# LAMPIRAN 1


Gambar 1.1 Timbunan pilihan galian pertama


Gambar 1.2 Perbaikan timbunan pilihan hasil galian

# LAMPIRAN 2


Gambar 2.1 Timbunan perkerasan STA 9+050 s/d STA 9+075


Gambar 2.2 Galian tanah STA 9+050 karena terjadi tanah lendutan

# LAMPIRAN 3


Gambar 3.1 Timbunan pilihan untuk perbaikan tanah lendutan


Gambar 3.2 Pemadatan timbunan pilihan akibat tanah lendutan

# LAMPIRAN 4

**CV RUBIKON**
*Soil Investigation & Land Survey*

## BORE LOG

Bore No. : BH - 1
Project : Pembangunan Jalan Lingkar Tuban
Client : -
Location : Kab Tuban
STA : -
GWL : -

GPS (UTM) X = 616008.000
Y = 9233801.000
Diameter of Bore : 73 mm
Diameter of Casing : 89 mm
Date Start : 14 - 06 - 2021
Finish : 16 - 06 - 2021

| DEPTH (m) | BORE LOG | Standard Penetration Test (SPT) N / 30 cm | VISUAL DESCRIPTION | COLOUR | UDS Depth / SPT Depth | N1 (0-15) | N2 (15-30) | N3 (30-45) | N-SPT (N2+N3) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | 0 20 40 60 80 | | | | | | | |
| 1 | | | Lanau kelempungan berbatu kapur sedikit berpasir | Coklat | | | | | |
| 2 | | 7 | | | 1.50 - 2.00 m UDS<br>2.00 - 2.45 m SPT | 4 /15 | 2 /15 | 5 /15 | 7 |
| 3 | | | | | | | | | |
| 4 | | 6 | | | 3.50 - 4.00 m UDS<br>4.00 - 4.45 m SPT | 2 /15 | 3 /15 | 3 /15 | 6 |
| 5 | | | | | | | | | |
| 6 | | 14 | Lanau kelempungan | Abu-Abu | 5.50 - 6.00 m UDS<br>6.00 - 6.45 m SPT | 3 /15 | 5 /15 | 9 /15 | 14 |
| 7 | | | | | | | | | |
| 8 | | 34 | | | 7.50 - 8.00 m UDS<br>8.00 - 8.45 m SPT | 6 /15 | 13 /15 | 21 /15 | 34 |
| 9 | | | | | | | | | |
| 10 | | 41 | | | 9.50 - 10.00 m UDS<br>10.00 - 10.45 m SPT | 10 /15 | 16 /15 | 25 /15 | 41 |
| 11 | | | | | | | | | |
| 12 | | 46 | | | 11.50 - 12.00 m UDS<br>12.00 - 12.45 m SPT | 11 /15 | 18 /15 | 28 /15 | 46 |
| 13 | | | | | | | | | |
| 14 | | 43 | | | 13.50 - 14.00 m UDS<br>14.00 - 14.45 m SPT | 10 /15 | 17 /15 | 26 /15 | 43 |
| 15 | | | | | | | | | |
| 16 | | 60 | Lanau kelempungan sedikit berbatu kapur | Abu-Abu Putih | 15.50 - 16.00 m UDS<br>16.00 - 16.45 m SPT | 17 /15 | 29 /15 | 31 /15 | 60 |
| 17 | | | | | | | | | |
| 18 | | 60 | | | 17.50 - 18.00 m UDS<br>18.00 - 18.45 m SPT | 20 /15 | 33 /15 | 27 /15 | 60 |
| 19 | | | | | | | | | |
| 20 | | 51 | | | 19.50 - 20.00 m UDS<br>20.00 - 20.45 m SPT | 14 /15 | 21 /15 | 30 /15 | 51 |
| 21 | | | | | | | | | |
| 22 | | 46 | Lanau kelempungan | Abu-Abu | 21.50 - 22.00 m UDS<br>22.00 - 22.45 m SPT | 13 /15 | 19 /15 | 27 /15 | 46 |
| 23 | | | | | | | | | |
| 24 | | 38 | | | 23.50 - 24.00 m UDS<br>24.00 - 24.45 m SPT | 12 /15 | 16 /15 | 22 /15 | 38 |
| 25 | | | | | | | | | |
| 26 | | 40 | | | 25.50 - 26.00 m UDS<br>26.00 - 26.45 m SPT | 12 /15 | 17 /15 | 23 /15 | 40 |
| 27 | | | | | | | | | |
| 28 | | 60 | | | 27.50 - 28.00 m UDS<br>28.00 - 28.45 m SPT | 16 /15 | 28 /15 | 32 /15 | 60 |
| 29 | | | | | | | | | |
| 30 | | 60 | | | 29.50 - 30.00 m UDS<br>30.00 - 30.45 m SPT | 30 /15 | 60 /15 | - /15 | 60 |

**CV RUBIKON**
*Soil Investigation & Land Survey*

# BORE LOG

Bore No. : BH - 1
Project : Pembangunan Jalan Lingkar Tuban
Client : -
Location : Kab Tuban
STA : -
GWL : -

GPS (UTM) X = 816008.000
Y = 9233601.000
Diameter of Bore : 73 mm
Diameter of Casing : 89 mm
Date Start : 14 - 06 - 2021
Finish : 16 - 06 - 2021

| DEPTH (m) | BORE LOG | Standard Penetration Test (SPT) N / 30 cm | VISUAL DESCRIPTION | COLOUR | UDS Depth / SPT Depth | N1 (0-15) | N2 (15-30) | N3 (30-45) | N-SPT (N2+N3) | Grain Size Analysis (%) Gravel (%) | Sand (%) | Silt (%) | Clay (%) | Physical Properties: Water Content (%) | Dry Density (γd) (gr/cm³) | Specific Gravity GS | Porosity n | Void Ratio e | Mechanical Properties: Unconfined Test qu kg/cm² | Direct Shear Test: c kg/cm² | φ ° | Atterberg Test: LL % | PL % | IP % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | Lanau kelempungan berbatu kapur sedikit berpasir | Coklat | | | | | | | | | | | | | | | | | | | | |
| 2 | | 3 | | | 1.50 - 2.00 m UDS<br>2.00 - 2.45 m SPT | 4 /15 | 2 /15 | 5 /15 | 7 | 0.00 | 12.98 | 61.84 | 25.18 | 57.17 | 1.084 | 2.636 | 0.601 | 1.507 | 0.33 | 0.33 | 9 | 60.41 | 35.24 | 45.17 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | 5 | | | 3.50 - 4.00 m UDS<br>4.00 - 4.45 m SPT | 2 /15 | 3 /15 | 3 /15 | 6 | 0.72 | 2.53 | 70.34 | 26.41 | 40.15 | 1.326 | 2.612 | 0.512 | 1.049 | 0.37 | 0.42 | 8 | 82.24 | 35.20 | 47.04 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | 14 | Lanau kelempungan | Abu-Abu | 5.50 - 6.00 m UDS<br>6.00 - 6.45 m SPT | 3 /15 | 5 /15 | 9 /15 | 14 | 0.00 | 0.76 | 72.25 | 26.99 | 26.03 | 1.554 | 2.584 | 0.403 | 0.675 | 0.41 | 0.42 | 6 | 81.48 | 33.24 | 48.24 |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | 34 | | | 7.50 - 8.00 m UDS<br>8.00 - 8.45 m SPT | 6 /15 | 13 /15 | 21 /15 | 34 | 3.14 | 8.14 | 62.37 | 26.35 | 25.17 | 1.615 | 2.631 | 0.368 | 0.662 | 0.42 | 0.31 | 12 | 77.62 | 32.29 | 45.33 |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | 47 | | | 9.50 - 10.00 m UDS<br>10.00 - 10.45 m SPT | 10 /15 | 16 /15 | 25 /15 | 41 | 1.36 | 7.65 | 63.52 | 27.46 | 19.35 | 1.617 | 2.626 | 0.337 | 0.508 | 0.60 | 0.39 | 7 | 74.64 | 28.24 | 46.50 |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | 46 | | | 11.50 - 12.00 m UDS<br>12.00 - 12.45 m SPT | 11 /15 | 18 /15 | 28 /15 | 46 | 0.00 | 5.71 | 67.01 | 27.28 | 22.30 | 1.686 | 2.617 | 0.368 | 0.583 | 0.48 | 0.39 | 8 | 78.34 | 31.20 | 47.14 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | 43 | | | 13.50 - 14.00 m UDS<br>14.00 - 14.45 m SPT | 10 /15 | 17 /15 | 26 /15 | 43 | 5.07 | 8.14 | 57.67 | 28.12 | 20.92 | 1.736 | 2.653 | 0.357 | 0.555 | 0.55 | 0.35 | 9 | 73.43 | 30.20 | 43.23 |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | 60 | Lanau kelempungan sedikit berbatu kapur | Abu-Abu Putih | 15.50 - 16.00 m UDS<br>16.00 - 16.45 m SPT | 17 /15 | 29 /15 | 31 /15 | 60 | 0.38 | 14.20 | 58.17 | 27.26 | 25.30 | 1.619 | 2.655 | 0.403 | 0.674 | 0.44 | 0.30 | 13 | 75.56 | 33.17 | 42.39 |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | 60 | | | 17.50 - 18.00 m UDS<br>18.00 - 18.45 m SPT | 20 /15 | 33 /15 | 27 /15 | 60 | 2.03 | 9.83 | 61.47 | 26.67 | 27.79 | 1.572 | 2.657 | 0.425 | 0.738 | 0.41 | 0.30 | 13 | 78.02 | 34.34 | 43.68 |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | 51 | | | 19.50 - 20.00 m UDS<br>20.00 - 20.45 m SPT | 14 /15 | 21 /15 | 30 /15 | 51 | 1.00 | 3.43 | 69.14 | 26.43 | 24.66 | 1.631 | 2.622 | 0.395 | 0.652 | 0.44 | 0.40 | 7 | 78.45 | 32.20 | 46.25 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | 46 | Lanau kelempungan | Abu-Abu | 21.50 - 22.00 m UDS<br>22.00 - 22.45 m SPT | 13 /15 | 19 /15 | 27 /15 | 46 | 0.08 | 17.48 | 56.63 | 25.81 | 22.47 | 1.658 | 2.668 | 0.375 | 0.599 | 0.48 | 0.30 | 13 | 72.48 | 31.16 | 41.32 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | 38 | | | 23.50 - 24.00 m UDS<br>24.00 - 24.45 m SPT | 12 /15 | 16 /15 | 22 /15 | 38 | 0.00 | 14.39 | 57.94 | 27.67 | 26.24 | 1.568 | 2.646 | 0.410 | 0.694 | 0.39 | 0.34 | 11 | 78.51 | 34.15 | 44.36 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | | 40 | | | 25.50 - 26.00 m UDS<br>26.00 - 26.45 m SPT | 12 /15 | 17 /15 | 23 /15 | 40 | 26.26 | 5.39 | 42.81 | 25.56 | 21.24 | 1.702 | 2.674 | 0.362 | 0.568 | 0.55 | 0.26 | 17 | 69.60 | 29.32 | 40.28 |
| 27 | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | | 60 | | | 27.50 - 28.00 m UDS<br>28.00 - 28.45 m SPT | 16 /15 | 28 /15 | 32 /15 | 60 | 2.41 | 7.03 | 62.91 | 27.66 | 22.63 | 1.687 | 2.643 | 0.374 | 0.596 | 0.49 | 0.40 | 7 | 74.47 | 30.23 | 44.24 |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | | 60 | | | 29.50 - 30.00 m UDS<br>30.00 - 30.45 m SPT | 30 /15 | 60 /15 | - /15 | 60 | 0.48 | 15.26 | 56.56 | 27.70 | 23.27 | 1.694 | 2.653 | 0.383 | 0.620 | 0.53 | 0.30 | 13 | 74.60 | 32.25 | 42.35 |

