

**LAMPIRAN III**  
**UJI CBR TERENDAM (*SOAKED*)**

- CBR Terendam (*Soaked*) Tanah Asli
- CBR Terendam (*Soaked*) Tanah Asli + 3,75% Slag Baja + 1,25% Fly Ash
- CBR Terendam (*Soaked*) Tanah Asli + 7,5 % Slag Baja + 2,5% Fly Ash
- CBR Terendam (*Soaked*) Tanah Asli + 11,25% Slag Baja + 3,75% Fly Ash

### CBR Terendam (*Soaked*) Tanah Asli

#### Data

Diameter Cetakan = 15.3 cm  
Tinggi Cetakan = 11.6 cm

#### PENETRASI

#### Kalibrasi

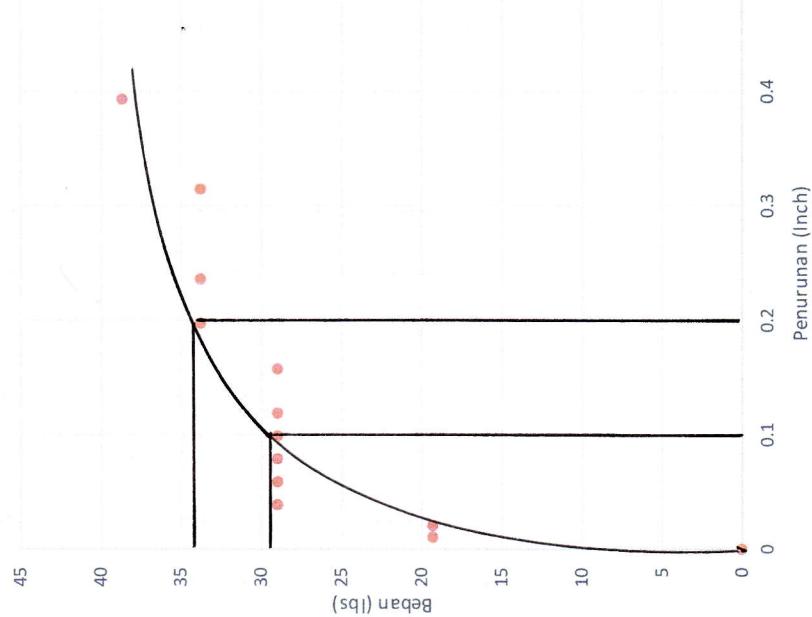
$$= 9.65$$

| Penetrasi<br>Dial Reading<br>(mm) | Penurunan<br>(inch) | Pembacaan<br>Proving Ring | Beban<br>(lbs) |
|-----------------------------------|---------------------|---------------------------|----------------|
| 0                                 | 0                   | 0                         | 0              |
| 0.25                              | 0.0098              | 2                         | 19.3           |
| 0.5                               | 0.0197              | 2                         | 19.3           |
| 1                                 | 0.0394              | 3                         | 28.95          |
| 1.5                               | 0.0590              | 3                         | 28.95          |
| 2                                 | 0.0787              | 3                         | 28.95          |
| 2.5                               | 0.0984              | 3                         | 28.95          |
| 3                                 | 0.1181              | 3                         | 28.95          |
| 4                                 | 0.1574              | 3                         | 28.95          |
| 5                                 | 0.1968              | 3.5                       | 33.775         |
| 6                                 | 0.2362              | 3.5                       | 33.775         |
| 8                                 | 0.3149              | 3.5                       | 33.775         |
| 10                                | 0.3936              | 4                         | 38.6           |

#### BERAT ISI

| Penambahan Air            | %  | 0      | Atas   | Tengah | Bawah |  |
|---------------------------|----|--------|--------|--------|-------|--|
| Berat Cawan               | gr | 4.2    | 4.2    | 5.7    |       |  |
| Berat Tanah Basah + Cawan | gr | 8.9    | 15.8   | 14.6   |       |  |
| Bera Tanah Kering + Cawan | gr | 7.4    | 12.8   | 11.8   |       |  |
| Berat Air (Ww)            | gr | 1.5    | 3      | 2.8    |       |  |
| Berat Tanah Kering (Ws)   | gr | 3.2    | 8.6    | 6.1    |       |  |
| Kadar Air                 | %  | 46.875 | 34.884 | 45.902 |       |  |
| Kadar Air Rata-Rata       | %  |        | 42.554 |        |       |  |

#### CBR SOAKED TANAH ASLI



| HARGA CBR          | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| Penurunan 0,1 inch | 2.9         | 0.967   |
| Penurunan 0,2 inch | 3.4         | 0.755   |

**CBR Terendam (Soaked) Tanah Asli + 3.75% Slag Baja + 1.25% Fly Ash**

**Data**

|                  |   |         |
|------------------|---|---------|
| Diameter Cetakan | = | 15.3 cm |
| Tinggi Cetakan   | = | 11.6 cm |

**Kadar Air**

| Penambahan Air            | %  | Atas    | Tengah  | Bawah   | 19 |
|---------------------------|----|---------|---------|---------|----|
| Berat Cawan               | gr | 4.2     | 5.7     | 5.6     |    |
| Berat Tanah Basah + Cawan | gr | 14.6    | 23      | 19.2    |    |
| Bera Tanah Kering + Cawan | gr | 11.8    | 18.1    | 15.5    |    |
| Berat Air (Ww)            | gr | 2.8     | 4.9     | 3.7     |    |
| Berat Tanah Kering (Ws)   | gr | 7.6     | 12.4    | 9.9     |    |
| Kadar Air                 | %  | 36.8421 | 39.5161 | 37.3737 |    |
| Kadar Air Rata-Rata       | %  | 37.911  |         |         |    |

