

PERHITUNGAN PVD PANJANG FULL (10.36M)

DATA TANAH HASIL BORE LOG

KEDALAMAN (M)	RATA-RATA NILAI N-SPT	KONSISTENSI TANAH MENURUT TABEL 2.1
(m)		
H1	4.48	2.5
H2	2.52	17.8
H3	0	57.5
		SANGAT LUNAK (VERY SOFT)
		LUNAK
		KERAS (HARD)

DATA TANAH ASLI

jenis tanah	DEPHT	N-SPT	γ kn/m ³	γ_d g/cm ³	e_v	n	W _{sat} %	γ'_{sat} kn/m	K cm/s	C _v cm ² /s	ρ_c ton/m	$mv = I/E$ cm ² /kg	ϕ	C _u kJ/m ²	C _c	C _s	γ'	P _{0'} t/m ²
lmpung lana	H1	2.5	16	0.8	2.38	0.7	88	15		0.0002	5.20	10	15	1.50	0.633	0.1266	14	3.2
pasir lanau	H2	17.8	18	1.0	1.7	0.63	63	16.3	1.10 ⁸	0.0005	9.790	0.5	10	10.65	0.7245	0.1449	15.3	7.8
pasir	H3	57.5	20	2.5	0.08	0.074	2.96	25.7			31.4	0.01	10	34.50	0.0340	0.006808	24.7	29.4

DATA TANAH QUARRY (TIMBUNAN)

jenis tanah = pasir dengan kerikil berlanauberplastisitas rendah (silty sand with gravel)

LL	48.05	%
PL	37.48	%
PI	10.57	%
OMC	34.55	%
MDD	1.38	gram/cm ³
CBR	11.9	%
Cu	82.76	
Cc	0.19	

presentase lolos ayakan No 200(75) = 33.45 %

fraksi pasir (no 4 > D > no 200) = 36.59 %

fraksi kerikil (no. 4 > D) = 29.96 %

γ_d = berat isi tanah basah = 1.73 gram/cm³

γ_{sat} = berat isi tanah kering = 1.34 gram/cm³

γ = berat jenis tanah = 1.6 kn/m³

PERHITUNGAN SETTLEMENT TANAH

$$q = 5 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	1.50	4.70	0.50	0.50
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.50	8.29	0.15	0.64
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.64
										total	0.64	

$$q = 7 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	2.10	5.30	0.51	0.51
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.70	8.49	0.15	0.67
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.67
										total	0.67	

$$q = 9 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	2.70	5.90	0.53	0.53
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.90	8.69	0.16	0.68
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.68
										total	0.68	

$$q = 12 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	3.60	6.80	0.55	0.55
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	1.20	8.99	0.16	0.71
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.71
										total	0.71	

$$q = 18 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	5.40	8.60	0.57	0.57
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	1.80	9.59	0.17	0.74
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.74
										total	0.74	

BEBAN PERKERASAN

no	jenis perk	tebal (m)	berat jenis t/m ³	berat perkerasan t/m ²
1	RIGID	0.31	2.2	0.682
2	LC	0.11	2.2	0.242
3	LPA	0.12	1.8	0.216
			total	1.14 t/m ²

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	32.00	1.14	6.40	0.5321	0.53
5.88	2.94	1.7	0.145	0.725	1.8	9.79	7.79	13.00	1.14	9.09	0.1702	0.70
14.64	7.32	0.08	0.007	0.034	2	31.44	29.44	7.00	1.14	30.14	0.0016	0.70
										total	0.70	

BEBAN LALULINTAS

TINGGI TIMBUNAN :	2m	Q LALULINTAS :	1.5	t/m ²
	3m		1.2	t/m ²
	4m		0.8	t/m ²
	5m		0.6	t/m ²

Ysat timbunan : 1.34 t/m³

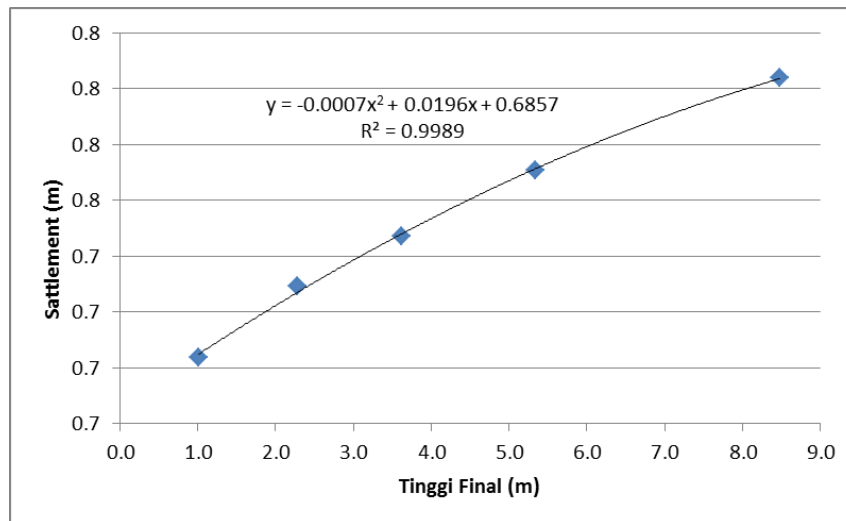
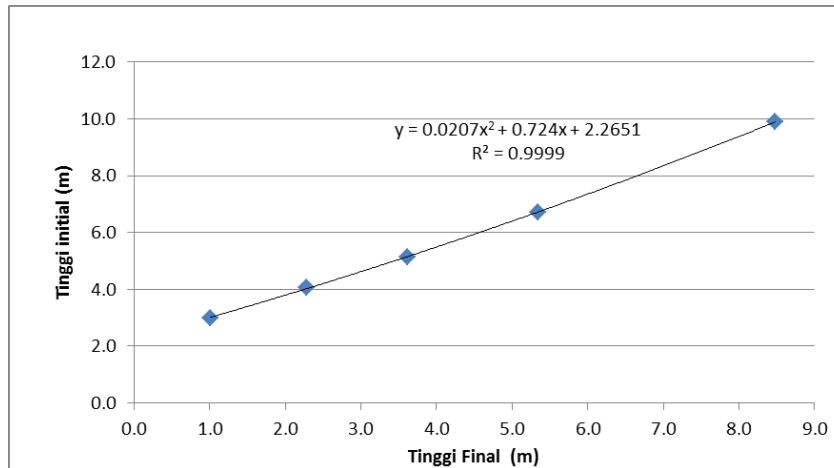
$H \text{ bongkar traffic} = Q \text{ lalulintas} : Y \text{ sat timbunan}$

h bongkar	2meter	1.119 m
	3meter	0.896 m
	4meter	0.597 m
	5meter	0.448 m

untuk timbunan diatas 5 meter menggunakan H bongkar traffic pada timbunan 5 meter yakni 0.448 m

H INITIAL DAN H FINAL

no	beban q (t/m ²)	Settlement akibat q (m)	H initial (m)	H bongkar Traffic(m)	Tebal Pavement (m)	settlement pavement	Tinggi Final	
	design	Calculation	(b+c)/1.9	grafik	design	calculation	D-C-E+ F-G	
A	B	C	D	E	F	G	H	
1	5	0.70	3.00	1.119	0.54	0.70		1.01
2	7	0.73	4.07	0.896	0.54	0.70		2.28
3	9	0.75	5.13	0.597	0.54	0.70		3.62
4	12	0.77	6.72	0.448	0.54	0.70		5.34
5	18	0.80	9.90	0.448	0.54	0.70		8.48



HARGA CV DARI DATA TANAH DI ASUMSIKAN

KEDALAMAN 0 - 4.48 M	C_v	=	0.00020	cm ² /detik
		=	0.01210	m ² /minggu
KEDALAMAN 4.48 - 10.36 M	C_v	=	0.00050	cm ² /detik
		=	0.03024	m ² /minggu
KEDALAMAN 10.36 - 25.00 M	C_v	=	0.000	cm ² /detik
		=	0	m ² /minggu
kh/kv =2 sampai 5	rata rata C_v		0.014112	m ² /minggu

WAKTU

TEBAL LAPISAN TANAH TERKONSOLIDASI = 10.36 M

T 90% = 0.006311176

Hdr = 10.36

Cv = 0.014

$t = T_{90\%} \times (Hdr)^2 / Cv$ rata rata

t = 48.0 TAHUN

Cv Gabungan 0.000319334 cm²/ detik

0.019313306 m²/ minggu

Ch = 2 X Cv gabungan

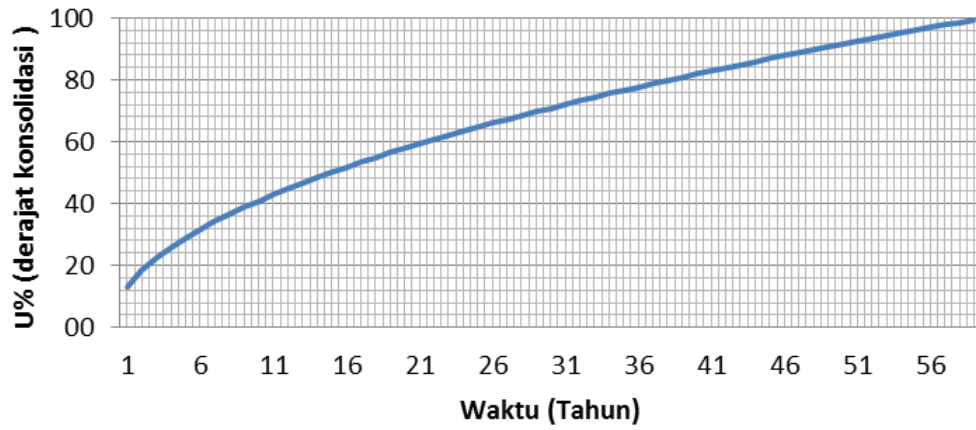
Ch = 0.038626612 m²/ minggu

KECEPATAN PENURUNAN TANAH ASLI (SETTLEMENT) TANPA PVD

TAHUN	Tv	U(%)	Sc(m)
1	0.000131	12.9	0.104028
2	0.000263	18.3	0.147117
3	0.000394	22.4	0.180181
4	0.000526	25.9	0.208056
5	0.000657	28.9	0.232613
6	0.000789	31.7	0.254815
7	0.00092	34.2	0.275232
8	0.001052	36.6	0.294235
9	0.001183	38.8	0.312083
10	0.001315	40.9	0.328965
11	0.001446	42.9	0.345021
12	0.001578	44.8	0.360363
13	0.001709	46.7	0.375077
14	0.001841	48.4	0.389236
15	0.001972	50.1	0.402898
16	0.002104	51.8	0.416111
17	0.002235	53.4	0.428918

18	0.002367	54.9	0.441352
19	0.002498	56.4	0.453447
20	0.00263	57.9	0.465226
21	0.002761	59.3	0.476715
22	0.002893	60.7	0.487934
23	0.003024	62.1	0.4989
24	0.003156	63.4	0.50963
25	0.003287	64.7	0.520139
26	0.003419	66.0	0.53044
27	0.00355	67.2	0.540544
28	0.003682	68.5	0.550463
29	0.003813	69.7	0.560207
30	0.003944	70.9	0.569784
31	0.004076	72.1	0.579202
32	0.004207	73.2	0.58847
33	0.004339	74.3	0.597594
34	0.00447	75.5	0.606581
35	0.004602	76.6	0.615437
36	0.004733	77.7	0.624167
37	0.004865	78.7	0.632776
38	0.004996	79.8	0.64127
39	0.005128	80.8	0.649653
40	0.005259	81.9	0.657929
41	0.005391	82.9	0.666103
42	0.005522	83.9	0.674177
43	0.005654	84.9	0.682156
44	0.005785	85.8	0.690042
45	0.005917	86.8	0.69784
46	0.006048	87.8	0.705551
47	0.00618	88.7	0.713179
48	0.006311	89.7	0.720726
49	0.006443	90.6	0.728194
50	0.006574	91.5	0.735587
51	0.006706	92.4	0.742907
52	0.006837	93.3	0.750155
53	0.006969	94.2	0.757334
54	0.0071	95.1	0.764445
55	0.007232	96.0	0.771491
56	0.007363	96.8	0.778473
57	0.007495	97.7	0.785392
58	0.007626	98.6	0.792252
59	0.007757	99.4	0.799053

