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DATA PENGUJIAN
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**SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY**

10 TON DUTCH CONE PENETRATION TEST

Location	: Jl. Setiabudi, Semarang, Jawa Tengah	Date	: 21 Desember 2018
No. of CPT	: SB. 1	Weather	: Cerah
Elevation	: +1,00 meter dari muka jalan	Surveyor	: Lab.Mektan FT.UAJY
Ground Water Depth	: -15.00 meter dari muka tanah	Project	:

Keda-laman meter	C kg/cm ²	C + F Kg/cm ²	L F Kg/cm ²	T F Kg/cm ¹	Jumlah T F Kg/cm ¹	Keda-laman meter	C kg/cm ²	C + F Kg/cm ²	L F Kg/cm ²	T F Kg/cm ¹	Jumlah T F Kg/cm ¹
0,00	0	0	0,00	0	0						
0,20	4	6	0,30	6	6	10,20					
0,40	6	8	0,30	6	12	10,40					
0,60	9	11	0,30	6	18	10,60					
0,80	13	16	0,45	9	27	10,80					
1,00	18	21	0,45	9	36	11,00					
1,20	34	37	0,45	9	45	11,20					
1,40	69	72	0,45	9	54	11,40					
1,60	93	96	0,45	9	63	11,60					
1,80	168	171	0,45	9	72	11,80					
2,00	237	240	0,45	9	81	12,00					
2,20	298	301	0,45	9	90	12,20					
2,40	354	357	0,45	9	99	12,40					
2,60	396	399	0,45	9	108	12,60					
2,80	446	450	0,60	12	120	12,80					
3,00						13,00					
3,20						13,20					
3,40						13,40					
3,60						13,60					
3,80						13,80					
4,00						14,00					
4,20						14,20					
4,40						14,40					
4,60						14,60					
4,80						14,80					
5,00						15,00					
5,20						15,20					
5,40						15,40					
5,60						15,60					
5,80						15,80					
6,00						16,00					
6,20						16,20					
6,40						16,40					
6,60						16,60					
6,80						16,80					
7,00						17,00					
7,20						17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
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9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

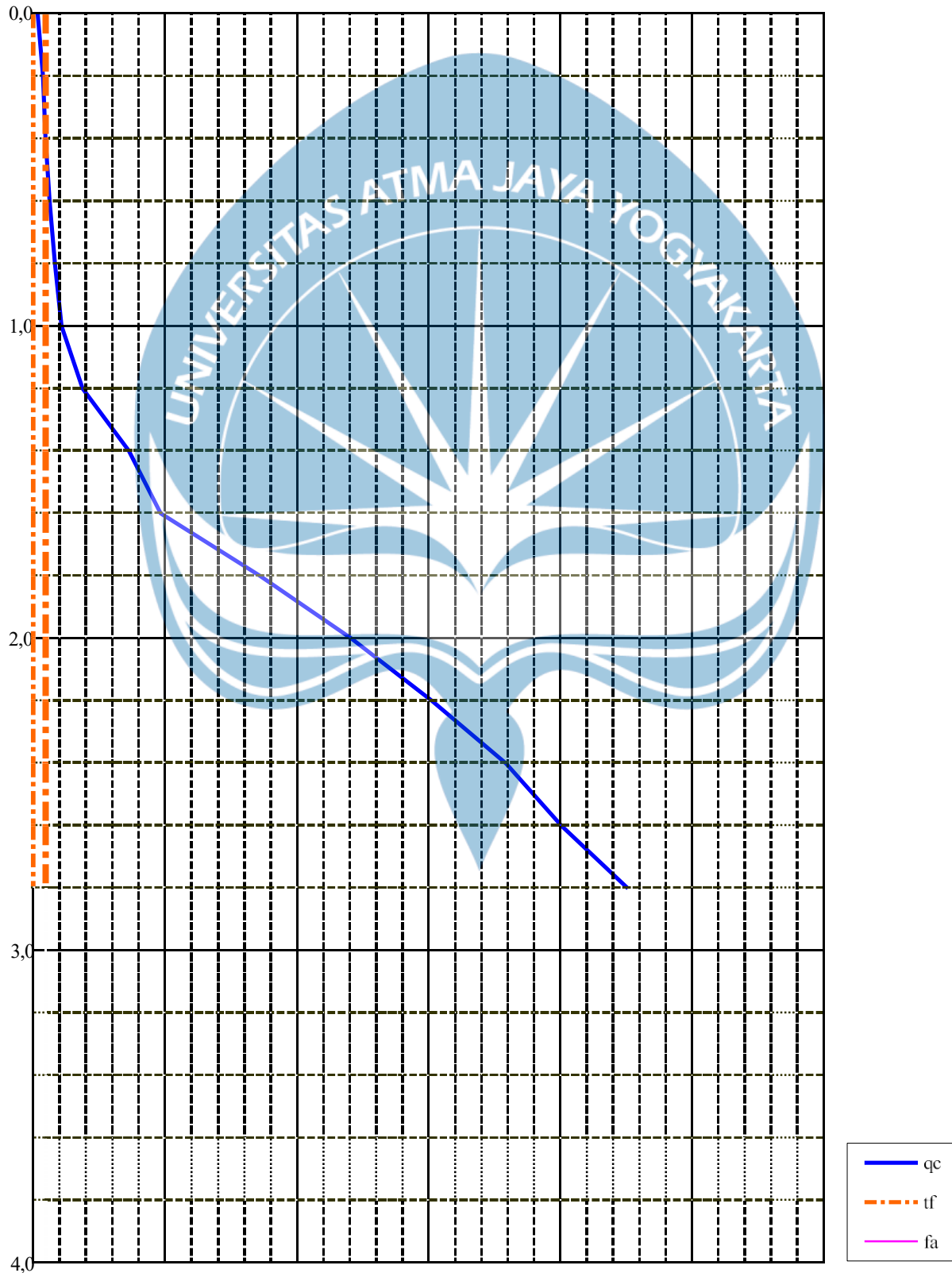


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DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

10 TON DUTCH CONE PENETRATION TEST

Project : Jl. Setiabudi, Semarang, Jawa Tengah
No. of CPT : SB. 1 Elevation : +1,00 meter dari muka jalan
Date : 21 Desember 2018 Ground Water Depth : -15.00 meter dari muka tanah

fa	10	20	30	40	50	60	kg / cm^2
qc	100	200	300	400	500	600	kg / cm^2
tf	1000	2000	3000	4000	5000	6000	kg / cm^1





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10 TON DUTCH CONE PENETRATION TEST

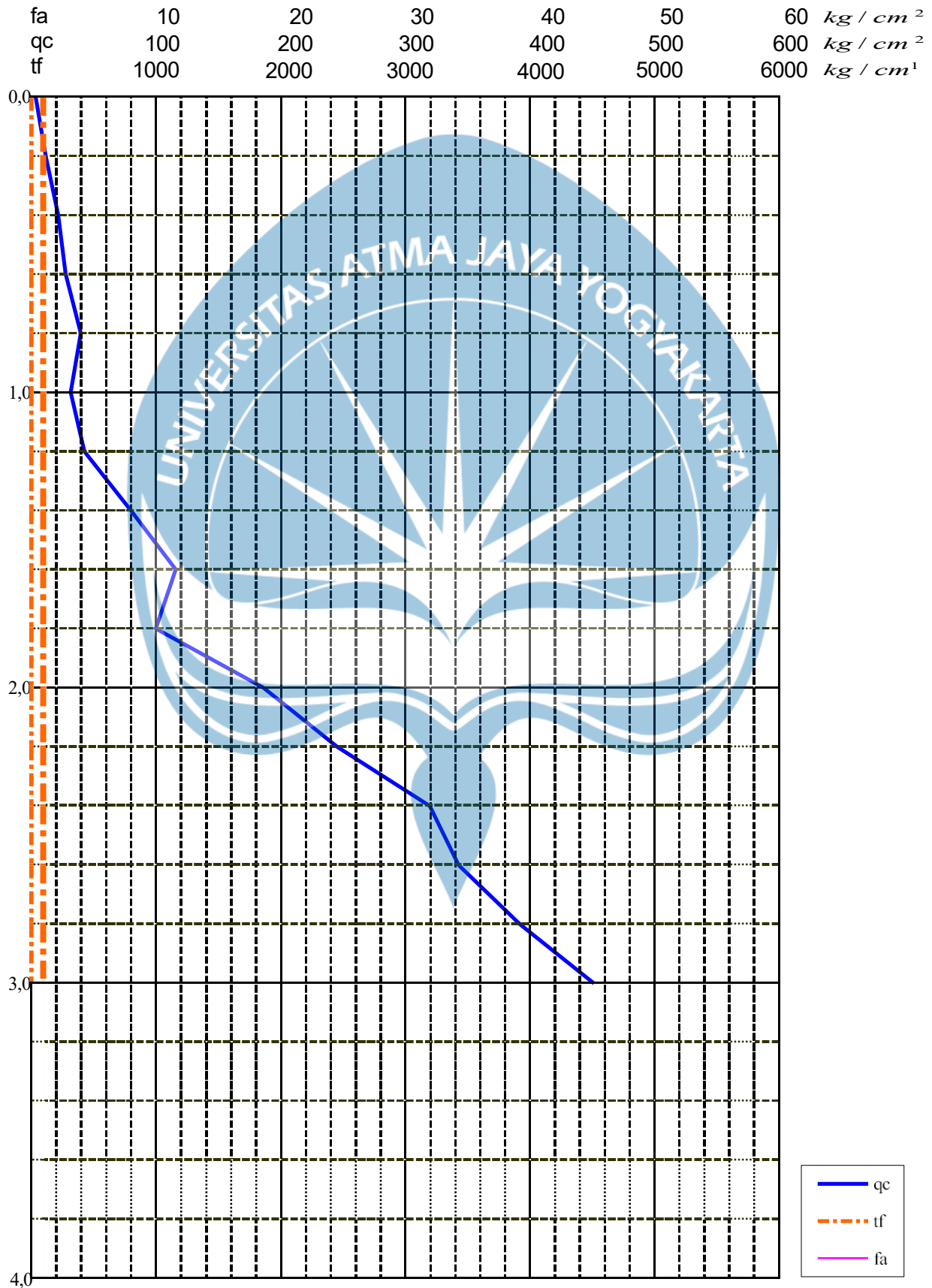
Location : Jl. Setiabudi, Semarang, Jawa Tengah Date : 21 Desember 2018
 No. of CPT : SB. 2 Weather : Cerah
 Elevation : +1,50 meter dari muka jalan Surveyor : Lab.Mektan FT.UAJY
 Ground Water Depth : -15.00 meter dari muka tanah Project :

Keda-laman meter	C kg/cm ²	C + F Kg/cm ²	L F Kg/cm ²	T F Kg/cm ¹	Jumlah T F Kg/cm ¹	Keda-laman meter	C kg/cm ²	C + F Kg/cm ²	L F Kg/cm ²	T F Kg/cm ¹	Jumlah T F Kg/cm ¹
0,00	0	0	0,00	0	0						
0,20	8	10	0,30	6	6	10,20					
0,40	18	21	0,45	9	15	10,40					
0,60	24	27	0,45	9	24	10,60					
0,80	36	39	0,45	9	33	10,80					
1,00	28	31	0,45	9	42	11,00					
1,20	39	42	0,45	9	51	11,20					
1,40	76	79	0,45	9	60	11,40					
1,60	112	115	0,45	9	69	11,60					
1,80	96	99	0,45	9	78	11,80					
2,00	182	185	0,45	9	87	12,00					
2,20	241	244	0,45	9	96	12,20					
2,40	315	318	0,45	9	105	12,40					
2,60	338	341	0,45	9	114	12,60					
2,80	387	390	0,45	9	123	12,80					
3,00	446	450	0,60	12	135	13,00					
3,20						13,20					
3,40						13,40					
3,60						13,60					
3,80						13,80					
4,00						14,00					
4,20						14,20					
4,40						14,40					
4,60						14,60					
4,80						14,80					
5,00						15,00					
5,20						15,20					
5,40						15,40					
5,60						15,60					
5,80						15,80					
6,00						16,00					
6,20						16,20					
6,40						16,40					
6,60						16,60					
6,80						16,80					
7,00						17,00					
7,20						17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					