**Berat Isi**

| Penambahan Air              | %      | Penambahan Air              | %      |
|-----------------------------|--------|-----------------------------|--------|
| Berat Cetakan               | gr     | Berat Cetakan               | gr     |
| Berat Tanah Basah + Cetakan | gr     | Berat Tanah Basah + Cetakan | gr     |
| Berat Tanah Basah           | gr     | Berat Tanah Basah           | gr     |
| Isi Cetakan                 | cm³    | Isi Cetakan                 | cm³    |
| Berat Isi Basah (yw)        | gr/cm³ | Berat Isi Basah (yw)        | gr/cm³ |
| Berat Isi Kering (yd)       | gr/cm³ | Berat Isi Kering (yd)       | gr/cm³ |

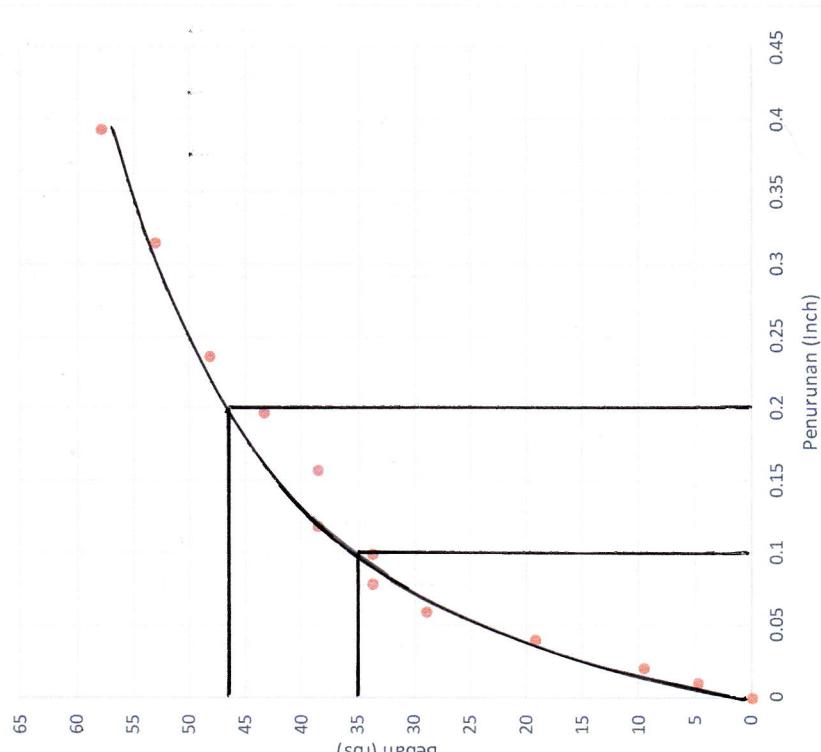
**CBR SOAKED 5% A**

| PENETRASI<br>Kalibrasi | = | 9.65 |
|------------------------|---|------|
| Dial Reading<br>(mm)   |   |      |

| Dial Reading<br>(mm) | Penurunan<br>(inch) | Pembacaan<br>Proving Ring | Beban<br>(lbs) |
|----------------------|---------------------|---------------------------|----------------|
| 0                    | 0                   | 0                         | 0              |
| 0.25                 | 0.0098              | 0.5                       | 4.825          |
| 0.5                  | 0.0197              | 1                         | 9.65           |
| 1                    | 0.0394              | 2                         | 19.3           |
| 1.5                  | 0.0590              | 3                         | 28.95          |
| 2                    | 0.0787              | 3.5                       | 33.775         |
| 2.5                  | 0.0984              | 3.5                       | 33.775         |
| 3                    | 0.1181              | 4                         | 38.6           |
| 4                    | 0.1574              | 4                         | 38.6           |
| 5                    | 0.1968              | 4.5                       | 43.425         |
| 6                    | 0.2362              | 5                         | 48.25          |
| 8                    | 0.3149              | 5.5                       | 53.075         |
| 10                   | 0.3936              | 6                         | 57.9           |

**HARGA CBR**

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| 35                 |             | 1,167   |
| 46                 |             | 1,022   |