REPUBLIK INDONESIA
KEMENTRIAN PEKERJAAN UMUM DAN PERUMAHAN RAKYAT
DIREKTORAT JENDRAL BINA MARGA
SATUAN KERJA PELAKSANNAN JALAN NASIONAL JAWA TIMUR - BALI
SATUAN KERJA PELAKSANNAN JALAN NASIONAL WILAYAH IV PROVINSI JAWA TIMUR

| | |
|---|---|
| Paket | : Pembangunan Jalan Lingkar Tuban |
| Kontraktor | : PT. Cahaya Indah Madya Pratama |
| Konsultan | : PT.Puri Dimensi - PT.Arkitron,Kso |

# SPECIFIC GRAVITY AND ABSORPTION TEST

Tanggal : 27 Mei 2021 Ex. : Rengel

Material : Coarse Aggregate

| NO.OF SAMPLE | | | I | II | |
|---|---|---|---|---|---|
| Weight of sample oven - dry in air | (Gram ) | A | 3345 | 3425 | |
| Weight of sample saturated surface dry in air | (Gram ) | B | 3415 | 3497 | |
| Weight of sample in water | (Gram ) | C | 2058 | 2128 | |
| Bulk Specific Gravity ( oven dry ) | | A / B - C | 2.465 | 2.502 | |
| | | | Average | | 2.483 |
| Bulk Specific Gravity ( saturated surface dry ) | | B / B - C | 2.517 | 2.554 | |
| | | | Average | | 2.535 |
| Apparent Specific Gravity | | A / A - C | 2.599 | 2.641 | |
| | | | Average | | 2.620 |
| Absorption ( % ) | | (B - A) x 100 / A | 2.093 | 2.102 | |
| | | | Average | | 2.097 |

Material : Fine Aggregate

| NO.OF SAMPLE | | | I | II | |
|---|---|---|---|---|---|
| Weight of sample saturated surface dry in air | (Gram) | 500 | 500 | 500 | |
| Weight of sample oven - dry in air | (Gram) | A | 484.2 | 483.5 | |
| Weight of flask + water to calibration mark | (Gram) | B | 629.6 | 653.4 | |
| Weight of sample + flask + water to calibration | (Gram) | C | 928.9 | 953.4 | |
| Bulk Specific Gravity ( oven dry ) | | A / (B+500-C) | 2.413 | 2.418 | |
| | | | Average | | 2.415 |
| Bulk Specific Gravity (saturated surface dry) | | 500 / (B+500-C) | 2.491 | 2.500 | |
| | | | Average | | 2.496 |
| Apparent Specific Gravity | | A / (B+A-C) | 2.619 | 2.635 | |
| | | | Average | | 2.627 |
| Absorption ( % ) | | (500-A) x100 / A | 3.263 | 3.413 | |
| | | | Average | | 3.338 |

$$\text{Combined Sp.Gr.} : \frac{100}{\frac{54.89}{2.483} + \frac{45.11}{2.415}}$$

: 2.452 Gr/cm $^3$

| Bina Marga | Konsultan | Kontraktor |
|---|---|---|
| Wido Mugi Kuntarto | Warsito, ST | Umar Farid |

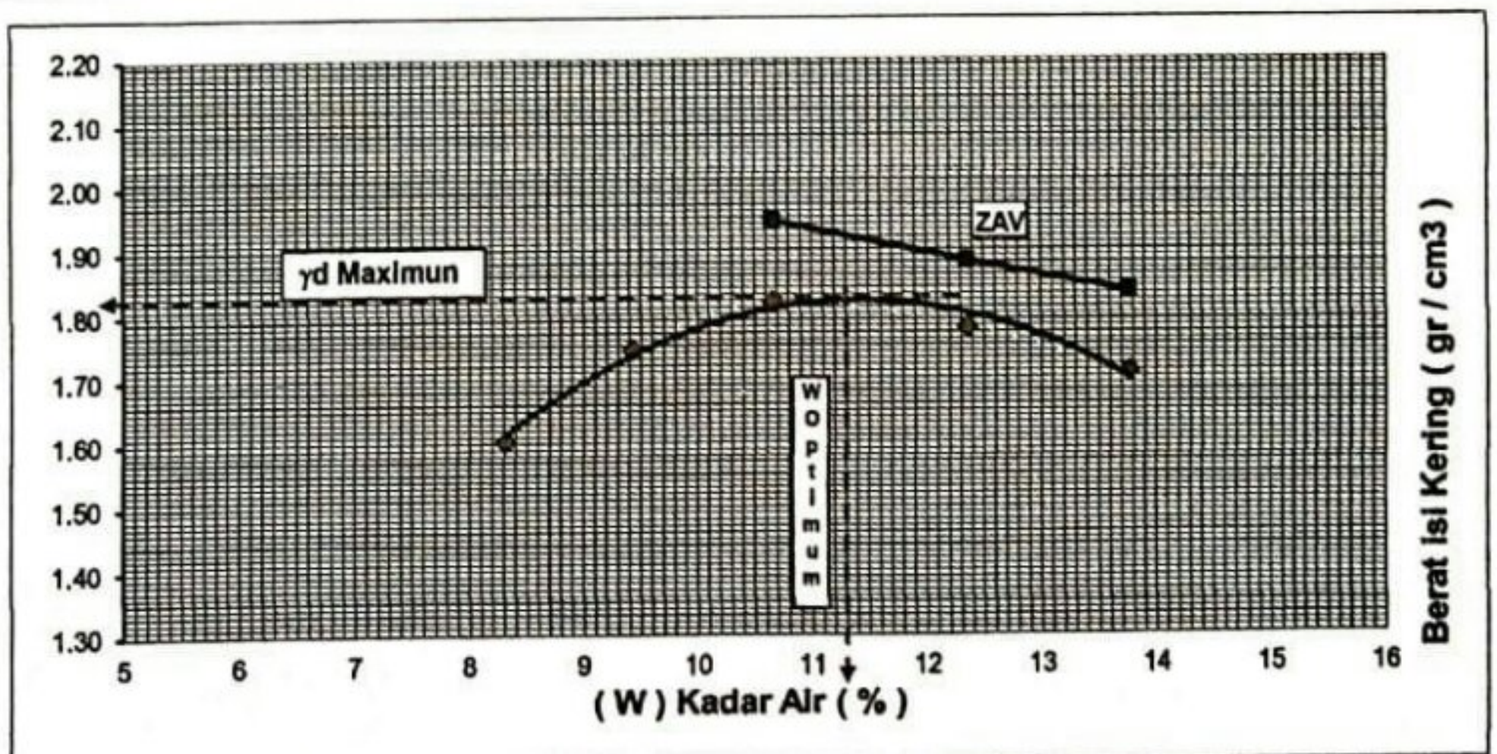
REPUBLIK INDONESIA
KEMENTRIAN PEKERJAAN UMUM DAN PERUMAHAN RAKYAT
DIREKTORAT JENDRAL BINA MARGA
SATUAN KERJA PELAKSANNAN JALAN NASIONAL JAWA TIMUR - BALI
SATUAN KERJA PELAKSANNAN JALAN NASIONAL WILAYAH IV PROVINSI JAWA TIMUR

| | |
|---|---|
| Paket | : Pembangunan Jalan Lingkar Tuban |
| Kontraktor | : PT. Cahaya Indah Madya Pratama |
| Konsultan | : PT.Puri Dimensi - PT.Arkitron,Kso |

