MOISTURE CONTENT DETERMINATION

PROJECT : TUGAS AKHIR
LOCATION : BANDUNG
D A T A :
TESTED BY : JOHNADI R. PURBA

SAMPLE NUMBER DEPTH		UKM		Setra Duta		Buah Batu		Kopo	
Container number		B12	AC	90	17	A1	25	15	C3
Weight of wet soil + container	g	164,10	138,50	164,40	156,80	274,90	224,00	176,50	147,20
Weight of dry soil + container	g	146,30	125,20	141,00	136,20	210,60	174,60	144,60	124,80
Weight of container	g	66,80	65,40	64,40	66,40	64,80	64,60	64,40	66,80
Weight of dry soil	g	79,50	59,80	76,60	69,80	64,30	49,40	31,90	22,40
Weight of water	g	17,80	13,30	23,40	20,60	145,80	110,00	80,20	58,00
Moistute content	%	22,39	22,24	30,55	29,51	44,10	44,91	39,78	38,62
A v a r a g e	%	22,32		30,03		44,51		39,20	

SPECIFIC GRAVITY TEST

Soil sample :
:
Location : UKM
Boring No. :
Sample No. : 1

Form No :
Test No.
Date 19-7-2006
Tested I.Johnadi R.Purba

Depth in m : 0.2 - 0.4 m

Determination		1	2	3	4	5	6
Wt. Bottle + water + soil	; W1	799,70	801,90	803,40	804,00	805,40	806,90
Temperature	; T (C)	60	55	50	45	40	35
Wt. Bottle + water	; W2	699,70	701,90	703,40	704,00	705,40	706,90
Wt.of pan + dry soil		260,80					
Wt.of pan		100,60					
Wt.of dry soil	; Ws	160,20					
Spec. Garvity of water at T	; GT	0,9832	0,9857	0,9881	0,9902	0,9922	0,9941
Spec. Garvity of soil	; Gs	2,62	2,62	2,63	2,64	2,64	2,65
AVERAGE Gs		2,63					

Soil sample :
:
Location : Setra Duta
Boring No. :
Sample No. : 2

Form No :
Test No.
Date 19-7-2006
Tested I.Johnadi R.Purba

Depth in m : 0.2 - 0.4 m

Determination		1	2	3	4	5	6
Wt. Bottle + water + soil	; W1	807,80	810,10	812,20	812,80	813,80	814,40
Temperature	; T (C)	60	55	50	45	40	35
Wt. Bottle + water	; W2	707,80	710,10	712,20	712,80	713,80	714,40
Wt.of pan + dry soil		259,70					
Wt.of pan		98,00					
Wt.of dry soil	; Ws	161,70					
Spec. Garvity of water at T	; GT	0,9832	0,9857	0,9881	0,9902	0,9922	0,9941
Spec. Garvity of soil	; Gs	2,58	2,58	2,59	2,60	2,60	2,61
AVERAGE Gs		2,59					

SPECIFIC GRAVITY TEST

Soil sample :
:
Location : Buah Batu
Boring No. :
Sample No. : 3

Form N :
Test No.
Date 19-7-2006
Tested Johnadi R.Purba

Depth in m : 0.2 - 0.4 m

Determination		1	2	3	4	5	6
Wt. Bottle + water + soil ; W1		795,70	796,60	797,40	798,10	799,10	799,40
Temperature ; T (C)		60	55	50	45	40	35
Wt. Bottle + water ; W2		695,70	696,60	697,40	698,10	699,10	699,40
Wt.of pan + dry soil		253,40					
Wt.of pan		97,30					
Wt.of dry soil ; Ws		156,10					
Spec. Garvity of water at T ; GT		0,9832	0,9857	0,9881	0,9902	0,9922	0,9941
Spec. Garvity of soil ; Gs		2,74	2,74	2,75	2,76	2,76	2,77
AVERAGE Gs		2,75					

Soil sample :
:
Location : Kopo
Boring No. :
Sample No. : 4

Form N :
Test No.
Date 19-7-2006
Tested Johnadi R.Purba

Determination		1	2	3	4	5	6
Wt. Bottle + water + soil ; W1		804,70	805,50	806,60	807,70	809,10	809,80
Temperature ; T (C)		55	50	45	40	35	30
Wt. Bottle + water ; W2		743,80	745,20	746,30	747,30	748,15	748,90
Wt.of pan + dry soil		221,50					
Wt.of pan		123,70					
Wt.of dry soil ; Ws		97,80					
Spec. Garvity of water at T ; GT		0,9857	0,9881	0,9902	0,9922	0,9941	0,9957
Spec. Garvity of soil ; Gs		2,61	2,58	2,58	2,59	2,64	2,64
AVERAGE Gs		2,61					

SIEVE ANALYSIS

Sample Data

PROJECT : **TUGAS AKHIR**
location / depth : **UKM**
sample description :
specific gravity : **2.63**

Mechanical Data Analysis

Dry sample and tare : **84.07**
Tare : **0.00**
Dry sample weight : **84.07**
Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
# 4	0,00	0,00	100,00
# 10	0,01	0,00	99,99
# 16	0,01	0,00	99,98
# 20	0,05	0,00	99,93
# 30	0,05	0,00	99,88
# 40	0,41	0,00	99,47
# 60	2,05	0,00	97,42
# 80	4,86	0,00	92,56
# 100	4,80	0,00	87,76
# 140	9,89	0,00	77,87
# 170	6,45	0,00	71,42
# 200	3,06	0,00	68,36

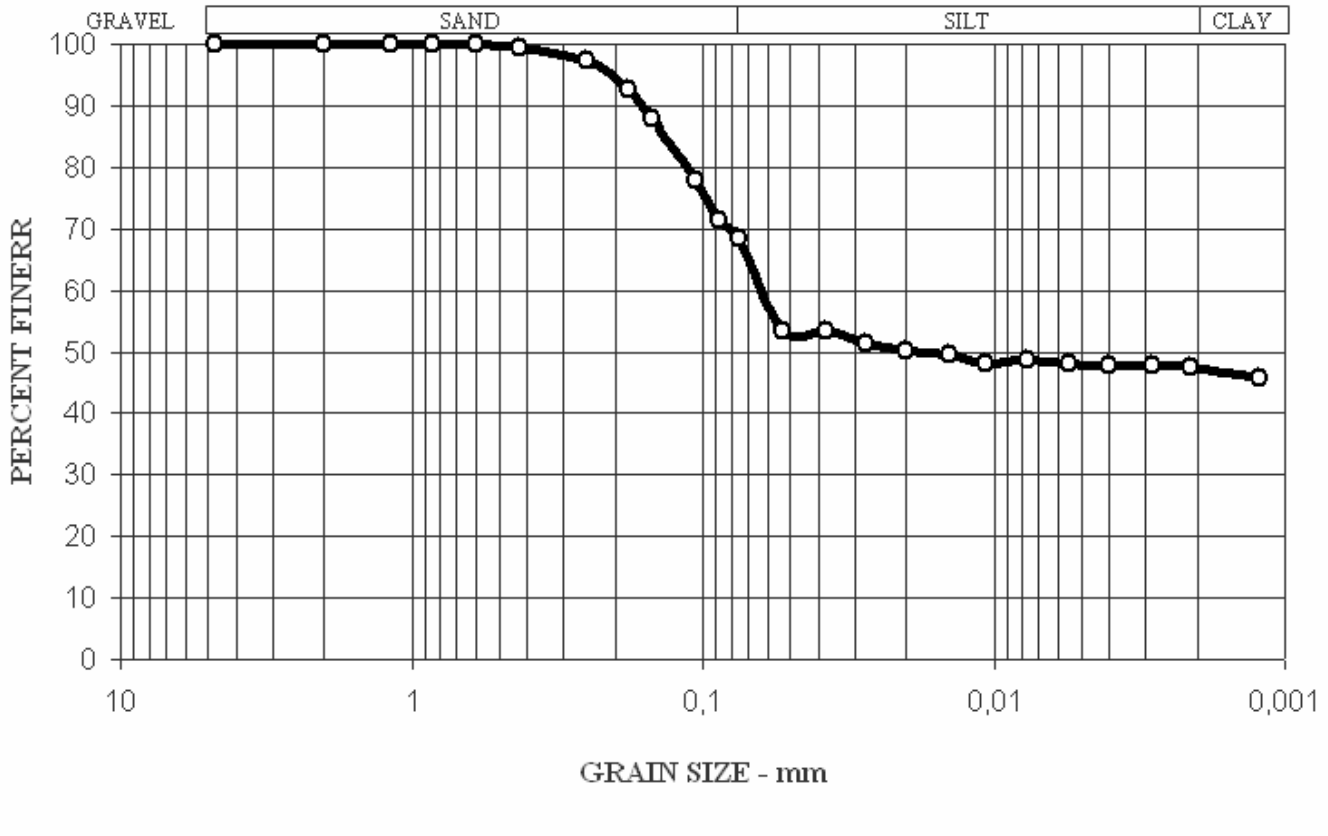
HYDROMETER ANALYSIS

Mechanical Data Analysis

correction factor : **1,01**
meniscus correction : **0,5**
effective depth, L : **16.294964 - 0.2645 x Rm**

Elapset time, min	Tempet, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0,5	31,0	1,0250	1,0277	0,0122	25,5	9,55	0,0533	53,5
1,0	30,8	1,0250	1,0277	0,0122	25,5	9,55	0,0377	53,4
2,0	28,0	1,0250	1,0266	0,0126	25,5	9,55	0,0275	51,3
4,0	26,1	1,0250	1,0260	0,0129	25,5	9,55	0,0199	50,2
8,0	24,8	1,0250	1,0257	0,0131	25,5	9,55	0,0143	49,7
15,0	23,1	1,0250	1,0254	0,0133	25,5	9,55	0,0106	48,1
30,0	21,5	1,0250	1,0252	0,0136	25,5	9,55	0,0077	48,6
60,0	20,0	1,0250	1,0250	0,0138	25,5	9,55	0,0055	48,2
120,0	18,1	1,0251	1,0248	0,0142	25,6	9,52	0,0040	47,9
240,0	17,3	1,0252	1,0248	0,0143	25,7	9,50	0,0028	47,9
450,0	15,5	1,0252	1,0246	0,0146	25,7	9,50	0,0021	47,4
1440,0	14,0	1,0245	1,0236	0,0149	25,0	9,68	0,0012	45,6

