

**Tabel Perhitungan Antrian dan Tundaan Pada Kondisi Pintu Perlintasan Tertutup Dengan Analisa Gelombang Kejut
(Arah ke Jalan Ngagel Jaya Selatan)**

Interval Waktu	VA	VB	Vm	DA	DB	DC	Kecepatan Gelombang Kejut			r	ta	XA	XB	tb	N	Tundaan Rata - rata
	(ekr/jam)	(ekr/jam)	(ekr/jam)	(ekr/km)	(ekr/km)	(ekr/km)	ωAB	ωBC	ωAC							
	a	b	c	d	e	f	$g = \frac{a-b}{d-e}$	$h = \frac{b-c}{e-f}$	$i = \frac{a-c}{d-f}$	j	$k = \frac{ja}{h-g}$	$l = \frac{ja}{e-d}$	$m = \frac{j}{3600} * \frac{h}{g/h-g}$	$n = \frac{ja}{h-g} * \frac{h}{g/h-g}$	$o = \frac{(j+k)a}{3600}$	$p = \frac{(j+o)}{2}$
06:58:52 - 07:01:06	1156	0	1388.00	181.850	161.64	80.820	57.2017	-17.1739	-2.2964	134	-103.058	-7665.02	0.491643	-72.1167	9.935711	71.967856
07:04:20 - 07:05:53	971	0	1388.00	152.747	161.64	80.820	109.186	-17.1739	-5.7975	93	-80.3602	10154.33	0.383361	-67.7203	3.409245	48.204622
07:10:24 - 07:11:37	794	0	1388.00	124.904	161.64	80.820	21.6132	-17.1739	-13.4744	73	-40.6775	1577.763	0.194053	-8.35503	7.128903	40.064452
07:25:43 - 07:27:18	1129	0	1388.00	177.602	161.64	80.820	70.7312	-17.1739	-2.6761	95	-76.44	-6719.46	0.364659	-57.8799	5.820634	50.410317
07:33:52 - 07:35:30	1056	0	1388.00	166.119	161.64	80.820	235.806	-17.1739	-3.8922	88	-82.026	-20750.9	0.391308	-76.052	1.752375	44.876187
07:43:11 - 07:44:15	774	0	1388.00	121.758	161.64	80.820	19.4068	-17.1739	-14.9986	64	-33.9532	1242.033	0.161975	-3.9065	6.460051	35.230026
07:54:17 - 07:55:40	843	0	1388.00	132.612	161.64	80.820	29.0403	-17.1739	-10.5229	83	-52.1559	2410.342	0.248811	-21.3118	7.222659	45.11133
02:59:32 - 03:00:40	656	0	1388.00	103.195	161.64	80.820	11.2241	-17.1739	-32.7155	68	-26.8765	763.2406	0.128215	14.24695	7.493611	37.746805
03:03:17 - 03:04:24	724	0	1388.00	113.892	161.64	80.820	15.1628	-17.1739	-20.0775	67	-31.4165	1015.907	0.149873	4.166951	7.156232	37.078116
03:15:04 - 03:15:56	756	0	1388.00	118.926	161.64	80.820	17.6989	-17.1739	-16.5855	52	-26.3914	920.3414	0.125901	-0.78279	5.377807	28.688903
03:23:31 - 03:24:36	764	0	1388.00	120.184	161.64	80.820	18.4291	-17.1739	-15.8520	65	-33.6458	1197.893	0.160508	-2.29164	6.654054	35.827027
03:32:25 - 03:33:21	755	0	1388.00	118.769	161.64	80.820	17.6106	-17.1739	-16.6806	56	-28.3515	986.1939	0.135252	-0.70304	5.7985	30.89925
03:34:43 - 03:35:54	807	0	1388.00	126.949	161.64	80.820	23.262	-17.1739	-12.5953	71	-40.8449	1651.601	0.194852	-10.6898	6.759764	38.879882
04:59:09 - 05:00:31	1056	0	1388.00	166.119	161.64	80.820	235.806	-17.1739	-3.8922	82	-76.4333	-19336.1	0.364627	-70.8666	1.632895	41.816447
05:04:11 - 05:05:14	976	0	1388.00	153.534	161.64	80.820	120.397	-17.1739	-5.6661	63	-55.1353	7585.023	0.263025	-47.2706	2.132209	32.566105
05:27:45 - 05:29:06	1124	0	1388.00	176.816	161.64	80.820	74.0677	-17.1739	-2.7501	112	-90.9189	-8295.59	0.433731	-69.8377	6.582	59.291
05:43:38 - 05:44:42	1056	0	1388.00	166.119	161.64	80.820	235.806	-17.1739	-3.8922	64	-59.6553	-15091.6	0.284587	-55.3105	1.274454	32.637227

**Tabel Perhitungan Antrian dan Tundaan Pada Kondisi Pintu Perlintasan Tertutup Dengan Analisa Gelombang Kejut
(Arah ke Jalan Dinoyo)**

