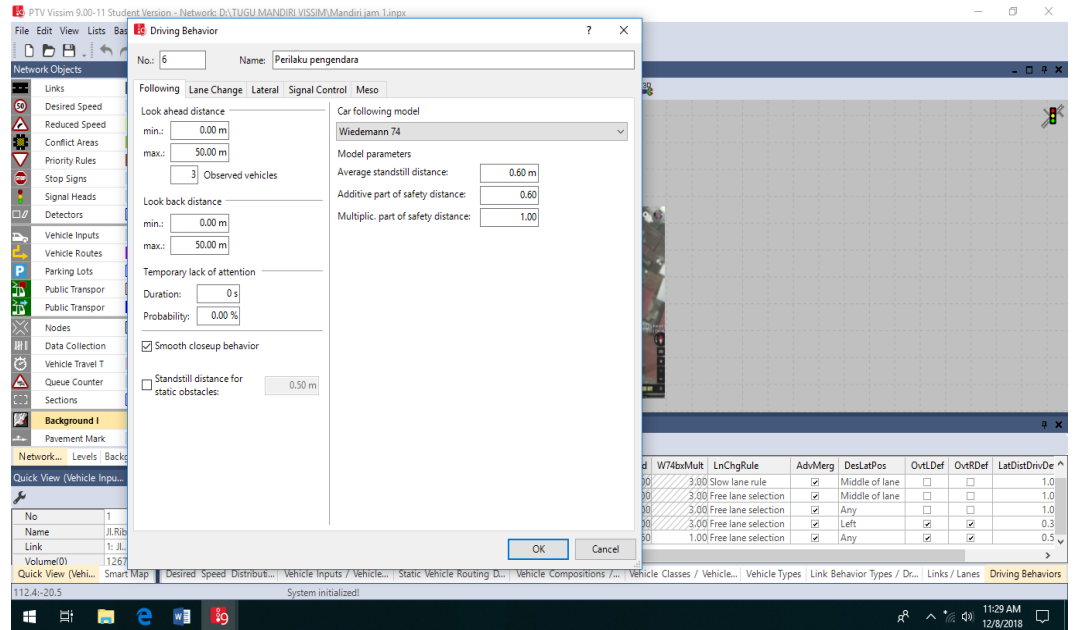


4) Proses Analisis Data

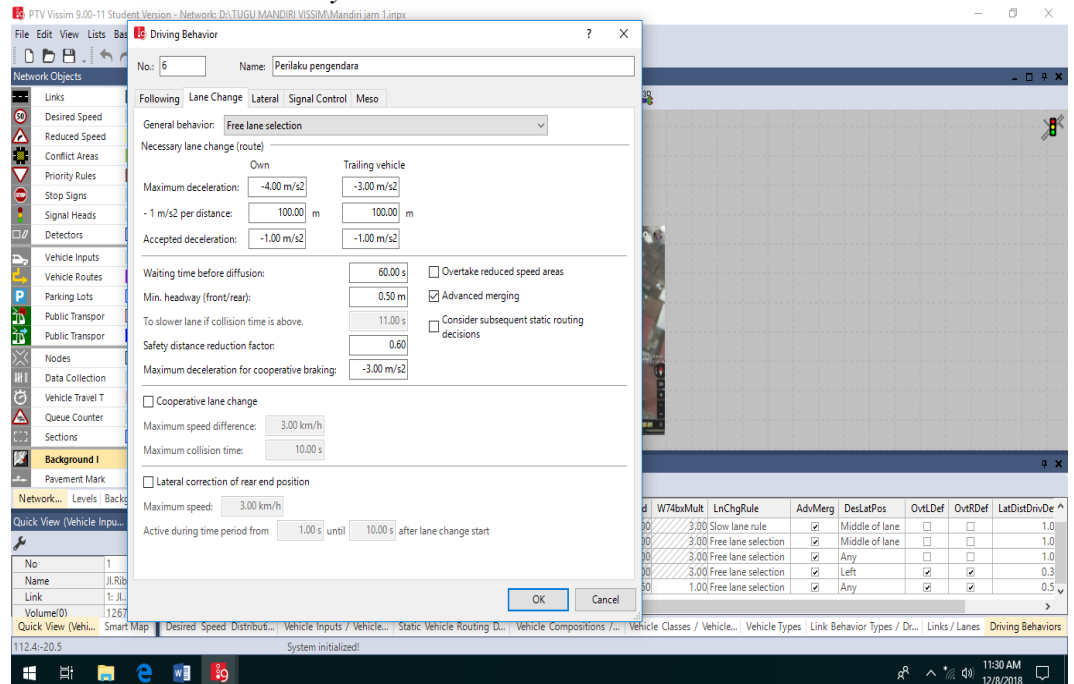


Setelah selesai penginputan data volume dan kecepatan pada studi kasus ini, selanjutnya yaitu pengaturan kalibrasi dengan mengatur *driving behavior* pada simpang tersebut. Mengatur *average standstill distance*,