## PERCOBAAN PEMADATAN

Jenis Material : Urugan Pilihan
Lokasi : Rengel
Tanggal : 27 Mei 2021

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 Berat tanah basah | (gr) | | | | | |
| 2 Kadar Air mula | (%) | | | | | |
| 3 Kadar Air akhir | (gr) | | | | | |
| 4 Penambahan air | (ml) | 100 | 200 | 300 | 400 | 500 |
| **BERAT ISI** | | | | | | |
| 1 Berat Cetakan | (gr) | 6818 | 6818 | 6818 | 6818 | 6818 |
| 2 Berat tanah basah + cetakan | (gr) | 10853 | 11250 | 11487 | 11454 | 11328 |
| 3 Berat tanah basah (2 - 1) | (gr) | 4035 | 4432 | 4669 | 4636 | 4510 |
| 4 Isi Cetakan | (gr/cc) | 2321 | 2321 | 2321 | 2321 | 2321 |
| 5 Berat Isi basah | $\gamma = (3)/(4)$ | 1.738 | 1.910 | 2.012 | 1.997 | 1.943 |
| 6 Berat Isi kering | $\gamma = \frac{5}{100 + W} \times 100\ \%$ | 1.605 | 1.745 | 1.818 | 1.778 | 1.708 |
| **KADAR AIR** | | | | | | |
| 1 Berat Tin box | (gr) | 100.4 | 85.5 | 96.3 | 100.4 | 85.5 |
| 2 Berat Tanah basah + Tin box | (gr) | 178.6 | 184.2 | 166.9 | 158.6 | 201.2 |
| 3 Berat Tanah Kering + Tin box | (gr) | 172.6 | 175.7 | 160.1 | 152.2 | 187.2 |
| 4 Berat Air (2 - 3) | (gr) | 6.0 | 8.5 | 6.8 | 6.4 | 14.0 |
| 5 Berat Tanah kering (3 - 1) | (gr) | 72.2 | 90.2 | 63.8 | 51.8 | 101.7 |
| 6 Kadar Air W = (4)/(5) x 100 | | 8.31 | 9.42 | 10.66 | 12.36 | 13.77 |




γ d Maximum = 1.823 gr/ cm ³ W optimum = 11.03 %

| Bina Marga | Konsultan | Kontraktor |
|---|---|---|
| Wido Mugi Kuntarto | Warsito, ST | Umar Farid |

REPUBLIK INDONESIA
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SATUAN KERJA PELAKSANNAN JALAN NASIONAL JAWA TIMUR - BALI

## PEMERIKSAAN KEPADATAN LAPANGAN DENGAN KERUCUT PASIR

Paket : Pembangunan Jalan Lingkar Tuban
Kontraktor : PT. Cahaya Indah Madya Pratama
Konsultan : PT.Puri Dimensi - PT.Arkitron,Kso

| No. | LOKASI | | STA | 4+950 | 4+975 | 5+000 | |
|---|---|---|---|---|---|---|---|
| | | | KR/KN | | | | |
| A | Berat Pasir ( sebelum ) | Gram | | 7452 | 7356 | 7455 | |
| B | Berat Pasir ( sesudah ) | Gram | | 2990 | 2828 | 3040 | |
| C | Berat Pasir dalam Corong dan Lubang | Gram | A - B | 4462 | 4528 | 4415 | |
| D | Berat Pasir di dalam corong | Gram | Lab | 1570 | 1570 | 1570 | |
| E | Berat Pasir di dalam lubang | Gram | C - D | 2892 | 2958 | 2845 | |
| F | Berat isi Pasir | Gr/cc | Lab | 1.400 | 1.400 | 1.400 | |
| G | Isi Lubang | Gram | E / F | 2066 | 2113 | 2032 | |
| H | Berat Tanah + Wadah | Gram | | 4215 | 4337 | 4198 | |
| I | Berat Wadah | Gram | | 0 | 0 | 0 | |
| J | Berat Tanah | Gram | H - I | 4215 | 4337 | 4198 | |
| K | Berat Isi Basah | Gr/cc | J / G | 2.040 | 2.053 | 2.066 | |
| L | Berat Isi Kering | Gr/cc | K/(1+(U/100)) | 1.847 | 1.857 | 1.873 | |
| M | Berat Isi Maximum | Gr/cc | Lab | 1.823 | 1.825 | 1.825 | |
| N | Kepadatan | % | (L / X )100 | 101.29 | 101.74 | 102.61 | |
| O | Specification | % | | > 100 % | > 100 % | > 100 % | |

KADAR AIR

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| P | Berat Tanah + Wadah | Gram | | 324.3 | 320.3 | 351.2 | |
| Q | Berat Tanah kering + Wadah | Gram | | 304.9 | 301.2 | 329.6 | |
| R | Berat Wadah | Gram | | 120.20 | 120.20 | 120.20 | |
| S | Berat Air | Gram | P - Q | 19.40 | 19.10 | 21.60 | |
| T | Berat Tanah kering | Gram | Q - R | 184.7 | 181 | 209.4 | |
| U | Kadar Air | % | (S / T)x100 | 10.50 | 10.55 | 10.32 | |

KOREKSI TERTAHAN SARINGAN No.4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| V | Berat Material tertahan No.4 | Gram | | | | | |
| W | Persen tertahan No.4 | % | (V / J)x100 | | | | |
| X | Berat Isi Maximum terkoreksi | ((1-W%)*M))+(0.9xW%xSpgr) | | | | | |

| BINA MARGA | KONSULTAN | CONTRACTOR |
|---|---|---|
| Wido Mugi Kuntarto | Warsito, ST | Umar Farid |

# LAMPIRAN 5

- **Perhitungan Penurunan Sc akibat Beban Timbunan**

| NO | Tebal Lapisan | H | Z | γt | γsat | γ' | eo | Cc | Cs | B1 | B2 | α 1 | α 2 | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3 | 0.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 2 | 2.94 | 81.87 | 1.119 | 0.663 | 1.0 | 1.663 | 1.782 | 0.042 |
| 2 | 1 | | 1.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 2 | 7.94 | 66.80 | 1.082 | 1.989 | 1.0 | 2.989 | 3.071 | 0.018 |
| 3 | 1 | | 2.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 2 | 11.09 | 54.46 | 1.024 | 3.315 | 1.0 | 4.315 | 4.339 | 0.009 |
| 4 | 1 | 2 | 3.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 2 | 12.53 | 45.00 | 0.948 | 6.076 | 1.0 | 7.076 | 7.024 | 0.004 |
| 5 | 1 | | 4.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 2 | 12.84 | 37.87 | 0.868 | 7.812 | 1.0 | 8.812 | 8.680 | 0.001 |
| 6 | 1 | 5 | 5.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 2 | 12.53 | 32.47 | 0.791 | 8.905 | 1.0 | 9.905 | 9.695 | 0.001 |
| 7 | 1 | | 6.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 2 | 11.94 | 28.30 | 0.720 | 10.524 | 1.0 | 11.524 | 11.244 | 0.003 |
| 8 | 1 | | 7.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 2 | 11.24 | 25.02 | 0.658 | 12.143 | 1.0 | 13.143 | 12.800 | 0.003 |
| 9 | 1 | | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 2 | 10.53 | 22.38 | 0.603 | 13.762 | 1.0 | 14.762 | 14.364 | 0.004 |
| 10 | 1 | | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 2 | 9.84 | 20.22 | 0.555 | 15.381 | 1.0 | 16.381 | 15.935 | 0.004 |
| 11 | 1 | 2 | 10.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 2 | 9.21 | 18.43 | 0.513 | 17.787 | 1.0 | 18.787 | 18.300 | 0.005 |
| 12 | 1 | | 11.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 2 | 8.63 | 16.93 | 0.477 | 19.481 | 1.0 | 20.481 | 19.958 | 0.005 |
| 13 | 1 | 3 | 12.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 2 | 8.11 | 15.64 | 0.444 | 21.175 | 1.0 | 22.175 | 21.619 | 0.005 |
| 14 | 1 | | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 2 | 7.63 | 14.53 | 0.416 | 22.869 | 1.0 | 23.869 | 23.285 | 0.005 |
| 15 | 1 | | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 2 | 7.20 | 13.57 | 0.391 | 24.563 | 1.0 | 25.563 | 24.954 | 0.005 |
| | | | | | | | | | | | | | | | | | | | 0.113 |

| NO | Tebal Lapisan | H | Z | γt | γsat | γ' | eo | Cc | Cs | B1 | B2 | α 1 | α 2 | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3 | 0.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 4 | 4.32 | 81.87 | 1.059 | 0.663 | 1.0 | 1.663 | 1.722 | 0.035 |
| 2 | 1 | | 1.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 4 | 11.89 | 66.80 | 1.039 | 1.989 | 1.0 | 2.989 | 3.028 | 0.028 |
| 3 | 1 | | 2.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 4 | 17.10 | 54.46 | 1.001 | 3.315 | 1.0 | 4.315 | 4.316 | 0.008 |
| 4 | 1 | 2 | 3.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 4 | 19.98 | 45.00 | 0.949 | 6.076 | 1.0 | 7.076 | 7.025 | 0.008 |
| 5 | 1 | | 4.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 4 | 21.16 | 37.87 | 0.889 | 7.812 | 1.0 | 8.812 | 8.701 | 0.003 |
| 6 | 1 | 5 | 5.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 4 | 21.27 | 32.47 | 0.828 | 8.905 | 1.0 | 9.905 | 9.732 | 0.003 |
| 7 | 1 | | 6.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 4 | 20.78 | 28.30 | 0.768 | 10.524 | 1.0 | 11.524 | 11.292 | 0.002 |
| 8 | 1 | | 7.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 4 | 19.98 | 25.02 | 0.713 | 12.143 | 1.0 | 13.143 | 12.855 | 0.002 |
| 9 | 1 | | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 4 | 19.04 | 22.38 | 0.662 | 13.762 | 1.0 | 14.762 | 14.423 | 0.003 |
| 10 | 1 | | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 4 | 18.07 | 20.22 | 0.616 | 15.381 | 1.0 | 16.381 | 15.996 | 0.003 |
| 11 | 1 | 2 | 10.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 4 | 17.10 | 18.43 | 0.575 | 17.787 | 1.0 | 18.787 | 18.362 | 0.004 |
| 12 | 1 | | 11.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 4 | 16.18 | 16.93 | 0.538 | 19.481 | 1.0 | 20.481 | 20.019 | 0.004 |
| 13 | 1 | 3 | 12.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 4 | 15.32 | 15.64 | 0.504 | 21.175 | 1.0 | 22.175 | 21.679 | 0.005 |
| 14 | 1 | | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 4 | 14.52 | 14.53 | 0.475 | 22.869 | 1.0 | 23.869 | 23.344 | 0.005 |
| 15 | 1 | | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 4 | 13.78 | 13.57 | 0.448 | 24.563 | 1.0 | 25.563 | 25.011 | 0.005 |
| | | | | | | | | | | | | | | | | | | | 0.117 |