10 TON DUTCH CONE PENETRATION TEST

Project : Jl. Setiabudi, Semarang, Jawa Tengah
No. of CPT : SB. 2 Elevation : +1,50 meter dari muka jalan
Date : 21 Desember 2018 Ground Water Depth : -15.00 meter dari muka tanah





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10 TON DUTCH CONE PENETRATION TEST

Location : Jl. Setiabudi, Semarang, Jawa Tengah Date : 21 Desember 2018
 No. of CPT : SB. 3 Weather : Cerah
 Elevation : +1,50 meter dari muka jalan Surveyor : Lab.Mektan FT.UAJY
 Ground Water Depth : -15.00 meter dari muka tanah Project :

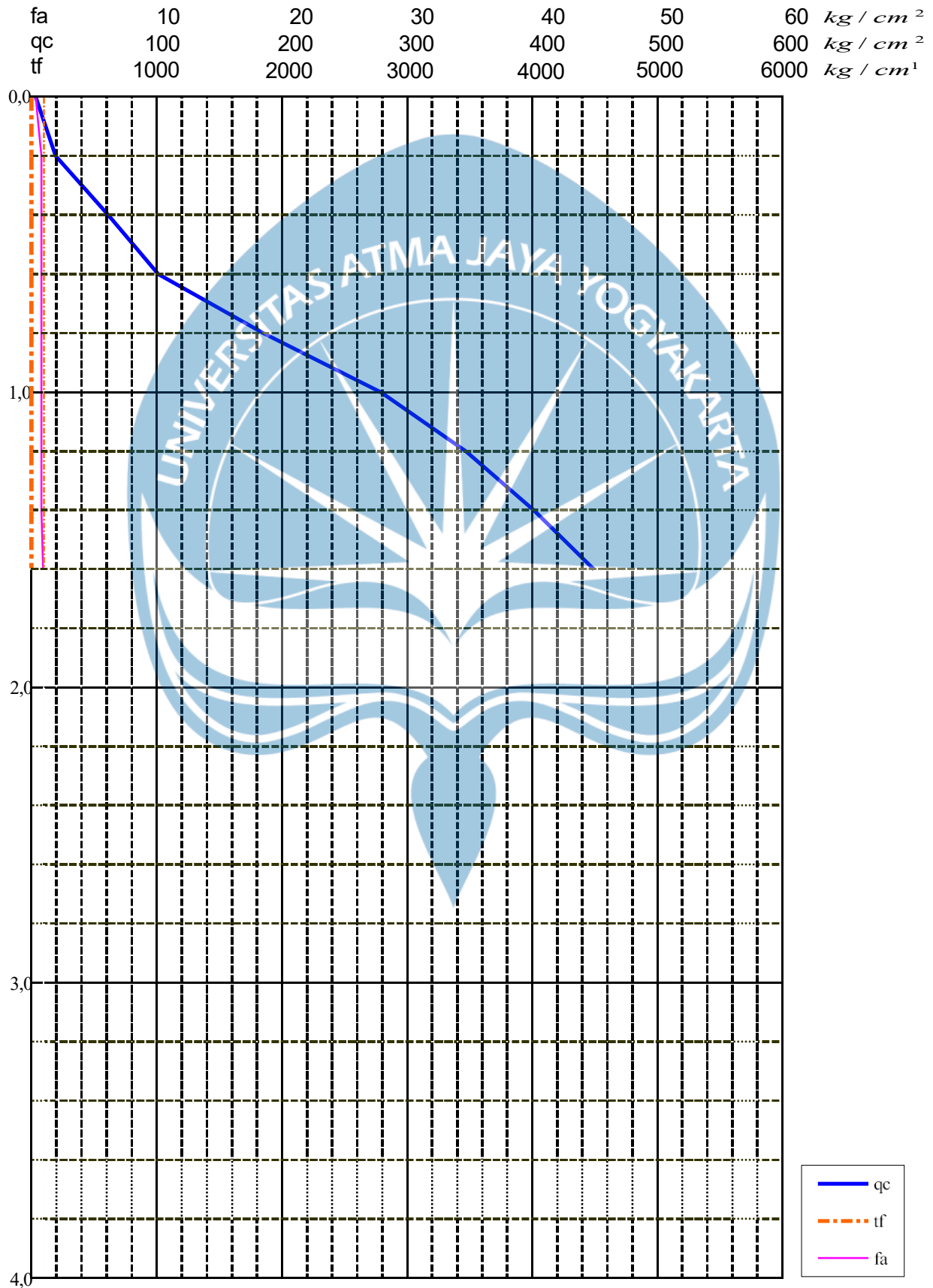
Keda-laman meter	C kg/cm ²	C + F Kg/cm ²	L F Kg/cm ²	T F Kg/cm ¹	Jumlah T F Kg/cm ¹	Keda-laman meter	C kg/cm ²	C + F Kg/cm ²	L F Kg/cm ²	T F Kg/cm ¹	Jumlah T F Kg/cm ¹
0,00	0	0	0,00	0	0						
0,20	16	19	0,45	9	9	10,20					
0,40	58	61	0,45	9	18	10,40					
0,60	98	101	0,45	9	27	10,60					
0,80	182	185	0,45	9	36	10,80					
1,00	276	279	0,45	9	45	11,00					
1,20	344	347	0,45	9	54	11,20					
1,40	398	401	0,45	9	63	11,40					
1,60	446	450	0,60	12	75	11,60					
1,80						11,80					
2,00						12,00					
2,20						12,20					
2,40						12,40					
2,60						12,60					
2,80						12,80					
3,00						13,00					
3,20						13,20					
3,40						13,40					
3,60						13,60					
3,80						13,80					
4,00						14,00					
4,20						14,20					
4,40						14,40					
4,60						14,60					
4,80						14,80					
5,00						15,00					
5,20						15,20					
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6,60						16,60					
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7,00						17,00					
7,20						17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					



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DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

10 TON DUTCH CONE PENETRATION TEST

Project : Jl. Setiabudi, Semarang, Jawa Tengah
No. of CPT : SB. 3 Elevation : +1,50 meter dari muka jalan
Date : 21 Desember 2018 Ground Water Depth : -15.00 meter dari muka tanah





BOR LOG

CLIENT:

PROJECT TITLE :

PROJECT CONTRACT NUMBER: 027/LMKT/FT.UAJY/11/2018

PROJECT LOCATION : Jl. Setiabudi, Semarang, Jawa Tengah

DATE STARTED: 21 Desember 2018

GROUND ELEVATION : + 1,50 m from road level

DATE COMPLETED : 21 Desember 2018

HOLE SIZE : 7.295cm

DRILLING CONTRACTOR: SOIL MECH. LAB. UAJY

GROUND WATER LEVEL : - 15,00 m from ground level

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

WEATHER CONDITION : FINE

LOGGED BY: RIYANTO, CS.

ESTIMATED SEASONAL HIGH : -

CHECKED BY: SOIL MECH. LAB, UAJY

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value)				Water Level Elevation (m)	SPT Value
					N ₁	N ₂	N ₃	N _v		
1										0
2					8	12	22	34		1
3										2
4					12	19	30	49		3
5										4
6					12	21	30	51		5
7										6
8					14	22	30	52		7
9		Pasir kasar (coklat)	18,5							8
10					14	21	31	52		9
11										10
12					14	23	31	54		11
13										12
14					16	24	31	55		13
15									15.00	14
16					16	23	32	55		15
17										16
18					17	24	33	57		17
19										18
20					17	24	35	59		19
21										20
22					19	23	37	60		21
23										22
24					19	25	35	60		23
25										24
26					18	24	36	60		25
27										26
28					19	26	34	60		27
29										28
30		Pasir kasar padat (coklat)	21,5		19	25	35	60		29
31										30
32					20	27	33	60		31
33										32
34					20	23	37	60		33
35										34
36					22	25	35	60		35
37										36
38					22	25	35	60		37
39										38
40					22	28	32	60		39

Catatan: Pada pengamatan di lapangan, lanau bisa tampak seperti pasir halus atau pasir sangat halus



BOR LOG

CLIENT: PROJECT TITLE :
PROJECT CONTRACT NUMBER: 027/LMKT/FT.UAJY/11/2018 PROJECT LOCATION : Jl. Setiabudi, Semarang, Jawa Tengah
DATE STARTED: 22 Desember 2018 GROUND ELEVATION : + 2,00 m from road level
DATE COMPLETED : 22 Desember 2018 HOLE SIZE : 7.295cm
DRILLING CONTRACTOR: SOIL MECH. LAB. UAJY GROUND WATER LEVEL : - 15,00 m from ground level
DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE WEATHER CONDITION : FINE
LOGGED BY: RIYANTO, CS. ESTIMATED SEASONAL HIGH : -
CHECKED BY: SOIL MECH. LAB, UAJY

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value)				Water Level Elevation (m)	SPT Value
					N ₁	N ₂	N ₃	N _v		
1										0
2					9	11	13	24		1
3										2
4					10	20	22	42		3
5										4
6					10	18	27	45		5
7										6
8					12	16	29	45		7
9										8
10					12	20	27	47		9
11		Pasir kasar (coklat)	22,5							10
12					14	20	33	53		11
13										12
14					16	21	33	54		13
15									15.00	14
16					16	23	32	55		15
17										16
18					17	22	34	56		17
19										18
20					17	20	37	57		19
21										20
22					18	23	34	57		21
23										22
24					19	23	37	60		23
25										24
26					19	25	35	60		25
27										26
28					19	25	35	60		27
29										28
30					20	26	34	60		29
31										30
32		Pasir kasar padat (coklat)	17,5		21	24	36	60		31
33										32
34					21	27	33	60		33
35										34
36					22	27	33	60		35
37										36
38					22	28	32	60		37
39										38
40					22	28	32	60		39

Catatan: Pada pengamatan di lapangan, lanau bisa tampak seperti pasir halus atau pasir sangat halus



REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi : Jl. Setiabudi, Semarang, Jawa Tengah
Tanggal : 07 Januari 2019

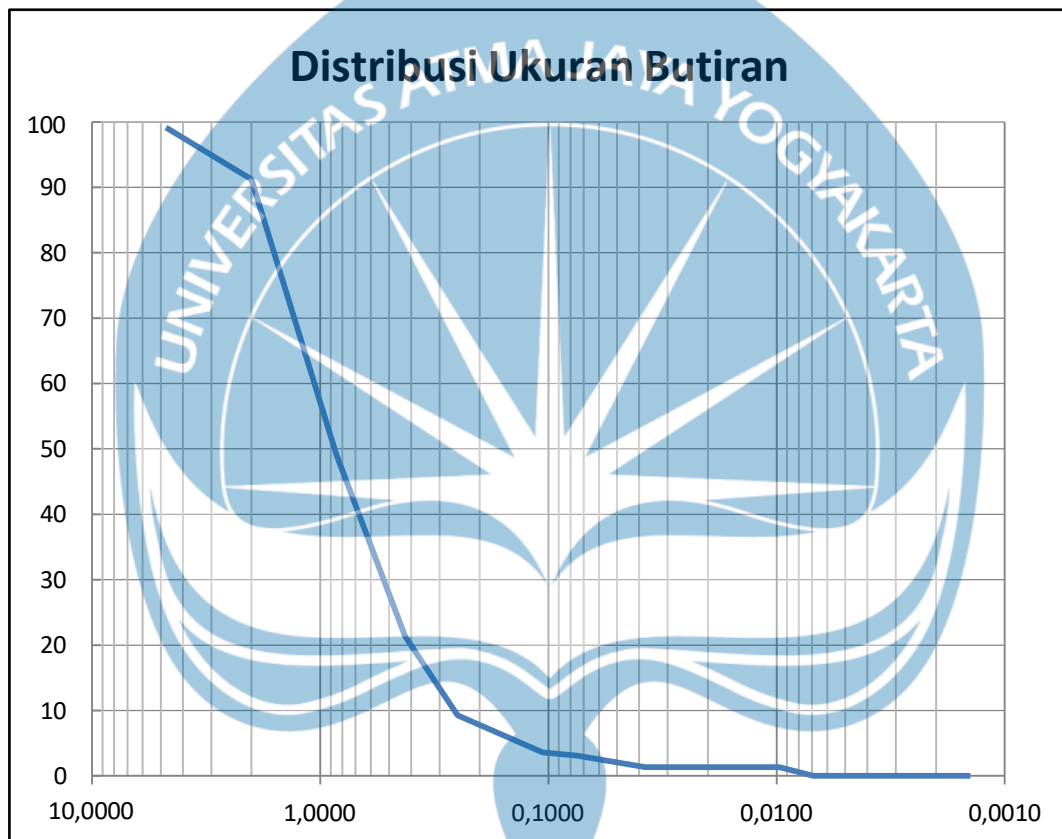
Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm ³)	γ_k (gr/cm ³)	Pengujian Geser Langsung	
						c (kg/cm ²)	θ°
BH 1	15,00	31,18	2,69	1,63	1,24	0,00	26,55
BH 2		29,34	2,65	1,63	1,26	0,00	25,97