Grafik penurunan Tanah tanpa Perbaikan



POLA SEGITIGA

t	ch	s (jarak)	D	a	b	dw	n	Fn	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
Minggu	m ² /minggu	m	m	m	m				MINGGU																														
0.5	0.0386	1	1.05	0.1	0.004	0.066242	15.85096	2.013	0.564276	1.128552	2.257103	3.385655	4.514207	5.642758	6.77131	7.899861	9.028413	10.15696	11.28552	12.41407	13.54262	14.67117	15.79972	16.92827	18.05683	19.18538	20.31393	21.44248	22.57103	23.69958	24.82814	25.95669	27.08524	28.21379	29.34234	30.47089	31.59945	32.728	33.85655
1	0.0386	2	2.1	0.1	0.004	0.066242	31.70192	2.706	0.189638	0.379277	0.758554	1.137831	1.517107	1.896384	2.275661	2.654938	3.034215	3.413492	3.792769	4.172046	4.551322	4.930599	5.309876	5.689153	6.06843	6.447707	6.826984	7.206261	7.585537	7.964814	8.344091	8.723368	9.102645	9.481922	9.861199	10.24048	10.61975	10.99903	11.37831
2	0.0386	3	3.15	0.1	0.004	0.066242	47.55288	3.112	0.096911	0.193822	0.387644	0.581466	0.775288	0.96911	1.162932	1.356754	1.550576	1.744398	1.93822	2.132042	2.325864	2.519686	2.713508	2.90733	3.101152	3.294974	3.488796	3.682618	3.87644	4.070262	4.264084	4.457906	4.651728	4.84555	5.039372	5.233194	5.427016	5.620838	5.81466
3	0.0386	4	4.2	0.1	0.004	0.066242	63.40385	3.400	0.059552	0.119104	0.238208	0.357312	0.476416	0.59552	0.714624	0.833728	0.952832	1.071936	1.19104	1.310144	1.429248	1.548351	1.667455	1.786559	1.905663	2.024767	2.143871	2.262975	2.382079	2.501183	2.620287	2.739391	2.858495	2.977599	3.096703	3.215807	3.334911	3.454015	3.573119
4	0.0386	5	5.25	0.1	0.004	0.066242	79.25481	3.623	0.040615	0.08123	0.16246	0.24369	0.32492	0.40615	0.48738	0.56861	0.64984	0.73107	0.8123	0.89353	0.97476	1.05599	1.13722	1.21845	1.29968	1.38091	1.46214	1.54337	1.6246	1.70583	1.78706	1.86829	1.94952	2.03075	2.11198	2.19321	2.27444	2.35567	2.4369
5	0.0386	6	6.3	0.1	0.004	0.066242	95.10577	3.805	0.029624	0.059249	0.118497	0.177746	0.236995	0.296244	0.355492	0.414741	0.47399	0.533238	0.592487	0.651736	0.710985	0.770233	0.829482	0.888731	0.94798	1.007228	1.066477	1.125726	1.184974	1.244223	1.303472	1.362721	1.421969	1.481218	1.540467	1.599715	1.658964	1.718213	1.777462
6	0.0386	7	7.35	0.1	0.004	0.066242	110.9567	3.959	0.022647	0.045293	0.090586	0.13588	0.181173	0.226466	0.271759	0.317052	0.362345	0.407639	0.452932	0.498225	0.543518	0.588811	0.634105	0.679398	0.724691	0.769984	0.815277	0.86057	0.905864	0.951157	0.99645	1.041743	1.087036	1.13233	1.177623	1.222916	1.268209	1.313502	1.358795

UV POLA SEGITIGA

t	cv gab	Hdr	Tv	Uv
minggu	m ² /minggu	m		
0.5	0.01931331	10.36	8.99719E-05	0.010706
1	0.01931331	10.36	0.000179944	0.01514
2	0.01931331	10.36	0.000359888	0.021412
3	0.01931331	10.36	0.000539832	0.026224
4	0.01931331	10.36	0.000719776	0.030281
5	0.01931331	10.36	0.000899719	0.033855
6	0.01931331	10.36	0.001079663	0.037086
7	0.01931331	10.36	0.001259607	0.040057
8	0.01931331	10.36	0.001439551	0.042823
9	0.01931331	10.36	0.001619495	0.045421
10	0.01931331	10.36	0.001799439	0.047878
11	0.01931331	10.36	0.001979383	0.050215
12	0.01931331	10.36	0.002159327	0.052447
13	0.01931331	10.36	0.002339271	0.054589
14	0.01931331	10.36	0.002519214	0.05665
15	0.01931331	10.36	0.002699158	0.058638
16	0.01931331	10.36	0.002879102	0.060561
17	0.01931331	10.36	0.003059046	0.062425
18	0.01931331	10.36	0.00323899	0.064235
19	0.01931331	10.36	0.003418934	0.065995
20	0.01931331	10.36	0.003598878	0.067709
21	0.01931331	10.36	0.003778822	0.069381
22	0.01931331	10.36	0.003958766	0.071014
23	0.01931331	10.36	0.00413871	0.07261
24	0.01931331	10.36	0.004318653	0.074172
25	0.01931331	10.36	0.004498597	0.075701
26	0.01931331	10.36	0.004678541	0.077201
27	0.01931331	10.36	0.004858485	0.078671
28	0.01931331	10.36	0.005038429	0.080115
29	0.01931331	10.36	0.005218373	0.081533
30	0.01931331	10.36	0.005398317	0.082927

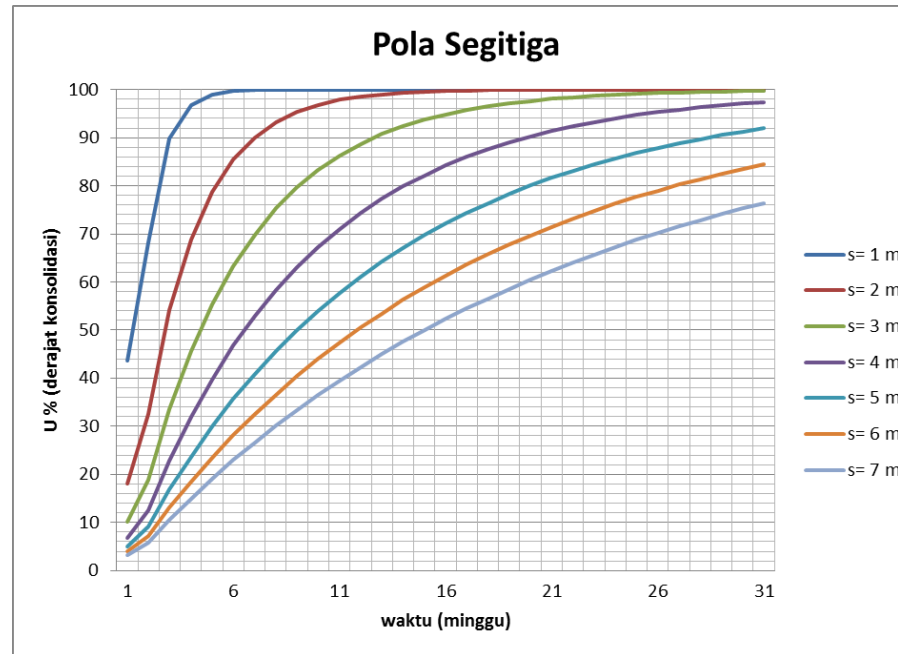
UH POLA SEGITIGA

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	0.431195	0.676461	0.895322	0.966133	0.989043	0.996455	0.998853	0.999629	0.99988	0.999961	0.999987	0.999996	0.999999	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	0.172726	0.315617	0.53162	0.679449	0.78062	0.84986	0.897247	0.929677	0.951872	0.967062	0.977458	0.984573	0.989442	0.992774	0.995055	0.996616	0.997684	0.998415	0.998915	0.999258	0.999492	0.999652	0.999762	0.999837	0.999889	0.999924	0.999948	0.999964	0.999976	0.999983	0.999989
3	0.092354	0.176179	0.321319	0.440888	0.539392	0.620541	0.687394	0.742469	0.78784	0.825218	0.856011	0.881379	0.902277	0.919494	0.933678	0.945362	0.954988	0.962918	0.969451	0.974833	0.979267	0.98292	0.985929	0.988408	0.99045	0.992133	0.993519	0.994661	0.995601	0.996376	0.997015
4	0.057808	0.112274	0.211942	0.30042	0.378964	0.44869	0.510588	0.565536	0.614314	0.657617	0.696057	0.730182	0.760475	0.787368	0.811241	0.832433	0.851247	0.867948	0.882774	0.895935	0.907619	0.917991	0.927198	0.935372	0.942628	0.949069	0.954788	0.959864	0.96437	0.96837	0.971921
5	0.039797	0.078011	0.149936	0.21625	0.277391	0.333762	0.385735	0.433655	0.477836	0.51857	0.556127	0.590753	0.622679	0.652114	0.679253	0.704275	0.727344	0.748614	0.768225	0.786306	0.802976	0.818346	0.832517	0.845583	0.857629	0.868735	0.878975	0.888417	0.897121	0.905147	0.912546
6	0.029187	0.057522	0.111735	0.16283	0.210985	0.256371	0.299146	0.33946	0.377456	0.413266	0.447016	0.478824	0.508803	0.537058	0.563687	0.588785	0.612439	0.634732	0.655743	0.675545	0.694208	0.711798	0.728376	0.744	0.758726	0.772604	0.785685	0.798013	0.809631	0.820582	0.830902
7	0.02239	0.044278	0.086596	0.12704	0.165693	0.202635	0.237941	0.271683	0.303932	0.334753	0.364209	0.39236	0.419266	0.44498	0.469555	0.493042	0.515489	0.536943	0.557446	0.577041	0.595769	0.613668	0.630774	0.647123	0.662748	0.677681	0.691952	0.705592	0.718628	0.731087	0.742994

U RATA-RATA POLA SEGITIGA

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	43.72843	68.13591	89.75636	96.70208	98.93744	99.65749	99.88955	99.96438	99.98851	99.99629	99.9988	99.99961	99.99987	99.99996	99.99999	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	18.15822	32.59787	54.16486	68.78547	78.7263	85.4943	90.10575	93.24944	95.39334	96.85584	97.85373	98.53473	98.99955	99.31686	99.53349	99.6814	99.7824	99.85137	99.89848	99.93065	99.95263	99.96764	99.97789	99.98489	99.98968	99.99295	99.99518	99.99671	99.99775	99.99846	99.99895
3	10.20712	18.86518	33.58055	45.55501	55.33393	63.33878	69.89872	75.27846	79.69255	83.3157	86.2905	88.73354	90.74028	92.38888	93.74347	94.8566	95.77142	96.52332	97.14136	97.64942	98.0671	98.41049	98.69283	98.92497	99.11586	99.27283	99.40192	99.50807	99.59537	99.66717	99.72623
4	6.789454	12.57139	22.88153	31.87654	39.77694	46.73544	52.87379	58.29391	63.08307	67.31681	71.06094	74.37308	77.30379	79.89751	82.19338	84.22591	86.02553	87.61911	89.03037	90.28029	91.38739	92.36807	93.23682	94.00646	94.68834	95.29249	95.82779	96.30212	96.72244	97.09491	97.42499
5	5.007696	9.196981	16.81368	23.68025	29.92716	35.63171	40.8516	45.63409	50.01963	54.04369	57.73783	61.13036	64.24686	67.11049	69.74231	72.16153	74.38566	76.43071	78.31131	80.04087	81.63168	83.09498	84.44109	85.6795	86.81888	87.86723	88.83186	89.7195	90.53634	91.28806	91.97987
6	3.95802	7.179126	13.07542	18.47834	23.48771	28.15462	32.51377	36.59198	40.41151	43.99157	47.34914	50.49951	53.45655	56.23296	58.84043	61.28977	63.59098	65.75338	67.78561	69.69575	71.49134	73.1794	74.76652	76.25886	77.66217	78.98186	80.223	81.39031	82.48826	83.52101	84.49248
7	3.285588	5.874816	10.61534	14.99322	19.09564	22.96293	26.62024	30.08578	33.37398	36.49687	39.46489	42.28728	44.97237	47.52776	49.96044	52.27691	54.48318	56.58489	58.58733	60.49546	62.31396	64.04723	65.69944	67.27453	68.77622	70.20806	71.57337	72.87535	74.117	75.30119	76.43063

DIAGRAM POLA SEGITIGA



POLA BUJUR SANGKAR

t	ch	s (jarak)	D	a	b	dw	n	Fn	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
Minggu	m ² /minggu	m	m	m	m				MINGGU																														
0.5	0.0386	1	1.13	0.1	0.004	0.066242	17.05865	2.087	0.504976	1.009952	2.019905	3.029857	4.03981	5.049762	6.059714	7.069667	8.079619	9.089572	10.09952	11.10948	12.11943	13.12938	14.13933	15.14929	16.15924	17.16919	18.17914	19.1891	20.19905	21.209	22.21895	23.22891	24.23886	25.24881	26.25876	27.26872	28.27867	29.28862	30.29857
1	0.0386	2	2.26	0.1	0.004	0.066242	34.11731	2.780	0.16818	0.33636	0.67272	1.009079	1.345439	1.681799	2.018159	2.354518	2.690878	3.027238	3.363598	3.699957	4.036317	4.372677	4.709037	5.045396	5.381756	5.718116	6.054476	6.390835	6.727195	7.063555	7.399915	7.736274	8.072634	8.408994	8.745354	9.081713	9.418073	9.754433	10.09079
2	0.0386	3	3.39	0.1	0.004	0.066242	51.17596	3.185	0.085649	0.171298	0.342597	0.513895	0.685194	0.856492	1.027791	1.199089	1.370388	1.541686	1.712985	1.884283	2.055581	2.22688	2.398178	2.569477	2.740775	2.912074	3.083372	3.254671	3.425969	3.597268	3.768566	3.939864	4.111163	4.282461	4.45376	4.625058	4.796357	4.967655	5.138954
3	0.0386	4	4.52	0.1	0.004	0.066242	68.23462	3.473	0.052529	0.105058	0.210116	0.315174	0.420231	0.525289	0.630347	0.735405	0.840463	0.945521	1.050579	1.155636	1.260694	1.365752	1.47081	1.575868	1.680926	1.785983	1.891041	1.996099	2.101157	2.206215	2.311273	2.416331	2.521388	2.626446	2.731504	2.836562	2.94162	3.046678	3.151736
4	0.0386	5	5.65	0.1	0.004	0.066242	85.29327	3.696	0.035779	0.071557	0.143114	0.214671	0.286229	0.357786	0.429343	0.5009	0.572457	0.644014	0.715571	0.787128	0.858686	0.930243	1.0018	1.073357	1.144914	1.216471	1.288028	1.359585	1.431143	1.5027	1.574257	1.645814	1.717371	1.788928	1.860485	1.932042	2.0036	2.075157	2.146714
5	0.0386	6	6.78	0.1	0.004	0.066242	102.3519	3.878	0.026072	0.052144	0.104287	0.156431	0.208575	0.260718	0.312862	0.365006	0.417149	0.469293	0.521437	0.573581	0.625724	0.677868	0.730012	0.782155	0.834299	0.886443	0.938586	0.99073	1.042874	1.095017	1.147161	1.199305	1.251448	1.303592	1.355736	1.40788	1.460023	1.512167	1.564311
6	0.0386	7	7.91	0.1	0.004	0.066242	119.4106	4.033	0.019916	0.039832	0.079665	0.119497	0.159329	0.199161	0.238994	0.278826	0.318658	0.358491	0.398323	0.438155	0.477988	0.51782	0.557652	0.597484	0.637317	0.677149	0.716981	0.756814	0.796646	0.836478	0.87631	0.916143	0.955975	0.995807	1.03564	1.075472	1.115304	1.155137	1.194969