**CBR Terendam (Soaked) Tanah Asli + 3.75% Slag Baja + 1.25% Fly Ash**

**Data**

Diameter Cetakan = 15.3 cm  
Tinggi Cetakan = 11.6 cm

**Kadar Air**

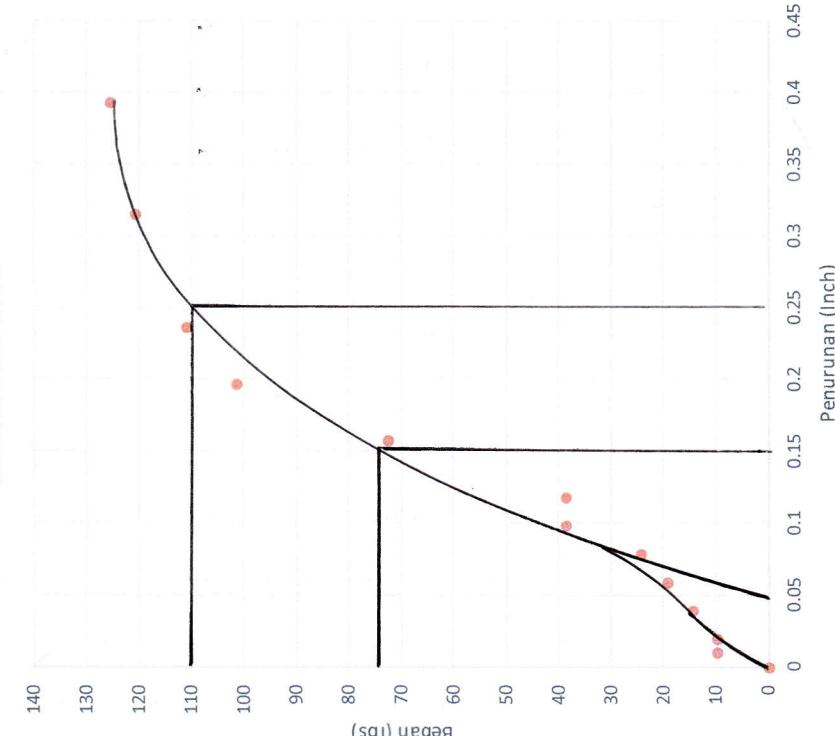
| Penambahan Air            | %  | Atas | 22 | Tengah  | Bawah   |
|---------------------------|----|------|----|---------|---------|
| Berat Cawan               | gr | 5.3  |    | 4.2     | 5.6     |
| Berat Tanah Basah + Cawan | gr | 16.4 |    | 17.5    | 23      |
| Bera Tanah Kering + Cawan | gr | 12.8 |    | 13.5    | 19.1    |
| Berat Air (Ww)            | gr | 3.6  |    | 4       | 3.9     |
| Berat Tanah Kering (Ws)   | gr | 7.5  |    | 9.3     | 13.5    |
| Kadar Air                 | %  | 48   |    | 43.0108 | 28.8889 |
| Kadar Air Rata-Rata       | %  |      |    | 39.967  |         |

**PENETRASI**

Kalibrasi = 9.65

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 1                      | 9.65        |
| 0.5               | 0.0197           | 1                      | 9.65        |
| 1                 | 0.0394           | 1.5                    | 14.475      |
| 1.5               | 0.0590           | 2                      | 19.3        |
| 2                 | 0.0787           | 2.5                    | 24.125      |
| 2.5               | 0.0984           | 4                      | 38.6        |
| 3                 | 0.1181           | 4                      | 38.6        |
| 4                 | 0.1574           | 7.5                    | 72.375      |
| 5                 | 0.1968           | 10.5                   | 101.325     |
| 6                 | 0.2362           | 11.5                   | 110.975     |
| 8                 | 0.3149           | 12.5                   | 120.625     |
| 10                | 0.3936           | 13                     | 125.45      |

**CBR SOAKED 5% B**



**HARGA CBR**

|                    | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| Penurunan 0,1 inch | 74          | 2.467   |
| Penurunan 0,2 inch | 110         | 2.444   |

### CBR Terendam (Soaked) Tanah Asli + 3.75% Slag Baja + 1.25% Fly Ash

#### Data

|                  |   |         |
|------------------|---|---------|
| Diameter Cetakan | = | 15.3 cm |
| Tinggi Cetakan   | = | 11.6 cm |

#### Kadar Air

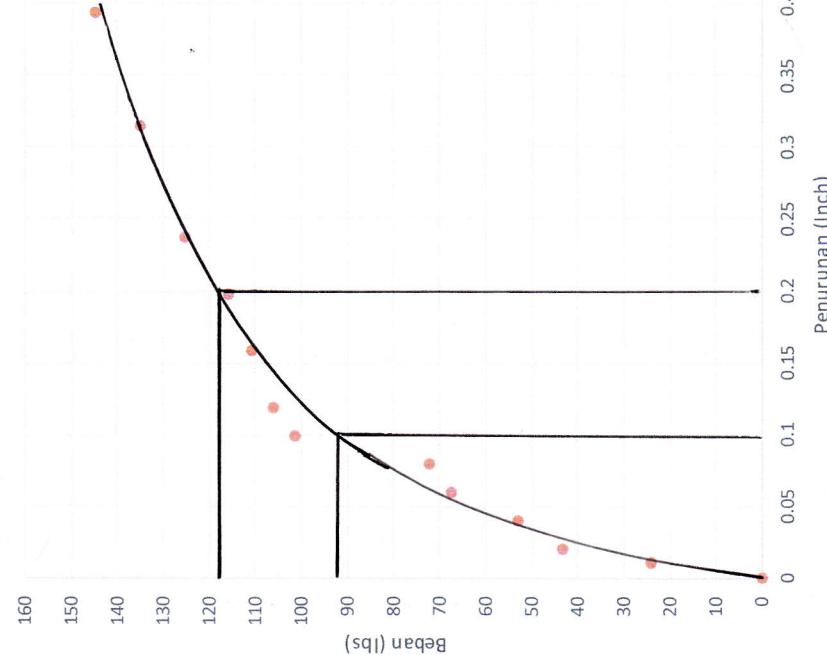
| Penambahan Air            | %  | 28      | Atas    | Tengah | Bawah |
|---------------------------|----|---------|---------|--------|-------|
| Berat Cawan               | gr | 4.2     | 4.2     | 4.2    | 4.2   |
| Berat Tanah Basah + Cawan | gr | 16.5    | 14.2    | 16.3   |       |
| Bera Tanah Kering + Cawan | gr | 12.9    | 11.7    | 13     |       |
| Berat Air (Ww)            | gr | 3.6     | 2.5     | 3.3    |       |
| Berat Tanah Kering (Ws)   | gr | 8.7     | 7.5     | 8.8    |       |
| Kadar Air                 | %  | 41.3793 | 33.3333 | 37.5   |       |
| Kadar Air Rata-Rata       | %  | 37.404  |         |        |       |