| NO | Tebal Lapisan | H | Z | γt | γsat | γ' | eo | Cc | Cs | B1 | B2 | α 1 | α 2 | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3 | 0.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 6 | 5.12 | 81.87 | 1.039 | 0.663 | 1.0 | 1.663 | 1.702 | 0.032 |
| 2 | 1 | | 1.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 6 | 14.23 | 66.80 | 1.025 | 1.989 | 1.0 | 2.989 | 3.014 | 0.024 |
| 3 | 1 | | 2.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 6 | 20.79 | 54.46 | 0.997 | 3.315 | 1.0 | 4.315 | 4.312 | 0.019 |
| 4 | 1 | 2 | 3.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 6 | 24.78 | 45.00 | 0.958 | 6.076 | 1.0 | 7.076 | 7.034 | 0.012 |
| 5 | 1 | | 4.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 6 | 26.78 | 37.87 | 0.910 | 7.812 | 1.0 | 8.812 | 8.722 | 0.002 |
| 6 | 1 | 5 | 5.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 6 | 27.46 | 32.47 | 0.860 | 8.905 | 1.0 | 9.905 | 9.764 | 0.007 |
| 7 | 1 | | 6.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 6 | 27.32 | 28.30 | 0.809 | 10.524 | 1.0 | 11.524 | 11.332 | 0.001 |
| 8 | 1 | | 7.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 6 | 26.69 | 25.02 | 0.760 | 12.143 | 1.0 | 13.143 | 12.902 | 0.002 |
| 9 | 1 | | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 6 | 25.80 | 22.38 | 0.713 | 13.762 | 1.0 | 14.762 | 14.475 | 0.002 |
| 10 | 1 | | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 6 | 24.78 | 20.22 | 0.670 | 15.381 | 1.0 | 16.381 | 16.051 | 0.003 |
| 11 | 1 | 2 | 10.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 6 | 23.70 | 18.43 | 0.631 | 17.787 | 1.0 | 18.787 | 18.418 | 0.003 |
| 12 | 1 | | 11.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 6 | 22.63 | 16.93 | 0.594 | 19.481 | 1.0 | 20.481 | 20.075 | 0.003 |
| 13 | 1 | 3 | 12.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 6 | 21.59 | 15.64 | 0.561 | 21.175 | 1.0 | 22.175 | 21.736 | 0.003 |
| 14 | 1 | | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 6 | 20.60 | 14.53 | 0.531 | 22.869 | 1.0 | 23.869 | 23.400 | 0.004 |
| 15 | 1 | | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 6 | 19.66 | 13.57 | 0.503 | 24.563 | 1.0 | 25.563 | 25.066 | 0.004 |
| | | | | | | | | | | | | | | | | | | | 0.121 |

| NO | Tebal Lapisan | H | Z | ɣt | ɣsat | ɣ' | eo | Cc | Cs | B1 | B2 | α 1 | α 2 | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3 | 0.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 8 | 5.64 | 81.87 | 1.030 | 0.663 | 1.0 | 1.663 | 1.693 | 0.031 |
| 2 | 1 | | 1.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 8 | 15.77 | 66.80 | 1.018 | 1.989 | 1.0 | 2.989 | 3.007 | 0.030 |
| 3 | 1 | | 2.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 8 | 23.27 | 54.46 | 0.997 | 3.315 | 1.0 | 4.315 | 4.312 | 0.027 |
| 4 | 1 | 2 | 3.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 8 | 28.07 | 45.00 | 0.965 | 6.076 | 1.0 | 7.076 | 7.041 | 0.023 |
| 5 | 1 | | 4.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 8 | 30.75 | 37.87 | 0.926 | 7.812 | 1.0 | 8.812 | 8.738 | 0.018 |
| 6 | 1 | 5 | 5.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 8 | 31.97 | 32.47 | 0.883 | 8.905 | 1.0 | 9.905 | 9.788 | 0.010 |
| 7 | 1 | | 6.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 8 | 32.22 | 28.30 | 0.839 | 10.524 | 1.0 | 11.524 | 11.363 | 0.008 |
| 8 | 1 | | 7.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 8 | 31.87 | 25.02 | 0.796 | 12.143 | 1.0 | 13.143 | 12.939 | 0.002 |
| 9 | 1 | | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 8 | 31.15 | 22.38 | 0.754 | 13.762 | 1.0 | 14.762 | 14.516 | 0.002 |
| 10 | 1 | | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 8 | 30.22 | 20.22 | 0.715 | 15.381 | 1.0 | 16.381 | 16.095 | 0.002 |
| 11 | 1 | 2 | 10.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 8 | 29.17 | 18.43 | 0.677 | 17.787 | 1.0 | 18.787 | 18.464 | 0.002 |
| 12 | 1 | | 11.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 8 | 28.07 | 16.93 | 0.643 | 19.481 | 1.0 | 20.481 | 20.124 | 0.003 |
| 13 | 1 | 3 | 12.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 8 | 26.97 | 15.64 | 0.610 | 21.175 | 1.0 | 22.175 | 21.785 | 0.003 |
| 14 | 1 | | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 8 | 25.89 | 14.53 | 0.580 | 22.869 | 1.0 | 23.869 | 23.449 | 0.003 |
| 15 | 1 | | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 8 | 24.85 | 13.57 | 0.553 | 24.563 | 1.0 | 25.563 | 25.116 | 0.003 |
| | | | | | | | | | | | | | | | | | | | 0.167 |

| NO | Tebal Lapisan | H | Z | ɣt | ɣsat | ɣ' | eo | Cc | Cs | B1 | B2 | α 1 | α 2 | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3 | 0.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 10 | 6.01 | 81.87 | 1.024 | 0.663 | 1.0 | 1.663 | 1.687 | 0.030 |
| 2 | 1 | | 1.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 10 | 16.86 | 66.80 | 1.015 | 1.989 | 1.0 | 2.989 | 3.004 | 0.029 |
| 3 | 1 | | 2.5 | 1.326 | 1.630 | 0.630 | 1.049 | 0.978 | 0.140 | 3.5 | 10 | 25.05 | 54.46 | 0.997 | 3.315 | 1.0 | 4.315 | 4.312 | 0.026 |
| 4 | 1 | 2 | 3.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 10 | 30.47 | 45.00 | 0.970 | 6.076 | 1.0 | 7.076 | 7.046 | 0.023 |
| 5 | 1 | | 4.5 | 1.736 | 1.655 | 0.655 | 0.555 | 0.939 | 0.134 | 3.5 | 10 | 33.69 | 37.87 | 0.937 | 7.812 | 1.0 | 8.812 | 8.749 | 0.020 |
| 6 | 1 | 5 | 5.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 10 | 35.36 | 32.47 | 0.901 | 8.905 | 1.0 | 9.905 | 9.805 | 0.017 |
| 7 | 1 | | 6.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 10 | 35.99 | 28.30 | 0.863 | 10.524 | 1.0 | 11.524 | 11.386 | 0.014 |
| 8 | 1 | | 7.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 10 | 35.93 | 25.02 | 0.824 | 12.143 | 1.0 | 13.143 | 12.967 | 0.011 |
| 9 | 1 | | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 10 | 35.42 | 22.38 | 0.787 | 13.762 | 1.0 | 14.762 | 14.548 | 0.009 |
| 10 | 1 | | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 0.887 | 0.127 | 3.5 | 10 | 34.64 | 20.22 | 0.750 | 15.381 | 1.0 | 16.381 | 16.131 | 0.007 |
| 11 | 1 | 2 | 10.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 10 | 33.69 | 18.43 | 0.716 | 17.787 | 1.0 | 18.787 | 18.503 | 0.006 |
| 12 | 1 | | 11.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 10 | 32.65 | 16.93 | 0.683 | 19.481 | 1.0 | 20.481 | 20.164 | 0.002 |
| 13 | 1 | 3 | 12.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 10 | 31.56 | 15.64 | 0.652 | 21.175 | 1.0 | 22.175 | 21.827 | 0.002 |
| 14 | 1 | | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 10 | 30.47 | 14.53 | 0.623 | 22.869 | 1.0 | 23.869 | 23.492 | 0.003 |
| 15 | 1 | | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 0.819 | 0.117 | 3.5 | 10 | 29.38 | 13.57 | 0.596 | 24.563 | 1.0 | 25.563 | 25.159 | 0.003 |
| | | | | | | | | | | | | | | | | | | | 0.202 |