UV POLA BUJUR SANGKAR

t	cv gab	Hdr	Tv	Uv
minggu	m ² /minggu	m		
0.5	0.01931331	10.36	8.99719E-05	0.010706
1	0.01931331	10.36	0.000179944	0.01514
2	0.01931331	10.36	0.000359888	0.021412
3	0.01931331	10.36	0.000539832	0.026224
4	0.01931331	10.36	0.000719776	0.030281
5	0.01931331	10.36	0.000899719	0.033855
6	0.01931331	10.36	0.001079663	0.037086
7	0.01931331	10.36	0.001259607	0.040057
8	0.01931331	10.36	0.001439551	0.042823
9	0.01931331	10.36	0.001619495	0.045421
10	0.01931331	10.36	0.001799439	0.047878
11	0.01931331	10.36	0.001979383	0.050215
12	0.01931331	10.36	0.002159327	0.052447
13	0.01931331	10.36	0.002339271	0.054589
14	0.01931331	10.36	0.002519214	0.05665
15	0.01931331	10.36	0.002699158	0.058638
16	0.01931331	10.36	0.002879102	0.060561
17	0.01931331	10.36	0.003059046	0.062425
18	0.01931331	10.36	0.00323899	0.064235
19	0.01931331	10.36	0.003418934	0.065995
20	0.01931331	10.36	0.003598878	0.067709
21	0.01931331	10.36	0.003778822	0.069381
22	0.01931331	10.36	0.003958766	0.071014
23	0.01931331	10.36	0.00413871	0.07261
24	0.01931331	10.36	0.004318653	0.074172
25	0.01931331	10.36	0.004498597	0.075701
26	0.01931331	10.36	0.004678541	0.077201
27	0.01931331	10.36	0.004858485	0.078671
28	0.01931331	10.36	0.005038429	0.080115
29	0.01931331	10.36	0.005218373	0.081533
30	0.01931331	10.36	0.005398317	0.082927

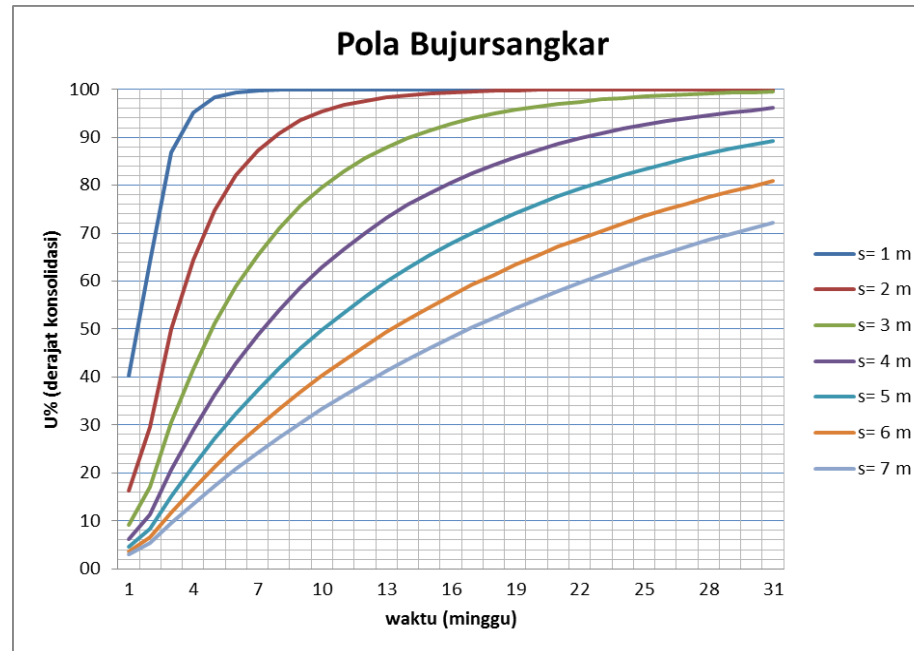
UH POLA BUJURSANGKAR

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	0.396448	0.635726	0.867304	0.951662	0.982392	0.993586	0.997663	0.999149	0.99969	0.999887	0.999959	0.999985	0.999995	0.999998	0.999999	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	0.154783	0.285609	0.489646	0.635407	0.739538	0.813929	0.867072	0.905038	0.93216	0.951536	0.965377	0.975266	0.98233	0.987377	0.990982	0.993558	0.995398	0.996712	0.997651	0.998322	0.998801	0.999144	0.999388	0.999563	0.999688	0.999777	0.999841	0.999886	0.999919	0.999942	0.999958
3	0.082076	0.157415	0.29005	0.401807	0.495972	0.575313	0.642165	0.698494	0.745955	0.785946	0.819641	0.848032	0.871954	0.892111	0.909094	0.923404	0.935461	0.945621	0.954181	0.961393	0.967471	0.972591	0.976906	0.980541	0.983604	0.986185	0.98836	0.990192	0.991736	0.993037	0.994133
4	0.051168	0.099718	0.189492	0.270314	0.343077	0.408584	0.467558	0.520652	0.568452	0.611485	0.650227	0.685105	0.716506	0.744775	0.770226	0.793138	0.813766	0.832337	0.849056	0.864108	0.877659	0.889858	0.900841	0.910729	0.919631	0.927645	0.93486	0.941356	0.947204	0.952468	0.957208
5	0.035142	0.06905	0.133332	0.193176	0.248887	0.300751	0.349034	0.393983	0.435829	0.474785	0.511051	0.544813	0.576244	0.605504	0.632744	0.658103	0.681711	0.703689	0.724149	0.743197	0.760929	0.777437	0.792805	0.807112	0.820431	0.83283	0.844373	0.855119	0.865123	0.874436	0.883106
6	0.025732	0.050802	0.099024	0.144796	0.188242	0.229481	0.268626	0.305781	0.341049	0.374525	0.406301	0.436462	0.465091	0.492266	0.51806	0.542544	0.565784	0.587843	0.608781	0.628656	0.647521	0.665428	0.682425	0.698559	0.713873	0.728409	0.742206	0.755303	0.767734	0.779534	0.790734
7	0.019717	0.039045	0.076566	0.112622	0.14727	0.180566	0.212561	0.243307	0.272852	0.301244	0.328527	0.354745	0.379939	0.40415	0.427415	0.449772	0.471256	0.491901	0.51174	0.530804	0.549124	0.566729	0.583646	0.599903	0.615525	0.630537	0.644963	0.658825	0.672147	0.684948	0.697249

U RATA-RATA POLA BUJURSANGKAR

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	40.291	63.96254	86.87247	95.21798	98.25803	99.36545	99.76885	99.9158	99.96933	99.98883	99.99593	99.99852	99.99946	99.9998	99.99993	99.99997	99.99999	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	16.38322	29.64251	50.0573	64.49683	74.74252	82.02279	87.2002	90.88415	93.50648	95.37368	96.70351	97.65079	98.32569	98.80659	99.1493	99.39355	99.56764	99.69174	99.78021	99.84328	99.88824	99.92031	99.94317	99.95947	99.97109	99.97938	99.9853	99.98951	99.99252	99.99466	99.99619
3	9.19028	17.01719	30.52516	41.7494	51.12339	58.96909	65.54359	71.05714	75.68344	79.56684	82.82763	85.56633	87.867	89.80002	91.42438	92.78954	93.93699	94.90153	95.7124	96.39413	96.96732	97.44929	97.85458	98.19541	98.48204	98.7231	98.92585	99.09638	99.23982	99.36047	99.46196
4	6.132595	11.33483	20.68461	28.9449	36.29686	42.86057	48.73043	53.98536	58.69319	62.91313	66.69729	70.09175	73.13743	75.87077	78.32423	80.52682	82.50445	84.28032	85.87517	87.30758	88.59422	89.74999	90.78829	91.72111	92.55921	93.31226	93.98891	94.59695	95.14335	95.63438	96.07568
5	4.547206	8.314484	15.18888	21.43335	27.16309	32.4424	37.31759	41.82589	45.99885	49.86406	53.44608	56.767	59.84685	62.70391	65.35489	67.81511	70.09869	72.2186	74.18683	76.01443	77.71162	79.28785	80.75185	82.11172	83.37495	84.54848	85.63874	86.65169	87.59286	88.46738	89.28
6	3.616258	6.517351	11.83152	16.72223	21.28226	25.5567	29.57492	33.35897	36.92674	40.29349	43.4726	46.47601	49.3146	51.99827	54.53619	56.93682	59.20803	61.35718	63.39113	65.31631	67.13876	68.86413	70.49776	72.04465	73.50954	74.89685	76.2108	77.45534	78.63419	79.75089	80.80876
7	3.021181	5.359456	9.633852	13.58926	17.30914	20.83072	24.17636	27.36178	30.39908	33.29819	36.06757	38.71463	41.24599	43.66768	45.98519	48.20362	50.32772	52.3619	54.31031	56.17687	57.96527	59.67898	61.32131	62.89539	64.4042	65.85057	67.23717	68.56658	69.84125	71.06348	72.23552

DIAGRAM POLA BUJURSANGKAR



PERHITUNGAN PVD PANJANG $\frac{2}{3}$ (7.08M)

DATA TANAH HASIL BORE LOG

KEDALAMAN (M)	RATA-RATA NILAI N-SPT	KONSISTENSI TANAH MENURUT TABEL 2.1
(m)		
H1 4.48	2.5	SANGAT LUNAK (VERY SOFT)
H2 2.52	17.8	LUNAK
H3 0	57.5	KERAS (HARD)

DATA TANAH ASLI

jenis tanah	DEPHT	N-SPT	γ	γ_d	e_s	n	W _{sat}	γ'_{sat}	K	C _v	pc	mv = I/E	ϕ	C _u	C _c	C _s	γ'	P _{0'}
			kn/m ³	g/cm ³			%	kn/m	cm/s	cm ² /s	ton/m	cm ² /kg		kJ/m ²				t/m ²
mpung lana	H1	2.5	16	0.8	2.38	0.7	88	15		0.0002	5.20	10	15	1.50	0.633	0.1266	14	3.2
pasir lanau	H2	17.8	18	1.0	1.7	0.63	63	16.3	1.10 ⁸	0.0005	9.790	0.5	10	10.65	0.7245	0.1449	15.3	7.8
pasir	H3	57.5	20	2.5	0.08	0.074	2.96	25.7			31.4	0.01	10	34.50	0.0340	0.006808	24.7	29.4

DATA TANAH QUARRY (TIMBUNAN)

jenis tanah = pasir dengan kerikil berlanauberplastisitas rendah (silty sand with gravel)

LL	48.05	%
PL	37.48	%
PI	10.57	%
OMC	34.55	%
MDD	1.38	gram/cm ³
CBR	11.9	%
Cu	82.76	
Cc	0.19	

presentase lolos ayakan No 200(75) = 33.45 %

fraksi pasir (no 4 > D > no 200) = 36.59 %

fraksi kerikil (no. 4 > D) = 29.96 %

γ_d = berat isi tanah basah = 1.73 gram/cm³

γ_{sat} = berat isi tanah kering = 1.34 gram/cm³

γ = berat jenis tanah = 1.6 kn/m³

PERHITUNGAN SETTLEMENT TANAH

$$q = 5 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	1.50	4.70	0.50	0.50
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.50	8.29	0.15	0.64
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.64
										total	0.64	

$$q = 7 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	2.10	5.30	0.51	0.51
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.70	8.49	0.15	0.67
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.67
										total	0.67	

$$q = 9 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	2.70	5.90	0.53	0.53
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.90	8.69	0.16	0.68
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.68
										total	0.68	

$$q = 12 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	3.60	6.80	0.55	0.55
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	1.20	8.99	0.16	0.71
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.71
										total	0.71	

$$q = 18 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	5.40	8.60	0.57	0.57
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	1.80	9.59	0.17	0.74
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.74
										total	0.74	

BEBAN PERKERASAN

no	jenis perk	tebal (m)	berat jenis t/m ³	berat perkerasan t/m ²
1	RIGID	0.31	2.2	0.682
2	LC	0.11	2.2	0.242
3	LPA	0.12	1.8	0.216
			total	1.14 t/m ²

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	32.00	1.14	6.40	0.5321	0.53
5.88	2.94	1.7	0.145	0.725	1.8	9.79	7.79	13.00	1.14	9.09	0.1702	0.70
14.64	7.32	0.08	0.007	0.034	2	31.44	29.44	7.00	1.14	30.14	0.0016	0.70
										total	0.70	

BEBAN LALULINTAS

TINGGI TIMBUNAN :	2m	Q LALULINTAS :	1.5	t/m ²
	3m		1.2	t/m ²
	4m		0.8	t/m ²
	5m		0.6	t/m ²