#### PENETRASI

#### Kalibrasi

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 2.5                    | 24.125      |
| 0.5               | 0.0197           | 4.5                    | 43.425      |
| 1                 | 0.0394           | 5.5                    | 53.075      |
| 1.5               | 0.0590           | 7                      | 67.55       |
| 2                 | 0.0787           | 7.5                    | 72.375      |
| 2.5               | 0.0984           | 10.5                   | 101.325     |
| 3                 | 0.1181           | 11                     | 106.15      |
| 4                 | 0.1574           | 11.5                   | 110.975     |
| 5                 | 0.1968           | 12                     | 115.8       |
| 6                 | 0.2362           | 13                     | 125.45      |
| 8                 | 0.3149           | 14                     | 135.1       |
| 10                | 0.3936           | 15                     | 144.75      |

#### CBR SOAKED 5% C



#### HARGA CBR

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| 17,5               | 92          | 3,067   |

| Penurunan 0,2 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| 17,5               | 2611        | 2,611   |

### CBR Terendam (Soaked) Tanah Asli + 3.75% Slag Baja + 1.25% Fly Ash

#### Data

|                  |   |         |
|------------------|---|---------|
| Diameter Cetakan | = | 15.3 cm |
| Tinggi Cetakan   | = | 11.6 cm |

#### Kadar Air

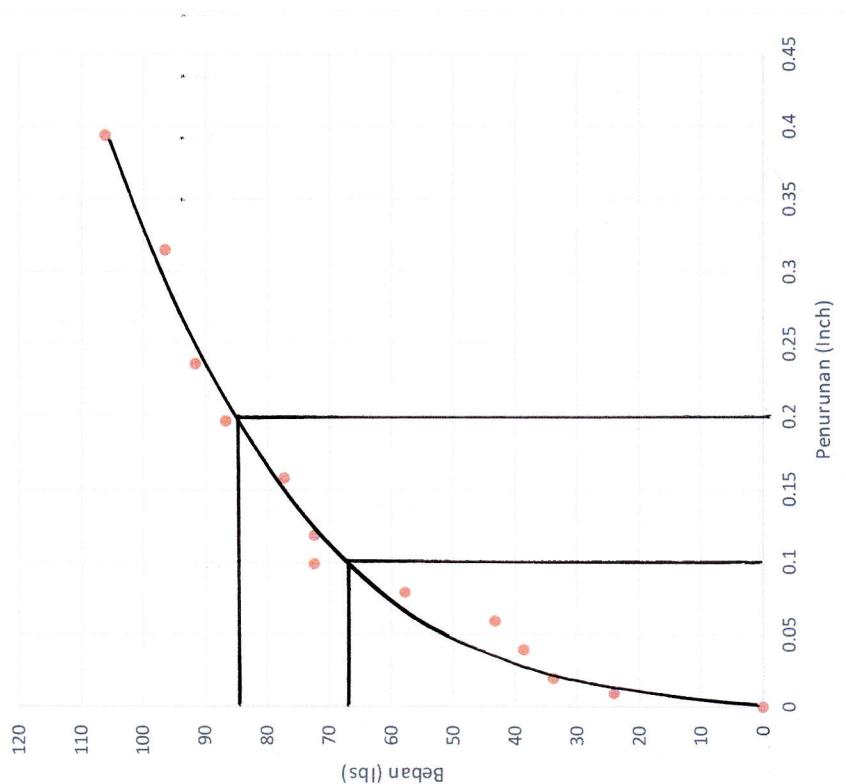
| Penambahan Air            | %  | 31      |         |       | Berat Isi                       |
|---------------------------|----|---------|---------|-------|---------------------------------|
|                           |    | Atas    | Tengah  | Bawah |                                 |
| Berat Cawan               | gr | 4.2     | 4.3     | 6     | Berat Tanah Basah + Cetakan     |
| Berat Tanah Basah + Cawan | gr | 25      | 18.3    | 20.7  | Berat Tanah Basah               |
| Bera Tanah Kering + Cawan | gr | 18.5    | 14.7    | 16.5  | Isi Cetakan                     |
| Berat Air (Ww)            | gr | 6.5     | 3.6     | 4.2   | Berat Isi Basah ( $\gamma_w$ )  |
| Berat Tanah Kering (Ws)   | gr | 14.3    | 10.4    | 10.5  | Berat Isi Kering ( $\gamma_d$ ) |
| Kadar Air                 | %  | 45.4545 | 34.6154 | 40    |                                 |
| Kadar Air Rata-Rata       | %  | 40.023  |         |       | CBR SOAKED 5% D                 |