ANALISA BUTIRAN

Proyek :
 Lokasi : Jl. Setiabudi, Semarang, Jawa Tengah
 Tanggal : 07 Januari 2019

Titik : BH 1
 Kedalaman: 15



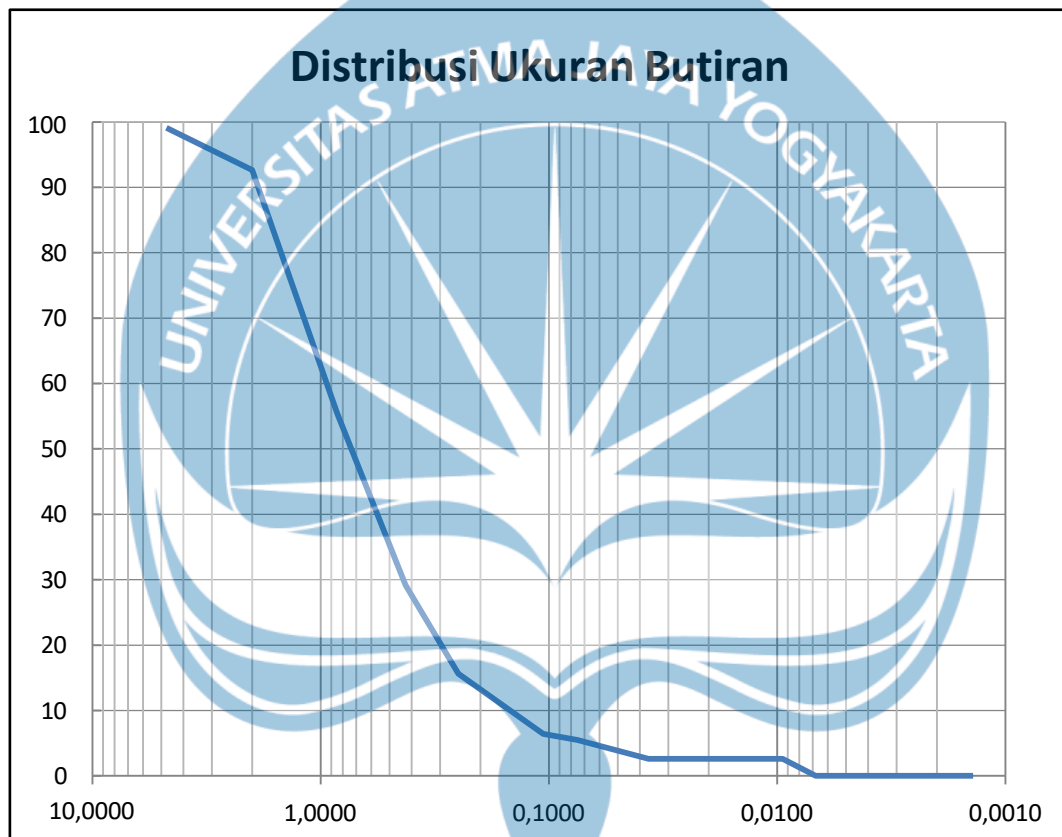
No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,83	99,17	99,17
10	2,000	7,96	91,21	91,21
20	0,850	42,01	49,20	49,20
40	0,425	27,87	21,33	21,33
60	0,250	12,08	9,25	9,25
140	0,106	5,69	3,56	3,56
200	0,075	0,45	3,11	3,11
Pan		3,11		



ANALISA BUTIRAN

Proyek :
 Lokasi : Jl. Setiabudi, Semarang, Jawa Tengah
 Tanggal : 07 Januari 2019

Titik : BH 2
 Kedalaman: 15

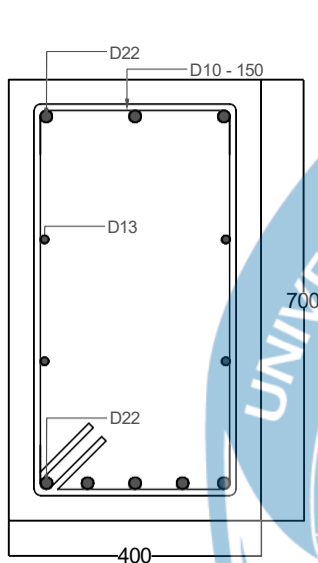


No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,89	99,11	99,11
10	2,000	6,46	92,65	92,65
20	0,850	37,14	55,51	55,51
40	0,425	26,31	29,20	29,20
60	0,250	13,57	15,63	15,63
140	0,106	9,22	6,41	6,41
200	0,075	0,93	5,48	5,48
Pan		5,48		

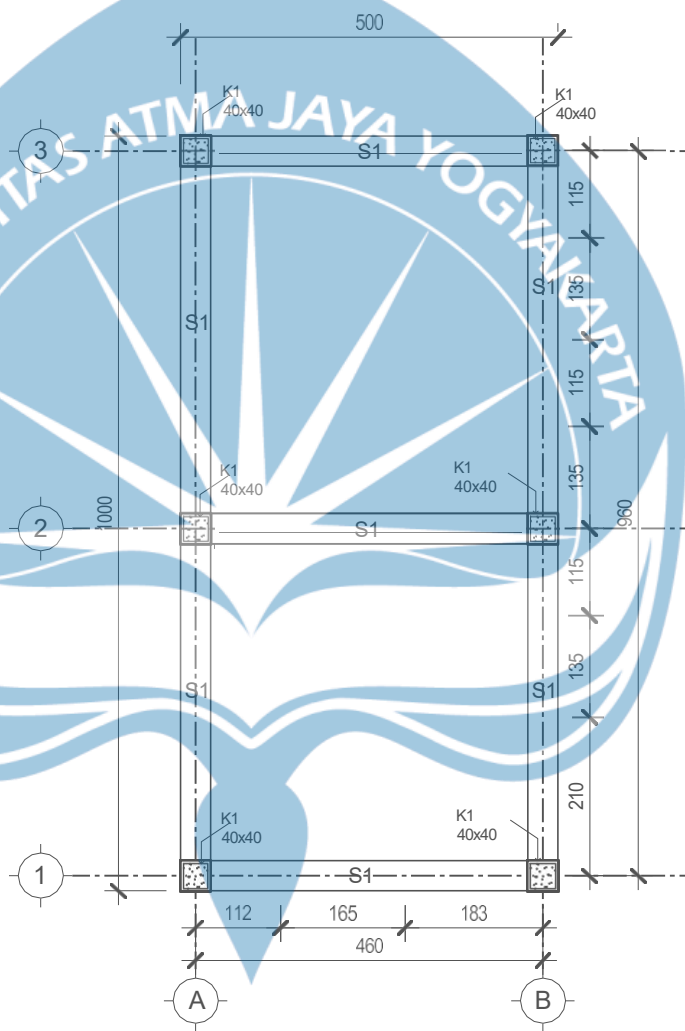


LAMPIRAN C

GAMBAR STRUKTUR



DETAIL SLOOF S1	
UKURAN SLOOF	400 X 700
TULANGAN ATAS	3 D22
TULANGAN BAWAH	5 D22
TULANGAN PINGGANG	3 D13
SENGKANG	D10 - 150



U.S. Logo Universitas Atma Jaya Yogyakarta Data.com_idg

TUGAS AKHIR PERANCANGAN INFRASTRUKTUR

Digambar dan Disusun Oleh:

Billy Johanes Haryanto (210218423)

Dosen Pengampu

Wiryawan Sarjono, Ir.,M.T.

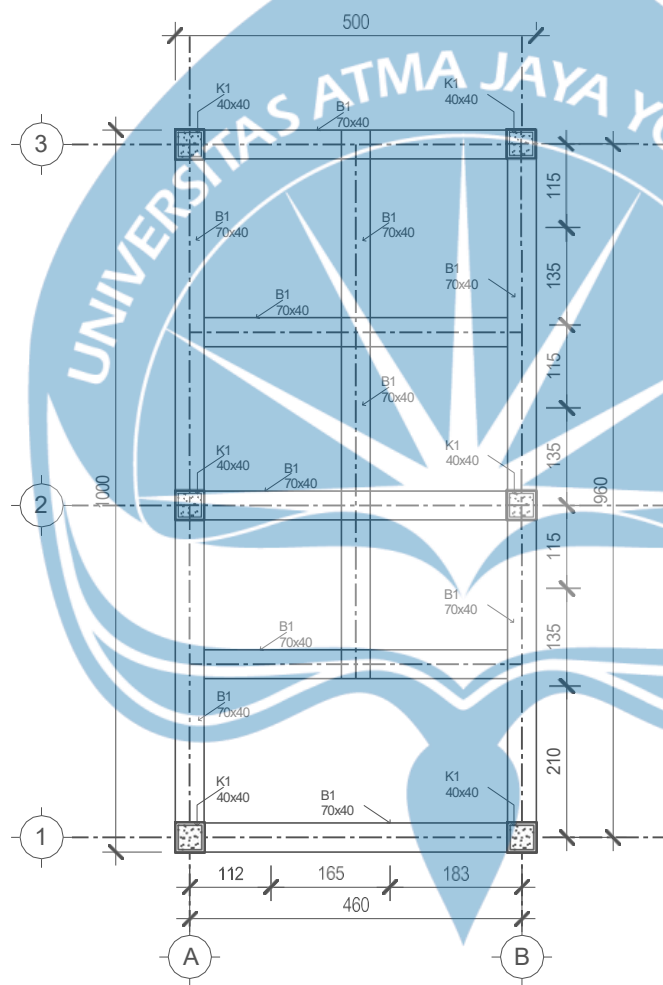
Lokasi

Homestay UNIMUS
Semarang, Jawa Tengah

Denah Dan Detail Sloof

SKALA

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Universitas Atma Jaya Yogyakarta

TUGAS AKHIR PERANCANGAN INFRASTRUKTUR

Digambar dan Disusun Oleh:

Billy Johanes Haryanto (210218423)

Dosen Pengampu

Wiryawan Sarjono, Ir., M.T.