GRAIN SIZE DISTRIBUTION REPORT



SIEVE ANALYSIS

Sample Data

PROJECT : **TUGAS AKHIR**
location / depth : **SETRA DUTA**
sample description :
specific gravity : **2.59**

Mechanical Data Analysis

Dry sample and tare : **90.79**
Tare : **0.00**
Dry sample weight : **90.79**
Sieve tare method

Sieve	Weight retained	Sieve tare	Percent finer
# 4	0,00	0,00	100,00
# 10	0,02	0,00	99,98
# 16	0,12	0,00	99,86
# 20	0,43	0,00	99,43
# 30	0,43	0,00	99,00
# 40	1,27	0,00	97,73
# 60	2,04	0,00	95,69
# 80	3,24	0,00	92,45
# 100	3,24	0,00	89,21
# 140	8,56	0,00	80,65
# 170	4,35	0,00	76,30
# 200	1,79	0,00	74,51

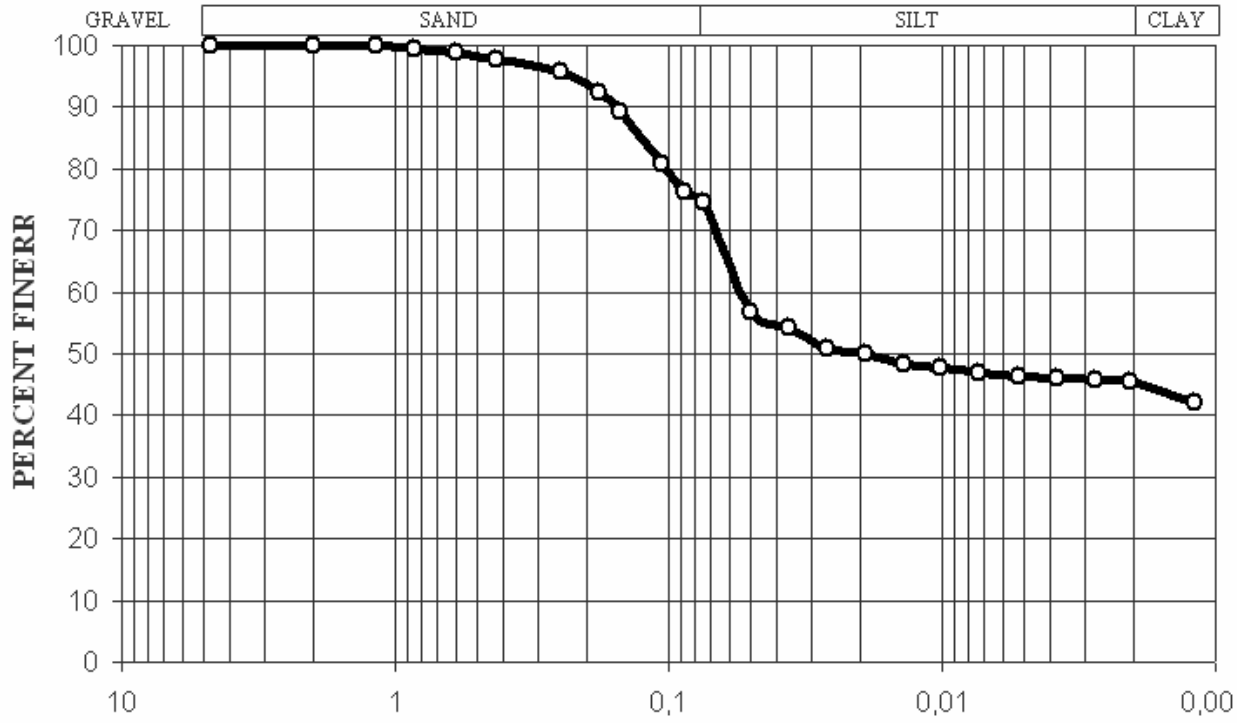
HYDROMETER ANALYSIS

Mechanical Data Analysis

correction factor : **1,009**
meniscus correction : **0,5**
effective depth, L : **16.294964 - 0.2645 x Rm**

Elapset time, min	Tempet, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0,5	36,5	1,2500	1,0313	0,0115	25,5	9,55	0,0503	56,7
1,0	34,8	1,2500	1,0300	0,0117	25,5	9,55	0,0362	54,3
2,0	31,6	1,2500	1,0280	0,0121	25,5	9,55	0,0264	50,8
4,0	30,5	1,2500	1,0275	0,0123	25,5	9,55	0,0190	49,9
8,0	28,2	1,2500	1,0266	0,0126	25,5	9,55	0,0138	48,3
15,0	26,8	1,2500	1,0262	0,0128	25,5	9,55	0,0102	47,6
30,0	25,2	1,2500	1,0258	0,0130	25,5	9,55	0,0073	46,9
60,0	24,1	1,2500	1,0256	0,0132	25,5	9,55	0,0053	46,4
120,0	22,0	1,0251	1,0254	0,0135	25,6	9,52	0,0038	46,0
240,0	20,2	1,2520	1,0252	0,0138	25,7	9,50	0,0027	45,7
450,0	18,0	1,0254	1,0251	0,0142	25,9	9,44	0,0021	45,6
1440,0	17,4	1,0235	1,0231	0,0143	24,0	9,95	0,0012	42,0

GRAIN SIZE DISTRIBUTION REPORT



SIEVE ANALYSIS

Sample Data

PROJECT : **TUGAS AKHIR**
location / depth : **BUAH BATU**
sample description :
specific gravity : **2.75**

Mechanical Data Analysis

Dry sample and tare : **67.05**
Tare : **0.00**
Dry sample weight : **67.05**
Sieve tare method

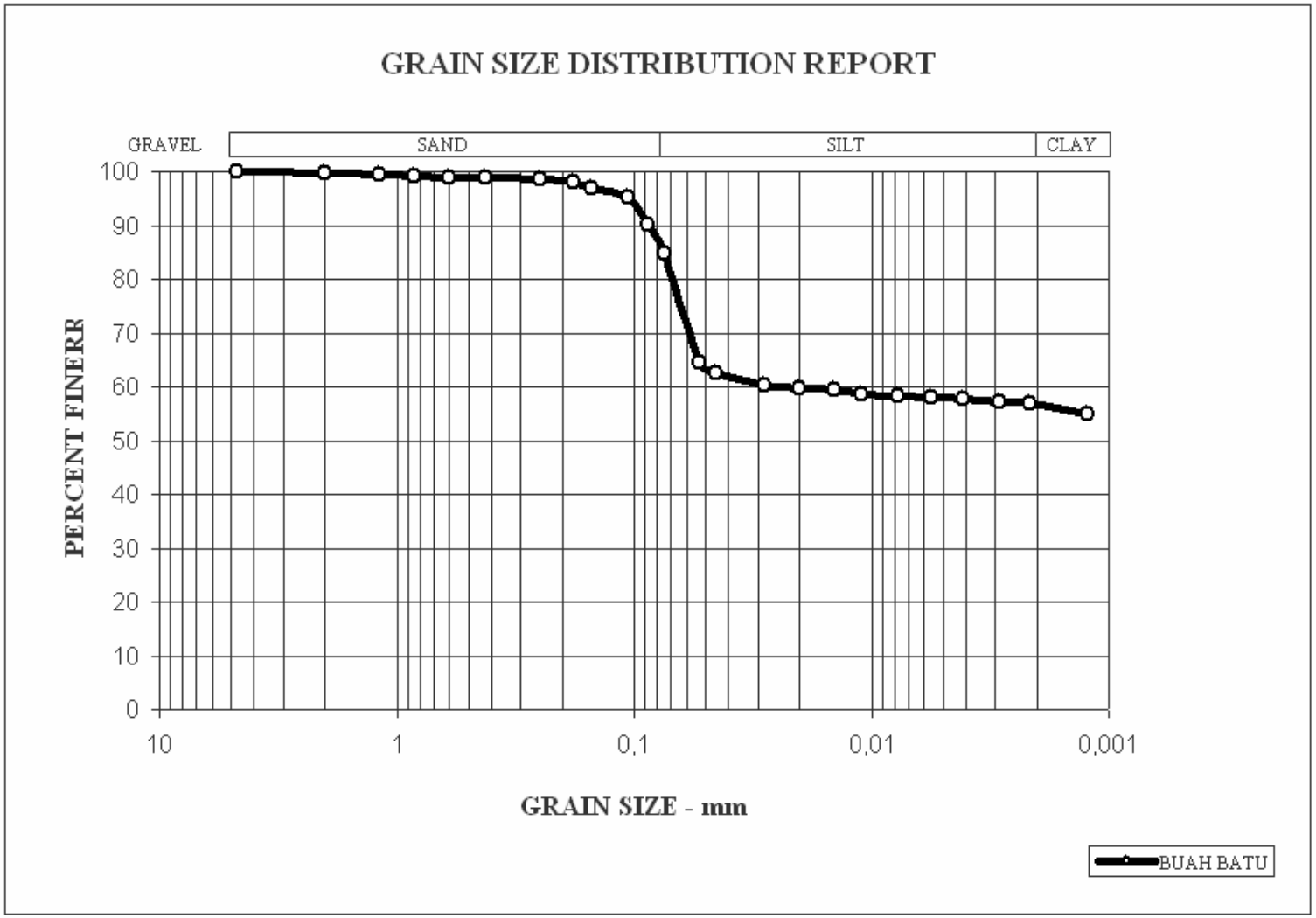
Sieve	Weight retained	Sieve tare	Percent finer
# 4	0,00	0,00	100,00
# 10	0,31	0,00	99,69
# 16	0,32	0,00	99,37
# 20	0,08	0,00	99,18
# 30	0,19	0,00	98,99
# 40	0,10	0,00	98,89
# 60	0,28	0,00	98,61
# 80	0,59	0,00	98,02
# 100	1,10	0,00	96,92
# 140	1,68	0,00	95,24
# 170	5,18	0,00	90,06
# 200	5,4	0,00	84,66