#### PENETRASI

#### Kalibrasi

|                   |  |                  |                        |             |
|-------------------|--|------------------|------------------------|-------------|
|                   |  | =                | 9.65                   |             |
| Dial Reading (mm) |  | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
| 0                 |  | 0                | 0                      | 0           |
| 0.25              |  | 0.0098           | 2.5                    | 24.125      |
| 0.5               |  | 0.0197           | 3.5                    | 33.775      |
| 1                 |  | 0.0394           | 4                      | 38.6        |
| 1.5               |  | 0.0590           | 4.5                    | 43.425      |
| 2                 |  | 0.0787           | 6                      | 57.9        |
| 2.5               |  | 0.0984           | 7.5                    | 72.375      |
| 3                 |  | 0.1181           | 7.5                    | 72.375      |
| 4                 |  | 0.1574           | 8                      | 77.2        |
| 5                 |  | 0.1968           | 9                      | 86.85       |
| 6                 |  | 0.2362           | 9.5                    | 91.675      |
| 8                 |  | 0.3149           | 10                     | 96.5        |
| 10                |  | 0.3936           | 11                     | 106.15      |

#### CBR SOAKED 5% D



#### HARGA CBR

|                    | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| Penurunan 0,1 inch | 68          | 2,267   |
| Penurunan 0,2 inch | 84          | 1,064   |

**CBR Terendam (Soaked) Tanah Asli + 7.5% Slag Baja + 2.5% Fly Ash**

**Data**

|                  |   |         |
|------------------|---|---------|
| Diameter Cetakan | = | 15.3 cm |
| Tinggi Cetakan   | = | 11.6 cm |

**Kadar Air**

| Penambahan Air            | %  | Atas    | Tengah  | Bawah   |
|---------------------------|----|---------|---------|---------|
| 16                        |    | 4.2     | 4.2     | 4.3     |
| Berat Cawan               | gr |         |         |         |
| Berat Tanah Basah + Cawan | gr | 18.6    | 14.6    | 16.6    |
| Bera Tanah Kering + Cawan | gr | 14.7    | 11.6    | 13.1    |
| Berat Air (Ww)            | gr | 3.9     | 3       | 3.5     |
| Berat Tanah Kering (Ws)   | gr | 10.5    | 7.4     | 8.8     |
| Kadar Air                 | %  | 37.1429 | 40.5405 | 39.7727 |
| Kadar Air Rata-Rata       | %  |         | 39.152  |         |

**Berat Isi**

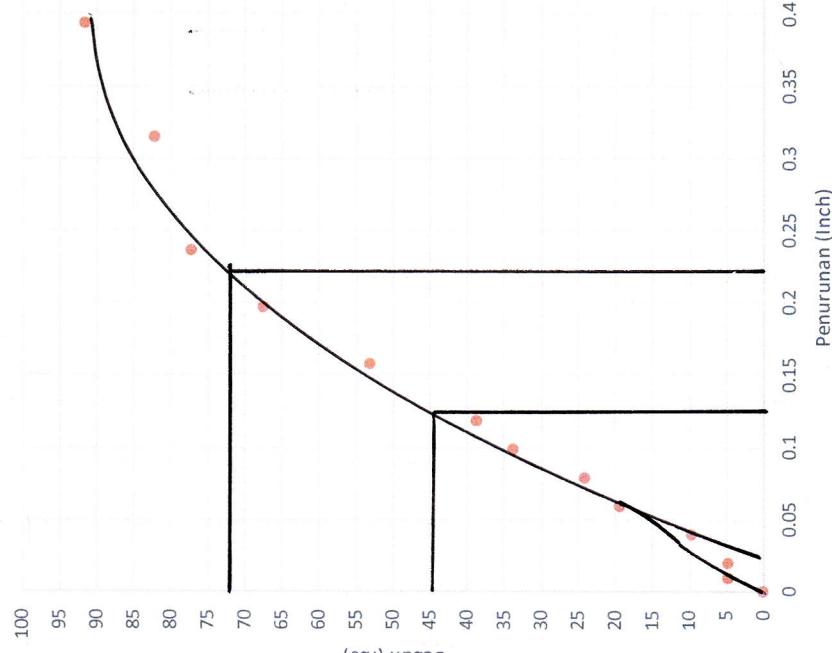
| Penambahan Air              | %  | Atas | Tengah | Bawah | Penambahan Air              | %      | 16      |
|-----------------------------|----|------|--------|-------|-----------------------------|--------|---------|
| Berat Cetakan               | gr |      |        |       | Berat Cetakan               | gr     | 5560    |
| Berat Tanah Basah + Cetakan | gr |      |        |       | Berat Tanah Basah + Cetakan | gr     | 8920    |
| Berat Tanah Basah           | gr |      |        |       | Berat Tanah Basah           | gr     | 3360    |
| Isi Cetakan                 |    |      |        |       | Isi Cetakan                 | cm³    | 2131.62 |
| Berat Isi Basah (yw)        |    |      |        |       | Berat Isi Basah (yw)        | g/cm³  | 1.57626 |
| Berat Isi Kering (yd)       |    |      |        |       | Berat Isi Kering (yd)       | gr/cm³ | 1.13276 |

**PENETRASI**

Kalibrasi = 9.65

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 0.5                    | 4.825       |
| 0.5               | 0.0197           | 0.5                    | 4.825       |
| 1                 | 0.0394           | 1                      | 9.65        |
| 1.5               | 0.0590           | 2                      | 19.3        |
| 2                 | 0.0787           | 2.5                    | 24.125      |
| 2.5               | 0.0984           | 3.5                    | 33.775      |
| 3                 | 0.1181           | 4                      | 38.6        |
| 4                 | 0.1574           | 5.5                    | 53.075      |
| 5                 | 0.1968           | 7                      | 67.55       |
| 6                 | 0.2362           | 8                      | 77.2        |
| 8                 | 0.3149           | 8.5                    | 82.025      |
| 10                | 0.3936           | 9.5                    | 91.675      |