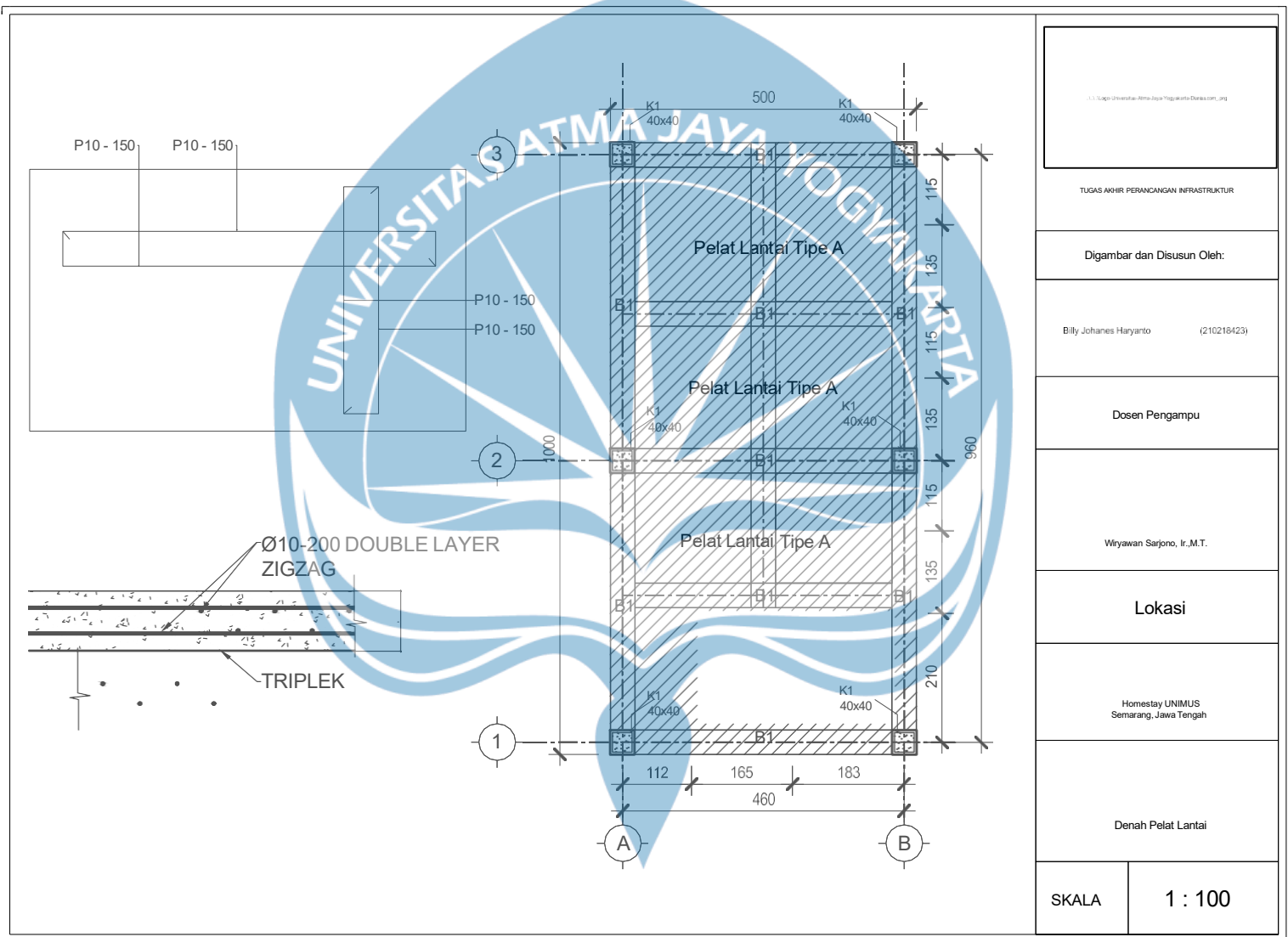
Lokasi

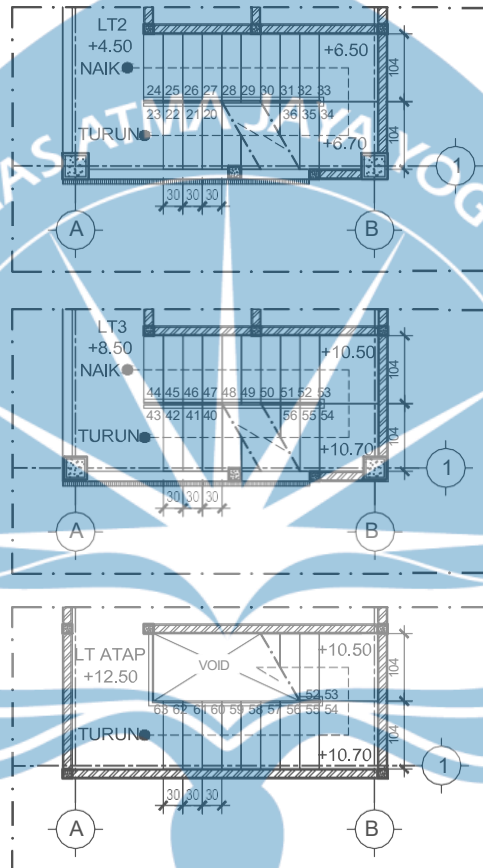
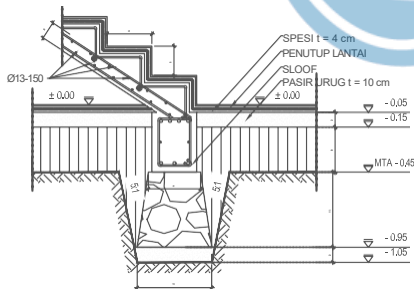
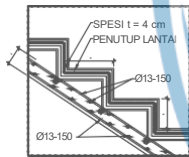
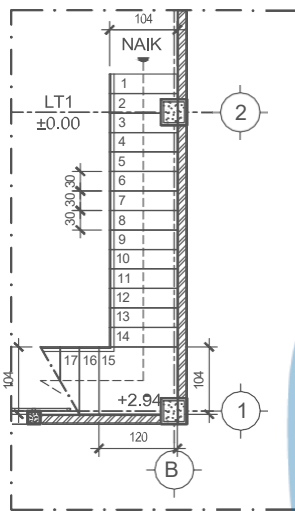
Homestay UNIMUS
Semarang, Jawa Tengah

Denah Balok Lantai 1-4

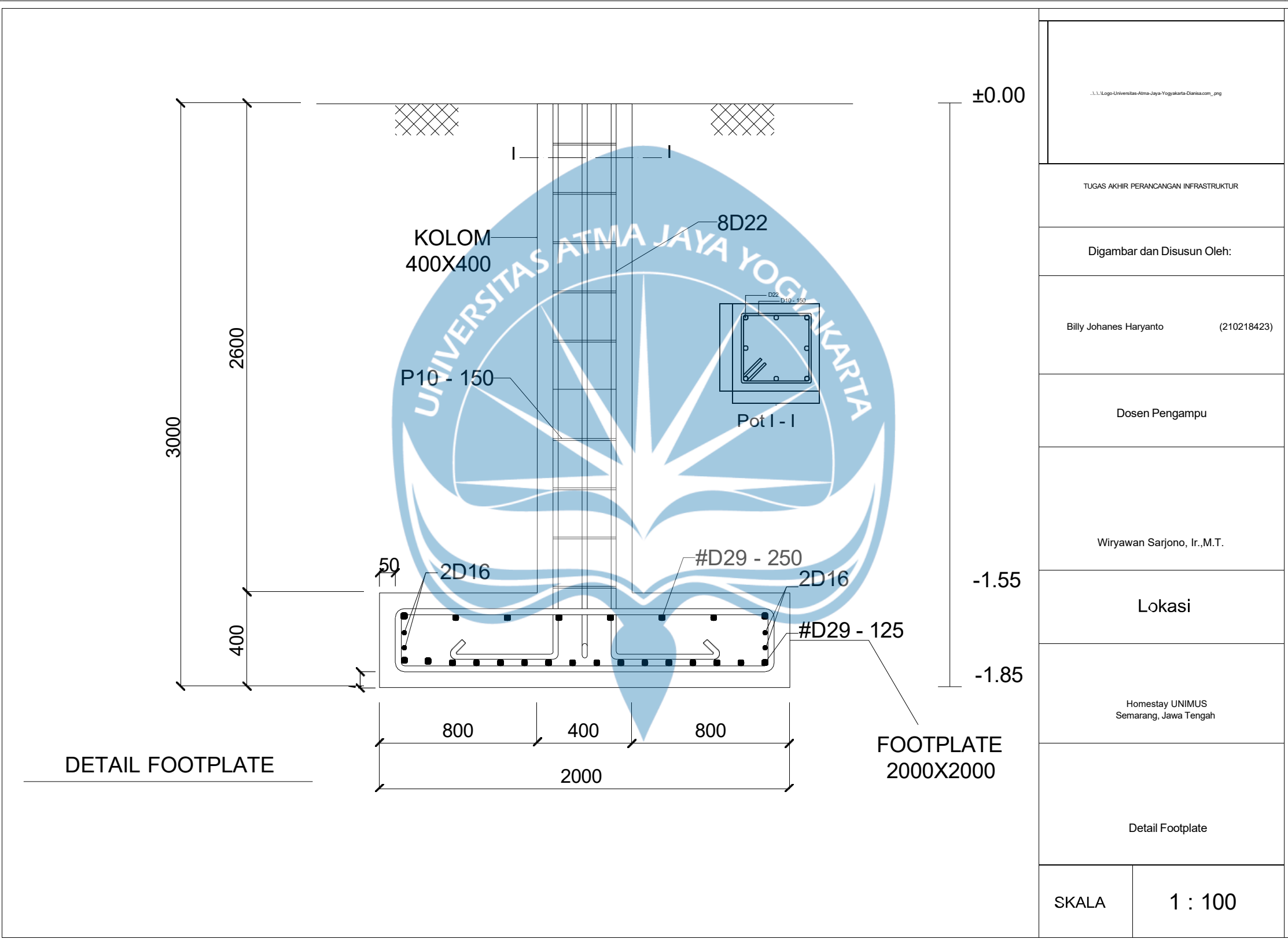
SKALA

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1.1. Tugas Akhir Perancangan Infrastruktur	
Digambar dan Disusun Oleh:	
Billy Johanes Haryanto (210218423)	
Dosen Pengampu	
Wiryawan Sarjono, Ir., M.T.	
Lokasi	
Homestay UNIMUS Semarang, Jawa Tengah	
Detail Tangga	
SKALA	1 : 100





LAMPIRAN D

DATA OUTPUT SAP2000

Frame	Station	OutputCase	CaseType	Step Type	Step Num	P	V2	V3	T	M2	M3	Frame Elem	ElemS tation
86	0	Envelope	Combination	Max		- 1506 .197	43.5 21	22.5 67	4.8 971	64.2 843	96.1 265	86-1	0
86	2.2 75	Envelope	Combination	Max		- 1471 .461	43.5 21	22.5 67	4.8 971	13.0 678	- 2.88 41	86-1	2.275
86	4.5 5	Envelope	Combination	Max		- 1436 .724	43.5 21	22.5 67	4.8 971	121. 7	53.7 607	86-1	4.55
86	0	Envelope	Combination	Min		- 1605 .046	- 27.4 81	- 50.7 92	- 4.7 911	- 109. 4079	- 71.2 773	86-1	0
86	2.2 75	Envelope	Combination	Min		- 1570 .309	- 27.4 81	- 50.7 92	- 4.7 911	6.02 11	- 8.75 83	86-1	2.275
86	4.5 5	Envelope	Combination	Min		- 1535 .573	- 27.4 81	- 50.7 92	- 4.7 911	- 38.3 986	- 101. 8947	86-1	4.55
87	0	Envelope	Combination	Max		- 1392 .676	27.5 77	24.3 12	4.8 939	65.5 933	72.0 277	87-1	0
87	2.2 75	Envelope	Combination	Max		- 1357 .939	27.5 77	24.3 12	4.8 939	10.3 952	9.28 92	87-1	2.275
87	4.5 5	Envelope	Combination	Max		- 1323 .202	27.5 77	24.3 12	4.8 939	109. 1066	102. 1777	87-1	4.55
87	0	Envelope	Combination	Min		- 1495 .132	- 43.4 15	- 46.3 38	- 4.8 381	- 101. 7347	- 95.3 605	87-1	0
87	2.2 75	Envelope	Combination	Min		- 1460 .395	- 43.4 15	- 46.3 38	- 4.8 381	3.57 17	3.40 86	87-1	2.275
87	4.5 5	Envelope	Combination	Min		- 1425 .659	- 43.4 15	- 46.3 38	- 4.8 381	- 45.0 314	- 53.4 493	87-1	4.55
88	0	Envelope	Combination	Max		- 3505 .474	62.1 37	33.0 73	3.3 948	80.1 831	123. 4133	88-1	0
88	2.2 75	Envelope	Combination	Max		- 3470 .737	62.1 37	33.0 73	3.3 948	4.95 13	- 17.9 007	88-1	2.275