# LAMPIRAN 6

**Penurunan Sc akibat Pavement dan Traffic**

**• Dengan Tinggi Timbunan 1m**

| NO | Tebal Lapisan | Z | ɣt | ɣsat | ɣ' | eo | LL | Cc | Cs | B1 | B2 | α 1 | α 2 | m | n | I | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 0.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 2 | 0.91 | 85.91 | 14.00 | ∞ | 0.250 | 1.250 | 0.663 | 1.0 | 1.663 | 1.913 | 0.056 |
| 2 | 1 | 1.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 2 | 2.63 | 77.91 | 4.67 | ∞ | 0.250 | 1.224 | 1.989 | 1.0 | 2.989 | 3.213 | 0.027 |
| 3 | 1 | 2.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 2 | 4.13 | 70.35 | 2.80 | ∞ | 0.250 | 1.193 | 3.315 | 1.0 | 4.315 | 4.508 | 0.017 |
| 4 | 1 | 3.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 2 | 5.31 | 63.43 | 2.00 | ∞ | 0.250 | 1.156 | 6.076 | 1.0 | 7.076 | 7.232 | 0.011 |
| 5 | 1 | 4.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 2 | 6.17 | 57.26 | 1.56 | ∞ | 0.247 | 1.112 | 7.812 | 1.0 | 8.812 | 8.924 | 0.008 |
| 6 | 1 | 5.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 2 | 6.73 | 51.84 | 1.27 | ∞ | 0.236 | 1.064 | 8.905 | 1.0 | 9.905 | 9.968 | 0.001 |
| 7 | 1 | 6.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 2 | 7.04 | 47.12 | 1.08 | ∞ | 0.230 | 1.013 | 10.524 | 1.0 | 11.524 | 11.537 | 0.003 |
| 8 | 1 | 7.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 2 | 7.17 | 43.03 | 0.93 | ∞ | 0.223 | 0.962 | 12.143 | 1.0 | 13.143 | 13.105 | 0.003 |
| 9 | 1 | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 2 | 7.16 | 39.47 | 0.82 | ∞ | 0.216 | 0.912 | 13.762 | 1.0 | 14.762 | 14.673 | 0.004 |
| 10 | 1 | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 2 | 7.07 | 36.38 | 0.74 | ∞ | 0.214 | 0.864 | 15.381 | 1.0 | 16.381 | 16.244 | 0.004 |
| 11 | 1 | 10.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 2 | 6.91 | 33.69 | 0.67 | ∞ | 0.212 | 0.818 | 17.787 | 1.0 | 18.787 | 18.605 | 0.005 |
| 12 | 1 | 11.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 2 | 6.72 | 31.33 | 0.61 | ∞ | 0.211 | 0.775 | 19.481 | 1.0 | 20.481 | 20.256 | 0.005 |
| 13 | 1 | 12.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 2 | 6.51 | 29.25 | 0.56 | ∞ | 0.210 | 0.736 | 21.175 | 1.0 | 22.175 | 21.911 | 0.005 |
| 14 | 1 | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 2 | 6.28 | 27.41 | 0.52 | ∞ | 0.209 | 0.699 | 22.869 | 1.0 | 23.869 | 23.568 | 0.005 |
| 15 | 1 | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 2 | 6.06 | 25.77 | 0.48 | ∞ | 0.208 | 0.664 | 24.563 | 1.0 | 25.563 | 25.227 | 0.005 |
| | | | | | | | | | | | | | | | | | | | | | | 0.160 |

- **Dengan Tinggi Timbunan 2m**

| NO | Tebal Lapisan | Z | ɣt | ɣsat | ɣ' | eo | LL | Cc | Cs | B1 | B2 | α 1 | α 2 | m | n | I | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 4 | 6.85 | 70.35 | 2.80 | ∞ | 0.250 | 1.094 | 3.315 | 1.0 | 4.315 | 4.409 | 0.012 |
| 2 | 1 | 3.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 4 | 8.91 | 63.43 | 2.00 | ∞ | 0.250 | 1.070 | 4.641 | 1.0 | 5.641 | 5.711 | 0.008 |
| 3 | 1 | 4.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 4 | 10.49 | 57.26 | 1.56 | ∞ | 0.250 | 1.040 | 5.967 | 1.0 | 6.967 | 7.007 | 0.006 |
| 4 | 1 | 5.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 4 | 11.59 | 51.84 | 1.27 | ∞ | 0.250 | 1.006 | 9.548 | 1.0 | 10.548 | 10.554 | 0.004 |
| 5 | 1 | 6.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 4 | 12.30 | 47.12 | 1.08 | ∞ | 0.247 | 0.968 | 11.284 | 1.0 | 12.284 | 12.252 | 0.002 |
| 6 | 1 | 7.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 4 | 12.69 | 43.03 | 0.93 | ∞ | 0.236 | 0.928 | 12.143 | 1.0 | 13.143 | 13.071 | 0.001 |
| 7 | 1 | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 4 | 12.83 | 39.47 | 0.82 | ∞ | 0.230 | 0.888 | 13.762 | 1.0 | 14.762 | 14.650 | 0.003 |
| 8 | 1 | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 4 | 12.80 | 36.38 | 0.74 | ∞ | 0.223 | 0.848 | 15.381 | 1.0 | 16.381 | 16.229 | 0.003 |
| 9 | 1 | 10.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 4 | 12.64 | 33.69 | 0.67 | ∞ | 0.216 | 0.810 | 17.000 | 1.0 | 18.000 | 17.809 | 0.004 |
| 10 | 1 | 11.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 4 | 12.40 | 31.33 | 0.61 | ∞ | 0.214 | 0.773 | 18.619 | 1.0 | 19.619 | 19.391 | 0.004 |
| 11 | 1 | 12.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 4 | 12.10 | 29.25 | 0.56 | ∞ | 0.212 | 0.737 | 21.175 | 1.0 | 22.175 | 21.912 | 0.005 |
| 12 | 1 | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 4 | 11.77 | 27.41 | 0.52 | ∞ | 0.211 | 0.704 | 22.869 | 1.0 | 23.869 | 23.573 | 0.005 |
| 13 | 1 | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 4 | 11.42 | 25.77 | 0.48 | ∞ | 0.210 | 0.673 | 24.563 | 1.0 | 25.563 | 25.236 | 0.005 |
| 14 | 1 | 15.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 4 | 11.06 | 24.30 | 0.45 | ∞ | 0.209 | 0.643 | 26.257 | 1.0 | 27.257 | 26.900 | 0.005 |
| 15 | 1 | 16.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 4 | 10.70 | 22.99 | 0.42 | ∞ | 0.208 | 0.616 | 27.951 | 1.0 | 28.951 | 28.567 | 0.005 |
| | | | | | | | | | | | | | | | | | | | | | | 0.073 |

- **Dengan Tinggi Timbunan 3m**

| NO | Tebal Lapisan | Z | ɣt | ɣsat | ɣ' | eo | LL | Cc | Cs | B1 | B2 | α 1 | α 2 | m | n | I | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 3.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 6 | 11.50 | 63.43 | 2.00 | ∞ | 0.250 | 1.043 | 4.641 | 1.0 | 5.641 | 5.684 | 0.007 |
| 2 | 1 | 4.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 6 | 13.64 | 57.26 | 1.56 | ∞ | 0.250 | 1.020 | 5.967 | 1.0 | 6.967 | 6.987 | 0.005 |
| 3 | 1 | 5.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 6 | 15.23 | 51.84 | 1.27 | ∞ | 0.250 | 0.993 | 7.293 | 1.0 | 8.293 | 8.286 | 0.004 |
| 4 | 1 | 6.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 6 | 16.31 | 47.12 | 1.08 | ∞ | 0.250 | 0.962 | 11.284 | 1.0 | 12.284 | 12.246 | 0.002 |
| 5 | 1 | 7.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 6 | 16.99 | 43.03 | 0.93 | ∞ | 0.247 | 0.929 | 13.020 | 1.0 | 14.020 | 13.949 | 0.001 |
| 6 | 1 | 8.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 6 | 17.35 | 39.47 | 0.82 | ∞ | 0.236 | 0.895 | 13.762 | 1.0 | 14.762 | 14.656 | 0.001 |
| 7 | 1 | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 6 | 17.46 | 36.38 | 0.74 | ∞ | 0.230 | 0.860 | 15.381 | 1.0 | 16.381 | 16.240 | 0.003 |
| 8 | 1 | 10.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 6 | 17.38 | 33.69 | 0.67 | ∞ | 0.223 | 0.826 | 17.000 | 1.0 | 18.000 | 17.825 | 0.003 |
| 9 | 1 | 11.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 6 | 17.17 | 31.33 | 0.61 | ∞ | 0.216 | 0.792 | 18.619 | 1.0 | 19.619 | 19.411 | 0.004 |
| 10 | 1 | 12.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 6 | 16.87 | 29.25 | 0.56 | ∞ | 0.214 | 0.760 | 20.238 | 1.0 | 21.238 | 20.997 | 0.004 |
| 11 | 1 | 13.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 6 | 16.51 | 27.41 | 0.52 | ∞ | 0.212 | 0.729 | 22.869 | 1.0 | 23.869 | 23.598 | 0.005 |
| 12 | 1 | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 6 | 16.11 | 25.77 | 0.48 | ∞ | 0.211 | 0.699 | 24.563 | 1.0 | 25.563 | 25.262 | 0.005 |
| 13 | 1 | 15.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 6 | 15.68 | 24.30 | 0.45 | ∞ | 0.210 | 0.671 | 26.257 | 1.0 | 27.257 | 26.928 | 0.005 |
| 14 | 1 | 16.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 6 | 15.25 | 22.99 | 0.42 | ∞ | 0.209 | 0.645 | 27.951 | 1.0 | 28.951 | 28.596 | 0.005 |
| 15 | 1 | 17.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 6 | 14.81 | 21.80 | 0.40 | ∞ | 0.208 | 0.620 | 29.645 | 1.0 | 30.645 | 30.265 | 0.005 |
| | | | | | | | | | | | | | | | | | | | | | | 0.060 |