**CBR SOAKED 10% A**



**HARGA CBR**

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| 1,12               | 45          | 1,5     |

88  
89

**CBR Terendam (Soaked) Tanah Asli + 7.5% Slag Baja + 2.5% Fly Ash**

**Data**

Diameter Cetakan = 15.3 cm  
Tinggi Cetakan = 11.6 cm

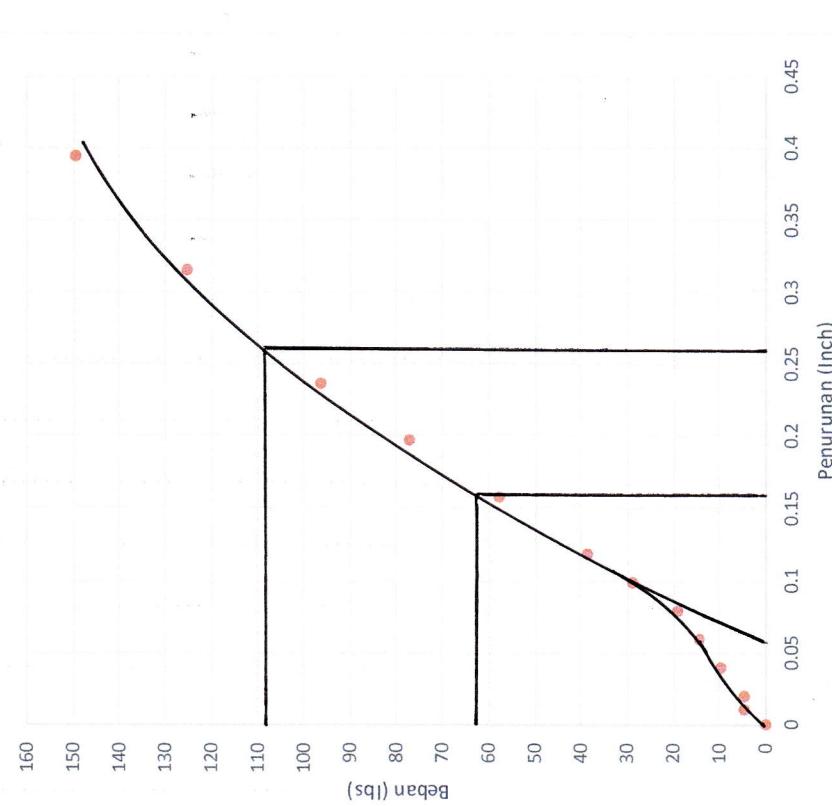
**Kadar Air**

| Penambahan Air            | %  | 19      | Atas    | Tengah  | Bawah |
|---------------------------|----|---------|---------|---------|-------|
| Berat Cawan               | gr | 5.7     | 4.2     | 5.7     |       |
| Berat Tanah Basah + Cawan | gr | 13.8    | 10.4    | 12.5    |       |
| Bera Tanah Kering + Cawan | gr | 11.6    | 9       | 10.8    |       |
| Berat Air (Ww)            | gr | 2.2     | 1.4     | 1.7     |       |
| Berat Tanah Kering (Ws)   | gr | 5.9     | 4.8     | 5.1     |       |
| Kadar Air                 | %  | 37.2881 | 29.1667 | 33.3333 |       |
| Kadar Air Rata-Rata       | %  | 33.2263 |         |         |       |

**Berat Isi**

| Penambahan Air              | %                  | 19      | Atas | Tengah | Bawah |
|-----------------------------|--------------------|---------|------|--------|-------|
| Berat Cetakan               | gr                 | 5660    |      |        |       |
| Berat Tanah Basah + Cetakan | gr                 | 9120    |      |        |       |
| Berat Tanah Basah           | gr                 | 3460    |      |        |       |
| Isi Cetakan                 | cm <sup>3</sup>    | 2131.62 |      |        |       |
| Berat Isi Basah (yw)        | gr/cm <sup>3</sup> | 1.62318 |      |        |       |
| Berat Isi Kering (yd)       | gr/cm <sup>3</sup> | 1.62318 |      |        |       |

**CBR SOAKED 10% B**



**PENETRASI**

Kalibrasi = 9.65

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 0.5                    | 4.825       |
| 0.5               | 0.0197           | 0.5                    | 4.825       |
| 1                 | 0.0394           | 1                      | 9.65        |
| 1.5               | 0.0590           | 1.5                    | 14.475      |
| 2                 | 0.0787           | 2                      | 19.3        |
| 2.5               | 0.0984           | 3                      | 28.95       |
| 3                 | 0.1181           | 4                      | 38.6        |
| 4                 | 0.1574           | 6                      | 57.9        |
| 5                 | 0.1968           | 8                      | 77.2        |
| 6                 | 0.2362           | 10                     | 96.5        |
| 8                 | 0.3149           | 13                     | 125.45      |
| 10                | 0.3936           | 15.5                   | 149.575     |

**HARGA CBR**

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| Penurunan 0,2 inch | 63          | 2,1     |
|                    | 109         | 2,422   |