Ysat timbunan : 1.34 t/m³

$H_{\text{bongkar traffic}} = Q_{\text{lalulintas}} : Y_{\text{sat timbunan}}$

h bongkar 2meter 1.119 m

3meter 0.896 m

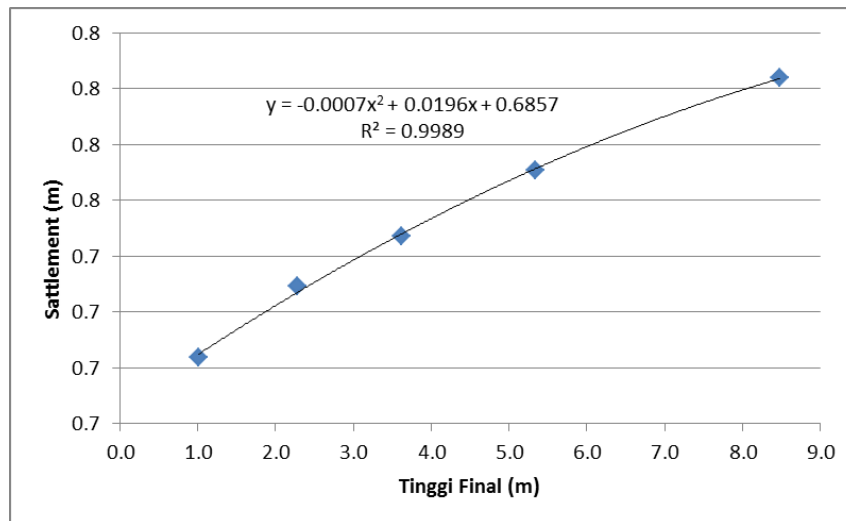
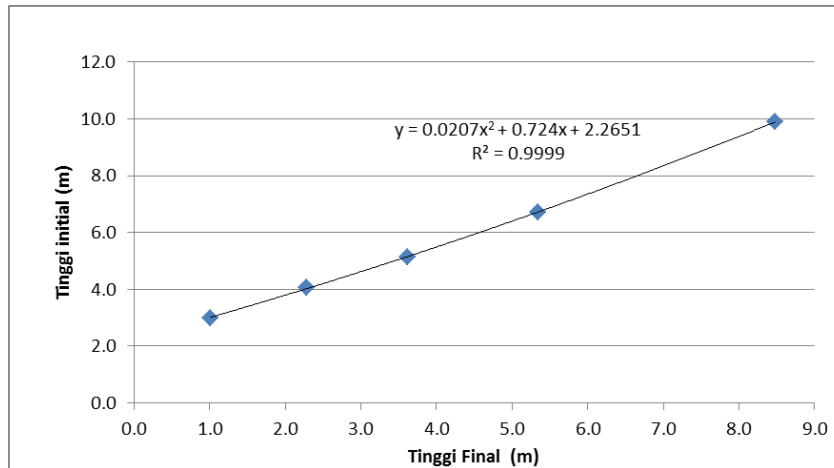
4meter 0.597 m

5meter 0.448 m

untuk timbunan diatas 5 meter menggunakan H bongkar traffic pada timbunan 5 meter yakni 0.448 m

H INITIAL DAN H FINAL

no	beban q (t/m ²)	Settlement akibat q (m)	H initial (m)	H bongkar Traffic(m)	Tebal Pavement (m)	settlement pavement	Tinggi Final	
	design	Calculation	(b+c)/1.9	grafik	design	calculation	D-C-E+	F-G
A	B	C	D	E	F	G	H	
1	5	0.70	3.00	1.119	0.54	0.70		1.01
2	7	0.73	4.07	0.896	0.54	0.70		2.28
3	9	0.75	5.13	0.597	0.54	0.70		3.62
4	12	0.77	6.72	0.448	0.54	0.70		5.34
5	18	0.80	9.90	0.448	0.54	0.70		8.48



HARGA CV DARI DATA TANAH DI ASUMSIKAN

KEDALAMAN 0 - 4.48 M	C_v	=	0.00020	cm ² /detik
		=	0.01210	m ² /minggu
KEDALAMAN 4.48 - 10.36 M	C_v	=	0.00050	cm ² /detik
		=	0.03024	m ² /minggu
KEDALAMAN 10.36 - 25.00 M	C_v	=	0.000	cm ² /detik
		=	0	m ² /minggu
kh/kv =2 sampai 5	rata rata C_v		0.014112	m ² /minggu

WAKTU

TEBAL LAPISAN TANAH TERKONSOLIDASI = 7.0866 M

T 90% = 0.006311176

Hdr = 7.086

Cv = 0.014

$t = T_{90\%} \times (Hdr)^2 / Cv$ rata rata

t = 48.0 TAHUN

Cv Gabungan 0.000319334 cm²/ detik

0.019313306 m²/ minggu

Ch = 2 X Cv gabungan

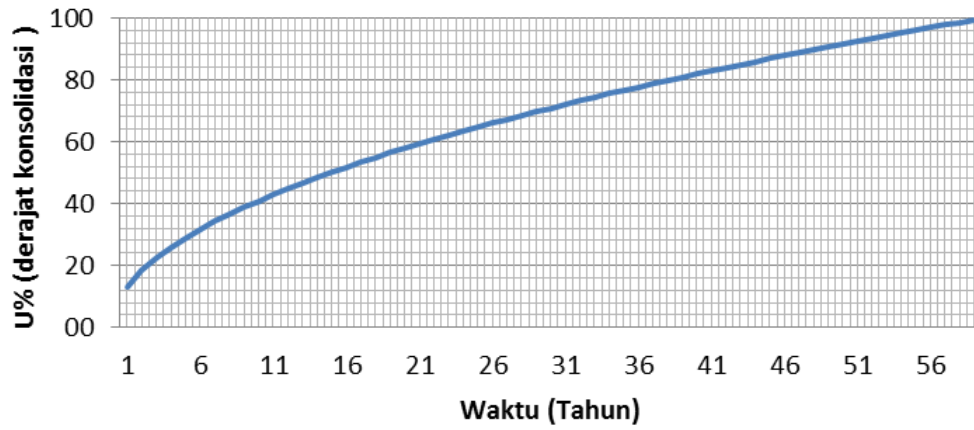
Ch = 0.038626612 m²/ minggu

KECEPATAN PENURUNAN TANAH ASLI (SETTLEMENT) TANPA PVD

TAHUN	Tv	U(%)	Sc(m)
1	0.000131	12.9	0.104028
2	0.000263	18.3	0.147117
3	0.000394	22.4	0.180181
4	0.000526	25.9	0.208056
5	0.000657	28.9	0.232613
6	0.000789	31.7	0.254815
7	0.00092	34.2	0.275232
8	0.001052	36.6	0.294235
9	0.001183	38.8	0.312083
10	0.001315	40.9	0.328965
11	0.001446	42.9	0.345021
12	0.001578	44.8	0.360363
13	0.001709	46.7	0.375077
14	0.001841	48.4	0.389236
15	0.001972	50.1	0.402898
16	0.002104	51.8	0.416111
17	0.002235	53.4	0.428918

18	0.002367	54.9	0.441352
19	0.002498	56.4	0.453447
20	0.00263	57.9	0.465226
21	0.002761	59.3	0.476715
22	0.002893	60.7	0.487934
23	0.003024	62.1	0.4989
24	0.003156	63.4	0.50963
25	0.003287	64.7	0.520139
26	0.003419	66.0	0.53044
27	0.00355	67.2	0.540544
28	0.003682	68.5	0.550463
29	0.003813	69.7	0.560207
30	0.003944	70.9	0.569784
31	0.004076	72.1	0.579202
32	0.004207	73.2	0.58847
33	0.004339	74.3	0.597594
34	0.00447	75.5	0.606581
35	0.004602	76.6	0.615437
36	0.004733	77.7	0.624167
37	0.004865	78.7	0.632776
38	0.004996	79.8	0.64127
39	0.005128	80.8	0.649653
40	0.005259	81.9	0.657929
41	0.005391	82.9	0.666103
42	0.005522	83.9	0.674177
43	0.005654	84.9	0.682156
44	0.005785	85.8	0.690042
45	0.005917	86.8	0.69784
46	0.006048	87.8	0.705551
47	0.00618	88.7	0.713179
48	0.006311	89.7	0.720726
49	0.006443	90.6	0.728194
50	0.006574	91.5	0.735587
51	0.006706	92.4	0.742907
52	0.006837	93.3	0.750155
53	0.006969	94.2	0.757334
54	0.0071	95.1	0.764445
55	0.007232	96.0	0.771491
56	0.007363	96.8	0.778473
57	0.007495	97.7	0.785392
58	0.007626	98.6	0.792252
59	0.007757	99.4	0.799053

Grafik penurunan Tanah tanpa Perbaikan



POLA SEGITIGA

t	ch	s (jarak)	D	a	b	dw	n	Fn	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
Minggu	m ² /minggu	m	m	m	m				MINGGU																														
0.5	0.0386	1	1.05	0.1	0.004	0.066242	15.85096	2.013	0.564276	1.128552	2.257103	3.385655	4.514207	5.642758	6.77131	7.899861	9.028413	10.15696	11.28552	12.41407	13.54262	14.67117	15.79972	16.92827	18.05683	19.18538	20.31393	21.44248	22.57103	23.69958	24.82814	25.95669	27.08524	28.21379	29.34234	30.47089	31.59945	32.728	33.85655
1	0.0386	2	2.1	0.1	0.004	0.066242	31.70192	2.706	0.189638	0.379277	0.758554	1.137831	1.517107	1.896384	2.275661	2.654938	3.034215	3.413492	3.792769	4.172046	4.551322	4.930599	5.309876	5.689153	6.06843	6.447707	6.826984	7.206261	7.585537	7.964814	8.344091	8.723368	9.102645	9.481922	9.861199	10.24048	10.61975	10.99903	11.37831
2	0.0386	3	3.15	0.1	0.004	0.066242	47.55288	3.112	0.096911	0.193822	0.387644	0.581466	0.775288	0.96911	1.162932	1.356754	1.550576	1.744398	1.93822	2.132042	2.325864	2.519686	2.713508	2.90733	3.101152	3.294974	3.488796	3.682618	3.87644	4.070262	4.264084	4.457906	4.651728	4.84555	5.039372	5.233194	5.427016	5.620838	5.81466
3	0.0386	4	4.2	0.1	0.004	0.066242	63.40385	3.400	0.059552	0.119104	0.238208	0.357312	0.476416	0.59552	0.714624	0.833728	0.952832	1.071936	1.19104	1.310144	1.429248	1.548351	1.667455	1.786559	1.905663	2.024767	2.143871	2.262975	2.382079	2.501183	2.620287	2.739391	2.858495	2.977599	3.096703	3.215807	3.334911	3.454015	3.573119
4	0.0386	5	5.25	0.1	0.004	0.066242	79.25481	3.623	0.040615	0.08123	0.16246	0.24369	0.32492	0.40615	0.48738	0.56861	0.64984	0.73107	0.8123	0.89353	0.97476	1.05599	1.13722	1.21845	1.29968	1.38091	1.46214	1.54337	1.6246	1.70583	1.78706	1.86829	1.94952	2.03075	2.11198	2.19321	2.27444	2.35567	2.4369
5	0.0386	6	6.3	0.1	0.004	0.066242	95.10577	3.805	0.029624	0.059249	0.118497	0.177746	0.236995	0.296244	0.355492	0.414741	0.47399	0.533238	0.592487	0.651736	0.710985	0.770233	0.829482	0.888731	0.94798	1.007228	1.066477	1.125726	1.184974	1.244223	1.303472	1.362721	1.421969	1.481218	1.540467	1.599715	1.658964	1.718213	1.777462
6	0.0386	7	7.35	0.1	0.004	0.066242	110.9567	3.959	0.022647	0.045293	0.090586	0.13588	0.181173	0.226466	0.271759	0.317052	0.362345	0.407639	0.452932	0.498225	0.543518	0.588811	0.634105	0.679398	0.724691	0.769984	0.815277	0.86057	0.905864	0.951157	0.99645	1.041743	1.087036	1.13233	1.177623	1.222916	1.268209	1.313502	1.358795

UV POLA SEGITIGA

t	cv gab	Hdr	Tv	Uv
minggu	m ² /minggu	m		
0.5	0.01931331	10.36	8.99719E-05	0.010706
1	0.01931331	10.36	0.000179944	0.01514
2	0.01931331	10.36	0.000359888	0.021412
3	0.01931331	10.36	0.000539832	0.026224
4	0.01931331	10.36	0.000719776	0.030281
5	0.01931331	10.36	0.000899719	0.033855
6	0.01931331	10.36	0.001079663	0.037086
7	0.01931331	10.36	0.001259607	0.040057
8	0.01931331	10.36	0.001439551	0.042823
9	0.01931331	10.36	0.001619495	0.045421
10	0.01931331	10.36	0.001799439	0.047878
11	0.01931331	10.36	0.001979383	0.050215
12	0.01931331	10.36	0.002159327	0.052447
13	0.01931331	10.36	0.002339271	0.054589
14	0.01931331	10.36	0.002519214	0.05665
15	0.01931331	10.36	0.002699158	0.058638
16	0.01931331	10.36	0.002879102	0.060561
17	0.01931331	10.36	0.003059046	0.062425
18	0.01931331	10.36	0.00323899	0.064235
19	0.01931331	10.36	0.003418934	0.065995
20	0.01931331	10.36	0.003598878	0.067709
21	0.01931331	10.36	0.003778822	0.069381
22	0.01931331	10.36	0.003958766	0.071014
23	0.01931331	10.36	0.00413871	0.07261
24	0.01931331	10.36	0.004318653	0.074172
25	0.01931331	10.36	0.004498597	0.075701
26	0.01931331	10.36	0.004678541	0.077201
27	0.01931331	10.36	0.004858485	0.078671
28	0.01931331	10.36	0.005038429	0.080115
29	0.01931331	10.36	0.005218373	0.081533
30	0.01931331	10.36	0.005398317	0.082927