HYDROMETER ANALYSIS

Mechanical Data Analysis

correction factor : **1,01**
meniscus correction : **0,5**
effective depth, L : **16.294964 - 0.2645 x Rm**

Elapset time, min	Tempet, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0,5	31,0	1,0250	1,0277	0,0122	25,5	9,55	0,0533	64,5
1,0	29,0	1,0250	1,0269	0,0013	25,5	9,55	0,0039	62,5
2,0	26,0	1,0250	1,0260	0,0129	25,5	9,55	0,0282	60,4
4,0	24,0	1,0250	1,0256	0,0131	25,5	9,55	0,0202	59,6
8,0	23,3	1,0250	1,0256	0,0132	25,5	9,55	0,0144	59,4
15,0	22,0	1,0250	1,0253	0,0137	25,5	9,55	0,0109	58,7
30,0	21,1	1,0250	1,0253	0,0138	25,5	9,55	0,0078	58,4
60,0	20,1	1,0250	1,0251	0,0141	25,5	9,55	0,0056	58,0
120,0	18,2	1,0251	1,0250	0,0145	25,6	9,52	0,0041	57,7
240,0	16,2	1,0252	1,0248	0,0145	25,7	9,50	0,0029	57,3
450,0	15,0	1,0252	1,0245	0,0147	25,7	9,50	0,0021	56,9
1440,0	14,4	1,0245	1,0237	0,0149	25,0	9,68	0,0012	55,0


GRAIN SIZE DISTRIBUTION REPORT
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
PERCENT FINERR
10
1
0,1
0,01
0,001
GRAIN SIZE - mm
BUAH BATU

SIEVE ANALYSIS

Sample Data

PROJECT : **TUGAS AKHIR**
location / depth : **KOPO**
sample description :
specific gravity : **2.61**

Mechanical Data Analysis

Dry sample and tare : **64.23**
Tare : **0.00**
Dry sample weight : **64.23**
Sieve tare method

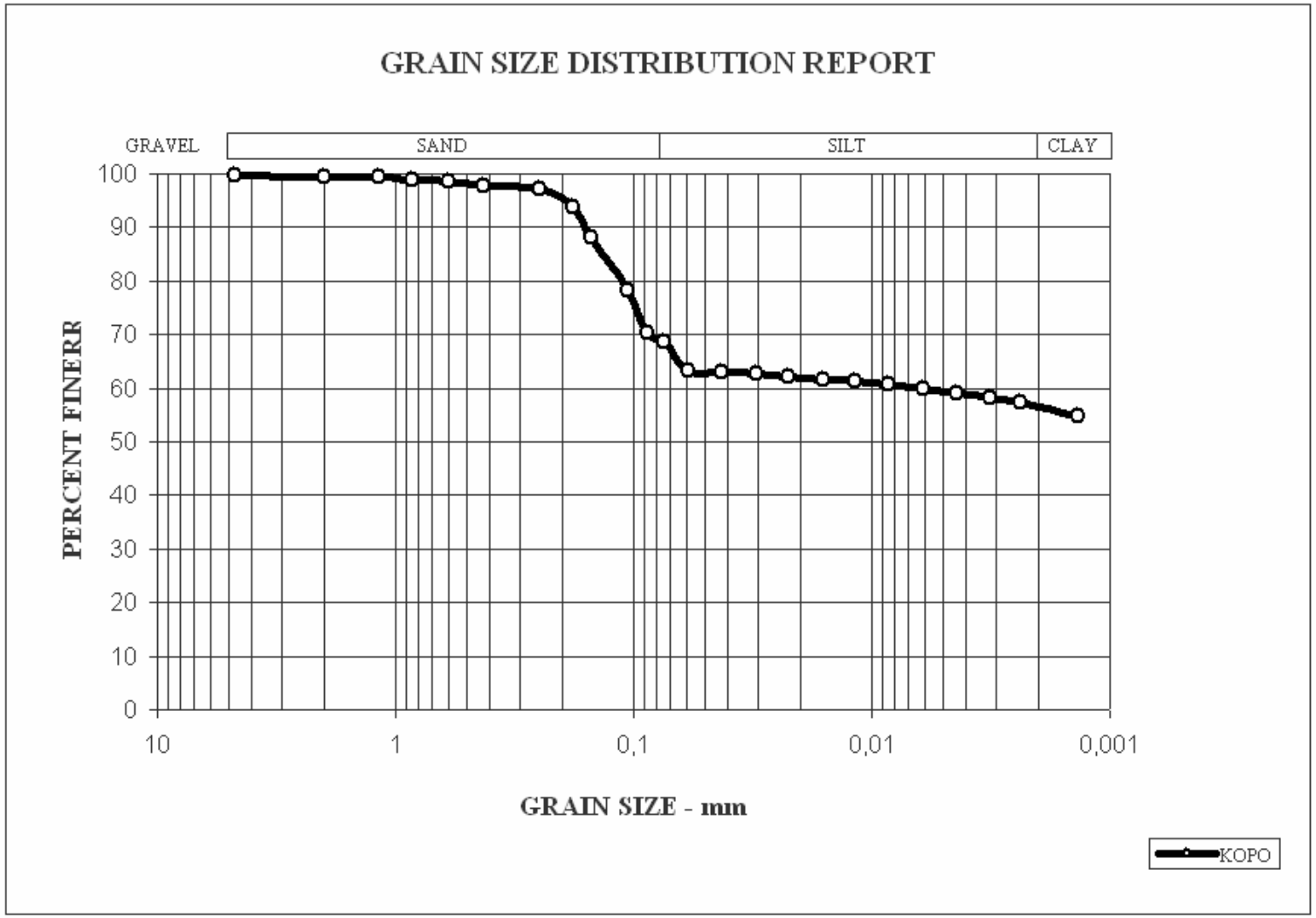
Sieve	Weight retained	Sieve tare	Percent finer
# 4	0,20	0,00	99,70
# 10	0,23	0,00	99,30
# 16	0,03	0,00	99,30
# 20	0,17	0,00	99,00
# 30	0,25	0,00	98,60
# 40	0,67	0,00	97,60
# 60	0,30	0,00	97,10
# 80	2,08	0,00	93,90
# 100	3,76	0,00	88,00
# 140	6,26	0,00	78,30
# 170	5,08	0,00	70,40
# 200	1,78	0,00	68,62

HYDROMETER ANALYSIS

Mechanical Data Analysis

correction factor : **1,01**
meniscus correction : **0,5**
effective depth, L : **16.294964 - 0.2645 x Rm**

Elapset time, min	Tempet, deg C	Actual reading	Corrected reading	K	Rm	Eff. depth	Diameter mm	Percent finer
0,5	21,8	1,0250	1,0252	0,0135	25,5	9,55	0,0590	63,3
1,0	20,1	1,0250	1,0250	0,0138	25,5	9,55	0,0426	63,1
2,0	19,1	1,0250	1,0249	0,0140	25,5	9,55	0,0306	62,8
4,0	17,0	1,0250	1,0246	0,0144	25,5	9,55	0,0223	62,1
8,0	15,8	1,0250	1,0244	0,0146	25,5	9,55	0,0160	61,7
15,0	14,6	1,0250	1,0242	0,0148	25,5	9,55	0,0118	61,2
30,0	13,6	1,0250	1,0240	0,0150	25,5	9,55	0,0085	60,7
60,0	12,0	1,0250	1,0237	0,0153	25,5	9,55	0,0061	59,9
120,0	10,5	1,0251	1,0234	0,0157	25,6	9,52	0,0044	59,1
240,0	9,0	1,0252	1,0231	0,0160	25,7	9,50	0,0032	58,2
450,0	8,0	1,0252	1,0227	0,0163	25,7	9,50	0,0024	57,3
1440,0	7,2	1,0245	1,0217	0,0165	25,0	9,68	0,0014	54,7


GRAIN SIZE DISTRIBUTION REPORT
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
PERCENT FINERR
10
1
0,1
0,01
0,001
GRAIN SIZE - mm
KOPO

ATERBERG LIMIT

PROJECT	: Tugas Akhir		
LOCATION	: UKM	**DATE OF TEST**	: 21 -7 -2006
SAMPLE NO.	: 1	**TESTED BY**	: Johnadi R Purba
SAMPLE DEPTH	: 0.2 - 0.35 m	**CHECKED BY**	:

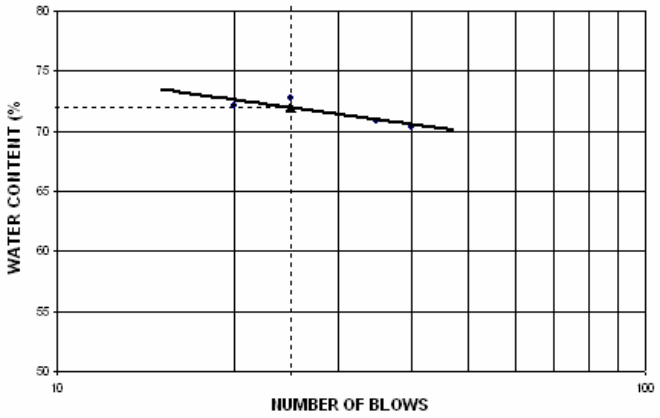
SOIL PARAMETERS

Water Content/Kadar Air : 21 %

Specific Gravity/Berat Jenis : 2,6

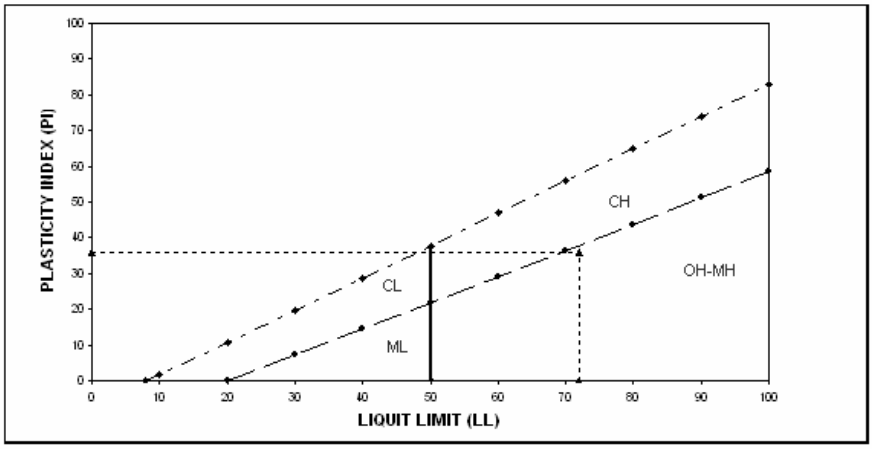
		liquid limit				plastic limit	
test number		1	2	3	4	1	2
container number		33	75	49	46	65	27
number of blows		40	35	25	20		
weight of container + wet soil	(gr)	32,70	27,20	27,80	31,80	24,30	19,10
weight of container + dry soil	(gr)	23,20	19,90	19,80	22,50	21,70	16,40
weight of water	(gr)	9,50	7,30	8,00	9,30	2,60	2,70
weight of container	(gr)	9,70	9,60	8,80	9,60	14,30	9,10
weight of dry soil	(gr)	13,50	10,30	11,00	12,90	7,40	7,30
moisture content	(%)	70,37	70,87	72,73	72,09	35,1	37,0
				average		36	

CASSAGRANDE CHART



liquid limit (w_l)	**72**
plastic limit (w_p)	**36**
plasticity index ($Ip = w_l - w_p$)	**36**
liquid index ($I_l = \frac{w - w_p}{Ip}$)	**0,43**
shrinkage limit (w_s)	
soil classification ASTM :	**MH**

U.S.C. SOIL CLASSIFICATION



ATERBERG LIMIT

PROJECT	: Tugas Akhir		
LOCATION	: Setra Duta	**DATE OF TEST**	: 21 -7 -2006
SAMPLE NO.	: 2	**TESTED BY**	: Johnadi R Purba
SAMPLE DEPTH	: 0.2 - 0.35 m	**CHECKED BY**	:

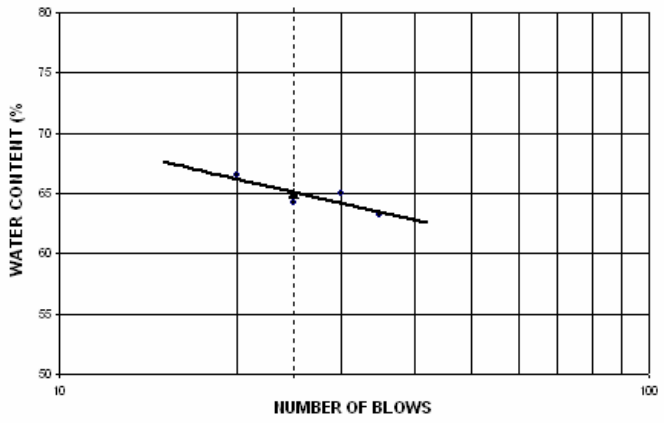
SOIL PARAMETERS

Water Content/Kadar Air : 33 %

Specific Gravity/Berat Jenis : 2,6

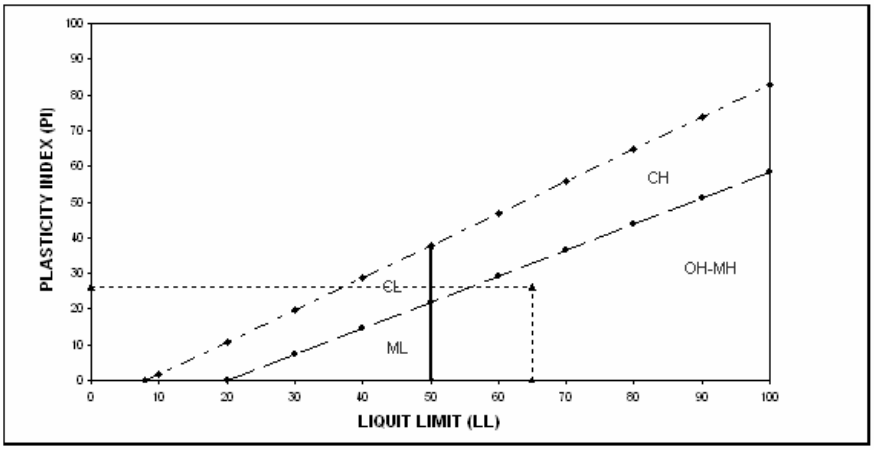
		liquid limit				plastic limit	
test number		1	2	3	4	1	2
container number		33	75	49	46	65	27
number of blows		35	30	25	20		
weight of container + wet soil	(gr)	34,30	36,20	42,60	37,70	20,40	23,50
weight of container + dry soil	(gr)	24,70	25,80	29,70	26,20	17,50	19,50
weight of water	(gr)	9,60	10,40	12,90	11,50	2,90	4,00
weight of container	(gr)	9,50	9,80	9,60	8,90	9,80	9,40
weight of dry soil	(gr)	15,20	16,00	20,10	17,30	7,70	10,10
moisture content	(%)	63,16	65,00	64,18	66,47	37,7	39,6
				average		39	

CASSAGRANDE CHART



liquid limit (w_l)	**65**
plastic limit (w_p)	**39**
plasticity index ($Ip = w_l - w_p$)	**26**
liquid index ($I_l = \frac{w - w_p}{Ip}$)	**0,23**
shrinkage limit (w_s)	
soil classification ASTM : **MH**	

U.S.C. SOIL CLASSIFICATION



ATERBERG LIMIT

PROJECT	: Tugas Akhir		
LOCATION	: Buah Batu	**DATE OF TEST**	: 21 -7 -2006
SAMPLE NO.	: 3	**TESTED BY**	: Johnadi R Purba
SAMPLE DEPTH	: 0.2 - 0.35 m	**CHECKED BY**	:

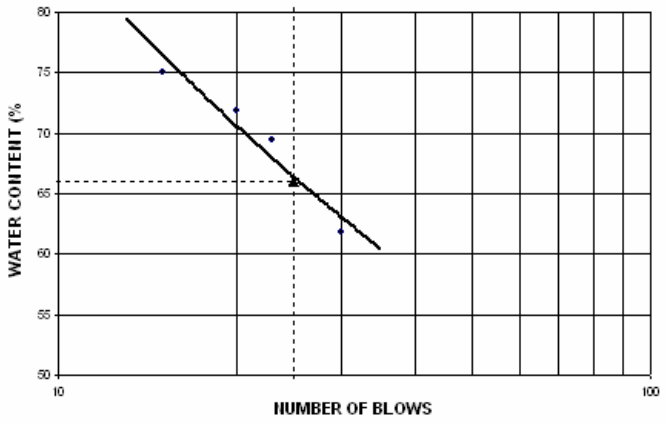
SOIL PARAMETERS

Water Content/Kadar Air : 45 %

Specific Gravity/Berat Jenis : 2,8

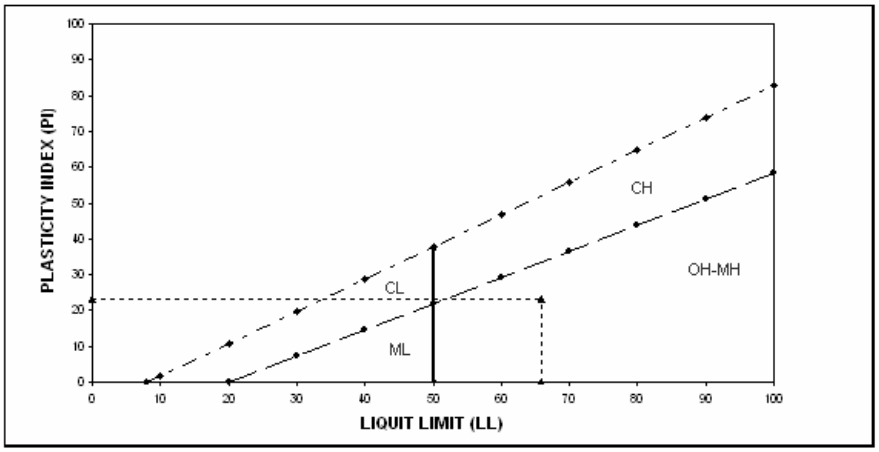
		liquid limit				plastic limit	
test number		1	2	3	4	1	2
container number		33	75	49	46	65	27
number of blows		30	23	20	15		
weight of container + wet soil	(gr)	15,10	16,90	15,00	13,70	18,90	24,10
weight of container + dry soil	(gr)	13,00	12,80	12,70	11,90	15,90	21,10
weight of water	(gr)	2,10	4,10	2,30	1,80	3,00	3,00
weight of container	(gr)	9,60	6,90	9,50	9,50	8,90	14,10
weight of dry soil	(gr)	3,40	5,90	3,20	2,40	7,00	7,00
moisture content	(%)	61,76	69,49	71,88	75,00	42,9	42,9
				average		43	

CASSAGRANDE CHART



liquid limit (w_l)	**66**
plastic limit (w_p)	**43**
plasticity index ($Ip = w_l - w_p$)	**23**
liquid index ($I_l = \frac{w - w_p}{Ip}$)	**-0,07**
shrinkage limit (w_s)	
soil classification ASTM : **MH**	