88	4.5 5	Envelope	Combination	Max		- 3436	62.1 37	33.0 73	3.3 948	110. 6003	- 1.11 58	88-1	4.55
88	0	Envelope	Combination	Min		- 3571 .407	- 9.24 8	- 47.1 45	- 3.2 047	- 103. 9102	- 43.2 104	88-1	0
88	2.2 75	Envelope	Combination	Min		- 3536 .671	- 9.24 8	- 47.1 45	- 3.2 047	3.33 55	- 22.2 171	88-1	2.275
88	4.5 5	Envelope	Combination	Min		- 3501 .934	- 9.24 8	- 47.1 45	- 3.2 047	- 70.2 995	- 159. 3228	88-1	4.55
89	0	Envelope	Combination	Max		- 3333 .124	9.32 7	28.2 27	3.3 948	71.5 374	43.6 753	89-1	0
89	2.2 75	Envelope	Combination	Max		- 3298 .387	9.32 7	28.2 27	3.3 948	7.32 92	22.5 88	89-1	2.275
89	4.5 5	Envelope	Combination	Max		- 3263 .65	9.32 7	28.2 27	3.3 948	117. 3894	160. 2638	89-1	4.55
89	0	Envelope	Combination	Min		- 3397 .901	- 62.3 39	- 49.0 67	- 3.2 047	- 105. 8656	- 123. 3842	89-1	0
89	2.2 75	Envelope	Combination	Min		- 3363 .164	- 62.3 39	- 49.0 67	- 3.2 047	5.75 25	18.3 058	89-1	2.275
89	4.5 5	Envelope	Combination	Min		- 3328 .427	- 62.3 39	- 49.0 67	- 3.2 047	- 56.8 976	1.23 27	89-1	4.55
90	0	Envelope	Combination	Max		- 1900 .606	23.3 54	57.2 89	3.3 948	115. 4204	70.4 395	90-1	0
90	2.2 75	Envelope	Combination	Max		- 1865 .87	23.3 54	57.2 89	3.3 948	- 14.9 018	17.3 121	90-1	2.275
90	4.5 5	Envelope	Combination	Max		- 1831 .133	23.3 54	57.2 89	3.3 948	10.5 91	151. 8758	90-1	4.55
90	0	Envelope	Combination	Min		- 1997 .276	- 61.5 55	- 13.9 35	- 3.2 047	- 52.8 153	- 128. 1987	90-1	0
90	2.2 75	Envelope	Combination	Min		- 1962 .539	- 61.5 55	- 13.9 35	- 3.2 047	- 21.1 232	11.8 361	90-1	2.275

90	4.55	Envelope	Combination	Min		-1927.802	-61.555	-13.935	-3.2047	-145.246	-35.8202	90-1	4.55
91	0	Envelope	Combination	Max		-1895.339	61.458	57.882	3.3948	117.644	127.9782	91-1	0
91	2.275	Envelope	Combination	Max		-1860.602	61.458	57.882	3.3948	-14.0259	-11.8378	91-1	2.275
91	4.55	Envelope	Combination	Max		-1825.865	61.458	57.882	3.3948	16.1436	35.6913	91-1	4.55
91	0	Envelope	Combination	Min		-1989.452	-23.336	-16.073	-3.2047	-56.9901	-70.4874	91-1	0
91	2.275	Envelope	Combination	Min		-1954.715	-23.336	-16.073	-3.2047	-20.4348	-17.3998	91-1	2.275
91	4.55	Envelope	Combination	Min		-1919.978	-23.336	-16.073	-3.2047	-145.7188	-151.6572	91-1	4.55
104	0	Envelope	Combination	Max		-1168.781	29.613	-31.962	3.7664	-56.0918	51.1856	104-1	0
104	2	Envelope	Combination	Max		-1138.243	29.613	-31.962	3.7664	7.8322	-2.0357	104-1	2
104	4	Envelope	Combination	Max		-1107.705	29.613	-31.962	3.7664	84.5179	-51.7288	104-1	4
104	0	Envelope	Combination	Min		-1173.767	24.846	-42.7	-3.6512	-86.2804	47.6516	104-1	0
104	2	Envelope	Combination	Min		-1143.229	24.846	-42.7	-3.6512	0.8816	-8.0448	104-1	2
104	4	Envelope	Combination	Min		-1112.691	24.846	-42.7	-3.6512	71.7555	-67.2694	104-1	4
105	0	Envelope	Combination	Max		-1149.848	-25.637	-26.763	4.0158	-43.6306	-49.7148	105-1	0
105	2	Envelope	Combination	Max		-1119.31	-25.637	-26.763	4.0158	9.8962	7.565	105-1	2

105	4	Envelope	Combination	Max		-1088.773	-25.637	-26.763	4.0158	75.7624	68.3468	105-1	4
105	0	Envelope	Combination	Min		-1154.529	-30.391	-37.154	-3.8461	-72.8545	-53.2234	105-1	0
105	2	Envelope	Combination	Min		-1123.991	-30.391	-37.154	-3.8461	1.4535	1.5532	105-1	2
105	4	Envelope	Combination	Min		-1093.453	-30.391	-37.154	-3.8461	63.422	52.8279	105-1	4
106	0	Envelope	Combination	Max		-2124.855	-66.368	-14.971	0	-32.935	-129.6348	106-1	0
106	2	Envelope	Combination	Max		-2094.317	-66.368	-14.971	0	-2.9931	3.1016	106-1	2
106	4	Envelope	Combination	Max		-2063.779	-66.368	-14.971	0	31.3581	144.9116	106-1	4
106	0	Envelope	Combination	Min		-2129.532	-73.404	-17.961	0	-40.4863	-148.7047	106-1	0
106	2	Envelope	Combination	Min		-2098.994	-73.404	-17.961	0	-4.5643	-1.8969	106-1	2
106	4	Envelope	Combination	Min		-2068.456	-73.404	-17.961	0	26.9485	135.8373	106-1	4
107	0	Envelope	Combination	Max		-2204.79	73.56	-10.853	0	-21.9768	148.0679	107-1	0
107	2	Envelope	Combination	Max		-2174.252	73.56	-10.853	0	-0.2709	0.9479	107-1	2
107	4	Envelope	Combination	Max		-2143.714	73.56	-10.853	0	25.9282	-137.0079	107-1	4
107	0	Envelope	Combination	Min		-2209.44	66.461	-13.908	0	-29.7028	128.8365	107-1	0
107	2	Envelope	Combination	Min		-2178.903	66.461	-13.908	0	-1.8875	-4.0859	107-1	2

107	4	Envelope	Combination	Min		- 2148.365	66.461	- 13.908	0	21.4347	- 146.1725	107-1	4
108	0	Envelope	Combination	Max		- 1251.066	- 47.643	61.767	0	129.9441	- 90.0907	108-1	0
108	2	Envelope	Combination	Max		- 1220.529	- 47.643	61.767	0	6.4103	5.1949	108-1	2
108	4	Envelope	Combination	Max		- 1189.991	- 47.643	61.767	0	- 105.605	111.7468	108-1	4
108	0	Envelope	Combination	Min		- 1257.194	- 56.514	52.167	0	103.0632	- 114.3101	108-1	0
108	2	Envelope	Combination	Min		- 1226.656	- 56.514	52.167	0	- 1.2709	- 1.2817	108-1	2
108	4	Envelope	Combination	Min		- 1196.119	- 56.514	52.167	0	- 117.1235	100.4804	108-1	4
109	0	Envelope	Combination	Max		- 1263.87	56.826	62.184	0	128.9316	114.9229	109-1	0
109	2	Envelope	Combination	Max		- 1233.332	56.826	62.184	0	4.5627	1.271	109-1	2
109	4	Envelope	Combination	Max		- 1202.795	56.826	62.184	0	- 107.9375	- 100.9314	109-1	4
109	0	Envelope	Combination	Min		- 1269.759	47.813	52.294	0	101.2392	90.32	109-1	0
109	2	Envelope	Combination	Min		- 1239.221	47.813	52.294	0	- 3.3492	- 5.3057	109-1	2
109	4	Envelope	Combination	Min		- 1208.683	47.813	52.294	0	- 119.8061	- 112.381	109-1	4
110	0	Envelope	Combination	Max		- 454.485	65.593	69.175	0	129.6458	123.8801	110-1	0
110	1.975	Envelope	Combination	Max		- 424.329	65.593	69.175	0	- 6.973	- 5.6662	110-1	1.975

110	3.95	Envelope	Combination	Max		-394.173	65.593	69.175	0	-143.0422	-135.1936	110-1	3.95
110	0	Envelope	Combination	Min		-454.684	65.415	68.495	0	127.4977	123.1411	110-1	0
110	1.975	Envelope	Combination	Min		-424.528	65.415	68.495	0	-7.7808	-6.0551	110-1	1.975
110	3.95	Envelope	Combination	Min		-394.372	65.415	68.495	0	-143.6088	-135.2702	110-1	3.95
111	0	Envelope	Combination	Max		-452.884	-65.302	67.483	0	125.2399	-122.769	111-1	0
111	1.975	Envelope	Combination	Max		-422.728	-65.302	67.483	0	-8.0377	6.2035	111-1	1.975
111	3.95	Envelope	Combination	Max		-392.571	-65.302	67.483	0	-140.7968	135.1952	111-1	3.95
111	0	Envelope	Combination	Min		-453.069	-65.479	66.828	0	123.1595	-123.5017	111-1	0
111	1.975	Envelope	Combination	Min		-422.913	-65.479	66.828	0	-8.8266	5.818	111-1	1.975
111	3.95	Envelope	Combination	Min		-392.757	-65.479	66.828	0	-141.3313	135.1184	111-1	3.95
112	0	Envelope	Combination	Max		-743.969	75.062	-14.696	0	-26.3696	147.7843	112-1	0
112	1.975	Envelope	Combination	Max		-713.813	75.062	-14.696	0	2.6634	-0.4614	112-1	1.975
112	3.95	Envelope	Combination	Max		-683.657	75.062	-14.696	0	32.1514	-148.671	112-1	3.95
112	0	Envelope	Combination	Min		-744.846	75.017	-15.033	0	-27.2655	147.4497	112-1	0
112	1.975	Envelope	Combination	Min		-714.69	75.017	-15.033	0	2.4157	-0.711	112-1	1.975

112	3.95	Envelope	Combination	Min		-684.534	75.017	-15.033	0	31.6419	-148.9077	112-1	3.95
113	0	Envelope	Combination	Max		-748.666	-74.89	-14.575	0	-26.2663	-146.2145	113-1	0
113	1.975	Envelope	Combination	Max		-718.51	-74.89	-14.575	0	2.5279	1.6936	113-1	1.975
113	3.95	Envelope	Combination	Max		-688.354	-74.89	-14.575	0	31.7971	149.646	113-1	3.95
113	0	Envelope	Combination	Min		-749.541	-74.94	-14.92	0	-27.1751	-146.5649	113-1	0
113	1.975	Envelope	Combination	Min		-719.384	-74.94	-14.92	0	2.284	1.4404	113-1	1.975
113	3.95	Envelope	Combination	Min		-689.228	-74.94	-14.92	0	31.2681	149.4013	113-1	3.95
114	0	Envelope	Combination	Max		-649.188	-20.75	-30.841	0.0948	-67.4282	-50.4723	114-1	0
114	1.975	Envelope	Combination	Max		-619.032	-20.75	-30.841	0.0948	-6.516	-9.4298	114-1	1.975
114	3.95	Envelope	Combination	Max		-588.876	-20.75	-30.841	0.0948	55.4429	31.7618	114-1	3.95
114	0	Envelope	Combination	Min		-652.65	-21.372	-31.765	-0.2389	-70.0333	-52.6758	114-1	0
114	1.975	Envelope	Combination	Min		-622.494	-21.372	-31.765	-0.2389	-7.299	-10.5273	114-1	1.975
114	3.95	Envelope	Combination	Min		-592.338	-21.372	-31.765	-0.2389	54.3886	31.4721	114-1	3.95
115	0	Envelope	Combination	Max		-649.549	-20.878	-31.8	0.2144	-70.1149	-51.6746	115-1	0
115	1.975	Envelope	Combination	Max		-619.393	-20.878	-31.8	0.2144	-7.3076	-10.5016	115-1	1.975