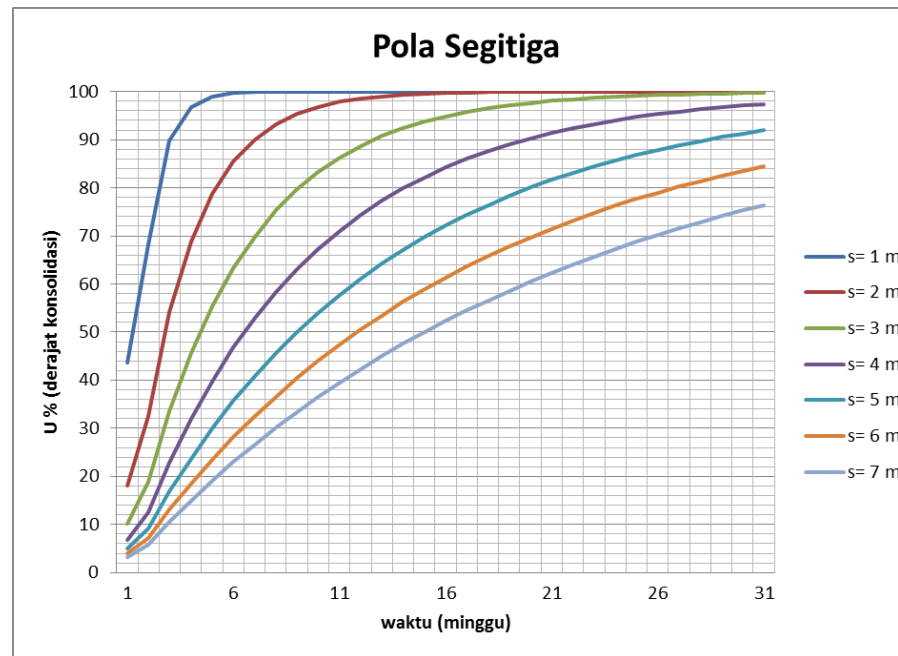
UH POLA SEGITIGA

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	0.431195	0.676461	0.895322	0.966133	0.989043	0.996455	0.998853	0.999629	0.99988	0.999961	0.999987	0.999996	0.999999	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	0.172726	0.315617	0.53162	0.679449	0.78062	0.84986	0.897247	0.929677	0.951872	0.967062	0.977458	0.984573	0.989442	0.992774	0.995055	0.996616	0.997684	0.998415	0.998915	0.999258	0.999492	0.999652	0.999762	0.999837	0.999889	0.999924	0.999948	0.999964	0.999976	0.999983	0.999989
3	0.092354	0.176179	0.321319	0.440888	0.539392	0.620541	0.687394	0.742469	0.78784	0.825218	0.856011	0.881379	0.902277	0.919494	0.933678	0.945362	0.954988	0.962918	0.969451	0.974833	0.979267	0.98292	0.985929	0.988408	0.99045	0.992133	0.993519	0.994661	0.995601	0.996376	0.997015
4	0.057808	0.112274	0.211942	0.30042	0.378964	0.44869	0.510588	0.565536	0.614314	0.657617	0.696057	0.730182	0.760475	0.787368	0.811241	0.832433	0.851247	0.867948	0.882774	0.895935	0.907619	0.917991	0.927198	0.935372	0.942628	0.949069	0.954788	0.959864	0.96437	0.96837	0.971921
5	0.039797	0.078011	0.149936	0.21625	0.277391	0.333762	0.385735	0.433655	0.477836	0.51857	0.556127	0.590753	0.622679	0.652114	0.679253	0.704275	0.727344	0.748614	0.768225	0.786306	0.802976	0.818346	0.832517	0.845583	0.857629	0.868735	0.878975	0.888417	0.897121	0.905147	0.912546
6	0.029187	0.057522	0.111735	0.16283	0.210985	0.256371	0.299146	0.33946	0.377456	0.413266	0.447016	0.478824	0.508803	0.537058	0.563687	0.588785	0.612439	0.634732	0.655743	0.675545	0.694208	0.711798	0.728376	0.744	0.758726	0.772604	0.785685	0.798013	0.809631	0.820582	0.830902
7	0.02239	0.044278	0.086596	0.12704	0.165693	0.202635	0.237941	0.271683	0.303932	0.334753	0.364209	0.39236	0.419266	0.44498	0.469555	0.493042	0.515489	0.536943	0.557446	0.577041	0.595769	0.613668	0.630774	0.647123	0.662748	0.677681	0.691952	0.705592	0.718628	0.731087	0.742994

U RATA-RATA POLA SEGITIGA

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	43.72843	68.13591	89.75636	96.70208	98.93744	99.65749	99.88955	99.96438	99.98851	99.99629	99.9988	99.99961	99.99988	99.99996	99.99999	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	18.15822	32.59787	54.16486	68.78547	78.7263	85.4943	90.10575	93.24944	95.39334	96.85584	97.85373	98.53473	98.99955	99.31686	99.53349	99.6814	99.7824	99.85137	99.89848	99.93065	99.95263	99.96764	99.97789	99.98489	99.98968	99.99295	99.99518	99.99671	99.99775	99.99846	99.99895
3	10.20712	18.86518	33.58505	45.55501	55.33393	63.33878	69.89872	75.27846	79.69255	83.3157	86.2905	88.73354	90.74028	92.38888	93.74347	94.8566	95.77142	96.52332	97.14136	97.64942	98.0671	98.41049	98.69283	98.92497	99.11586	99.27283	99.40192	99.50807	99.59537	99.66717	99.72623
4	6.789454	12.57139	22.88153	31.87654	39.77694	46.73544	52.87379	58.29391	63.08307	67.31681	71.06094	74.37308	77.30379	79.89751	82.19338	84.22591	86.02553	87.61911	89.03037	90.28029	91.38739	92.36807	93.23682	94.00646	94.68834	95.29249	95.82779	96.30212	96.72244	97.09491	97.42499
5	5.007696	9.196981	16.81368	23.68025	29.92716	35.63171	40.8516	45.63409	50.01963	54.04369	57.73783	61.13036	64.24686	67.11049	69.74231	72.16153	74.38566	76.43071	78.31131	80.04087	81.63168	83.09498	84.44109	85.6795	86.81888	87.86723	88.83186	89.7195	90.53634	91.28806	91.97987
6	3.95802	7.179126	13.07542	18.47834	23.48771	28.15462	32.51377	36.59198	40.41151	43.99157	47.34914	50.49951	53.45655	56.23296	58.84043	61.28977	63.59098	65.75338	67.78561	69.69575	71.49134	73.1794	74.76652	76.25886	77.66217	78.98186	80.223	81.39031	82.48826	83.52101	84.49248
7	3.285588	5.874816	10.61534	14.99322	19.09564	22.96293	26.62024	30.08578	33.37398	36.49687	39.46489	42.28728	44.97237	47.52776	49.96044	52.27691	54.48318	56.58489	58.58733	60.49546	62.31396	64.04723	65.69944	67.27453	68.77622	70.20806	71.57337	72.87535	74.117	75.30119	76.43063

DIAGRAM POLA SEGITIGA



POLA BUJUR SANGKAR

t	ch	s (jarak)	D	a	b	dw	n	Fn	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
Minggu	m ² /minggu	m	m	m	m				MINGGU																														
0.5	0.0386	1	1.13	0.1	0.004	0.066242	17.05865	2.087	0.504976	1.009952	2.019905	3.029857	4.03981	5.049762	6.059714	7.069667	8.079619	9.089572	10.09952	11.10948	12.11943	13.12938	14.13933	15.14929	16.15924	17.16919	18.17914	19.1891	20.19905	21.209	22.21895	23.22891	24.23886	25.24881	26.25876	27.26872	28.27867	29.28862	30.29857
1	0.0386	2	2.26	0.1	0.004	0.066242	34.11731	2.780	0.16818	0.33636	0.67272	1.009079	1.345439	1.681799	2.018159	2.354518	2.690878	3.027238	3.363598	3.699957	4.036317	4.372677	4.709037	5.045396	5.381756	5.718116	6.054476	6.390835	6.727195	7.063555	7.399915	7.736274	8.072634	8.408994	8.745354	9.081713	9.418073	9.754433	10.09079
2	0.0386	3	3.39	0.1	0.004	0.066242	51.17596	3.185	0.085649	0.171298	0.342597	0.513895	0.685194	0.856492	1.027791	1.199089	1.370388	1.541686	1.712985	1.884283	2.055581	2.22688	2.398178	2.569477	2.740775	2.912074	3.083372	3.254671	3.425969	3.597268	3.768566	3.939864	4.111163	4.282461	4.45376	4.625058	4.796357	4.967655	5.138954
3	0.0386	4	4.52	0.1	0.004	0.066242	68.23462	3.473	0.052529	0.105058	0.210116	0.315174	0.420231	0.525289	0.630347	0.735405	0.840463	0.945521	1.050579	1.155636	1.260694	1.365752	1.47081	1.575868	1.680926	1.785983	1.891041	1.996099	2.101157	2.206215	2.311273	2.416331	2.521388	2.626446	2.731504	2.836562	2.94162	3.046678	3.151736
4	0.0386	5	5.65	0.1	0.004	0.066242	85.29327	3.696	0.035779	0.071557	0.143114	0.214671	0.286229	0.357786	0.429343	0.5009	0.572457	0.644014	0.715571	0.787128	0.858686	0.930243	1.0018	1.073357	1.144914	1.216471	1.288028	1.359585	1.431143	1.5027	1.574257	1.645814	1.717371	1.788928	1.860485	1.932042	2.0036	2.075157	2.146714
5	0.0386	6	6.78	0.1	0.004	0.066242	102.3519	3.878	0.026072	0.052144	0.104287	0.156431	0.208575	0.260718	0.312862	0.365006	0.417149	0.469293	0.521437	0.573581	0.625724	0.677868	0.730012	0.782155	0.834299	0.886443	0.938586	0.99073	1.042874	1.095017	1.147161	1.199305	1.251448	1.303592	1.355736	1.40788	1.460023	1.512167	1.564311
6	0.0386	7	7.91	0.1	0.004	0.066242	119.4106	4.033	0.019916	0.039832	0.079665	0.119497	0.159329	0.199161	0.238994	0.278826	0.318658	0.358491	0.398323	0.438155	0.477988	0.51782	0.557652	0.597484	0.637317	0.677149	0.716981	0.756814	0.796646	0.836478	0.87631	0.916143	0.955975	0.995807	1.03564	1.075472	1.115304	1.155137	1.194969

UV POLA BUJUR SANGKAR

t	cv gab	Hdr	Tv	Uv
minggu	m ² /minggu	m		
0.5	0.01931331	10.36	8.99719E-05	0.010706
1	0.01931331	10.36	0.000179944	0.01514
2	0.01931331	10.36	0.000359888	0.021412
3	0.01931331	10.36	0.000539832	0.026224
4	0.01931331	10.36	0.000719776	0.030281
5	0.01931331	10.36	0.000899719	0.033855
6	0.01931331	10.36	0.001079663	0.037086
7	0.01931331	10.36	0.001259607	0.040057
8	0.01931331	10.36	0.001439551	0.042823
9	0.01931331	10.36	0.001619495	0.045421
10	0.01931331	10.36	0.001799439	0.047878
11	0.01931331	10.36	0.001979383	0.050215
12	0.01931331	10.36	0.002159327	0.052447
13	0.01931331	10.36	0.002339271	0.054589
14	0.01931331	10.36	0.002519214	0.05665
15	0.01931331	10.36	0.002699158	0.058638
16	0.01931331	10.36	0.002879102	0.060561
17	0.01931331	10.36	0.003059046	0.062425
18	0.01931331	10.36	0.00323899	0.064235
19	0.01931331	10.36	0.003418934	0.065995
20	0.01931331	10.36	0.003598878	0.067709
21	0.01931331	10.36	0.003778822	0.069381
22	0.01931331	10.36	0.003958766	0.071014
23	0.01931331	10.36	0.00413871	0.07261
24	0.01931331	10.36	0.004318653	0.074172
25	0.01931331	10.36	0.004498597	0.075701
26	0.01931331	10.36	0.004678541	0.077201
27	0.01931331	10.36	0.004858485	0.078671
28	0.01931331	10.36	0.005038429	0.080115
29	0.01931331	10.36	0.005218373	0.081533
30	0.01931331	10.36	0.005398317	0.082927