Interval Waktu	VA	VB	Vm	DA	DB	DC	Kecepatan Gelombang Kejut			r	ta	XA	XB	tb	N	Tundaan Rata - rata
	(ekr/jam)	(ekr/jam)	(ekr/jam)	(ekr/km)	(ekr/km)	(ekr/km)	ω_{AB}	ω_{BC}	ω_{AC}	(detik)	(detik)	(km)	(km)	(detik)	(ekr)	(detik)
	a	b	c	d	e	f	$g = (a-b)/(d-e)$	$h = (b-c)/(e-f)$	$i = (a-c)/(d-f)$	j	$k = jg/(h-g)$	$l = ja/(e-d)$	$m = j/3600 * (h-g/h-g)$	$n = jg/(h-g)(h/g+1)$	$o = (j+k)a/3600$	$p = (j+o)/2$
06:58:52 - 07:01:06	1521	0	2048.80	202.561	225.53	112.766	66.2119	-18.1686	-5.8779	134	-105.147	8872.394	0.530661	-76.295	12.19019	73.095095
07:04:20 - 07:05:53	1065	0	2048.80	141.832	225.53	112.766	12.724	-18.1686	-33.8469	93	-38.3048	1183.335	0.193318	16.39043	16.18067	54.590334
07:10:24 - 07:11:37	904	0	2048.80	120.391	225.53	112.766	8.59796	-18.1686	-150.1399	73	-23.4491	627.651	0.118344	26.10181	12.44278	42.721392
07:25:43 - 07:27:18	1135	0	2048.80	151.155	225.53	112.766	15.26	-18.1686	-23.8040	95	-43.367	1449.697	0.218866	8.265917	16.27872	55.639362
07:33:52 - 07:35:30	953	0	2048.80	126.917	225.53	112.766	9.66378	-18.1686	-77.4389	88	-30.5548	850.413	0.154205	26.89034	15.20701	51.603507
07:43:11 - 07:44:15	742	0	2048.80	98.817	225.53	112.766	5.85563	-18.1686	93.6801	64	-15.5993	374.7601	0.078727	32.80145	9.975928	36.987964
07:54:17 - 07:55:40	942	0	2048.80	125.452	225.53	112.766	9.41242	-18.1686	-87.2487	83	-28.325	781.2307	0.142951	26.35007	14.30663	48.653317
02:59:32 - 03:00:40	675	0	2048.80	89.894	225.53	112.766	4.97646	-18.1686	60.0637	68	-14.6208	338.3994	0.073789	38.75836	10.0086	39.004298
03:03:17 - 03:04:24	754	0	2048.80	100.415	225.53	112.766	6.02633	-18.1686	104.8294	67	-16.688	403.7641	0.084221	33.62404	10.53757	38.768787
03:15:04 - 03:15:56	775	0	2048.80	103.211	225.53	112.766	6.33579	-18.1686	133.3152	52	-13.445	329.4612	0.067855	25.11	8.300035	30.150018
03:23:31 - 03:24:36	727	0	2048.80	96.819	225.53	112.766	5.64821	-18.1686	82.8858	65	-15.4149	367.1336	0.077796	34.17018	10.01343	37.506717
03:32:25 - 03:33:21	756	0	2048.80	100.681	225.53	112.766	6.0552	-18.1686	106.9743	56	-13.9983	339.0915	0.070647	28.00342	8.82036	32.41018
03:34:43 - 03:35:54	964	0	2048.80	128.382	225.53	112.766	9.92273	-18.1686	-69.4697	71	-25.0794	704.5138	0.126572	20.84115	12.29651	41.648255
04:59:09 - 05:00:31	1144	0	2048.80	152.353	225.53	112.766	15.6329	-18.1686	-22.8559	82	-37.9243	1281.897	0.191397	6.151383	14.00628	48.003138
05:04:11 - 05:05:14	1023	0	2048.80	136.239	225.53	112.766	11.4566	-18.1686	-43.7016	63	-24.3633	721.7674	0.122957	14.27342	10.97926	36.989632
05:27:45 - 05:29:06	1265	0	2048.80	168.468	225.53	112.766	22.1678	-18.1686	-14.0715	112	-61.5522	2482.794	0.310643	-11.1045	17.72679	64.863393
05:43:38 - 05:44:42	962	0	2048.80	128.115	225.53	112.766	9.87507	-18.1686	-70.8055	64	-22.5365	632.0045	0.113738	18.92708	11.07998	37.53999



Gambar Pos Penjaga Perlintasan



Gambar Kendaraan yang melintasi Perlintasan Kereta api Jalan Bung Tomo Surabaya



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Gambar Kendaraan yang melintasi Perlintasan Kereta api Jalan Bung Tomo Surabaya



Gambar Pengukuran Jalan Bung Tomo Surabaya



Gambar Pengukuran Jalan Bung Tomo Surabaya