### CBR Terendam (*Soaked*) Tanah Asli + 7.5% Slag Baja + 2.5% Fly Ash

#### Data

Diameter Cetakan = 15.3 cm  
Tinggi Cetakan = 11.6 cm

#### Kadar Air

| Penambahan Air %             | Atas | 25      | Tengah  | Bawah |
|------------------------------|------|---------|---------|-------|
| Berat Cawan gr               | 5.7  | 5.7     | 5.6     |       |
| Berat Tanah Basah + Cawan gr | 15.9 | 13.2    | 14.7    |       |
| Bera Tanah Kering + Cawan gr | 13.2 | 11.4    | 12.4    |       |
| Berat Air (Ww) gr            | 2.7  | 1.8     | 2.3     |       |
| Berat Tanah Kering (Ws) gr   | 7.5  | 5.7     | 6.8     |       |
| Kadar Air %                  | 36   | 31.5789 | 33.8235 |       |
| Kadar Air Rata-Rata %        |      | 33.801  |         |       |

| Penambahan Air %            | 25 | Atas | Tengah | Bawah | Berat Isi                   | Penambahan Air %   | 25      |
|-----------------------------|----|------|--------|-------|-----------------------------|--------------------|---------|
| Berat Cetakan               |    |      |        |       | Berat Cetakan               |                    |         |
| Berat Tanah Basah + Cetakan |    |      |        |       | Berat Tanah Basah + Cetakan | gr                 | 5700    |
| Berat Tanah Basah           |    |      |        |       | Berat Tanah Basah           | gr                 | 9620    |
| Isi Cetakan                 |    |      |        |       | Isi Cetakan                 | cm <sup>3</sup>    | 2131.62 |
| Berat Isi Basah (yw)        |    |      |        |       | Berat Isi Basah (yw)        | gr/cm <sup>3</sup> | 1.83897 |
| Berat Isi Kering (yd)       |    |      |        |       | Berat Isi Kering (yd)       | gr/cm <sup>3</sup> | 1.83897 |

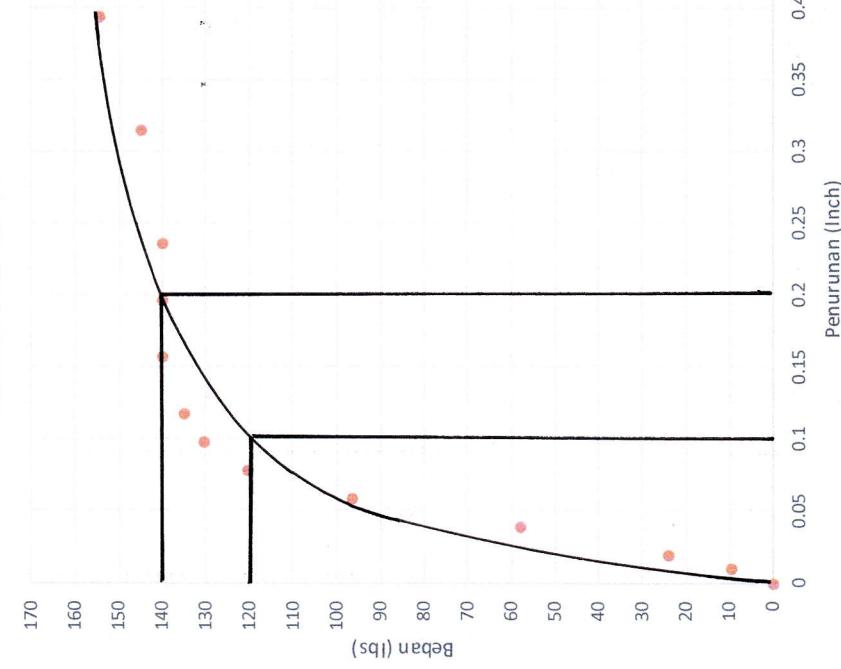
#### PENETRASI

| Kalibrasi | Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-----------|-------------------|------------------|------------------------|-------------|
|           | 0                 | 0                | 0                      | 0           |
| 0.25      | 0.0098            | 1                | 1                      | 9.65        |
| 0.5       | 0.0197            | 2.5              | 2.5                    | 24.125      |
| 1         | 0.0394            | 6                | 6                      | 57.9        |
| 1.5       | 0.0590            | 10               | 10                     | 96.5        |
| 2         | 0.0787            | 12.5             | 12.5                   | 120.625     |
| 2.5       | 0.0984            | 13.5             | 13.5                   | 130.275     |
| 3         | 0.1181            | 14               | 14                     | 135.1       |
| 4         | 0.1574            | 14.5             | 14.5                   | 139.925     |
| 5         | 0.1968            | 14.5             | 14.5                   | 139.925     |
| 6         | 0.2362            | 14.5             | 14.5                   | 139.925     |
| 8         | 0.3149            | 15               | 15                     | 144.75      |
| 10        | 0.3936            | 16               | 16                     | 154.4       |

#### HARGA CBR

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| 125                | 4           |         |
| 145                | 3,11        |         |

CBR SOAKED 10% C



### CBR Terendam (Soaked) Tanah Asli + 7.5% Slag Baja + 2.5% Fly Ash

#### Data

Diameter Cetakan = 15.3 cm  
Tinggi Cetakan = 11.6 cm

#### Kadar Air

| Penambahan Air %             | Atas    | Tengah  | Bawah  |
|------------------------------|---------|---------|--------|
| 28                           | 5.7     | 3.9     | 4      |
| Berat Cawan gr               |         |         |        |
| Berat Tanah Basah + Cawan gr | 22.5    | 13.9    | 13.3   |
| Bera Tanah Kering + Cawan gr | 18      | 11.3    | 10.7   |
| Berat Air (Ww) gr            | 4.5     | 2.6     | 2.6    |
| Berat Tanah Kering (Ws) gr   | 12.3    | 7.4     | 6.7    |
| Kadar Air %                  | 36.5854 | 35.1351 | 38.806 |
| Kadar Air Rata-Rata %        | 36.842  |         |        |