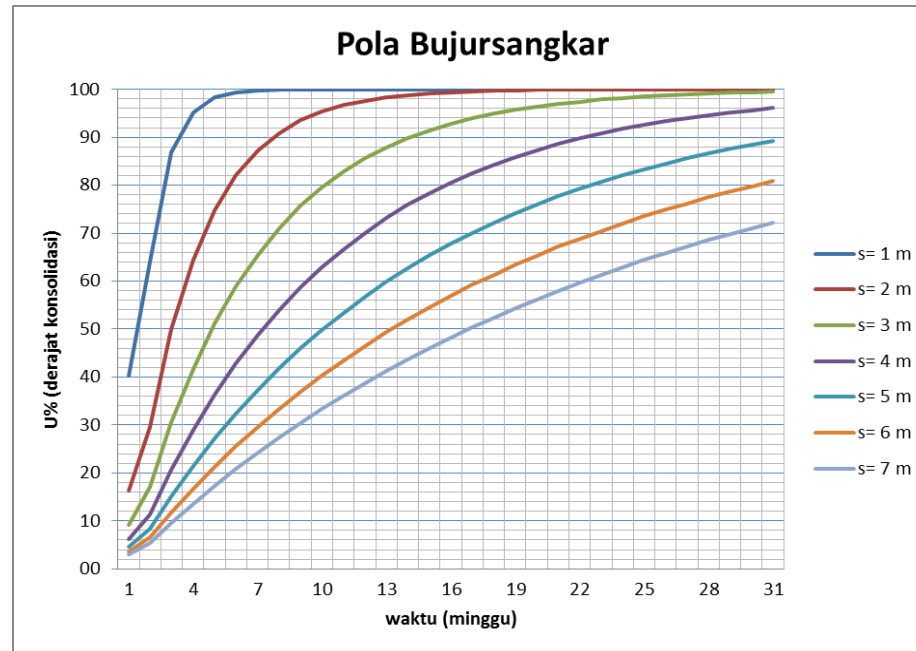
UH POLA BUJURSANGKAR

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	0.396448	0.635726	0.867304	0.951662	0.982392	0.993586	0.997663	0.999149	0.99969	0.999887	0.999959	0.999985	0.999995	0.999998	0.999999	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	0.154783	0.285609	0.489646	0.635407	0.739538	0.813929	0.867072	0.905038	0.93216	0.951536	0.965377	0.975266	0.98233	0.987377	0.990982	0.993558	0.995398	0.996712	0.997651	0.998322	0.998801	0.999144	0.999388	0.999563	0.999688	0.999777	0.999841	0.999886	0.999919	0.999942	0.999958
3	0.082076	0.157415	0.29005	0.401807	0.495972	0.575313	0.642165	0.698494	0.745955	0.785946	0.819641	0.848032	0.871954	0.892111	0.909094	0.923404	0.935461	0.945621	0.954181	0.961393	0.967471	0.972591	0.976906	0.980541	0.983604	0.986185	0.98836	0.990192	0.991736	0.993037	0.994133
4	0.051168	0.099718	0.189492	0.270314	0.343077	0.408584	0.467558	0.520652	0.568452	0.611485	0.650227	0.685105	0.716506	0.744775	0.770226	0.793138	0.813766	0.832337	0.849056	0.864108	0.877659	0.889858	0.900841	0.910729	0.919631	0.927645	0.93486	0.941356	0.947204	0.952468	0.957208
5	0.035142	0.06905	0.133332	0.193176	0.248887	0.300751	0.349034	0.393983	0.435829	0.474785	0.511051	0.544813	0.576244	0.605504	0.632744	0.658103	0.681711	0.703689	0.724149	0.743197	0.760929	0.777437	0.792805	0.807112	0.820431	0.83283	0.844373	0.855119	0.865123	0.874436	0.883106
6	0.025732	0.050802	0.099024	0.144796	0.188242	0.229481	0.268626	0.305781	0.341049	0.374525	0.406301	0.436462	0.465091	0.492266	0.51806	0.542544	0.565784	0.587843	0.608781	0.628656	0.647521	0.665428	0.682425	0.698559	0.713873	0.728409	0.742206	0.755303	0.767734	0.779534	0.790734
7	0.019717	0.039045	0.076566	0.112622	0.14727	0.180566	0.212561	0.243307	0.272852	0.301244	0.328527	0.354745	0.379939	0.40415	0.427415	0.449772	0.471256	0.491901	0.51174	0.530804	0.549124	0.566729	0.583646	0.599903	0.615525	0.630537	0.644963	0.658825	0.672147	0.684948	0.697249

U RATA-RATA POLA BUJURSANGKAR

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	40.291	63.96254	86.87247	95.21798	98.25803	99.36545	99.76885	99.9158	99.96933	99.98883	99.99593	99.99852	99.99946	99.9998	99.99993	99.99997	99.99999	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	16.38322	29.64251	50.0573	64.49683	74.74252	82.02279	87.2002	90.88415	93.50648	95.37368	96.70351	97.65079	98.32569	98.80659	99.1493	99.39355	99.56764	99.69174	99.78021	99.84328	99.88824	99.92031	99.94317	99.95947	99.97109	99.97938	99.9853	99.98951	99.99252	99.99466	99.99619
3	9.19028	17.01719	30.52516	41.7494	51.12339	58.96909	65.54359	71.05714	75.68344	79.56684	82.82763	85.56633	87.867	89.80002	91.42438	92.78954	93.93699	94.90153	95.7124	96.39413	96.96732	97.44929	97.85458	98.19541	98.48204	98.7231	98.92585	99.09638	99.23982	99.36047	99.46196
4	6.132595	11.33483	20.68461	28.9449	36.29686	42.86057	48.73043	53.98536	58.69319	62.91313	66.69729	70.09175	73.13743	75.87077	78.32423	80.52682	82.50445	84.28032	85.87517	87.30758	88.59422	89.74999	90.78829	91.72111	92.55921	93.31226	93.98891	94.59695	95.14335	95.63438	96.07568
5	4.547206	8.314484	15.18888	21.43335	27.16309	32.4424	37.31759	41.82589	45.99885	49.86406	53.44608	56.767	59.84685	62.70391	65.35489	67.81511	70.09869	72.2186	74.18683	76.01443	77.71162	79.28785	80.75185	82.11172	83.37495	84.54848	85.63874	86.65169	87.59286	88.46738	89.28
6	3.616258	6.517351	11.83152	16.72223	21.28226	25.5567	29.57492	33.35897	36.92674	40.29349	43.4726	46.47601	49.3146	51.99827	54.53619	56.93682	59.20803	61.35718	63.39113	65.31631	67.13876	68.86413	70.49776	72.04465	73.50954	74.89685	76.2108	77.45534	78.63419	79.75089	80.80876
7	3.021181	5.359456	9.633852	13.58926	17.30914	20.83072	24.17636	27.36178	30.39908	33.29819	36.06757	38.71463	41.24599	43.66768	45.98519	48.20362	50.32772	52.3619	54.31031	56.17687	57.96527	59.67898	61.32131	62.89539	64.4042	65.85057	67.23717	68.56658	69.84125	71.06348	72.23552

DIAGRAM POLA BUJURSANGKAR



PERHITUNGAN PVD PANJANG $\frac{1}{3}$ (3.5 M)

DATA TANAH HASIL BORE LOG

KEDALAMAN (M)	RATA-RATA NILAI N-SPT	KONSISTENSI TANAH MENURUT TABEL 2.1
(m)		
H1 4.48	2.5	SANGAT LUNAK (VERY SOFT)
H2 2.52	17.8	LUNAK
H3 0	57.5	KERAS (HARD)

DATA TANAH ASLI

jenis tanah	DEPHT	N-SPT	γ	γ_d	e_s	n	W _{sat}	γ'_{sat}	K	C _v	pc	mv = I/E	ϕ	C _u	C _c	C _s	γ'	P _{0'}
			kn/m ³	g/cm ³			%	kn/m	cm/s	cm ² /s	ton/m	cm ² /kg		kJ/m ²				t/m ²
lumpur lempung	H1	2.5	16	0.8	2.38	0.7	88	15		0.0002	5.20	10	15	1.50	0.633	0.1266	14	3.2
pasir lanau	H2	17.8	18	1.0	1.7	0.63	63	16.3	1.10 ⁸	0.0005	9.790	0.5	10	10.65	0.7245	0.1449	15.3	7.8
pasir	H3	57.5	20	2.5	0.08	0.074	2.96	25.7			31.4	0.01	10	34.50	0.0340	0.006808	24.7	29.4

DATA TANAH QUARRY (TIMBUNAN)

jenis tanah = pasir dengan kerikil berlanau berplastisitas rendah (silty sand with gravel)

LL	48.05	%
PL	37.48	%
PI	10.57	%
OMC	34.55	%
MDD	1.38	gram/cm ³
CBR	11.9	%
Cu	82.76	
Cc	0.19	

presentase lolos ayakan No 200(75) = 33.45 %

fraksi pasir (no 4 > D > no 200) = 36.59 %

fraksi kerikil (no. 4 > D) = 29.96 %

γ_d = berat isi tanah basah = 1.73 gram/cm³

γ_{sat} = berat isi tanah kering = 1.34 gram/cm³

γ = berat jenis tanah = 1.6 kn/m³

PERHITUNGAN SETTLEMENT TANAH

$$q = 5 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	1.50	4.70	0.50	0.50
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.50	8.29	0.15	0.64
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.64
										total	0.64	

$$q = 7 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	2.10	5.30	0.51	0.51
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.70	8.49	0.15	0.67
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.67
										total	0.67	

$$q = 9 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	2.70	5.90	0.53	0.53
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	0.90	8.69	0.16	0.68
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.68
										total	0.68	

$$q = 12 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	3.60	6.80	0.55	0.55
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	1.20	8.99	0.16	0.71
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.71
										total	0.71	

$$q = 18 \text{ t/m}^2$$

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	15.00	5.40	8.60	0.57	0.57
2.52	1.26	1.7	0.145	0.725	1.8	9.79	7.79	5.00	1.80	9.59	0.17	0.74
0	0	0.08	0.007	0.034	2	31.44	29.44	0.00	0.00	29.44	0.00	0.74
										total	0.74	

BEBAN PERKERASAN

no	jenis perk	tebal (m)	berat jenis t/m ³	berat perkerasan t/m ²
1	RIGID	0.31	2.2	0.682
2	LC	0.11	2.2	0.242
3	LPA	0.12	1.8	0.216
			total	1.14 t/m ²

TEBAL LAPISAN	Z	e0	Cs	Cc	γ	pc	po	i	Δp	$\Delta p + po$	Sc	Sc cum
	m				t/m ³	t/m ³	t/m ³		t/m ³	t/m ³	m	m
4.48	2.24	2.38	0.127	0.633	1.6	5.20	3.20	32.00	1.14	6.40	0.5321	0.53
5.88	2.94	1.7	0.145	0.725	1.8	9.79	7.79	13.00	1.14	9.09	0.1702	0.70
14.64	7.32	0.08	0.007	0.034	2	31.44	29.44	7.00	1.14	30.14	0.0016	0.70
										total	0.70	

BEBAN LALULINTAS

TINGGI TIMBUNAN :	2m	Q LALULINTAS :	1.5	t/m ²
	3m		1.2	t/m ²
	4m		0.8	t/m ²
	5m		0.6	t/m ²

Ysat timbunan : 1.34 t/m³

$$H \text{ bongkar traffic} = Q \text{ lalulintas} : Y \text{ sat timbunan}$$

h bongkar 2meter 1.119 m

3meter 0.896 m

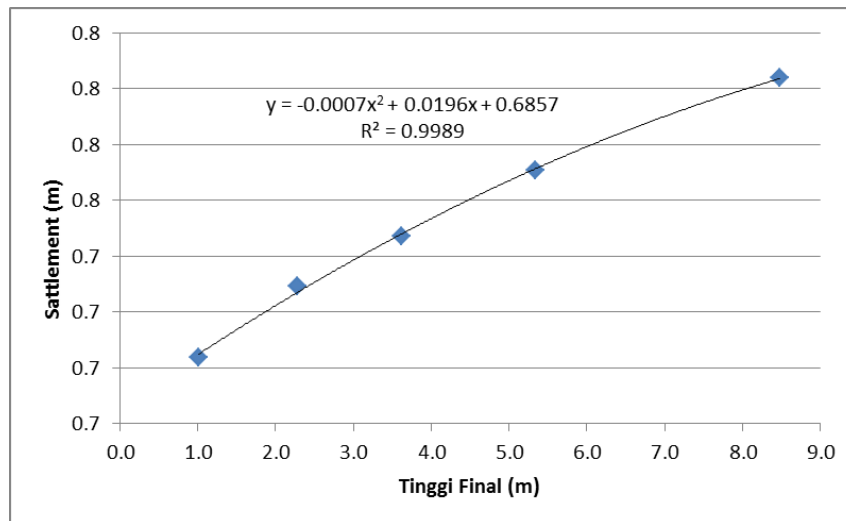
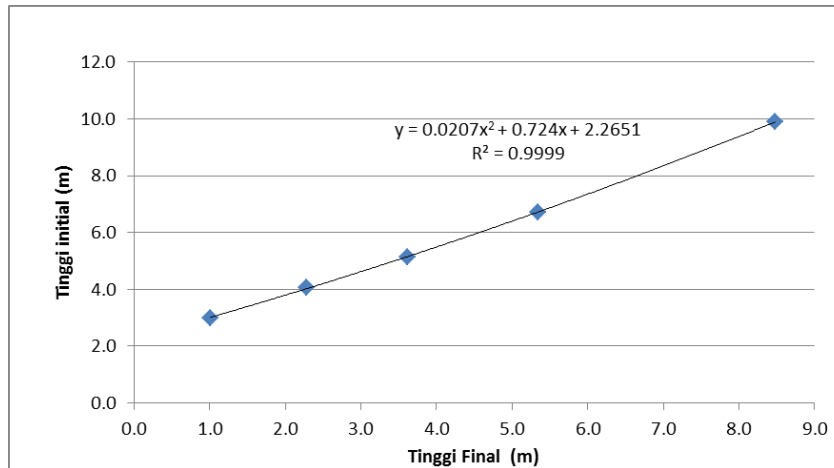
4meter 0.597 m

5meter 0.448 m

untuk timbunan diatas 5 meter menggunakan H bongkar traffic pada timbunan 5 meter yakni 0.448 m

H INITIAL DAN H FINAL

no	beban q (t/m ²)	Settlement akibat q (m)	H initial (m)	H bongkar Traffic(m)	Tebal Pavement (m)	settlement pavement	Tinggi Final	
	design	Calculation	(b+c)/1.9	grafik	design	calculation	D-C-E+	F-G
A	B	C	D	E	F	G	H	
1	5	0.70	3.00	1.119	0.54	0.70		1.01
2	7	0.73	4.07	0.896	0.54	0.70		2.28
3	9	0.75	5.13	0.597	0.54	0.70		3.62
4	12	0.77	6.72	0.448	0.54	0.70		5.34
5	18	0.80	9.90	0.448	0.54	0.70		8.48



HARGA CV DARI DATA TANAH DI ASUMSIKAN

KEDALAMAN 0 - 4.48 M	C_v	=	0.00020	cm ² /detik
		=	0.01210	m ² /minggu
KEDALAMAN 4.48 - 10.36 M	C_v	=	0.00050	cm ² /detik
		=	0.03024	m ² /minggu
KEDALAMAN 10.36 - 25.00 M	C_v	=	0.000	cm ² /detik
		=	0	m ² /minggu
kh/kv =2 sampai 5	rata rata C_v		0.014112	m ² /minggu