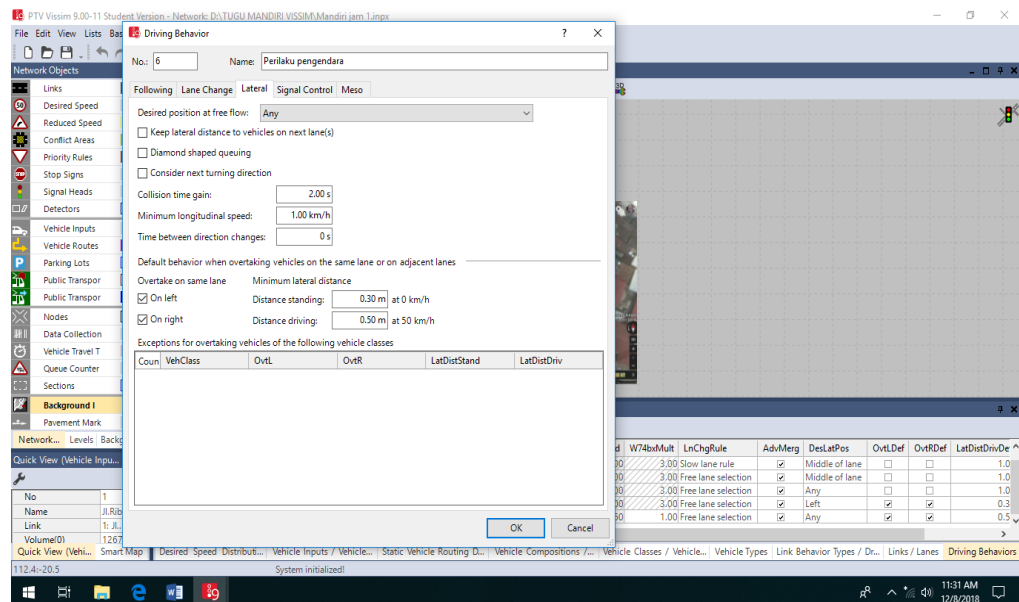
safety distance, standstill distance, look ahead distance, dan look back distance.



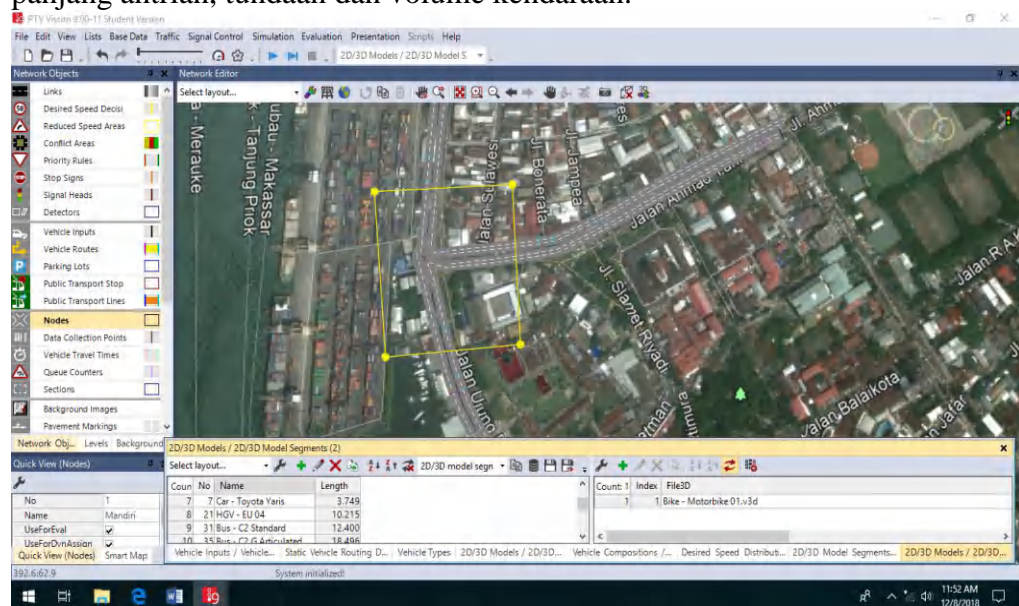
2. Mengatur Lane Change pada Driving Behavior, dengan mengubah General behavior menjadi Free Lance Selection, mengatur jarak antar kendaraan / min. headway.