- **Dengan Tinggi Timbunan 4m**

| NO | Tebal Lapisan | Z | ɣt | ɣsat | ɣ' | eo | LL | Cc | Cs | B1 | B2 | α 1 | α 2 | m | n | I | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 4.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 8 | 16.04 | 57.26 | 1.56 | ∞ | 0.250 | 1.012 | 5.967 | 1.0 | 6.967 | 6.979 | 0.005 |
| 2 | 1 | 5.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 8 | 18.02 | 51.84 | 1.27 | ∞ | 0.250 | 0.989 | 7.293 | 1.0 | 8.293 | 8.282 | 0.004 |
| 3 | 1 | 6.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 8 | 19.45 | 47.12 | 1.08 | ∞ | 0.250 | 0.963 | 8.619 | 1.0 | 9.619 | 9.582 | 0.002 |
| 4 | 1 | 7.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 8 | 20.41 | 43.03 | 0.93 | ∞ | 0.250 | 0.935 | 13.020 | 1.0 | 14.020 | 13.955 | 0.002 |
| 5 | 1 | 8.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 8 | 20.99 | 39.47 | 0.82 | ∞ | 0.247 | 0.905 | 14.756 | 1.0 | 15.756 | 15.661 | 0.001 |
| 6 | 1 | 9.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 8 | 21.27 | 36.38 | 0.74 | ∞ | 0.236 | 0.874 | 15.381 | 1.0 | 16.381 | 16.254 | 0.001 |
| 7 | 1 | 10.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 8 | 21.32 | 33.69 | 0.67 | ∞ | 0.230 | 0.843 | 17.000 | 1.0 | 18.000 | 17.843 | 0.003 |
| 8 | 1 | 11.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 8 | 21.20 | 31.33 | 0.61 | ∞ | 0.223 | 0.813 | 18.619 | 1.0 | 19.619 | 19.431 | 0.003 |
| 9 | 1 | 12.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 8 | 20.95 | 29.25 | 0.56 | ∞ | 0.216 | 0.783 | 20.238 | 1.0 | 21.238 | 21.020 | 0.004 |
| 10 | 1 | 13.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 8 | 20.61 | 27.41 | 0.52 | ∞ | 0.214 | 0.754 | 21.857 | 1.0 | 22.857 | 22.610 | 0.004 |
| 11 | 1 | 14.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 8 | 20.20 | 25.77 | 0.48 | ∞ | 0.212 | 0.726 | 24.563 | 1.0 | 25.563 | 25.289 | 0.005 |
| 12 | 1 | 15.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 8 | 19.76 | 24.30 | 0.45 | ∞ | 0.211 | 0.699 | 26.257 | 1.0 | 27.257 | 26.956 | 0.005 |
| 13 | 1 | 16.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 8 | 19.28 | 22.99 | 0.42 | ∞ | 0.210 | 0.674 | 27.951 | 1.0 | 28.951 | 28.625 | 0.005 |
| 14 | 1 | 17.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 8 | 18.80 | 21.80 | 0.40 | ∞ | 0.209 | 0.650 | 29.645 | 1.0 | 30.645 | 30.295 | 0.005 |
| 15 | 1 | 18.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 8 | 18.31 | 20.73 | 0.38 | ∞ | 0.208 | 0.627 | 31.339 | 1.0 | 32.339 | 31.966 | 0.005 |
| | | | | | | | | | | | | | | | | | | | | | | 0.053 |

- **Dengan Tinggi Timbunan 5m**

| NO | Tebal Lapisan | Z | ɣt | ɣsat | ɣ' | eo | LL | Cc | Cs | B1 | B2 | α 1 | α 2 | m | n | I | Δp | Po' | ΔPf | Pc' | Δp + Po' | Sc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 5.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 10 | 20.23 | 51.84 | 1.27 | ∞ | 0.250 | 0.988 | 7.293 | 1.0 | 8.293 | 8.281 | 0.004 |
| 2 | 1 | 6.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 10 | 21.95 | 47.12 | 1.08 | ∞ | 0.250 | 0.966 | 8.619 | 1.0 | 9.619 | 9.585 | 0.003 |
| 3 | 1 | 7.5 | 1.326 | 1.630 | 0.630 | 1.049 | 82.24 | 0.978 | 0.140 | 7 | 10 | 23.17 | 43.03 | 0.93 | ∞ | 0.250 | 0.941 | 9.945 | 1.0 | 10.945 | 10.886 | 0.002 |
| 4 | 1 | 8.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 10 | 23.96 | 39.47 | 0.82 | ∞ | 0.250 | 0.914 | 14.756 | 1.0 | 15.756 | 15.670 | 0.001 |
| 5 | 1 | 9.5 | 1.736 | 1.655 | 0.655 | 0.555 | 73.43 | 0.939 | 0.134 | 7 | 10 | 24.42 | 36.38 | 0.74 | ∞ | 0.247 | 0.887 | 16.492 | 1.0 | 17.492 | 17.379 | 0.000 |
| 6 | 1 | 10.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 10 | 24.61 | 33.69 | 0.67 | ∞ | 0.236 | 0.859 | 17.000 | 1.0 | 18.000 | 17.858 | 0.001 |
| 7 | 1 | 11.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 10 | 24.59 | 31.33 | 0.61 | ∞ | 0.230 | 0.831 | 18.619 | 1.0 | 19.619 | 19.449 | 0.003 |
| 8 | 1 | 12.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 10 | 24.42 | 29.25 | 0.56 | ∞ | 0.223 | 0.803 | 20.238 | 1.0 | 21.238 | 21.041 | 0.003 |
| 9 | 1 | 13.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 10 | 24.14 | 27.41 | 0.52 | ∞ | 0.216 | 0.776 | 21.857 | 1.0 | 22.857 | 22.633 | 0.004 |
| 10 | 1 | 14.5 | 1.619 | 1.663 | 0.663 | 0.674 | 75.56 | 0.887 | 0.127 | 7 | 10 | 23.77 | 25.77 | 0.48 | ∞ | 0.214 | 0.750 | 23.476 | 1.0 | 24.476 | 24.226 | 0.004 |
| 11 | 1 | 15.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 10 | 23.34 | 24.30 | 0.45 | ∞ | 0.212 | 0.725 | 26.257 | 1.0 | 27.257 | 26.982 | 0.005 |
| 12 | 1 | 16.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 10 | 22.87 | 22.99 | 0.42 | ∞ | 0.211 | 0.701 | 27.951 | 1.0 | 28.951 | 28.652 | 0.005 |
| 13 | 1 | 17.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 10 | 22.37 | 21.80 | 0.40 | ∞ | 0.210 | 0.677 | 29.645 | 1.0 | 30.645 | 30.322 | 0.005 |
| 14 | 1 | 18.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 10 | 21.85 | 20.73 | 0.38 | ∞ | 0.209 | 0.655 | 31.339 | 1.0 | 32.339 | 31.994 | 0.005 |
| 15 | 1 | 19.5 | 1.694 | 1.761 | 0.761 | 0.383 | 74.60 | 0.819 | 0.117 | 7 | 10 | 21.33 | 19.75 | 0.36 | ∞ | 0.208 | 0.634 | 33.033 | 1.0 | 34.033 | 33.667 | 0.005 |
| | | | | | | | | | | | | | | | | | | | | | | 0.049 |

## LAMPIRAN 7

- **PVD Pola Segitiga**

| S = | 0.60 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 41.974 | 42.338 |
| 2 | 0.000169 | 1.47 | 70.987 | 71.351 |
| 3 | 0.000253 | 1.80 | 80.658 | 81.022 |
| 4 | 0.000338 | 2.07 | 85.493 | 85.857 |
| 5 | 0.000422 | 2.32 | 88.395 | 88.759 |
| 6 | 0.000507 | 2.54 | 90.329 | 90.693 |
| 7 | 0.000591 | 2.74 | 91.711 | 92.075 |
| 8 | 0.000676 | 2.93 | 92.747 | 93.111 |
| 9 | 0.000760 | 3.11 | 93.553 | 93.917 |
| 10 | 0.000844 | 3.28 | 94.197 | 94.561 |
| 11 | 0.000929 | 3.44 | 94.725 | 95.089 |
| 12 | 0.001013 | 3.59 | 95.164 | 95.528 |
| 13 | 0.001098 | 3.74 | 95.536 | 95.900 |
| 14 | 0.001182 | 3.88 | 95.855 | 96.219 |
| 15 | 0.001267 | 4.02 | 96.132 | 96.496 |
| 16 | 0.001351 | 4.15 | 97.824 | 98.188 |
| 17 | 0.001436 | 4.28 | 99.512 | 99.876 |
| 18 | 0.001520 | 4.40 | 99.794 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 0.80 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 13.555 | 13.919 |
| 2 | 0.000169 | 1.47 | 56.777 | 57.141 |
| 3 | 0.000253 | 1.80 | 71.185 | 71.549 |
| 4 | 0.000338 | 2.07 | 78.389 | 78.753 |
| 5 | 0.000422 | 2.32 | 82.711 | 83.075 |
| 6 | 0.000507 | 2.54 | 85.592 | 85.956 |
| 7 | 0.000591 | 2.74 | 87.651 | 88.015 |
| 8 | 0.000676 | 2.93 | 89.194 | 89.558 |
| 9 | 0.000760 | 3.11 | 90.395 | 90.759 |
| 10 | 0.000844 | 3.28 | 91.355 | 91.719 |
| 11 | 0.000929 | 3.44 | 92.141 | 92.505 |
| 12 | 0.001013 | 3.59 | 92.796 | 93.160 |
| 13 | 0.001098 | 3.74 | 93.350 | 93.714 |
| 14 | 0.001182 | 3.88 | 93.825 | 94.189 |
| 15 | 0.001267 | 4.02 | 94.237 | 94.601 |
| 16 | 0.001351 | 4.15 | 94.597 | 94.961 |
| 17 | 0.001436 | 4.28 | 94.915 | 95.279 |
| 18 | 0.001520 | 4.40 | 95.197 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.00 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 20.287 | 20.651 |
| 2 | 0.000169 | 1.47 | 39.857 | 40.221 |
| 3 | 0.000253 | 1.80 | 59.904 | 60.268 |
| 4 | 0.000338 | 2.07 | 69.928 | 70.292 |
| 5 | 0.000422 | 2.32 | 75.943 | 76.307 |
| 6 | 0.000507 | 2.54 | 79.952 | 80.316 |
| 7 | 0.000591 | 2.74 | 82.816 | 83.180 |
| 8 | 0.000676 | 2.93 | 84.964 | 85.328 |
| 9 | 0.000760 | 3.11 | 86.635 | 86.999 |
| 10 | 0.000844 | 3.28 | 87.971 | 88.335 |
| 11 | 0.000929 | 3.44 | 89.065 | 89.429 |
| 12 | 0.001013 | 3.59 | 89.976 | 90.340 |
| 13 | 0.001098 | 3.74 | 90.747 | 91.111 |
| 14 | 0.001182 | 3.88 | 91.408 | 91.772 |
| 15 | 0.001267 | 4.02 | 91.981 | 92.345 |
| 16 | 0.001351 | 4.15 | 92.482 | 92.846 |
| 17 | 0.001436 | 4.28 | 92.924 | 93.288 |
| 18 | 0.001520 | 4.40 | 93.317 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.20 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 18.254 | 18.618 |
| 2 | 0.000169 | 1.47 | 20.873 | 21.237 |
| 3 | 0.000253 | 1.80 | 47.249 | 47.613 |
| 4 | 0.000338 | 2.07 | 60.437 | 60.801 |
| 5 | 0.000422 | 2.32 | 68.349 | 68.713 |
| 6 | 0.000507 | 2.54 | 73.624 | 73.988 |
| 7 | 0.000591 | 2.74 | 77.392 | 77.756 |
| 8 | 0.000676 | 2.93 | 80.218 | 80.582 |
| 9 | 0.000760 | 3.11 | 82.416 | 82.780 |
| 10 | 0.000844 | 3.28 | 84.175 | 84.539 |
| 11 | 0.000929 | 3.44 | 85.613 | 85.977 |
| 12 | 0.001013 | 3.59 | 86.812 | 87.176 |
| 13 | 0.001098 | 3.74 | 87.827 | 88.191 |
| 14 | 0.001182 | 3.88 | 88.696 | 89.060 |
| 15 | 0.001267 | 4.02 | 89.450 | 89.814 |
| 16 | 0.001351 | 4.15 | 90.109 | 90.473 |
| 17 | 0.001436 | 4.28 | 90.691 | 91.055 |
| 18 | 0.001520 | 4.40 | 91.208 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.40 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 20.652 | 21.016 |
| 2 | 0.000169 | 1.47 | 28.826 | 29.190 |
| 3 | 0.000253 | 1.80 | 32.783 | 33.147 |
| 4 | 0.000338 | 2.07 | 49.587 | 49.951 |
| 5 | 0.000422 | 2.32 | 59.670 | 60.034 |
| 6 | 0.000507 | 2.54 | 66.391 | 66.755 |
| 7 | 0.000591 | 2.74 | 71.193 | 71.557 |
| 8 | 0.000676 | 2.93 | 74.794 | 75.158 |
| 9 | 0.000760 | 3.11 | 77.594 | 77.958 |
| 10 | 0.000844 | 3.28 | 79.835 | 80.199 |
| 11 | 0.000929 | 3.44 | 81.668 | 82.032 |
| 12 | 0.001013 | 3.59 | 83.196 | 83.560 |
| 13 | 0.001098 | 3.74 | 84.488 | 84.852 |
| 14 | 0.001182 | 3.88 | 85.596 | 85.960 |
| 15 | 0.001267 | 4.02 | 86.557 | 86.921 |
| 16 | 0.001351 | 4.15 | 87.397 | 87.761 |
| 17 | 0.001436 | 4.28 | 88.138 | 88.502 |
| 18 | 0.0015200 | 4.40 | 88.797 | 99.987 |
| 19 | 0.0016044 | 4.52 | 99.999 | 99.999 |