U.S.C. SOIL CLASSIFICATION



ATERBERG LIMIT

PROJECT	: Tugas Akhir		
LOCATION	: Kopo	**DATE OF TEST**	: 21 -7 -2006
SAMPLE NO.	: 4	**TESTED BY**	: Johnadi R Purba
SAMPLE DEPTH	: 0.2 - 0.35 m	**CHECKED BY**	:

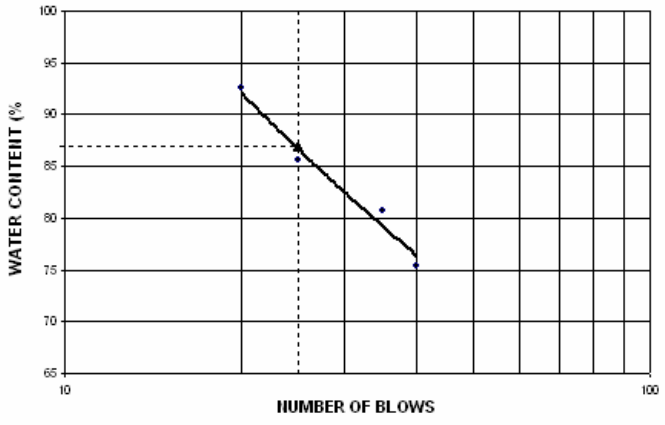
SOIL PARAMETERS

Water Content/Kadar Air : 21 %

Specific Gravity/Berat Jenis : 2,6

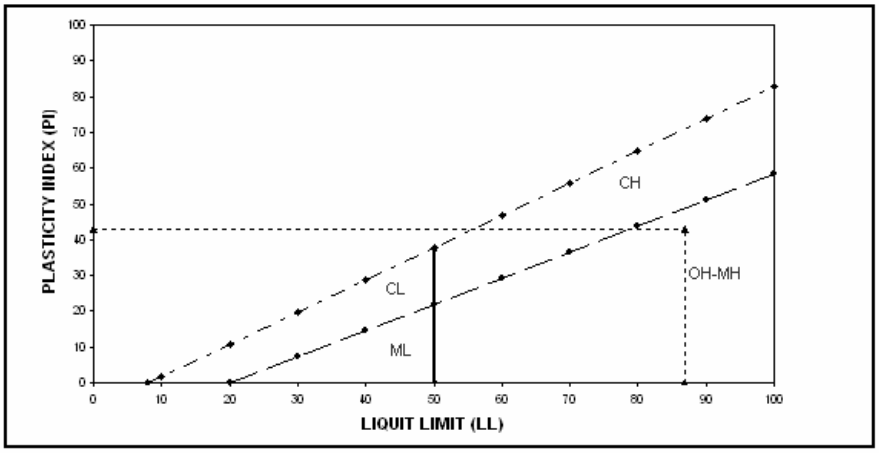
		liquid limit				plastic limit	
test number		1	2	3	4	1	2
container number		33	75	49	46	65	27
number of blows		40	35	25	20		
weight of container + wet soil	(gr)	30,75	29,25	30,86	28,89	23,67	23,14
weight of container + dry soil	(gr)	21,95	20,68	21,75	19,99	19,53	19,26
weight of water	(gr)	8,80	8,57	9,11	8,90	4,14	3,88
weight of container	(gr)	10,28	10,07	11,11	10,38	10,09	10,39
weight of dry soil	(gr)	11,67	10,61	10,64	9,61	9,44	8,87
moisture content	(%)	75,41	80,77	85,62	92,61	43,9	43,7
				average		44	

CASSAGRANDE CHART



liquid limit (w_l)	**87**
plastic limit (w_p)	**44**
plasticity index ($Ip = w_l - w_p$)	**43**
liquid index ($I_l = \frac{w - w_p}{Ip}$)	**0,54**
shrinkage limit (w_s)	
soil classification ASTM :	**MH**

U.S.C. SOIL CLASSIFICATION



CBR TEST

Soil sample :
:
Location : UKM, Bandung
Depth : 0,20 - 0,35
Sample No. : 1

Form No. : I/6
Test type : Standar AASHTO
Date : 17Juli 2006
Tested by : Johnadi R. Purba

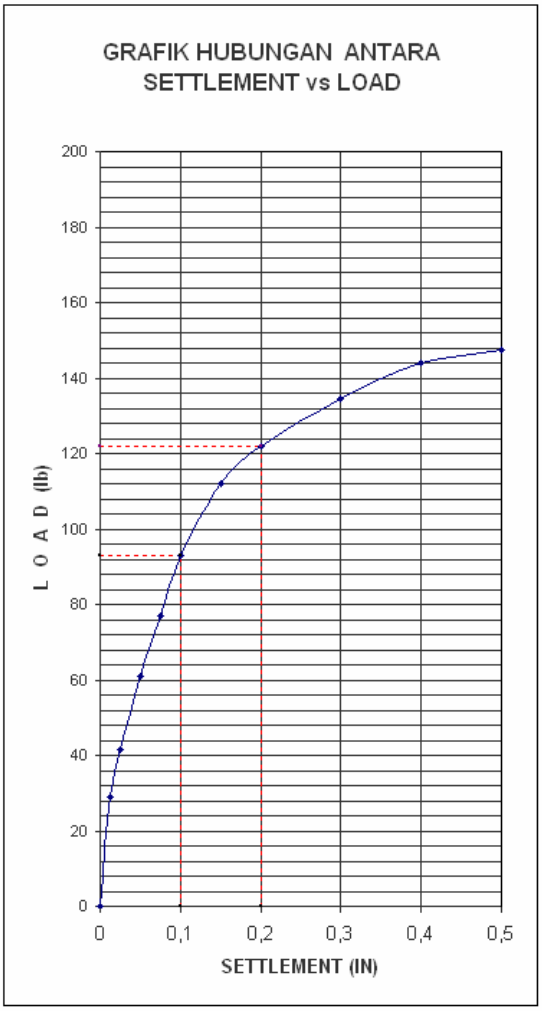
Number of Mold	B

Weight of soil + mold	9510
Weight of mold	7240
Weight of soil	2270
Volume of soil	2085,00
Wet density	1,09
Dry density	0,89

Time (min)	Settl. (in)	Dial reading (cal. 32.0309)	Load (lb)
¼	0,0125	0,90	28,8
½	0,025	1,30	41,6
1	0,050	1,90	60,9
1½	0,075	2,40	76,9
2	0,100	2,90	92,9
3	0,150	3,50	112,1
4	0,200	3,80	121,7
6	0,300	4,20	134,5
8	0,400	4,50	144,1
10	0,500	4,60	147,3

Water content		
Wt. of wet soil + dish	164,10	138,50
Wt. of dry soil + dish	146,30	125,20
Wt. of dish	66,80	65,40
Wt. of water	17,80	13,30
Wt. of dry soil	79,50	59,80
Water content	22,39	22,24
Average	22,32	

CBR VALUE	
01"	02"
$\frac{92,890}{3000}$ x 100 %	$\frac{121,7}{4500}$ x 100 %
3,10 %	2,70 %
3,10 %	



CBR TEST

Soil sample :
:
Location : Setra Duta, Bandung
Depth : 0,20 - 0,35
Sample No. : 2

Form No. : I/6
Test type : Standar AASHTO
Date : 17 Juli 2006
Tested by : Johnadi R. Purba

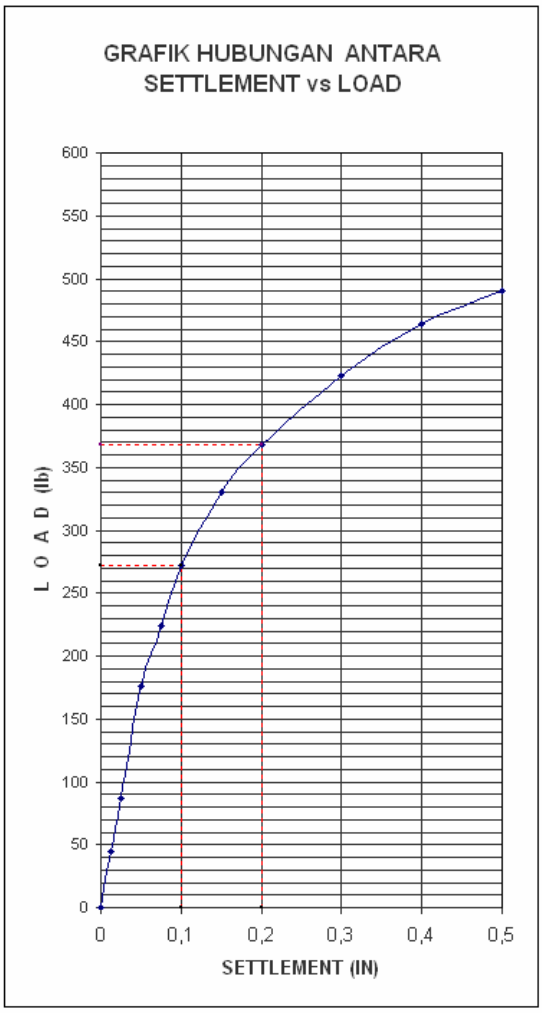
Number of Mold	D

Weight of soil + mold	10290
Weight of mold	7315
Weight of soil	2975
Volume of soil	2164,50
Wet density	1,37
Dry density	1,06

Time (min)	Settl. (in)	Dial reading (cal. 32.0309)	Load (lb)
¼	0,0125	1,40	44,8
½	0,025	2,70	86,5
1	0,050	5,50	176,2
1½	0,075	7,00	224,2
2	0,100	8,50	272,3
3	0,150	10,30	329,9
4	0,200	11,50	368,4
6	0,300	13,20	422,8
8	0,400	14,50	464,4
10	0,500	15,30	490,1

Water content		
Wt. of wet soil + dish	164,40	156,80
Wt. of dry soil + dish	141,00	136,20
Wt. of dish	64,40	66,40
Wt. of water	23,40	20,60
Wt. of dry soil	76,60	69,80
Water content	30,55	29,51
Average	30,03	