115	3.95	Envelope	Combination	Max		-589.237	20.878	-31.8	0.2144	56.5756	-30.5211	115-1	3.95
115	0	Envelope	Combination	Min		-652.787	20.259	-32.748	-0.1696	-72.7843	49.4826	115-1	0
115	1.975	Envelope	Combination	Min		-622.631	20.259	-32.748	-0.1696	-8.1087	9.4099	115-1	1.975
115	3.95	Envelope	Combination	Min		-592.475	20.259	-32.748	-0.1696	55.491	-30.8131	115-1	3.95
116	0	Envelope	Combination	Max		-295.212	84.214	-166.726	0.7016	-114.4305	50.4673	116-1	0
116	0.75	Envelope	Combination	Max		-283.76	84.214	-166.726	0.7016	10.6317	-12.4947	116-1	0.75
116	1.5	Envelope	Combination	Max		-272.309	84.214	-166.726	0.7016	136.2706	-71.5832	116-1	1.5
116	0	Envelope	Combination	Min		-297.207	78.783	-167.762	-0.872	-115.3726	46.5838	116-1	0
116	0.75	Envelope	Combination	Min		-285.755	78.783	-167.762	0.872	10.431	-12.7018	116-1	0.75
116	1.5	Envelope	Combination	Min		-274.303	78.783	-167.762	0.872	135.6579	-75.8608	116-1	1.5
117	0	Envelope	Combination	Max		-294.481	-79.481	-166.535	0.9753	-114.7465	-46.9475	117-1	0
117	0.75	Envelope	Combination	Max		-283.03	-79.481	-166.535	0.9753	10.1726	12.8631	117-1	0.75
117	1.5	Envelope	Combination	Max		-271.578	-79.481	-166.535	0.9753	135.6817	76.5491	117-1	1.5
117	0	Envelope	Combination	Min		-296.621	-84.915	-167.578	-0.6407	-115.6848	-50.8306	117-1	0
117	0.75	Envelope	Combination	Min		-285.169	-84.915	-167.578	-0.6407	9.9804	12.6553	117-1	0.75

117	1.5	Envelope	Combination	Min		- 273.718	- 84.915	- 167.578	- 0.6407	135.0557	72.2659	117-1	1.5
118	0	Envelope	Combination	Max		- 56.741	126.217	- 107.603	0	- 46.8382	103.5535	118-1	0
118	0.75	Envelope	Combination	Max		- 45.289	126.217	- 107.603	0	33.8644	9.0328	118-1	0.75
118	1.5	Envelope	Combination	Max		- 33.838	126.217	- 107.603	0	115.0319	- 85.3554	118-1	1.5
118	0	Envelope	Combination	Min		- 57.23	125.845	- 108.288	0	- 47.4058	103.4001	118-1	0
118	0.75	Envelope	Combination	Min		- 45.778	125.845	- 108.288	0	33.8096	8.8743	118-1	0.75
118	1.5	Envelope	Combination	Min		- 34.326	125.845	- 108.288	0	114.5602	- 85.7839	118-1	1.5
119	0	Envelope	Combination	Max		- 58.499	128.421	- 105.441	0	- 44.7087	105.3959	119-1	0
119	0.75	Envelope	Combination	Max		- 47.047	128.421	- 105.441	0	34.3725	- 8.9385	119-1	0.75
119	1.5	Envelope	Combination	Max		- 35.596	128.421	- 105.441	0	113.9368	87.6585	119-1	1.5
119	0	Envelope	Combination	Min		- 59.012	128.801	- 106.156	0	- 45.3034	105.5543	119-1	0
119	0.75	Envelope	Combination	Min		- 47.56	128.801	- 106.156	0	34.3131	- 9.0954	119-1	0.75
119	1.5	Envelope	Combination	Min		- 36.109	128.801	- 106.156	0	113.4465	87.224	119-1	1.5



Pengukuran dan pemasangan 1 m' Bouwplank kayu tinggi 2 meter						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.1000	Rp 126,500.00	Rp 12,650.00
2	Tukang Kayu		OH	0.1000	Rp 154,000.00	Rp 15,400.00
3	Kepala Tukang		OH	0.0100	Rp 165,000.00	Rp 1,650.00
4	Mandor		OH	0.0050	Rp 165,000.00	Rp 825.00
Jumlah Harga Tenaga Kerja						Rp 30,525.00
B	Bahan					
1	Kaso 5/7 meranti		m3	0.0120	Rp 90,000.00	Rp 1,080.00
2	Paku biasa 2" - 3"		Kg	0.0200	Rp 22,000.00	Rp 440.00
3	Kayu papan 3/20 meranti		m3	0.0070	Rp 90,000.00	Rp 630.00
Jumlah Harga Bahan						Rp 2,150.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 32,675.00
E	Overhead + Profit (10%)					Rp 3,267.50
F	Harga Satuan Pekerjaan (D + E)					Rp 35,942.50

Pengurangan kembali 1 m3 galian tanah Membuat Papan Nama Proyek 80x120 cm (bahan seng)						
No	Uraian	Kode	Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja	L.01	OH	0.5000	Rp 126,500.00	Rp 63,250.00
2	Mandor	L.04	OH	0.0500	Rp 154,000.00	Rp 7,700.00
Jumlah Harga Tenaga Kerja						Rp 70,950.00
B	Bahan					

						Rp -
Jumlah Harga Bahan						Rp -
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 70,950.00
E	Overhead + Profit (10%)					Rp 7,095.00
F	Harga Satuan Pekerjaan (D + E)					Rp 78,045.00

Pembuatan 1 m' Sloof + bekisting kayu tinggi 2 meter						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	5.6500	Rp126,500.00	Rp 714,725.00
2	Tukang Batu		OH	0.2750	Rp154,000.00	Rp 42,350.00
3	Tukang Kayu		OH	1.5600	Rp154,000.00	Rp 240,240.00
4	Tukang Besi		OH	1.4	Rp154,000.00	Rp 215,600.00
5	Kepala Tukang		OH	0.323	Rp165,000.00	Rp 53,295.00
6	Mandor		OH	0.2830	Rp154,000.00	Rp 43,582.00
Jumlah Harga Tenaga Kerja						Rp 1,309,792.00
B	Bahan					
1	Kayu Kelas III		m3	0.2700	Rp90,000.00	Rp 24,300.00
2	Paku 5 cm - 12 cm		Kg	2.0000	Rp25,300.00	Rp 50,600.00
3	Minyak Bekisting		Liter	0.6000	Rp18,480.00	Rp 11,088.00
4	Besi Beton ulir		Kg	210.0000	Rp16,060.00	Rp 3,372,600.00
5	Kawat Beton		Kg	3.0000	Rp20,680.00	Rp 62,040.00
6	Portland Cement		Kg	336.000	Rp70,000.00	Rp

				0		23,520,000.00
7	Pasir Beton		m3	0.5400	Rp363,000.00	Rp 196,020.00
8	Kerikil		m3	0.8100	Rp302,500.00	Rp 245,025.00
Jumlah Harga Bahan						Rp 27,481,673.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 28,791,465.00
E	Overhead + Profit (10%)					Rp 2,879,146.50
F	Harga Satuan Pekerjaan (D + E)					Rp 31,670,611.50

Pembuatan 1 m' pagar sementara dari seng gelombang tinggi 2 meter kayu tinggi 2 meter						
No	Uraian	Satuan	Koefisien	Harga Satuan	Jumlah	
A	Tenaga Kerja					
1	Pekerja	OH	0.2000	Rp 126,500.00	Rp	25,300.00
2	Tukang Kayu	OH	0.4000	Rp 154,000.00	Rp	61,600.00
3	Kepala Tukang	OH	0.0200	Rp 165,000.00	Rp	3,300.00
4	Mandor	OH	0.0400	Rp 154,000.00	Rp	6,160.00
Jumlah Harga Tenaga Kerja						Rp 96,360.00
B	Bahan					
1	Dolken Kayu Ø 8-10/400 cm	Batang	1.2500	Rp 35,200.00	Rp	44,000.00
2	Semen portland (PC)	Kg	2.5000	Rp 70,000.00	Rp	175,000.00
3	Seng gelombang 2" - 5" BJLS 24	Lbr	1.2000	Rp 80,300.00	Rp	96,360.00
4	Pasir beton	m3	0.0500	Rp 363,000.00	Rp	18,150.00

5	Koral beton		m3	0.0900	Rp 352,962.50	Rp 31,766.63
6	Kayu 5/7 meranti		m3	0.0720	Rp 90,000.00	Rp 6,480.00
7	Paku biasa 2" - 5"		Kg	0.0600	Rp 25,300.00	Rp 1,518.00
8	Meni besi		Liter	0.4500	Rp 26,290.00	Rp 11,830.50
Jumlah Harga Bahan						Rp 385,105.13
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 481,465.13
E	Overhead + Profit (10%)					Rp 48,146.51
F	Harga Satuan Pekerjaan (D + E)					Rp 529,611.64

Pekerjaan Tanah keras sedalam 1 meter						
No	Uraian	Satuan	Koefisien	Harga Satuan	Jumlah	
A	Tenaga Kerja					
1	Pekerja	OH	1.0000	Rp 126,500.00	Rp	126,500.00
2	Mandor	OH	0.0320	Rp 154,000.00	Rp	4,928.00
Jumlah Harga Tenaga Kerja						Rp 131,428.00
B	Bahan					
Jumlah Harga Bahan						Rp -
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 131,428.00
E	Overhead + Profit (10%)					Rp 13,142.80
F	Harga Satuan Pekerjaan (D + E)					Rp 144,570.80

Pembuatan 1 m' pavng block

kayu tinggi 2 meter

No	Uraian	Satuan	Koefisien	Harga Satuan	Jumlah
A Tenaga Kerja					
1	Pekerja	OH	0.2500	Rp 126,500.00	Rp 31,625.00
2	Tukang Batu	OH	0.5000	Rp 154,000.00	Rp 77,000.00
3	Kepala Tukang	OH	0.0500	Rp 165,000.00	Rp 8,250.00
4	Mandor	OH	0.0013	Rp 154,000.00	Rp 200.20
Jumlah Harga Tenaga Kerja					Rp 117,075.20
B Bahan					
1	Paving Block 6 cm	m2	1.0100	Rp 125,200.00	Rp 126,452.00
2	Pasir Beton	m3	0.0500	Rp 363,000.00	Rp 18,150.00
Jumlah Harga Bahan					Rp 144,602.00
C Peralatan					
Jumlah Harga Peralatan					Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)				Rp 261,677.20
E	Overhead + Profit (10%)				Rp 26,167.72
F	Harga Satuan Pekerjaan (D + E)				Rp 287,844.92

Pembuatan 1 m' Pondasi Beton Bertulang + bekisting

kayu tinggi 2 meter

No	Uraian	Satuan	Koefisien	Harga Satuan	Jumlah
A Tenaga Kerja					
1	Pekerja	OH	5.3000	Rp126,500.00	Rp 670,450.00
2	Tukang Batu	OH	0.2750	Rp154,000.00	Rp 42,350.00
3	Tukang Kayu	OH	1.3000	Rp154,000.00	Rp 200,200.00
4	Tukang Besi	OH	1.05	Rp154,000.00	Rp 161,700.00
5	Kepala Tukang	OH	0.262	Rp165,000.00	Rp 43,230.00
6	Mandor	OH	0.2650	Rp154,000.00	Rp 40,810.00
Jumlah Harga Tenaga Kerja					Rp 1,158,740.00
B Bahan					
1	Kayu Kelas III	m3	0.2000	Rp 90,000.00	Rp 18,000.00
2	Paku 5 cm - 12 cm	Kg	1.5000	Rp 25,300.00	Rp 37,950.00
3	Minyak Bekisting	Liter	0.4000	Rp 18,480.00	Rp 7,392.00
4	Besi Beton ulir	Kg	157.5000	Rp 16,060.00	Rp 2,529,450.00