| S = | 1.60 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 16.808 | 17.172 |
| 2 | 0.000169 | 1.47 | 20.287 | 20.651 |
| 3 | 0.000253 | 1.80 | 24.788 | 25.152 |
| 4 | 0.000338 | 2.07 | 37.606 | 37.970 |
| 5 | 0.000422 | 2.32 | 50.085 | 50.449 |
| 6 | 0.000507 | 2.54 | 58.404 | 58.768 |
| 7 | 0.000591 | 2.74 | 64.346 | 64.710 |
| 8 | 0.000676 | 2.93 | 68.803 | 69.167 |
| 9 | 0.000760 | 3.11 | 72.269 | 72.633 |
| 10 | 0.000844 | 3.28 | 75.042 | 75.406 |
| 11 | 0.000929 | 3.44 | 77.311 | 77.675 |
| 12 | 0.001013 | 3.59 | 79.202 | 79.566 |
| 13 | 0.001098 | 3.74 | 80.802 | 81.166 |
| 14 | 0.001182 | 3.88 | 82.173 | 82.537 |
| 15 | 0.001267 | 4.02 | 83.362 | 83.726 |
| 16 | 0.001351 | 4.15 | 84.402 | 84.766 |
| 17 | 0.001436 | 4.28 | 85.319 | 85.683 |
| 18 | 0.001520 | 4.40 | 86.135 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.80 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 15.430 | 15.794 |
| 2 | 0.000169 | 1.47 | 19.645 | 20.009 |
| 3 | 0.000253 | 1.80 | 21.445 | 21.809 |
| 4 | 0.000338 | 2.07 | 24.677 | 25.041 |
| 5 | 0.000422 | 2.32 | 39.742 | 40.106 |
| 6 | 0.000507 | 2.54 | 49.785 | 50.149 |
| 7 | 0.000591 | 2.74 | 56.959 | 57.323 |
| 8 | 0.000676 | 2.93 | 62.339 | 62.703 |
| 9 | 0.000760 | 3.11 | 66.523 | 66.887 |
| 10 | 0.000844 | 3.28 | 69.871 | 70.235 |
| 11 | 0.000929 | 3.44 | 72.610 | 72.974 |
| 12 | 0.001013 | 3.59 | 74.892 | 75.256 |
| 13 | 0.001098 | 3.74 | 76.824 | 77.188 |
| 14 | 0.001182 | 3.88 | 78.479 | 78.843 |
| 15 | 0.001267 | 4.02 | 79.914 | 80.278 |
| 16 | 0.001351 | 4.15 | 81.169 | 81.533 |
| 17 | 0.001436 | 4.28 | 82.277 | 82.641 |
| 18 | 0.001520 | 4.40 | 83.262 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 2.00 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 14.865 | 15.229 |
| 2 | 0.000169 | 1.47 | 19.433 | 19.797 |
| 3 | 0.000253 | 1.80 | 23.955 | 24.319 |
| 4 | 0.000338 | 2.07 | 25.784 | 26.148 |
| 5 | 0.000422 | 2.32 | 28.627 | 28.991 |
| 6 | 0.000507 | 2.54 | 40.522 | 40.886 |
| 7 | 0.000591 | 2.74 | 49.019 | 49.383 |
| 8 | 0.000676 | 2.93 | 55.392 | 55.756 |
| 9 | 0.000760 | 3.11 | 60.348 | 60.712 |
| 10 | 0.000844 | 3.28 | 64.313 | 64.677 |
| 11 | 0.000929 | 3.44 | 67.558 | 67.922 |
| 12 | 0.001013 | 3.59 | 70.261 | 70.625 |
| 13 | 0.001098 | 3.74 | 72.549 | 72.913 |
| 14 | 0.001182 | 3.88 | 74.510 | 74.874 |
| 15 | 0.001267 | 4.02 | 76.209 | 76.573 |
| 16 | 0.001351 | 4.15 | 77.696 | 78.060 |
| 17 | 0.001436 | 4.28 | 79.008 | 79.372 |
| 18 | 0.001520 | 4.40 | 80.174 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 2.20 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 17.475 | 17.839 |
| 2 | 0.000169 | 1.47 | 20.287 | 20.651 |
| 3 | 0.000253 | 1.80 | 22.309 | 22.673 |
| 4 | 0.000338 | 2.07 | 27.482 | 27.846 |
| 5 | 0.000422 | 2.32 | 28.414 | 28.778 |
| 6 | 0.000507 | 2.54 | 30.345 | 30.709 |
| 7 | 0.000591 | 2.74 | 40.296 | 40.660 |
| 8 | 0.000676 | 2.93 | 47.759 | 48.123 |
| 9 | 0.000760 | 3.11 | 53.564 | 53.928 |
| 10 | 0.000844 | 3.28 | 58.207 | 58.571 |
| 11 | 0.000929 | 3.44 | 62.007 | 62.371 |
| 12 | 0.001013 | 3.59 | 65.173 | 65.537 |
| 13 | 0.001098 | 3.74 | 67.852 | 68.216 |
| 14 | 0.001182 | 3.88 | 70.148 | 70.512 |
| 15 | 0.001267 | 4.02 | 72.138 | 72.502 |
| 16 | 0.001351 | 4.15 | 73.880 | 74.244 |
| 17 | 0.001436 | 4.28 | 75.416 | 75.780 |
| 18 | 0.001520 | 4.40 | 76.782 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