CBR VALUE	
01"	02"
$\frac{272,263}{3000}$ x 100 %	$\frac{368,4}{4500}$ x 100 %
9,08 %	8,19 %
9,08 %	



CBR TEST

Soil sample :
:
Location : Buahbatu, Bandung
Depth : 0,20 - 0,35
Sample No. : 3

Form No. : I/6
Test type : Standar AASHTO
Date : 20 Juli 2006
Tested by : Johnadi R. Purba

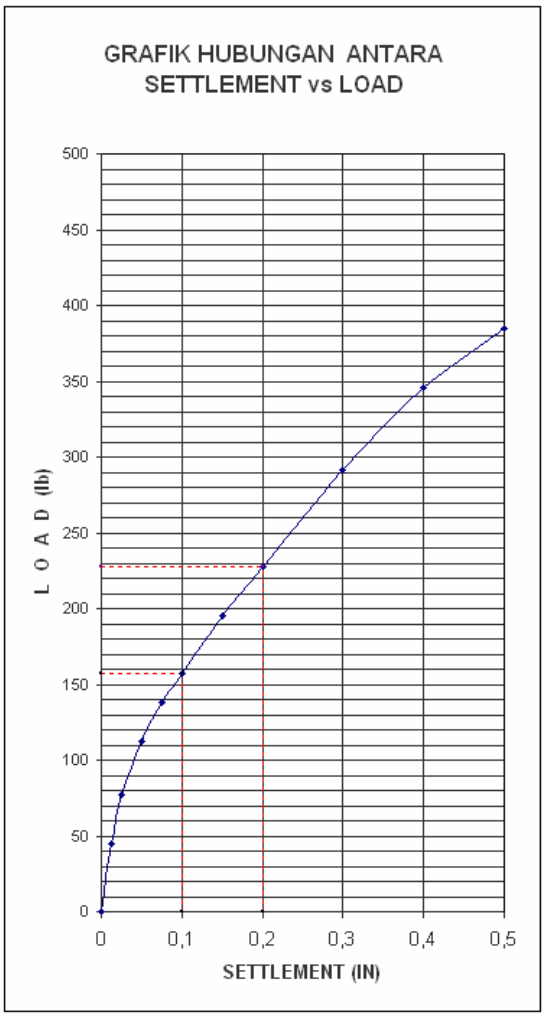
Number of Mold	E

Weight of soil + mold	9640
Weight of mold	7280
Weight of soil	2360
Volume of soil	2167,00
Wet density	1,09
Dry density	0,75

Time (min)	Settl. (in)	Dial reading (cal. 32.0309)	Load (lb)
¼	0,0125	1,40	44,8
½	0,025	2,40	76,9
1	0,050	3,50	112,1
1½	0,075	4,30	137,7
2	0,100	4,90	157,0
3	0,150	6,10	195,4
4	0,200	7,10	227,4
6	0,300	9,10	291,5
8	0,400	10,80	345,9
10	0,500	12,00	384,4

Water content		
Wt. of wet soil + dish	274,90	224,00
Wt. of dry soil + dish	210,60	174,60
Wt. of dish	64,80	64,60
Wt. of water	64,30	49,40
Wt. of dry soil	145,80	110,00
Water content	44,10	44,91
Average	44,51	

CBR VALUE	
01"	02"
$\frac{156,951}{3000}$ x 100 %	$\frac{227,4}{4500}$ x 100 %
5,23 %	5,05 %
5,23 %	



CBR TEST

Soil sample :
:
Location : Kopo, Bandung
Depth : 0,20 - 0,35
Sample No. : 4

Form No. : I/6
Test type : Standar AASHTO
Date : 20 Juli 2006
Tested by : Johnadi R. Purba

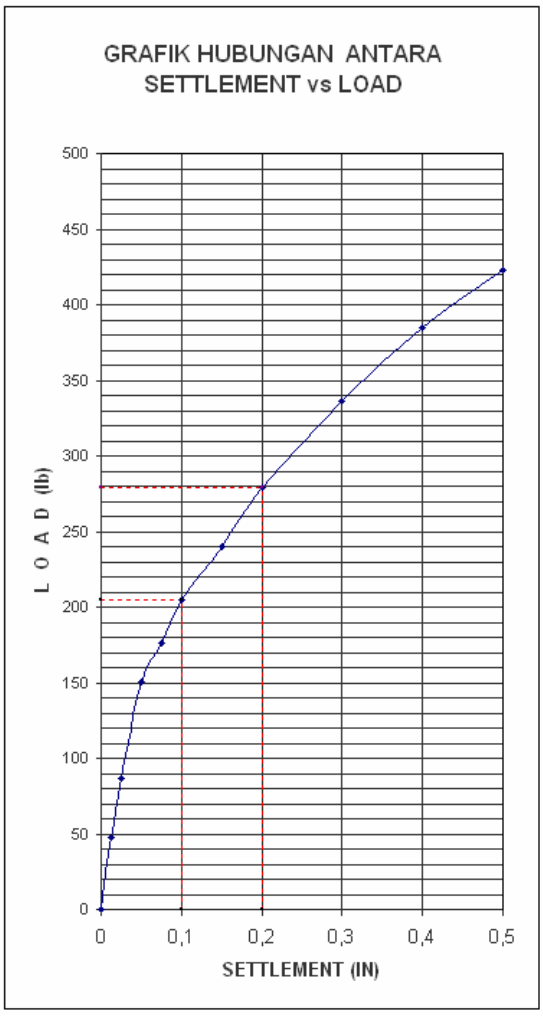
Number of Mold	E

Weight of soil + mold	9565
Weight of mold	7410
Weight of soil	2155
Volume of soil	2164,50
Wet density	1,00
Dry density	0,72

Time (min)	Settl. (in)	Dial reading (cal. 32.0309)	Load (lb)
¼	0,0125	1,50	48,0
½	0,025	2,70	86,5
1	0,050	4,70	150,5
1½	0,075	5,50	176,2
2	0,100	6,40	205,0
3	0,150	7,50	240,2
4	0,200	8,70	278,7
6	0,300	10,50	336,3
8	0,400	12,00	384,4
10	0,500	13,20	422,8

Water content		
Wt. of wet soil + dish	176,50	147,20
Wt. of dry soil + dish	144,60	124,80
Wt. of dish	64,40	66,80
Wt. of water	31,90	22,40
Wt. of dry soil	80,20	58,00
Water content	39,78	38,62
Average	39,20	

CBR VALUE	
01"	02"
$\frac{204,998}{3000}$ x 100 %	$\frac{278,7}{4500}$ x 100 %
6,83 %	6,19 %
6,83 %	



PENCATATAN DYNAMIC CONE PENETROMETER (DCP)

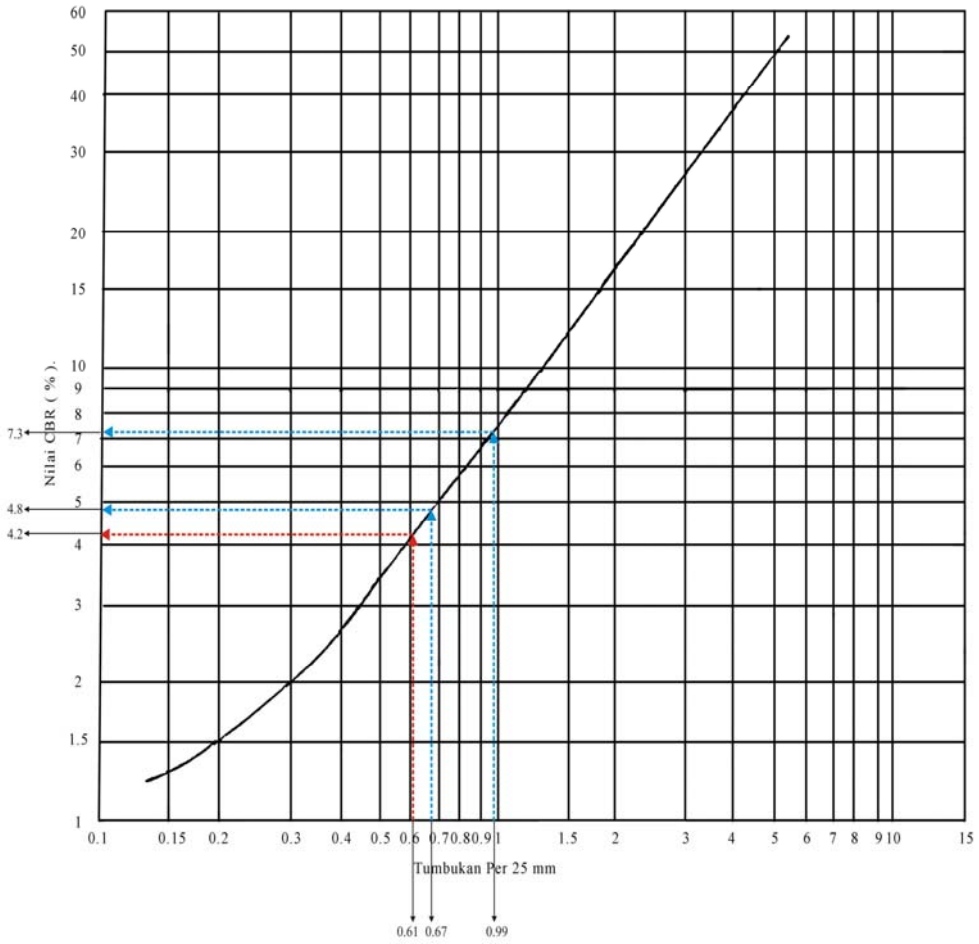
KABUPATEN : Bandung
NOMOR RUAS : 1
NAMA RUAS :
PROYEK : Tugas Akhir
LOKASI KM : UKM

TANGGAL : 14 Juli 2006
OPERATOR :
DIPERIKSA : Johnadi R. Purba
KONDISI :
:

HASIL PENCATATAN

TUMBUKAN	PEMBACAAN MISTAR		TUMBUKKAN		NILAI CBR	
			PENETRASI	PER	GRAFIK	CBR (%)
(N)	(cm)	(mm)	(mm)	(25 mm)		
0	1,0	10	-	-	-	-
1	4,5	45	35	0,71	5	4
2	6,0	60	50	1,00	8	4
3	13,0	130	120	0,63	5	4
4	16,0	160	150	0,67	5	4
5	18,5	185	175	0,71	5	4
6	26,5	265	255	0,59	4	4
7	29,0	290	280	0,63	5	4
8	34,0	340	330	0,61	4	4
9	38,0	380	370	0,61	4	4
10	40,5	405	395	0,63	5	4
11	42,0	420	410	0,67	5	4
12	45,5	455	445	0,67	5	4
13	46,0	460	450	0,72	5	4
14	46,5	465	455	0,77	6	4
15	47,0	470	460	0,82	6	4
16	48,0	480	470	0,85	6	4
17	49,5	495	485	0,88	7	4
18	51,0	510	500	0,90	7	4
19	54,0	540	530	0,90	7	4
20	58,5	585	575	0,87	6	4
21	63,0	630	620	0,85	6	4
22	66,0	660	650	0,85	6	4
23	68,0	680	670	0,86	6	4
24	70,0	700	690	0,87	6	4
25	72,0	720	710	0,88	7	4
26	73,0	730	720	0,90	7	4
27	74,5	745	735	0,92	7	4
28	76,0	760	750	0,93	7	4
29	78,0	780	770	0,94	7	4
30	79,0	790	780	0,96	7	4
31	80,0	800	790	0,98	7	4
32	82,5	825	815	0,98	7	4
33	84,5	845	835	0,99	7	4
34	86,0	860	850	1,00	8	4
35	87,0	870	860	1,02	8	4
36	90,0	900	890	1,01	8	4
37	91,0	910	900	1,03	8	4
38	93,0	930	920	1,03	8	4
					NILAI CBR : 4 %	

Lokasi : UKM
No : 1



Misal :

Tumbukkan ke 9 → Tumbukkan per 25 mm = 0,61 → Nilai CBR Grafik = 4,2 %
Tumbukkan ke 12 → Tumbukkan per 25 mm = 0,67 → Nilai CBR Grafik = 4,8 %
Tumbukkan ke 33 → Tumbukkan per 25 mm = 0,99 → Nilai CBR Grafik = 7,3 %

Nilai CBR yang dipakai = 4 % (Nilai terkecil)

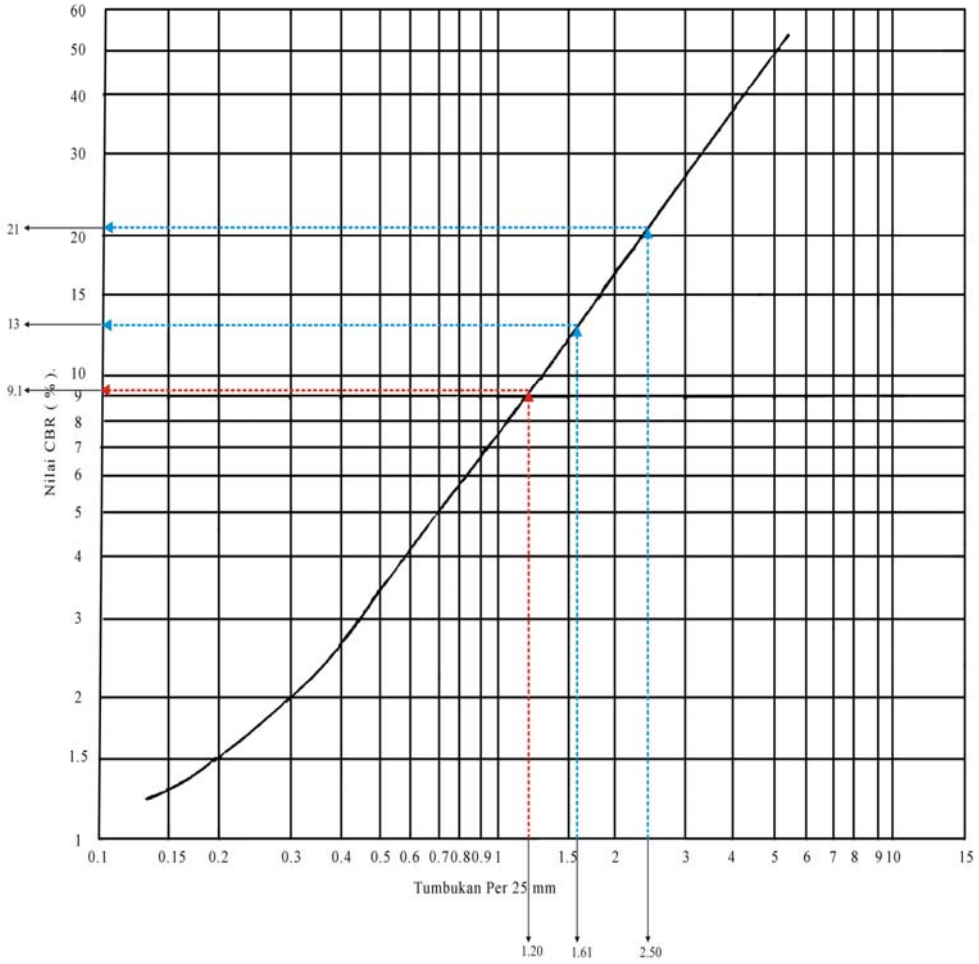
PENCATATAN DYNAMIC CONE PENETROMETER (DCP)

KABUPATEN	: Bandung	**TANGGAL**	: 14 Juli 2006
NOMOR RUAS	: 2	**OPERATOR**	:
NAMA RUAS	:	**DIPERIKSA**	: Johnadi R. Purba
PROYEK	: Tugas Akhir	**KONDISI**	:
LOKASI KM	: Setra Duta		:

HASIL PENCATATAN

TUMBUKAN	PEMBACAAN MISTAR		PENETRASI	TUMBUKAN PER	NILAI CBR	
					GRAFIK	CBR (%)
(N)	(cm)	(mm)	(mm)	(25 mm)		
0	0,5	5		-	-	-
1	1,5	15	10	2,50	21	9
2	2,5	25	20	2,50	21	9
3	4,0	40	35	2,14	18	9
4	6,0	60	55	1,82	15	9
5	7,5	75	70	1,79	14	9
6	12,0	120	115	1,30	10	9
7	13,0	130	125	1,40	11	9
8	14,0	140	135	1,48	12	9
9	15,0	150	145	1,55	12	9
10	16,0	160	155	1,61	13	9
11	18,0	180	175	1,57	12	9
12	20,0	200	195	1,54	12	9
13	25,0	250	245	1,33	10	9
14	28,5	285	280	1,25	10	9
15	30,0	300	295	1,27	10	9
16	32,5	325	320	1,25	10	9
17	33,8	338	333	1,28	10	9
18	35,8	358	353	1,27	10	9
19	36,4	364	359	1,32	10	9
20	37,5	375	370	1,35	11	9
21	39,0	390	385	1,36	11	9
22	40,0	400	395	1,39	11	9
23	41,5	415	410	1,40	11	9
24	43,0	430	425	1,41	11	9
25	44,4	444	439	1,42	11	9
26	46,4	464	459	1,42	11	9
27	47,8	478	473	1,43	11	9
28	49,0	490	485	1,44	11	9
29	49,8	498	493	1,47	12	9
30	51,0	510	505	1,49	12	9
31	51,8	518	513	1,51	12	9
32	54,8	548	543	1,47	12	9
33	57,0	570	565	1,46	12	9
34	59,8	598	593	1,43	11	9
35	62,0	620	615	1,42	11	9
36	65,2	652	647	1,39	11	9
37	68,0	680	675	1,37	11	9
38	72,0	720	715	1,33	10	9
39	75,8	758	753	1,29	10	9
40	78,5	785	780	1,28	10	9
41	81,8	818	813	1,26	10	9
42	85,0	850	845	1,24	10	9
43	88,8	888	883	1,22	9	9
44	92,1	921	916	1,20	9	9
45	95,5	955	950	1,18	9	9
					NILAI CBR : 9 %	

Lokasi : Setra Duta
No : 2



Misal

Tumbukkan ke 44 → Tumbukkan per 25 mm = 1,20 → Nilai CBR Grafik = 9,1 %
Tumbukkan ke 10 → Tumbukkan per 25 mm = 1,61 → Nilai CBR Grafik = 13 %
Tumbukkan ke 1 → Tumbukkan per 25 mm = 2,50 → Nilai CBR Grafik = 21 %

Nilai CBR yang dipakai = 9 % (Nilai terkecil)

PENCATATAN DYNAMIC CONE PENETROMETER (DCP)

KABUPATEN : Bandung
NOMOR RUAS : 3
NAMA RUAS :
PROYEK : Tugas Akhir
LOKASI KM : Buah Batu