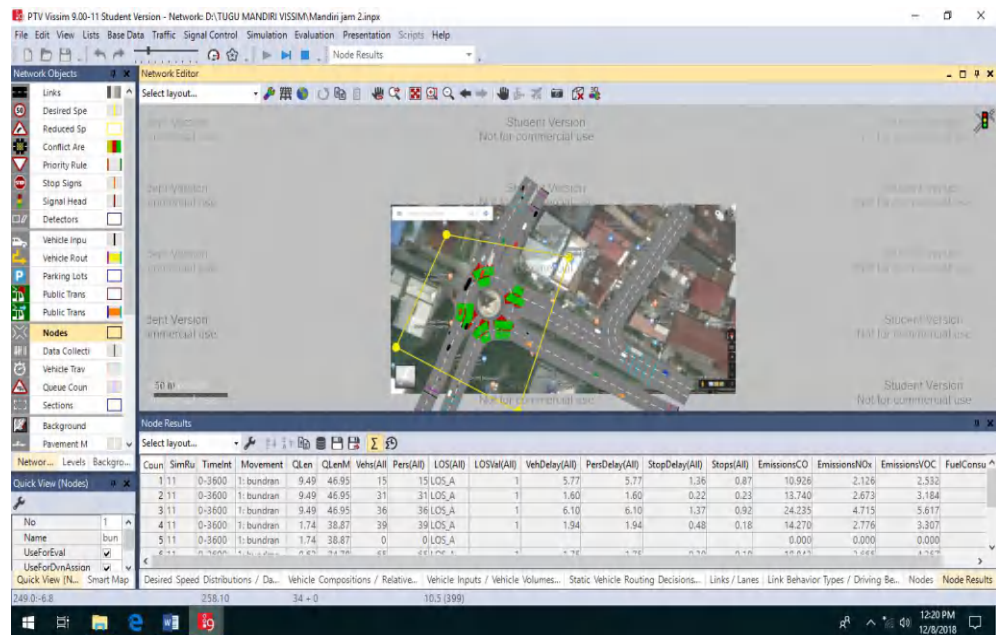
3. Kemudian mengatur *Lateral* pada *Driving Behavior*, yaitu posisi kendaraan di mana dapat menyiap di lajut mana saja, baik kiri dan kanan, *Desired position* ➔ *Any*. Setelah itu mengatur *Minimum Lateral Distance*, yaitu *distance standing* dan *distance driving*.



4. Setelah pengaturan *Driving Behavior*, maka ditentukan persimpangan yang akan ditinjau dengan menambahkan *Nodes*. *Nodes* tersebut berfungsi untuk menentukan titik pembacaan hasil running yang dapat menghasilkan panjang antrian, tundaan dan volume kendaraan.



- Selanjutnya *Running* akan menghasilkan *Node Results* di mana kita dapat melihat volume kendaraan yang melewati titik simpang, tundaan kendaraan, panjang antrian, dan juga hasil estimasi beban emisi CO dan NOx dari kendaraan bermotor pada *Node* yang telah ditentukan sebelumnya.



LAMPIRAN 3
DOKUMENTASI