## LAMPIRAN 8

- **PVD Pola Segiempat**

| S = | 0.60 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 35.821 | 36.185 |
| 2 | 0.000169 | 1.47 | 67.910 | 68.274 |
| 3 | 0.000253 | 1.80 | 78.607 | 78.971 |
| 4 | 0.000338 | 2.07 | 83.955 | 84.319 |
| 5 | 0.000422 | 2.32 | 87.164 | 87.528 |
| 6 | 0.000507 | 2.54 | 89.303 | 89.667 |
| 7 | 0.000591 | 2.74 | 90.832 | 91.196 |
| 8 | 0.000676 | 2.93 | 91.978 | 92.342 |
| 9 | 0.000760 | 3.11 | 92.869 | 93.233 |
| 10 | 0.000844 | 3.28 | 93.582 | 93.946 |
| 11 | 0.000929 | 3.44 | 94.166 | 94.530 |
| 12 | 0.001013 | 3.59 | 94.652 | 95.016 |
| 13 | 0.001098 | 3.74 | 95.063 | 95.427 |
| 14 | 0.001182 | 3.88 | 95.416 | 95.780 |
| 15 | 0.001267 | 4.02 | 95.721 | 96.085 |
| 16 | 0.001351 | 4.15 | 95.989 | 96.353 |
| 17 | 0.001436 | 4.28 | 96.225 | 96.589 |
| 18 | 0.001520 | 4.40 | 99.687 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 0.80 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 4.499 | 4.863 |
| 2 | 0.000169 | 1.47 | 52.250 | 52.614 |
| 3 | 0.000253 | 1.80 | 68.166 | 68.530 |
| 4 | 0.000338 | 2.07 | 76.125 | 76.489 |
| 5 | 0.000422 | 2.32 | 80.900 | 81.264 |
| 6 | 0.000507 | 2.54 | 84.083 | 84.447 |
| 7 | 0.000591 | 2.74 | 86.357 | 86.721 |
| 8 | 0.000676 | 2.93 | 88.062 | 88.426 |
| 9 | 0.000760 | 3.11 | 89.389 | 89.753 |
| 10 | 0.000844 | 3.28 | 90.450 | 90.814 |
| 11 | 0.000929 | 3.44 | 91.318 | 91.682 |
| 12 | 0.001013 | 3.59 | 92.042 | 92.406 |
| 13 | 0.001098 | 3.74 | 92.654 | 93.018 |
| 14 | 0.001182 | 3.88 | 93.179 | 93.543 |
| 15 | 0.001267 | 4.02 | 93.633 | 93.997 |
| 16 | 0.001351 | 4.15 | 94.031 | 94.395 |
| 17 | 0.001436 | 4.28 | 94.382 | 94.746 |
| 18 | 0.001520 | 4.40 | 94.694 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.00 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 20.287 | 20.651 |
| 2 | 0.000169 | 1.47 | 33.009 | 33.373 |
| 3 | 0.000253 | 1.80 | 55.339 | 55.703 |
| 4 | 0.000338 | 2.07 | 66.505 | 66.869 |
| 5 | 0.000422 | 2.32 | 73.204 | 73.568 |
| 6 | 0.000507 | 2.54 | 77.670 | 78.034 |
| 7 | 0.000591 | 2.74 | 80.860 | 81.224 |
| 8 | 0.000676 | 2.93 | 83.252 | 83.616 |
| 9 | 0.000760 | 3.11 | 85.113 | 85.477 |
| 10 | 0.000844 | 3.28 | 86.602 | 86.966 |
| 11 | 0.000929 | 3.44 | 87.820 | 88.184 |
| 12 | 0.001013 | 3.59 | 88.835 | 89.199 |
| 13 | 0.001098 | 3.74 | 89.694 | 90.058 |
| 14 | 0.001182 | 3.88 | 90.430 | 90.794 |
| 15 | 0.001267 | 4.02 | 91.068 | 91.432 |
| 16 | 0.001351 | 4.15 | 91.626 | 91.990 |
| 17 | 0.001436 | 4.28 | 92.119 | 92.483 |
| 18 | 0.001520 | 4.40 | 99.678 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.20 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 18.254 | 18.618 |
| 2 | 0.000169 | 1.47 | 10.658 | 11.022 |
| 3 | 0.000253 | 1.80 | 40.438 | 40.802 |
| 4 | 0.000338 | 2.07 | 55.329 | 55.693 |
| 5 | 0.000422 | 2.32 | 64.263 | 64.627 |
| 6 | 0.000507 | 2.54 | 70.219 | 70.583 |
| 7 | 0.000591 | 2.74 | 74.474 | 74.838 |
| 8 | 0.000676 | 2.93 | 77.664 | 78.028 |
| 9 | 0.000760 | 3.11 | 80.146 | 80.510 |
| 10 | 0.000844 | 3.28 | 82.132 | 82.496 |
| 11 | 0.000929 | 3.44 | 83.756 | 84.120 |
| 12 | 0.001013 | 3.59 | 85.110 | 85.474 |
| 13 | 0.001098 | 3.74 | 86.255 | 86.619 |
| 14 | 0.001182 | 3.88 | 87.237 | 87.601 |
| 15 | 0.001267 | 4.02 | 88.088 | 88.452 |
| 16 | 0.001351 | 4.15 | 88.832 | 89.196 |
| 17 | 0.001436 | 4.28 | 89.489 | 89.853 |
| 18 | 0.001520 | 4.40 | 90.073 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.40 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 20.652 | 21.016 |
| 2 | 0.000169 | 1.47 | 28.826 | 29.190 |
| 3 | 0.000253 | 1.80 | 24.593 | 24.957 |
| 4 | 0.000338 | 2.07 | 43.445 | 43.809 |
| 5 | 0.000422 | 2.32 | 54.756 | 55.120 |
| 6 | 0.000507 | 2.54 | 62.296 | 62.660 |
| 7 | 0.000591 | 2.74 | 67.683 | 68.047 |
| 8 | 0.000676 | 2.93 | 71.722 | 72.086 |
| 9 | 0.000760 | 3.11 | 74.864 | 75.228 |
| 10 | 0.000844 | 3.28 | 77.378 | 77.742 |
| 11 | 0.000929 | 3.44 | 79.434 | 79.798 |
| 12 | 0.001013 | 3.59 | 81.148 | 81.512 |
| 13 | 0.001098 | 3.74 | 82.598 | 82.962 |
| 14 | 0.001182 | 3.88 | 83.841 | 84.205 |
| 15 | 0.001267 | 4.02 | 84.919 | 85.283 |
| 16 | 0.001351 | 4.15 | 85.861 | 86.225 |
| 17 | 0.001436 | 4.28 | 86.693 | 87.057 |
| 18 | 0.0015200 | 4.40 | 87.432 | 99.987 |
| 19 | 0.0016044 | 4.52 | 99.999 | 99.999 |

| S = | 1.60 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 16.808 | 17.172 |
| 2 | 0.000169 | 1.47 | 20.287 | 20.651 |
| 3 | 0.000253 | 1.80 | 24.788 | 25.152 |
| 4 | 0.000338 | 2.07 | 29.840 | 30.204 |
| 5 | 0.000422 | 2.32 | 43.872 | 44.236 |
| 6 | 0.000507 | 2.54 | 53.226 | 53.590 |
| 7 | 0.000591 | 2.74 | 59.908 | 60.272 |
| 8 | 0.000676 | 2.93 | 64.920 | 65.284 |
| 9 | 0.000760 | 3.11 | 68.818 | 69.182 |
| 10 | 0.000844 | 3.28 | 71.936 | 72.300 |
| 11 | 0.000929 | 3.44 | 74.487 | 74.851 |
| 12 | 0.001013 | 3.59 | 76.613 | 76.977 |
| 13 | 0.001098 | 3.74 | 78.412 | 78.776 |
| 14 | 0.001182 | 3.88 | 79.954 | 80.318 |
| 15 | 0.001267 | 4.02 | 81.291 | 81.655 |
| 16 | 0.001351 | 4.15 | 82.460 | 82.824 |
| 17 | 0.001436 | 4.28 | 83.492 | 83.856 |
| 18 | 0.001520 | 4.40 | 84.409 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 1.80 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 15.430 | 15.794 |
| 2 | 0.000169 | 1.47 | 19.645 | 20.009 |
| 3 | 0.000253 | 1.80 | 21.445 | 21.809 |
| 4 | 0.000338 | 2.07 | 15.383 | 15.747 |
| 5 | 0.000422 | 2.32 | 32.307 | 32.671 |
| 6 | 0.000507 | 2.54 | 43.589 | 43.953 |
| 7 | 0.000591 | 2.74 | 51.648 | 52.012 |
| 8 | 0.000676 | 2.93 | 57.692 | 58.056 |
| 9 | 0.000760 | 3.11 | 62.393 | 62.757 |
| 10 | 0.000844 | 3.28 | 66.153 | 66.517 |
| 11 | 0.000929 | 3.44 | 69.230 | 69.594 |
| 12 | 0.001013 | 3.59 | 71.794 | 72.158 |
| 13 | 0.001098 | 3.74 | 73.964 | 74.328 |
| 14 | 0.001182 | 3.88 | 75.824 | 76.188 |
| 15 | 0.001267 | 4.02 | 77.436 | 77.800 |
| 16 | 0.001351 | 4.15 | 78.846 | 79.210 |
| 17 | 0.001436 | 4.28 | 80.090 | 80.454 |
| 18 | 0.001520 | 4.40 | 81.196 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 2.00 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 14.865 | 15.229 |
| 2 | 0.000169 | 1.47 | 19.433 | 19.797 |
| 3 | 0.000253 | 1.80 | 23.955 | 24.319 |
| 4 | 0.000338 | 2.07 | 25.784 | 26.148 |
| 5 | 0.000422 | 2.32 | 19.418 | 19.782 |
| 6 | 0.000507 | 2.54 | 32.848 | 33.212 |
| 7 | 0.000591 | 2.74 | 42.442 | 42.806 |
| 8 | 0.000676 | 2.93 | 49.636 | 50.000 |
| 9 | 0.000760 | 3.11 | 55.232 | 55.596 |
| 10 | 0.000844 | 3.28 | 59.709 | 60.073 |
| 11 | 0.000929 | 3.44 | 63.372 | 63.736 |
| 12 | 0.001013 | 3.59 | 66.424 | 66.788 |
| 13 | 0.001098 | 3.74 | 69.007 | 69.371 |
| 14 | 0.001182 | 3.88 | 71.221 | 71.585 |
| 15 | 0.001267 | 4.02 | 73.139 | 73.503 |
| 16 | 0.001351 | 4.15 | 74.818 | 75.182 |
| 17 | 0.001436 | 4.28 | 76.299 | 76.663 |
| 18 | 0.001520 | 4.40 | 77.616 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |

| S = | 2.20 | m | | |
|---|---|---|---|---|
| t (minggu) | Tv $m^2$/minggu | Uv (%) | Uh (%) | U total |
| 1 | 0.000084 | 1.04 | 17.475 | 17.839 |
| 2 | 0.000169 | 1.47 | 20.287 | 20.651 |
| 3 | 0.000253 | 1.80 | 22.309 | 22.673 |
| 4 | 0.000338 | 2.07 | 27.482 | 27.846 |
| 5 | 0.000422 | 2.32 | 28.414 | 28.778 |
| 6 | 0.000507 | 2.54 | 32.280 | 32.644 |
| 7 | 0.000591 | 2.74 | 41.954 | 42.318 |
| 8 | 0.000676 | 2.93 | 49.210 | 49.574 |
| 9 | 0.000760 | 3.11 | 54.853 | 55.217 |
| 10 | 0.000844 | 3.28 | 59.368 | 59.732 |
| 11 | 0.000929 | 3.44 | 63.062 | 63.426 |
| 12 | 0.001013 | 3.59 | 66.140 | 66.504 |
| 13 | 0.001098 | 3.74 | 68.745 | 69.109 |
| 14 | 0.001182 | 3.88 | 70.977 | 71.341 |
| 15 | 0.001267 | 4.02 | 72.912 | 73.276 |
| 16 | 0.001351 | 4.15 | 74.605 | 74.969 |
| 17 | 0.001436 | 4.28 | 76.099 | 76.463 |
| 18 | 0.001520 | 4.40 | 77.427 | 99.987 |
| 19 | 0.001604 | 4.52 | 99.999 | 99.999 |