WAKTU

TEBAL LAPISAN TANAH TERKONSOLIDASI =3.5M

T 90% = 0.006311176

Hdr = 3.5

Cv = 0.014

$t = T90\% \times (Hdr)^2 / Cv$ rata rata

t = 48.0 TAHUN

Cv Gabungan 0.000319334 cm²/ detik

0.019313306 m²/ minggu

Ch = 2 X Cv gabungan

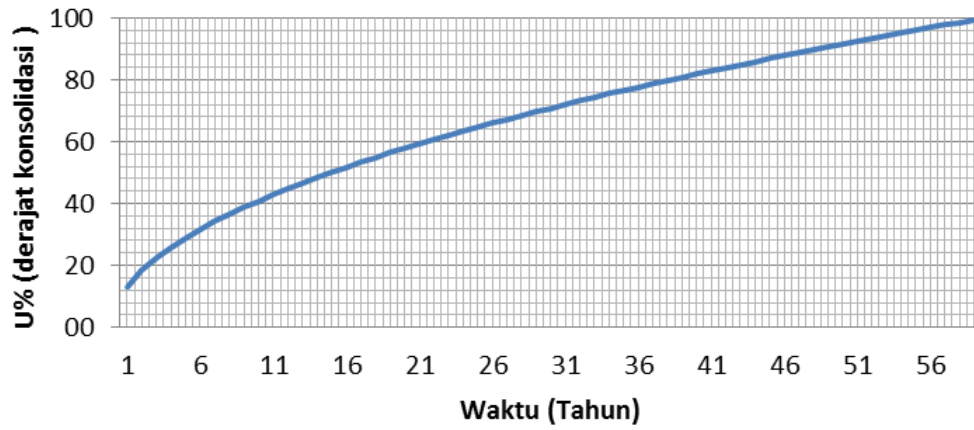
Ch = **0.038626612** m²/ minggu

KECEPATAN PENURUNAN TANAH ASLI (SETTLEMENT) TANPA PVD

TAHUN	Tv	U(%)	Sc(m)
1	0.000131	12.9	0.104028
2	0.000263	18.3	0.147117
3	0.000394	22.4	0.180181
4	0.000526	25.9	0.208056
5	0.000657	28.9	0.232613
6	0.000789	31.7	0.254815
7	0.00092	34.2	0.275232
8	0.001052	36.6	0.294235
9	0.001183	38.8	0.312083
10	0.001315	40.9	0.328965
11	0.001446	42.9	0.345021
12	0.001578	44.8	0.360363
13	0.001709	46.7	0.375077
14	0.001841	48.4	0.389236
15	0.001972	50.1	0.402898
16	0.002104	51.8	0.416111
17	0.002235	53.4	0.428918

18	0.002367	54.9	0.441352
19	0.002498	56.4	0.453447
20	0.00263	57.9	0.465226
21	0.002761	59.3	0.476715
22	0.002893	60.7	0.487934
23	0.003024	62.1	0.4989
24	0.003156	63.4	0.50963
25	0.003287	64.7	0.520139
26	0.003419	66.0	0.53044
27	0.00355	67.2	0.540544
28	0.003682	68.5	0.550463
29	0.003813	69.7	0.560207
30	0.003944	70.9	0.569784
31	0.004076	72.1	0.579202
32	0.004207	73.2	0.58847
33	0.004339	74.3	0.597594
34	0.00447	75.5	0.606581
35	0.004602	76.6	0.615437
36	0.004733	77.7	0.624167
37	0.004865	78.7	0.632776
38	0.004996	79.8	0.64127
39	0.005128	80.8	0.649653
40	0.005259	81.9	0.657929
41	0.005391	82.9	0.666103
42	0.005522	83.9	0.674177
43	0.005654	84.9	0.682156
44	0.005785	85.8	0.690042
45	0.005917	86.8	0.69784
46	0.006048	87.8	0.705551
47	0.00618	88.7	0.713179
48	0.006311	89.7	0.720726
49	0.006443	90.6	0.728194
50	0.006574	91.5	0.735587
51	0.006706	92.4	0.742907
52	0.006837	93.3	0.750155
53	0.006969	94.2	0.757334
54	0.0071	95.1	0.764445
55	0.007232	96.0	0.771491
56	0.007363	96.8	0.778473
57	0.007495	97.7	0.785392
58	0.007626	98.6	0.792252
59	0.007757	99.4	0.799053

Grafik penurunan Tanah tanpa Perbaikan



POLA SEGITIGA

t	ch	s (jarak)	D	a	b	dw	n	Fn	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
Minggu	m ² /minggu	m	m	m	m				MINGGU																														
0.5	0.0386	1	1.05	0.1	0.004	0.066242	15.85096	2.013	0.564276	1.128552	2.257103	3.385655	4.514207	5.642758	6.77131	7.899861	9.028413	10.15696	11.28552	12.41407	13.54262	14.67117	15.79972	16.92827	18.05683	19.18538	20.31393	21.44248	22.57103	23.69958	24.82814	25.95669	27.08524	28.21379	29.34234	30.47089	31.59945	32.728	33.85655
1	0.0386	2	2.1	0.1	0.004	0.066242	31.70192	2.706	0.189638	0.379277	0.758554	1.137831	1.517107	1.896384	2.275661	2.654938	3.034215	3.413492	3.792769	4.172046	4.551322	4.930599	5.309876	5.689153	6.06843	6.447707	6.826984	7.206261	7.585537	7.964814	8.344091	8.723368	9.102645	9.481922	9.861199	10.24048	10.61975	10.99903	11.37831
2	0.0386	3	3.15	0.1	0.004	0.066242	47.55288	3.112	0.096911	0.193822	0.387644	0.581466	0.775288	0.96911	1.162932	1.356754	1.550576	1.744398	1.93822	2.132042	2.325864	2.519686	2.713508	2.90733	3.101152	3.294974	3.488796	3.682618	3.87644	4.070262	4.264084	4.457906	4.651728	4.84555	5.039372	5.233194	5.427016	5.620838	5.81466
3	0.0386	4	4.2	0.1	0.004	0.066242	63.40385	3.400	0.059552	0.119104	0.238208	0.357312	0.476416	0.59552	0.714624	0.833728	0.952832	1.071936	1.19104	1.310144	1.429248	1.548351	1.667455	1.786559	1.905663	2.024767	2.143871	2.262975	2.382079	2.501183	2.620287	2.739391	2.858495	2.977599	3.096703	3.215807	3.334911	3.454015	3.573119
4	0.0386	5	5.25	0.1	0.004	0.066242	79.25481	3.623	0.040615	0.08123	0.16246	0.24369	0.32492	0.40615	0.48738	0.56861	0.64984	0.73107	0.8123	0.89353	0.97476	1.05599	1.13722	1.21845	1.29968	1.38091	1.46214	1.54337	1.6246	1.70583	1.78706	1.86829	1.94952	2.03075	2.11198	2.19321	2.27444	2.35567	2.4369
5	0.0386	6	6.3	0.1	0.004	0.066242	95.10577	3.805	0.029624	0.059249	0.118497	0.177746	0.236995	0.296244	0.355492	0.414741	0.47399	0.533238	0.592487	0.651736	0.710985	0.770233	0.829482	0.888731	0.94798	1.007228	1.066477	1.125726	1.184974	1.244223	1.303472	1.362721	1.421969	1.481218	1.540467	1.599715	1.658964	1.718213	1.777462
6	0.0386	7	7.35	0.1	0.004	0.066242	110.9567	3.959	0.022647	0.045293	0.090586	0.13588	0.181173	0.226466	0.271759	0.317052	0.362345	0.407639	0.452932	0.498225	0.543518	0.588811	0.634105	0.679398	0.724691	0.769984	0.815277	0.86057	0.905864	0.951157	0.99645	1.041743	1.087036	1.13233	1.177623	1.222916	1.268209	1.313502	1.358795

UV POLA SEGITIGA

t	cv gab	Hdr	Tv	Uv
minggu	m ² /minggu	m		
0.5	0.01931331	10.36	8.99719E-05	0.010706
1	0.01931331	10.36	0.000179944	0.01514
2	0.01931331	10.36	0.000359888	0.021412
3	0.01931331	10.36	0.000539832	0.026224
4	0.01931331	10.36	0.000719776	0.030281
5	0.01931331	10.36	0.000899719	0.033855
6	0.01931331	10.36	0.001079663	0.037086
7	0.01931331	10.36	0.001259607	0.040057
8	0.01931331	10.36	0.001439551	0.042823
9	0.01931331	10.36	0.001619495	0.045421
10	0.01931331	10.36	0.001799439	0.047878
11	0.01931331	10.36	0.001979383	0.050215
12	0.01931331	10.36	0.002159327	0.052447
13	0.01931331	10.36	0.002339271	0.054589
14	0.01931331	10.36	0.002519214	0.05665
15	0.01931331	10.36	0.002699158	0.058638
16	0.01931331	10.36	0.002879102	0.060561
17	0.01931331	10.36	0.003059046	0.062425
18	0.01931331	10.36	0.00323899	0.064235
19	0.01931331	10.36	0.003418934	0.065995
20	0.01931331	10.36	0.003598878	0.067709
21	0.01931331	10.36	0.003778822	0.069381
22	0.01931331	10.36	0.003958766	0.071014
23	0.01931331	10.36	0.00413871	0.07261
24	0.01931331	10.36	0.004318653	0.074172
25	0.01931331	10.36	0.004498597	0.075701
26	0.01931331	10.36	0.004678541	0.077201
27	0.01931331	10.36	0.004858485	0.078671
28	0.01931331	10.36	0.005038429	0.080115
29	0.01931331	10.36	0.005218373	0.081533
30	0.01931331	10.36	0.005398317	0.082927

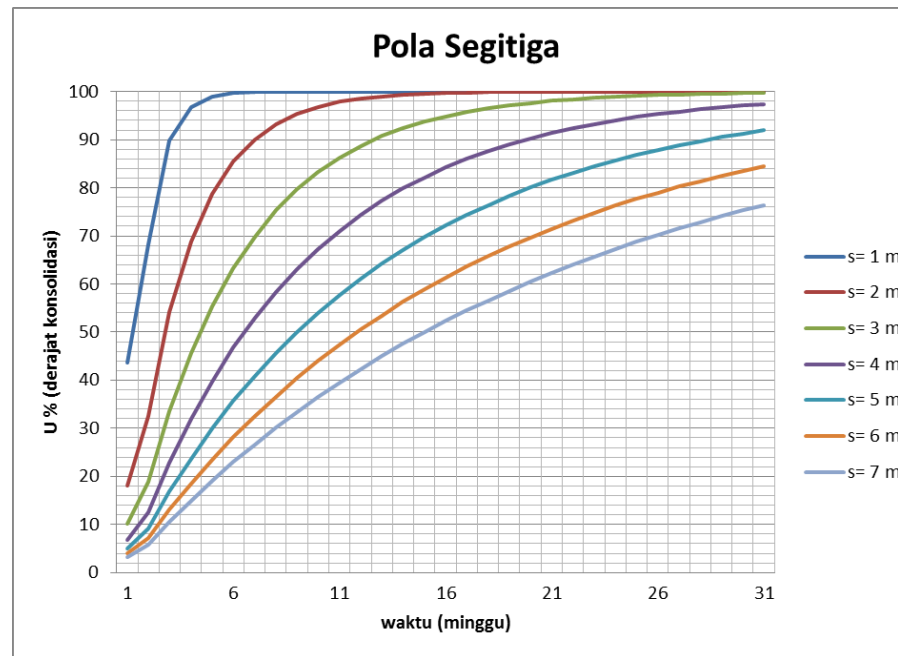
UH POLA SEGITIGA

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	0.431195	0.676461	0.895322	0.966133	0.989043	0.996455	0.998853	0.999629	0.99988	0.999961	0.999987	0.999996	0.999999	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	0.172726	0.315617	0.53162	0.679449	0.78062	0.84986	0.897247	0.929677	0.951872	0.967062	0.977458	0.984573	0.989442	0.992774	0.995055	0.996616	0.997684	0.998415	0.998915	0.999258	0.999492	0.999652	0.999762	0.999837	0.999889	0.999924	0.999948	0.999964	0.999976	0.999983	0.999989
3	0.092354	0.176179	0.321319	0.440888	0.539392	0.620541	0.687394	0.742469	0.78784	0.825218	0.856011	0.881379	0.902277	0.919494	0.933678	0.945362	0.954988	0.962918	0.969451	0.974833	0.979267	0.98292	0.985929	0.988408	0.99045	0.992133	0.993519	0.994661	0.995601	0.996376	0.997015
4	0.057808	0.112274	0.211942	0.30042	0.378964	0.44869	0.510588	0.565536	0.614314	0.657617	0.696057	0.730182	0.760475	0.787368	0.811241	0.832433	0.851247	0.867948	0.882774	0.895935	0.907619	0.917991	0.927198	0.935372	0.942628	0.949069	0.954788	0.959864	0.96437	0.96837	0.971921
5	0.039797	0.078011	0.149936	0.21625	0.277391	0.333762	0.385735	0.433655	0.477836	0.51857	0.556127	0.590753	0.622679	0.652114	0.679253	0.704275	0.727344	0.748614	0.768225	0.786306	0.802976	0.818346	0.832517	0.845583	0.857629	0.868735	0.878975	0.888417	0.897121	0.905147	0.912546
6	0.029187	0.057522	0.111735	0.16283	0.210985	0.256371	0.299146	0.33946	0.377456	0.413266	0.447016	0.478824	0.508803	0.537058	0.563687	0.588785	0.612439	0.634732	0.655743	0.675545	0.694208	0.711798	0.728376	0.744	0.758726	0.772604	0.785685	0.798013	0.809631	0.820582	0.830902
7	0.02239	0.044278	0.086596	0.12704	0.165693	0.202635	0.237941	0.271683	0.303932	0.334753	0.364209	0.39236	0.419266	0.44498	0.469555	0.493042	0.515489	0.536943	0.557446	0.577041	0.595769	0.613668	0.630774	0.647123	0.662748	0.677681	0.691952	0.705592	0.718628	0.731087	0.742994