5	Kawat Beton		Kg	2.2500	Rp 20,680.00	Rp 46,530.00
6	Portland Cement		Kg	336.0000	Rp 70,000.00	Rp 23,520,000.00
7	Pasir Beton		m3	0.5400	Rp 363,000.00	Rp 196,020.00
8	Kerikil		m3	0.8100	Rp 302,500.00	Rp 245,025.00
Jumlah Harga Bahan						Rp 26,600,367.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 27,759,107.00
E	Overhead + Profit (10%)					Rp 2,775,910.70
F	Harga Satuan Pekerjaan (D + E)					Rp 30,535,017.70
Pembuatan 1 m' Kolom+bekisting kayu tinggi 2 meter						
No	Uraian	Satuan	Koefisien	Harga Satuan	Jumlah	
A	Tenaga Kerja					
1	Pekerja	OH	7.0500	Rp126,500.00	Rp	891,825.00
2	Tukang Batu	OH	0.2750	Rp154,000.00	Rp	42,350.00
3	Tukang Kayu	OH	1.6500	Rp154,000.00	Rp	254,100.00
4	Tukang Besi	OH	2.1	Rp154,000.00	Rp	323,400.00
5	Kepala Tukang	OH	0.403	Rp165,000.00	Rp	66,495.00
6	Mandor	OH	0.3530	Rp154,000.00	Rp	54,362.00
Jumlah Harga Tenaga Kerja					Rp	1,632,532.00
B	Bahan					
1	Kayu Kelas III	m3	0.4000	Rp90,000.00	Rp	36,000.00
2	Paku 5 cm - 12 cm	Kg	4.0000	Rp25,300.00	Rp	101,200.00
3	Minyak Bekisting	Liter	2.0000	Rp18,480.00	Rp	36,960.00
4	Besi Beton ulir	Kg	315.0000	Rp16,060.00	Rp	5,058,900.00
5	Kawat Beton	Kg	4.5000	Rp20,680.00	Rp	93,060.00

6	Portland Cement		Kg	336.0000	Rp70,000.00	Rp 23,520,000.00		
7	Pasir Beton		m3	0.5400	Rp363,000.00	Rp 196,020.00		
8	Kerikil		m3	0.8100	Rp302,500.00	Rp 245,025.00		
9	Kayu Kelas II balok		m3	0.1500	Rp110,000.00	Rp 16,500.00		
10	plywood 9 mm		Lembar	3.5000	Rp210,000.00	Rp 735,000.00		
11	Dolken kayu galam, D(8-10)cm,panjang 4 m		Batang	20.0000	Rp35,200.00	Rp 704,000.00		
Jumlah Harga Bahan						Rp 30,742,665.00		
C	Peralatan							
Jumlah Harga Peralatan						Rp -		
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 32,375,197.00		
E	Overhead + Profit	Pembuatan 1 m' Balok + bekisting					1.70	
F	Harga Satuan Pekerjaan	No	Uraian	Satuan	Koefisien	Harga Satuan	Jumlah	6.70
		A	Tenaga Kerja					
		1	Pekerja	OH	6.3500	Rp126,500.00	Rp 803,275.00	
		2	Tukang Batu	OH	0.2750	Rp154,000.00	Rp 42,350.00	
		3	Tukang Kayu	OH	1.6500	Rp154,000.00	Rp 254,100.00	
		4	Tukang Besi	OH	1.4	Rp154,000.00	Rp 215,600.00	
		5	Kepala Tukang	OH	0.333	Rp165,000.00	Rp 54,945.00	
		6	Mandor	OH	0.3180	Rp154,000.00	Rp 48,972.00	
		Jumlah Harga Tenaga Kerja					Rp 1,419,242.00	
		B	Bahan					
		1	Kayu Kelas III	m3	0.3200	Rp90,000.00	Rp 28,800.00	
		2	Paku 5 cm - 12 cm	Kg	3.2000	Rp25,300.00	Rp 80,960.00	
		3	Minyak Bekisting	Liter	1.6000	Rp18,480.00	Rp 29,568.00	
		4	Besi Beton ulir	Kg	210.0000	Rp16,060.00	Rp 3,372,600.00	
		5	Kawat Beton	Kg	3.0000	Rp20,680.00	Rp 62,040.00	
		6	Portland Cement	Kg	336.0000	Rp70,000.00	Rp 23,520,000.00	
		7	Pasir Beton	m3	0.5400	Rp363,000.00	Rp 196,020.00	
		8	Kerikil	m3	0.8100	Rp302,500.00	Rp 245,025.00	
		9	Kayu Kelas II balok	m3	0.1400	Rp110,000.00	Rp 15,400.00	
		10	plywood 9 mm	Lembar	2.8000	Rp210,000.00	Rp 588,000.00	
		11	Dolken kayu galam, D(8-10)cm,panjang 4 m	Batang	16.0000	Rp35,200.00	Rp 563,200.00	
		Jumlah Harga Bahan					Rp 28,701,613.00	
		C	Peralatan					
		Jumlah Harga Peralatan					Rp -	
		D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)				Rp 30,120,855.00	
		E	Overhead + Profit (10%)				Rp 3,012,085.50	
		F	Harga Satuan Pekerjaan (D + E)				Rp 33,132,940.50	

Pembuatan 1 m' Plat Lantai+bekisting						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	5.3000	Rp126,500.00	Rp 670,450.00
2	Tukang Batu		OH	0.2750	Rp154,000.00	Rp 42,350.00
3	Tukang Kayu		OH	1.3000	Rp154,000.00	Rp 200,200.00
4	Tukang Besi		OH	1.05	Rp154,000.00	Rp 161,700.00
5	Kepala Tukang		OH	0.262	Rp165,000.00	Rp 43,230.00
6	Mandor		OH	0.2650	Rp154,000.00	Rp 40,810.00
Jumlah Harga Tenaga Kerja						Rp 1,158,740.00
B	Bahan					
1	Kayu Kelas III		m3	0.3200	Rp90,000.00	Rp 28,800.00
2	Paku 5 cm - 12 cm		Kg	3.2000	Rp25,300.00	Rp 80,960.00
3	Minyak Bekisting		Liter	1.6000	Rp18,480.00	Rp 29,568.00
4	Besi Beton ulir		Kg	157.5000	Rp16,060.00	Rp 2,529,450.00
5	Kawat Beton		Kg	2.2500	Rp20,680.00	Rp 46,530.00
6	Portland Cement		Kg	336.0000	Rp70,000.00	Rp 23,520,000.00
7	Pasir Beton		m3	0.5400	Rp363,000.00	Rp 196,020.00
8	Kerikil		m3	0.8100	Rp302,500.00	Rp 245,025.00
9	Kayu Kelas II balok		m3	0.1200	Rp110,000.00	Rp 13,200.00
10	plywood 9 mm		Lembar	2.8000	Rp210,000.00	Rp 588,000.00
11	Dolken kayu galam, D(8-10)cm, panjang 4 m		Batang	32.0000	Rp35,200.00	Rp 1,126,400.00
Jumlah Harga Bahan						Rp 28,403,953.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 29,562,693.00
E	Overhead + Profit (10%)					Rp 2,956,269.30
F	Harga Satuan Pekerjaan (D + E)					Rp 32,518,962.30

Pembuatan 1 m' dinding bata merah tebal 1/2 campuran spesi 1 PC : 4 PP						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.3000	Rp 126,500.00	Rp 37,950.00
2	Tukang Batu		OH	0.1000	Rp 154,000.00	Rp 15,400.00
3	Kepala Tukang		OH	0.0100	Rp 165,000.00	Rp 1,650.00
4	Mandor		OH	0.0150	Rp 154,000.00	Rp 2,310.00
Jumlah Harga Tenaga Kerja						Rp 57,310.00
B	Bahan					
1	Bata Merah		Buah	70.0000	Rp 800.00	Rp 56,000.00
2	Portland Cement		Kg	11.5000	Rp 70,000.00	Rp 805,000.00
3	Pasir Pasang		m3	0.0430	Rp 412,500.00	Rp 17,737.50
Jumlah Harga Bahan						Rp 878,737.50
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 936,047.50
E	Overhead + Profit (10%)					Rp 93,604.75
F	Harga Satuan Pekerjaan (D + E)					Rp 1,029,652.25

Pembuatan 1 m' Plesteran 1 PC : 4 PP						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.3000	Rp 126,500.00	Rp 37,950.00
2	Tukang Batu		OH	0.1500	Rp 154,000.00	Rp 23,100.00
3	Kepala Tukang		OH	0.0150	Rp 165,000.00	Rp 2,475.00
4	Mandor		OH	0.0150	Rp 154,000.00	Rp 2,310.00
Jumlah Harga Tenaga Kerja						Rp 65,835.00
B	Bahan					
1	Portland Cement		Kg	6.2400	Rp 70,000.00	Rp 70,000.00
2	Pasir Pasang		m3	0.0240	Rp 412,500.00	Rp 2,574,000.00
Jumlah Harga Bahan						Rp 2,644,000.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 2,709,835.00
E	Overhead + Profit (10%)					Rp 270,983.50
F	Harga Satuan Pekerjaan (D + E)					Rp 2,980,818.50

Pembuatan 1 m' lantai ubin granit ukuran 40x40 cm						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.2500	Rp126,500.00	Rp 31,625.00
2	Tukang Batu		OH	0.1250	Rp154,000.00	Rp 19,250.00
3	Kepala Tukang		OH	0.013	Rp165,000.00	Rp2,145.00
4	Mandor		OH	0.0130	Rp154,000.00	Rp 2,002.00
Jumlah Harga Tenaga Kerja						Rp 55,022.00
B	Bahan					
1	Ubin Granit		Buah	6.6300	Rp 60,000.00	Rp 397,800.00
2	Portland Cement		Kg	9.8000	Rp 70,000.00	Rp 686,000.00
3	Pasir Pasang		m3	0.0450	Rp 412,500.00	Rp 18,562.50
4	Semen Warna		Kg	1.3000	Rp 20,000.00	Rp 26,000.00
Jumlah Harga Bahan						Rp 1,128,362.50
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 1,183,384.50
E	Overhead + Profit (10%)					Rp 118,338.45
F	Harga Satuan Pekerjaan (D + E)					Rp 1,301,722.95

Pembuatan 1 m' Langit langit Gypsum Board (1200x2400x9)mm						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.1000	Rp126,500.00	Rp 12,650.00
2	Tukang Kayu		OH	0.0500	Rp154,000.00	Rp 7,700.00
3	Kepala Tukang		OH	0.005	Rp165,000.00	Rp825.00
4	Mandor		OH	0.0050	Rp154,000.00	Rp 770.00
Jumlah Harga Tenaga Kerja						Rp 21,945.00
B	Bahan					
1	Gypsum Board		Lembar	0.3640	Rp 90,000.00	Rp 32,760.00
2	Paku Sekrup		Kg	0.1100	Rp 33,099.00	Rp 3,640.89
Jumlah Harga Bahan						Rp 36,400.89
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 58,345.89
E	Overhead + Profit (10%)					Rp 5,834.59
F	Harga Satuan Pekerjaan (D + E)					Rp 64,180.48

Pembuatan 1 m' Kusen pintu dan kusen jendela, kayu kelas I						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	7.0000	Rp 126,500.00	Rp 885,500.00
2	Tukang Kayu		OH	21.0000	Rp 154,000.00	Rp 3,234,000.00
3	Kepala Tukang		OH	2.1	Rp 165,000.00	Rp 346,500.00
4	Mandor		OH	0.3500	Rp 154,000.00	Rp 53,900.00
Jumlah Harga Tenaga Kerja						Rp 4,519,900.00
B	Bahan					
1	Balok Kayu		m3	1.1000	Rp 12,650,000.00	Rp 13,915,000.00
2	Paku 10 cm		Kg	1.2500	Rp 70,000.00	Rp 87,500.00
3	Lem Kayu		kg	1.0000	Rp 18,040.00	Rp 18,040.00
Jumlah Harga Bahan						Rp 14,020,540.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 18,540,440.00
E	Overhead + Profit (10%)					Rp 1,854,044.00
F	Harga Satuan Pekerjaan (D + E)					Rp 20,394,484.00