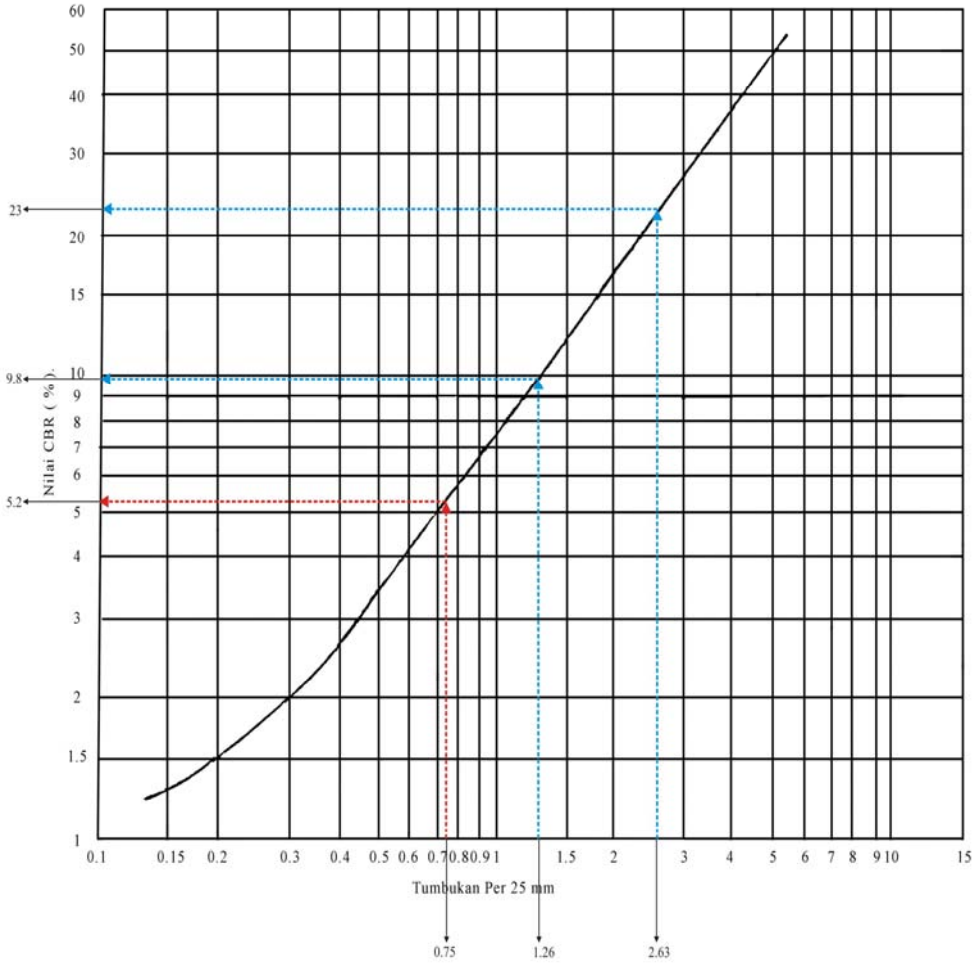
TANGGAL : 14 Juli 2006
OPERATOR :
DIPERIKSA : Johnadi R. Purba
KONDISI :
:

HASIL PENCATATAN

TUMBUKAN	PEMBACAAN MISTAR		PENETRASI	TUMBUKAN PER	NILAI CBR	
					GRAFIK	CBR (%)
(N)	(cm)	(mm)	(mm)	(25 mm)		
0	0,6	6		-	-	-
1	1,5	15	9	2,78	24	5
2	2,5	25	19	2,63	23	5
3	4,2	42	36	2,08	17	5
4	5,4	54	48	2,08	17	5
5	6,8	68	62	2,02	17	5
6	8,3	83	77	1,95	16	5
7	9,8	98	92	1,90	15	5
8	11,9	119	113	1,77	14	5
9	14,0	140	134	1,68	13	5
10	17,8	178	172	1,45	11	5
11	22,5	225	219	1,26	10	5
12	27,3	273	267	1,12	9	5
13	31,4	314	308	1,06	8	5
14	34,7	347	341	1,03	8	5
15	38,6	386	380	0,99	7	5
16	41,5	415	409	0,98	7	5
17	46,0	460	454	0,94	7	5
18	50,0	500	494	0,91	7	5
19	56,7	567	561	0,85	6	5
20	63,4	634	628	0,80	6	5
21	70,1	701	695	0,76	6	5
22	74,4	744	738	0,75	5	5
23	79,6	796	790	0,73	5	5
24	85,8	858	852	0,70	5	5
25	90,0	900	894	0,70	5	5
26	95,0	950	944	0,69	5	5
27	99,3	993	987	0,68	5	5

NILAI CBR : 5 %

Lokasi : Buah Batu
No : 3



Misal

Tumbukkan ke 22 → Tumbukkan per 25 mm = 0,75 → Nilai CBR Grafik = 5,2 %
Tumbukkan ke 11 → Tumbukkan per 25 mm = 1,26 → Nilai CBR Grafik = 9,8 %
Tumbukkan ke 2 → Tumbukkan per 25 mm = 2,63 → Nilai CBR Grafik = 23 %

Nilai CBR yang dipakai = 5 % (Nilai terkecil)

PENCATATAN DYNAMIC CONE PENETROMETER (DCP)

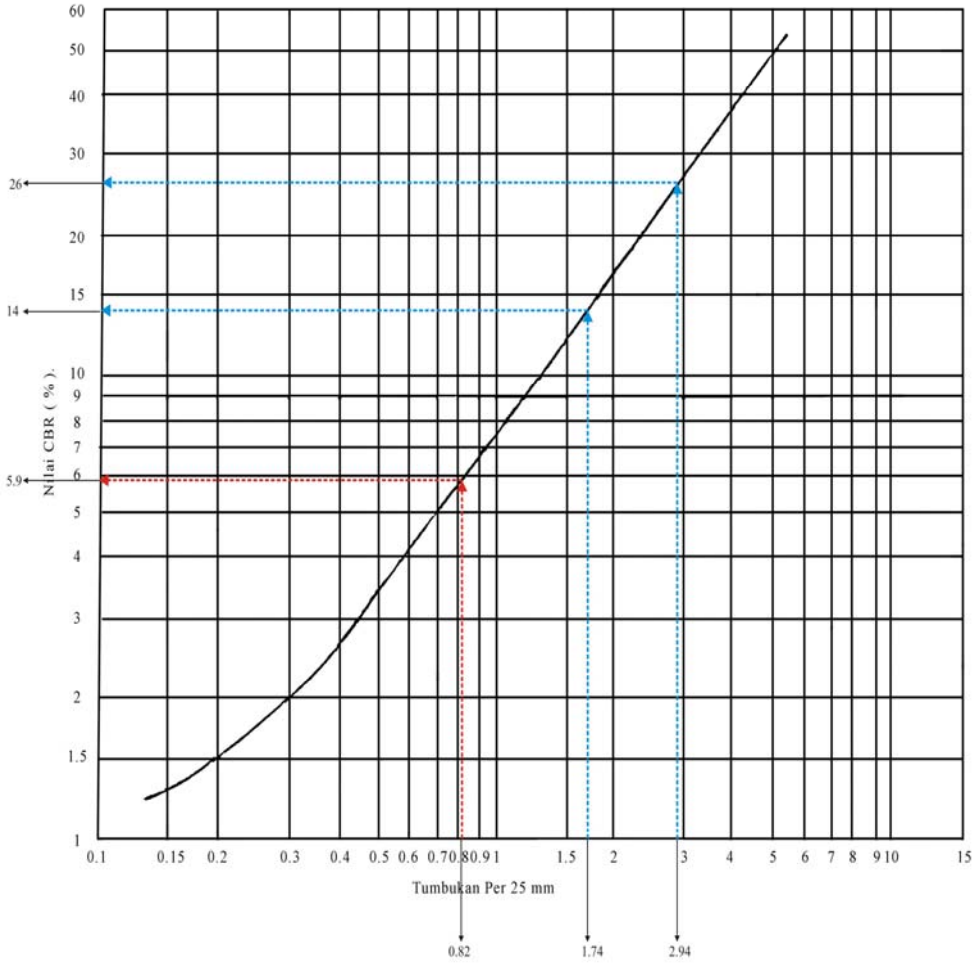
KABUPATEN : Bandung
NOMOR RUAS : 4
NAMA RUAS :
PROYEK : Tugas Akhir
LOKASI KM : Kopo

TANGGAL : 14 Juli 2006
OPERATOR :
DIPERIKSA : Johnadi R. Purba
KONDISI :
:

HASIL PENCATATAN

TUMBUKAN	PEMBACAAN MISTAR		PENETRASI	TUMBUKAN PER	NILAI CBR	
					GRAFIK	CBR (%)
(N)	(cm)	(mm)	(mm)	(25 mm)		
0	0,6	6		-	-	-
1	1,4	14	8	3,13	28	6
2	2,3	23	17	2,94	26	6
3	3,0	30	24	3,13	28	6
4	3,7	37	31	3,23	29	6
5	4,2	42	36	3,47	32	6
6	5,0	50	44	3,41	31	6
7	6,3	63	57	3,07	27	6
8	7,0	70	64	3,13	28	6
9	8,0	80	74	3,04	27	6
10	9,1	91	85	2,94	26	6
11	10,4	104	98	2,81	24	6
12	12,1	121	115	2,61	22	6
13	14,0	140	134	2,43	20	6
14	16,0	160	154	2,27	19	6
15	19,3	193	187	2,01	16	6
16	21,8	218	212	1,89	15	6
17	25,0	250	244	1,74	14	6
18	27,0	270	264	1,70	14	6
19	30,0	300	294	1,62	13	6
20	33,5	335	329	1,52	12	6
21	37,8	378	372	1,41	11	6
22	44,7	447	441	1,25	10	6
23	48,5	485	479	1,20	9	6
24	51,0	510	504	1,19	9	6
25	54,0	540	534	1,17	9	6
26	59,1	591	585	1,11	9	6
27	68,0	680	674	1,00	8	6
28	76,0	760	754	0,93	7	6
29	85,0	850	844	0,86	6	6
30	92,0	920	914	0,82	6	6
					NILAI CBR : 6 %	

Lokasi : Kopo
No : 4



Misal

Tumbukkan ke 30 → Tumbukkan per 25 mm = 0,82 → Nilai CBR Grafik = 5,9 %
Tumbukkan ke 17 → Tumbukkan per 25 mm = 1,74 → Nilai CBR Grafik = 14 %
Tumbukkan ke 2 → Tumbukkan per 25 mm = 2,94 → Nilai CBR Grafik = 26 %

Nilai CBR yang dipakai = 6 % (Nilai terkecil)