U RATA-RATA POLA SEGITIGA

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	43.72843	68.13591	89.75636	96.70208	98.93744	99.65749	99.88955	99.96438	99.98851	99.99629	99.9988	99.99961	99.99987	99.99996	99.99999	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	18.15822	32.59787	54.16486	68.78547	78.7263	85.4943	90.10575	93.24944	95.39334	96.85584	97.85373	98.53473	98.99955	99.31686	99.53349	99.6814	99.7824	99.85137	99.89848	99.93065	99.95263	99.96764	99.97789	99.98489	99.98968	99.99295	99.99518	99.99671	99.99775	99.99846	99.99895
3	10.20712	18.86518	33.58055	45.55501	55.33393	63.33878	69.89872	75.27846	79.69255	83.3157	86.2905	88.73354	90.74028	92.38888	93.74347	94.8566	95.77142	96.52332	97.14136	97.64942	98.0671	98.41049	98.69283	98.92497	99.11586	99.27283	99.40192	99.50807	99.59537	99.66717	99.72623
4	6.789454	12.57139	22.88153	31.87654	39.77694	46.73544	52.87379	58.29391	63.08307	67.31681	71.06094	74.37308	77.30379	79.89751	82.19338	84.22591	86.02553	87.61911	89.03037	90.28029	91.38739	92.36807	93.23682	94.00646	94.68834	95.29249	95.82779	96.30212	96.72244	97.09491	97.42499
5	5.007696	9.196981	16.81368	23.68025	29.92716	35.63171	40.8516	45.63409	50.01963	54.04369	57.73783	61.13036	64.24686	67.11049	69.74231	72.16153	74.38566	76.43071	78.31131	80.04087	81.63168	83.09498	84.44109	85.6795	86.81888	87.86723	88.83186	89.7195	90.53634	91.28806	91.97987
6	3.95802	7.179126	13.07542	18.47834	23.48771	28.15462	32.51377	36.59198	40.41151	43.99157	47.34914	50.49951	53.45655	56.23296	58.84043	61.28977	63.59098	65.75338	67.78561	69.69575	71.49134	73.1794	74.76652	76.25886	77.66217	78.98186	80.223	81.39031	82.48826	83.52101	84.49248
7	3.285588	5.874816	10.61534	14.99322	19.09564	22.96293	26.62024	30.08578	33.37398	36.49687	39.46489	42.28728	44.97237	47.52776	49.96044	52.27691	54.48318	56.58489	58.58733	60.49546	62.31396	64.04723	65.69944	67.27453	68.77622	70.20806	71.57337	72.87535	74.117	75.30119	76.43063

DIAGRAM POLA SEGITIGA



POLA BUJUR SANGKAR

t	ch	s (jarak)	D	a	b	dw	n	Fn	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
Minggu	m ² /minggu	m	m	m	m				MINGGU																														
0.5	0.0386	1	1.13	0.1	0.004	0.066242	17.05865	2.087	0.504976	1.009952	2.019905	3.029857	4.03981	5.049762	6.059714	7.069667	8.079619	9.089572	10.09952	11.10948	12.11943	13.12938	14.13933	15.14929	16.15924	17.16919	18.17914	19.1891	20.19905	21.209	22.21895	23.22891	24.23886	25.24881	26.25876	27.26872	28.27867	29.28862	30.29857
1	0.0386	2	2.26	0.1	0.004	0.066242	34.11731	2.780	0.16818	0.33636	0.67272	1.009079	1.345439	1.681799	2.018159	2.354518	2.690878	3.027238	3.363598	3.699957	4.036317	4.372677	4.709037	5.045396	5.381756	5.718116	6.054476	6.390835	6.727195	7.063555	7.399915	7.736274	8.072634	8.408994	8.745354	9.081713	9.418073	9.754433	10.09079
2	0.0386	3	3.39	0.1	0.004	0.066242	51.17596	3.185	0.085649	0.171298	0.342597	0.513895	0.685194	0.856492	1.027791	1.199089	1.370388	1.541686	1.712985	1.884283	2.055581	2.22688	2.398178	2.569477	2.740775	2.912074	3.083372	3.254671	3.425969	3.597268	3.768566	3.939864	4.111163	4.282461	4.45376	4.625058	4.796357	4.967655	5.138954
3	0.0386	4	4.52	0.1	0.004	0.066242	68.23462	3.473	0.052529	0.105058	0.210116	0.315174	0.420231	0.525289	0.630347	0.735405	0.840463	0.945521	1.050579	1.155636	1.260694	1.365752	1.47081	1.575868	1.680926	1.785983	1.891041	1.996099	2.101157	2.206215	2.311273	2.416331	2.521388	2.626446	2.731504	2.836562	2.94162	3.046678	3.151736
4	0.0386	5	5.65	0.1	0.004	0.066242	85.29327	3.696	0.035779	0.071557	0.143114	0.214671	0.286229	0.357786	0.429343	0.5009	0.572457	0.644014	0.715571	0.787128	0.858686	0.930243	1.0018	1.073357	1.144914	1.216471	1.288028	1.359585	1.431143	1.5027	1.574257	1.645814	1.717371	1.788928	1.860485	1.932042	2.0036	2.075157	2.146714
5	0.0386	6	6.78	0.1	0.004	0.066242	102.3519	3.878	0.026072	0.052144	0.104287	0.156431	0.208575	0.260718	0.312862	0.365006	0.417149	0.469293	0.521437	0.573581	0.625724	0.677868	0.730012	0.782155	0.834299	0.886443	0.938586	0.99073	1.042874	1.095017	1.147161	1.199305	1.251448	1.303592	1.355736	1.40788	1.460023	1.512167	1.564311
6	0.0386	7	7.91	0.1	0.004	0.066242	119.4106	4.033	0.019916	0.039832	0.079665	0.119497	0.159329	0.199161	0.238994	0.278826	0.318658	0.358491	0.398323	0.438155	0.477988	0.51782	0.557652	0.597484	0.637317	0.677149	0.716981	0.756814	0.796646	0.836478	0.87631	0.916143	0.955975	0.995807	1.03564	1.075472	1.115304	1.155137	1.194969

UV POLA BUJUR SANGKAR

t	cv gab	Hdr	Tv	Uv
minggu	m ² /minggu	m		
0.5	0.01931331	10.36	8.99719E-05	0.010706
1	0.01931331	10.36	0.000179944	0.01514
2	0.01931331	10.36	0.000359888	0.021412
3	0.01931331	10.36	0.000539832	0.026224
4	0.01931331	10.36	0.000719776	0.030281
5	0.01931331	10.36	0.000899719	0.033855
6	0.01931331	10.36	0.001079663	0.037086
7	0.01931331	10.36	0.001259607	0.040057
8	0.01931331	10.36	0.001439551	0.042823
9	0.01931331	10.36	0.001619495	0.045421
10	0.01931331	10.36	0.001799439	0.047878
11	0.01931331	10.36	0.001979383	0.050215
12	0.01931331	10.36	0.002159327	0.052447
13	0.01931331	10.36	0.002339271	0.054589
14	0.01931331	10.36	0.002519214	0.05665
15	0.01931331	10.36	0.002699158	0.058638
16	0.01931331	10.36	0.002879102	0.060561
17	0.01931331	10.36	0.003059046	0.062425
18	0.01931331	10.36	0.00323899	0.064235
19	0.01931331	10.36	0.003418934	0.065995
20	0.01931331	10.36	0.003598878	0.067709
21	0.01931331	10.36	0.003778822	0.069381
22	0.01931331	10.36	0.003958766	0.071014
23	0.01931331	10.36	0.00413871	0.07261
24	0.01931331	10.36	0.004318653	0.074172
25	0.01931331	10.36	0.004498597	0.075701
26	0.01931331	10.36	0.004678541	0.077201
27	0.01931331	10.36	0.004858485	0.078671
28	0.01931331	10.36	0.005038429	0.080115
29	0.01931331	10.36	0.005218373	0.081533
30	0.01931331	10.36	0.005398317	0.082927

UH POLA BUJURSANGKAR

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	0.396448	0.635726	0.867304	0.951662	0.982392	0.993586	0.997663	0.999149	0.99969	0.999887	0.999959	0.999985	0.999995	0.999998	0.999999	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	0.154783	0.285609	0.489646	0.635407	0.739538	0.813929	0.867072	0.905038	0.93216	0.951536	0.965377	0.975266	0.98233	0.987377	0.990982	0.993558	0.995398	0.996712	0.997651	0.998322	0.998801	0.999144	0.999388	0.999563	0.999688	0.999777	0.999841	0.999886	0.999919	0.999942	0.999958
3	0.082076	0.157415	0.29005	0.401807	0.495972	0.575313	0.642165	0.698494	0.745955	0.785946	0.819641	0.848032	0.871954	0.892111	0.909094	0.923404	0.935461	0.945621	0.954181	0.961393	0.967471	0.972591	0.976906	0.980541	0.983604	0.986185	0.98836	0.990192	0.991736	0.993037	0.994133
4	0.051168	0.099718	0.189492	0.270314	0.343077	0.408584	0.467558	0.520652	0.568452	0.611485	0.650227	0.685105	0.716506	0.744775	0.770226	0.793138	0.813766	0.832337	0.849056	0.864108	0.877659	0.889858	0.900841	0.910729	0.919631	0.927645	0.93486	0.941356	0.947204	0.952468	0.957208
5	0.035142	0.06905	0.133332	0.193176	0.248887	0.300751	0.349034	0.393983	0.435829	0.474785	0.511051	0.544813	0.576244	0.605504	0.632744	0.658103	0.681711	0.703689	0.724149	0.743197	0.760929	0.777437	0.792805	0.807112	0.820431	0.83283	0.844373	0.855119	0.865123	0.874436	0.883106
6	0.025732	0.050802	0.099024	0.144796	0.188242	0.229481	0.268626	0.305781	0.341049	0.374525	0.406301	0.436462	0.465091	0.492266	0.51806	0.542544	0.565784	0.587843	0.608781	0.628656	0.647521	0.665428	0.682425	0.698559	0.713873	0.728409	0.742206	0.755303	0.767734	0.779534	0.790734
7	0.019717	0.039045	0.076566	0.112622	0.14727	0.180566	0.212561	0.243307	0.272852	0.301244	0.328527	0.354745	0.379939	0.40415	0.427415	0.449772	0.471256	0.491901	0.51174	0.530804	0.549124	0.566729	0.583646	0.599903	0.615525	0.630537	0.644963	0.658825	0.672147	0.684948	0.697249

U RATA-RATA POLA BUJURSANGKAR

jarak	A (0.5)	A (1)	A (2)	A (3)	A (4)	A (5)	A (6)	A (7)	A (8)	A (9)	A (10)	A (11)	A (12)	A (13)	A (14)	A (15)	A (16)	A (17)	A (18)	A (19)	A (20)	A (21)	A (22)	A (23)	A (24)	A (25)	A (26)	A (27)	A (28)	A (29)	A (30)
1	40.291	63.96254	86.87247	95.21798	98.25803	99.36545	99.76885	99.9158	99.96933	99.98883	99.99593	99.99852	99.99946	99.9998	99.99993	99.99997	99.99999	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	16.38322	29.64251	50.0573	64.49683	74.74252	82.02279	87.2002	90.88415	93.50648	95.37368	96.70351	97.65079	98.32569	98.80659	99.1493	99.39355	99.56764	99.69174	99.78021	99.84328	99.88824	99.92031	99.94317	99.95947	99.97109	99.97938	99.9853	99.98951	99.99252	99.99466	99.99619
3	9.19028	17.01719	30.52516	41.7494	51.12339	58.96909	65.54359	71.05714	75.68344	79.56684	82.82763	85.56633	87.867	89.80002	91.42438	92.78954	93.93699	94.90153	95.7124	96.39413	96.96732	97.44929	97.85458	98.19541	98.48204	98.7231	98.92585	99.09638	99.23982	99.36047	99.46196
4	6.132595	11.33483	20.68461	28.9449	36.29686	42.86057	48.73043	53.98536	58.69319	62.91313	66.69729	70.09175	73.13743	75.87077	78.32423	80.52682	82.50445	84.28032	85.87517	87.30758	88.59422	89.74999	90.78829	91.72111	92.55921	93.31226	93.98891	94.59695	95.14335	95.63438	96.07568
5	4.547206	8.314484	15.18888	21.43335	27.16309	32.4424	37.31759	41.82589	45.99885	49.86406	53.44608	56.767	59.84685	62.70391	65.35489	67.81511	70.09869	72.2186	74.18683	76.01443	77.71162	79.28785	80.75185	82.11172	83.37495	84.54848	85.63874	86.65169	87.59286	88.46738	89.28
6	3.616258	6.517351	11.83152	16.72223	21.28226	25.5567	29.57492	33.35897	36.92674	40.29349	43.4726	46.47601	49.3146	51.99827	54.53619	56.93682	59.20803	61.35718	63.39113	65.31631	67.13876	68.86413	70.49776	72.04465	73.50954	74.89685	76.2108	77.45534	78.63419	79.75089	80.80876
7	3.021181	5.359456	9.633852	13.58926	17.30914	20.83072	24.17636	27.36178	30.39908	33.29819	36.06757	38.71463	41.24599	43.66768	45.98519	48.20362	50.32772	52.3619	54.31031	56.17687	57.96527	59.67898	61.32131	62.89539	64.4042	65.85057	67.23717	68.56658	69.84125	71.06348	72.23552

DIAGRAM POLA BUJURSANGKAR