Pembuatan 1 m' pintu dan jendela Kaca, kayu kelas I						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.8000	Rp 126,500.00	Rp 101,200.00
2	Tukang Kayu		OH	2.4000	Rp 154,000.00	Rp 369,600.00
3	Kepala Tukang		OH	0.24	Rp 165,000.00	Rp 39,600.00
4	Mandor		OH	0.0400	Rp 154,000.00	Rp 6,160.00
Jumlah Harga Tenaga Kerja						Rp 516,560.00
B	Bahan					
1	Papan Kayu		m3	0.0240	Rp 13,675,000.00	Rp 328,200.00
2	Lem Kayu		kg	0.3000	Rp 18,040.00	Rp 5,412.00
Jumlah Harga Bahan						Rp 333,612.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 850,172.00
E	Overhead + Profit (10%)					Rp 85,017.20
F	Harga Satuan Pekerjaan (D + E)					Rp 935,189.20

Pengecatan Tembok 1 m' (1 lapis plamur, 1 lapis cat dasar, 2 lapis cat penutup)						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.0200	Rp 126,500.00	Rp 2,530.00
2	Tukang Cat		OH	0.0630	Rp 154,000.00	Rp 9,702.00
3	Kepala Tukang		OH	0.0063	Rp 165,000.00	Rp 1,039.50
4	Mandor		OH	0.0030	Rp 154,000.00	Rp 462.00
Jumlah Harga Tenaga Kerja						Rp 13,733.50
B	Bahan					
1	Plamur		kg	0.1000	Rp 33,110.00	Rp 3,311.00
2	Cat Dasar		Kg	0.1000	Rp 126,500.00	Rp 12,650.00
3	Cat Penutup		kg	0.2600	Rp 31,900.00	Rp 8,294.00
Jumlah Harga Bahan						Rp 24,255.00
C	Peralatan					
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 37,988.50
E	Overhead + Profit (10%)					Rp 3,798.85
F	Harga Satuan Pekerjaan (D + E)					Rp 41,787.35

Pengecatan Bidang Kayu 1 m' (1 lapis plamur, 1 lapis cat dasar, 3 lapis cat penutup)						
No	Uraian		Satuan	Koefisien	Harga Satuan	Jumlah
A	Tenaga Kerja					
1	Pekerja		OH	0.0700	Rp126,500.00	Rp 8,855.00
2	Tukang Cat		OH	0.1050	Rp154,000.00	Rp 16,170.00
3	Kepala Tukang		OH	0.004	Rp165,000.00	Rp660.00
4	Mandor		OH	0.0030	Rp154,000.00	Rp 462.00
Jumlah Harga Tenaga Kerja						Rp 26,147.00
B	Bahan					
1	Cat menie		kg	0.2000	Rp 42,020.00	Rp 8,404.00
2	plamur		Kg	0.1500	Rp 33,110.00	Rp 4,966.50
3	Cat dasar		kg	0.1700	Rp 126,500.00	Rp 21,505.00
4	Cat Penutup		kg	0.3500	Rp82,200.00	Rp 28,770.00
5	Kuas		Buah	0.0100	Rp15,000.00	Rp 150.00
6	Pengencer		kg	0.0300	Rp11,000.00	Rp 330.00
7	Ampelas		lembar	0.2000	Rp4,290.00	Rp 858.00
Jumlah Harga Bahan						Rp 64,983.50
C	Peralatan					Rp -
Jumlah Harga Peralatan						Rp -
D	Jumlah Harga Tenaga, Bahan, Peralatan (A + B + C)					Rp 91,130.50
E	Overhead + Profit (10%)					Rp 9,113.05
F	Harga Satuan Pekerjaan (D + E)					Rp 100,243.55

RAB STRUKTUR

Struktur		Pekerjaan	Volume	AHSP	
	Pekerjaan Struktur Bawah	Pembuatan Pagar	30	529611.6375	Rp15,888,349.13
		Pekerjaan tanah	36	216856.2	Rp7,806,823.20
		Pondasi Beton Berulang	10.656	45802526.55	Rp488,071,722.92
		Sloof	13.524	31670611.5	Rp924,292,200.48
	Lantai 1	Balok	13.524	33132940.5	Rp448,089,887.32
		Kolom	4.368	35612716.7	Rp155,556,346.55
		Dinding	155.04	1029652.25	Rp159,637,284.84
		Bekisting tangga dan pengecoran	0.85180566	644141251.6	548683166.8
	Lantai 2	Balok	13.524	33132940.5	Rp448,089,887.32
		Kolom	3.84	35612716.7	Rp136,752,832.13
		Plat Lantai	38	32518962.3	Rp1,235,720,567.40
		Bekisting tangga dan pengecoran	0.80679365	644141251.6	519689074
Lantai 3	Balok	13.524	33132940.5	Rp448,089,887.32	

	Lantai 4	Kolom	3.792	35612716.7	Rp135,043,421.73
		Plat Lantai	38	32518962.3	Rp1,235,720,567.40
		Bekisting tangga dan pengecoran	0.80287315	644141251.6	517163713.7
		Balok	4.508	33132940.5	Rp149,363,295.77
		Kolom	2.24	35612716.7	Rp79,772,485.41
		Plat Lantai	38	32518962.3	Rp1,235,720,567.40
				Total	Rp8,889,152,080.86

RAB ARSITEKTUR

ARS		Pekerjaan	Volum e	AHSP	
	Lantai 1	Plasteran	310.08	2980818.5	Rp924,292,200.48
		Langit langit gypsum	50	64180.479	Rp3,209,023.95
		Pengecatan Tembok	310.08	41787.35	Rp12,957,421.49
		Pintu	4	935189.2	Rp3,740,756.80
		Pengecatan Pintu	8	100243.55	Rp801,948.40
		Pemasangan Paving Block	38	287844.92	Rp10,938,106.96
	Lantai 2	Dinding	138.54	1029652.25	Rp142,648,022.72
		Plasteran	277.08	2980818.5	Rp825,925,189.98
		Langit langit gypsum	50	64180.479	Rp3,209,023.95
		Lantai	38	1301722.95	Rp49,465,472.10
		Pengecatan Tembok	277.08	41787.35	Rp11,578,438.94
		Pintu	6	935189.2	Rp5,611,135.20
		Pengecatan Pintu	12	100243.55	Rp1,202,922.60
	Lantai 3	Dinding	137.04	1029652.25	Rp141,103,544.34
		Plasteran	274.08	2980818.5	Rp816,982,734.48
		Langit langit gypsum	50	64180.479	Rp3,209,023.95
		Lantai	38	1301722.95	Rp49,465,472.10
		Pengecatan Tembok	274.08	41787.35	Rp11,453,076.89
		Pintu	6	935189.2	Rp5,611,135.20
		Pengecatan Pintu	12	100243.55	Rp1,202,922.60

	Lantai 4	Dinding	102.6	1029652.25	Rp105,642,320.85
		Plasteran	205.2	2980818.5	Rp611,663,956.20
		Langit langit gypsum	10.5	64180.479	Rp673,895.03
		Pengecatan Tembok	205.2	41787.35	Rp8,574,764.22
		Pintu	2	935189.2	Rp1,870,378.40
		pengecatan pintu	4	100243.55	Rp400,974.20
				Total	Rp3,753,433,862.02

PERHITUNGAN KOEFISIEN PEKERJA

				Koe fisi en	Prod uktiv itas	Vol ume	Duras i 1 pekerj a	Juml ah peker ja	Dur asi	Rek ap dura si
	Pembuatan Pagar	Peke rja	O H	0.2	5	30	6	6	1	1
		Tuka ng Kayu	O H	0.4	2.5	30	12	12	1	1
		Kepa la Tuka ng	O H	0.0 2	50	30	0.6	1	0.6	1
		Man dor	O H	0.0 4	25	30	1.2	2	0.6	1
	Pekerjaan Tanah	Peke rja	O H	1	1	36	36	10	3.6	4
		Man dor	O H	0.0 32	31.25	36	1.152	1	1.1 52	2
	Pondasi Beton Bertulang & Bekisting	Peke rja	O H	5.3	0.188 6792 45	10.6 56	56.47 68	15	3.7 651 2	4
		Tuka ng Batu	O H	0.2 75	3.636 3636 36	10.6 56	2.930 4	1	2.9 304	3
		Tuka ng Kayu	O H	1.3	0.769 2307 69	10.6 56	13.85 28	4	3.4 632	4
		Tuka ng Besi	O H	1.0 5	0.952 3809 52	10.6 56	11.18 88	3	3.7 296	4
		Kepa la Tuka ng	O H	0.2 62	3.816 7938 93	10.6 56	2.791 872	1	2.7 918 72	3

		Man dor	O H	0.2 65	3.773 5849 06	10.6 56	2.823 84	1	2.8 238 4	3
	Sloof	Peke rja	O H	5.6 5	0.176 9911 5	13.5 24	76.41 06	19	4.0 216 11	5
		Tuka ng Batu	O H	0.2 75	3.636 3636 36	13.5 24	3.719 1	1	3.7 191	4
		Tuka ng Kayu	O H	1.5 6	0.641 0256 41	13.5 24	21.09 744	5	4.2 194 88	5
		Tuka ng Besi	O H	1.4	0.714 2857 14	13.5 24	18.93 36	5	3.7 867 2	4
		Kepa la Tuka ng	O H	0.3 23	3.095 9752 32	13.5 24	4.368 252	1	4.3 682 52	5
		Man dor	O H	0.2 83	3.533 5689 05	13.5 24	3.827 292	1	3.8 272 92	4
La nta i 1	Kolom dan Bekisting	Peke rja	O H	7.0 5	0.141 8439 72	4.36 8	30.79 44	16	1.9 246 5	2
		Tuka ng Batu	O H	0.2 75	3.636 3636 36	4.36 8	1.201 2	1	1.2 012	2
		Tuka ng Kayu	O H	1.6 5	0.606 0606 06	4.36 8	7.207 2	4	1.8 018	2
		Tuka ng Besi	O H	2.1	0.476 1904 76	4.36 8	9.172 8	5	1.8 345 6	2
		Kepa la Tuka ng	O H	0.4 03	2.481 3895 78	4.36 8	1.760 304	1	1.7 603 04	2
		Man dor	O H	0.3 53	2.832 8611 9	4.36 8	1.541 904	1	1.5 419 04	2
	Balok dan Bekisting	Peke rja	O H	6.3 5	0.157 4803 15	13.5 24	85.87 74	29	2.9 612 9	3
		Tuka ng Batu	O H	0.2 75	3.636 3636 36	13.5 24	3.719 1	2	1.8 595 5	2
		Tuka ng Kayu	O H	1.6 5	0.606 0606 06	13.5 24	22.31 46	8	2.7 893 25	3

		Tuka ng Besi	O H	1.4	0.714 2857 14	13.5 24	18.93 36	7	2.7 048	3
		Kepa la Tuka ng	O H	0.3 33	3.003 0030 03	13.5 24	4.503 492	2	2.2 517 46	3
		Man dor	O H	0.3 18	3.144 6540 88	13.5 24	4.300 632	2	2.1 503 16	3
	Pemasangan Dinding	Peke rja	O H	0.3	3.333 3333 33	155. 04	46.51 2	8	5.8 14	6
		Tuka ng Batu	O H	0.1	10	155. 04	15.50 4	3	5.1 68	6
		Kepa la Tuka ng	O H	0.0 1	100	155. 04	1.550 4	1	1.5 504	2
		Man dor	O H	0.0 15	66.66 6666 67	155. 04	2.325 6	1	2.3 256	3
	Plasteran	Peke rja	O H	0.3	3.333 3333 33	310. 08	93.02 4	20	4.6 512	5
		Tuka ng Batu	O H	0.1 5	6.666 6666 67	310. 08	46.51 2	10	4.6 512	5
		Kepa la Tuka ng	O H	0.0 15	66.66 6666 67	310. 08	4.651 2	1	4.6 512	5
		Man dor	O H	0.0 15	66.66 6666 67	310. 08	4.651 2	1	4.6 512	5
	Langit langit gypsum	Peke rja	O H	0.1	10	50	5	5	1	1
		Tuka ng Kayu	O H	0.0 5	20	50	2.5	3	0.8 333 33	1
		Kepa la Tuka ng	O H	0.0 05	200	50	0.25	1	0.2 5	1
		Man dor	O H	0.0 05	200	50	0.25	1	0.2 5	1
	Pengecetan Tembok	Peke rja	O H	0.0 2	50	310. 08	6.201 6	3	2.0 672	3