#### Berat Isi

| Penambahan Air %          | Berat Cetakan gr | Berat Tanah Basah + Cetakan gr | Berat Isi Basah (yw) gr/cm³ | Berat Isi Kering (yd) gr/cm³ |
|---------------------------|------------------|--------------------------------|-----------------------------|------------------------------|
| 28                        | 6160             | 10120                          | 1.85774                     | 1.39404                      |
| Berat Cawan               |                  |                                |                             |                              |
| Berat Tanah Basah + Cawan |                  |                                |                             |                              |
| Bera Tanah Kering + Cawan |                  |                                |                             |                              |
| Berat Air (Ww)            |                  |                                |                             |                              |
| Berat Tanah Kering (Ws)   |                  |                                |                             |                              |
| Kadar Air                 |                  |                                |                             |                              |

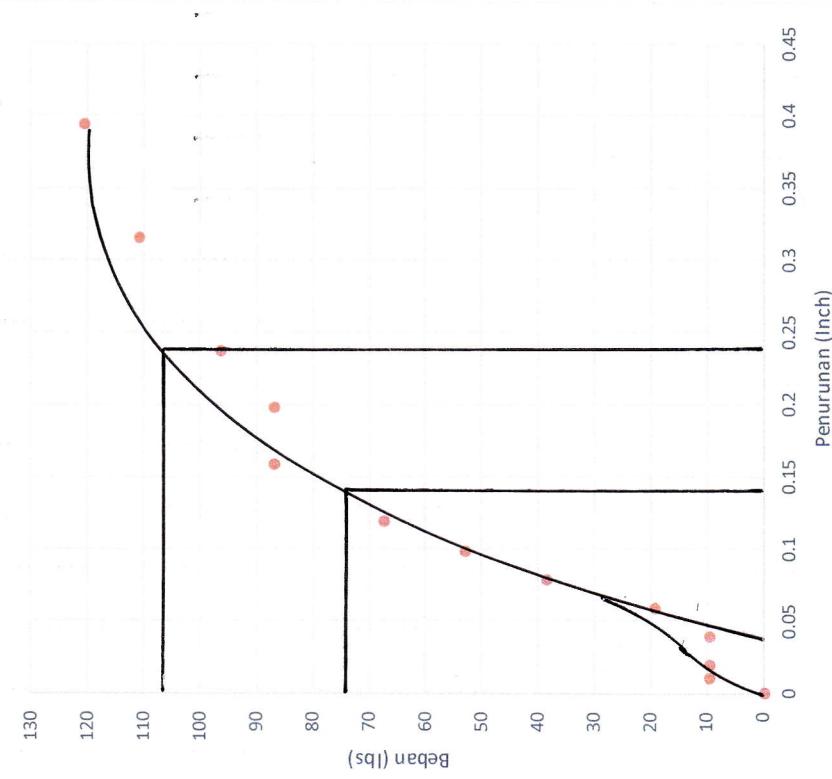
#### PENETRASI

#### Kalibrasi = 9.65

#### Dial Reading (mm)

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 1                      | 9.65        |
| 0.5               | 0.0197           | 1                      | 9.65        |
| 1                 | 0.0394           | 1                      | 9.65        |
| 1.5               | 0.0590           | 2                      | 19.3        |
| 2                 | 0.0787           | 4                      | 38.6        |
| 2.5               | 0.0984           | 5.5                    | 53.075      |
| 3                 | 0.1181           | 7                      | 67.55       |
| 4                 | 0.1574           | 9                      | 86.85       |
| 5                 | 0.1968           | 9                      | 86.85       |
| 6                 | 0.2362           | 10                     | 96.5        |
| 8                 | 0.3149           | 11.5                   | 110.975     |
| 10                | 0.3936           | 12.5                   | 120.625     |

#### CBR SOAKED 10% D



#### HARGA CBR

| Penurunan 0,1 inch (d <sub>1</sub> ) | Beban (lbs) 74 | CBR (%) 2,467 |
|--------------------------------------|----------------|---------------|
| Penurunan 0,2 inch (d <sub>2</sub> ) |                | 2,352         |

**CBR Terendam (Soaked) Tanah Asli + 11.25% Slag Baja + 3.75% Fly Ash**

**Data**

|                  |   |         |
|------------------|---|---------|
| Diameter Cetakan | = | 15.3 cm |
| Tinggi Cetakan   | = | 11.6 cm |

**Kadar Air**

| Penambahan Air            | %  | Atas    | Tengah  | Bawah   | 13 |
|---------------------------|----|---------|---------|---------|----|
| Berat Cawan               | gr | 4.2     | 5.9     | 5.9     |    |
| Berat Tanah Basah + Cawan | gr | 12.7    | 18      | 15.9    |    |
| Bera Tanah Kering + Cawan | gr | 10.2    | 14.9    | 13.3    |    |
| Berat Air (Ww)            | gr | 2.5     | 3.1     | 2.6     |    |
| Berat Tanah Kering (Ws)   | gr | 6       | 9       | 7.4     |    |
| Kadar Air                 | %  | 41.6667 | 34.4444 | 35.1351 |    |
| Kadar Air Rata-Rata       | %  | 37.082  |         |         |    |

**Berat Isi**

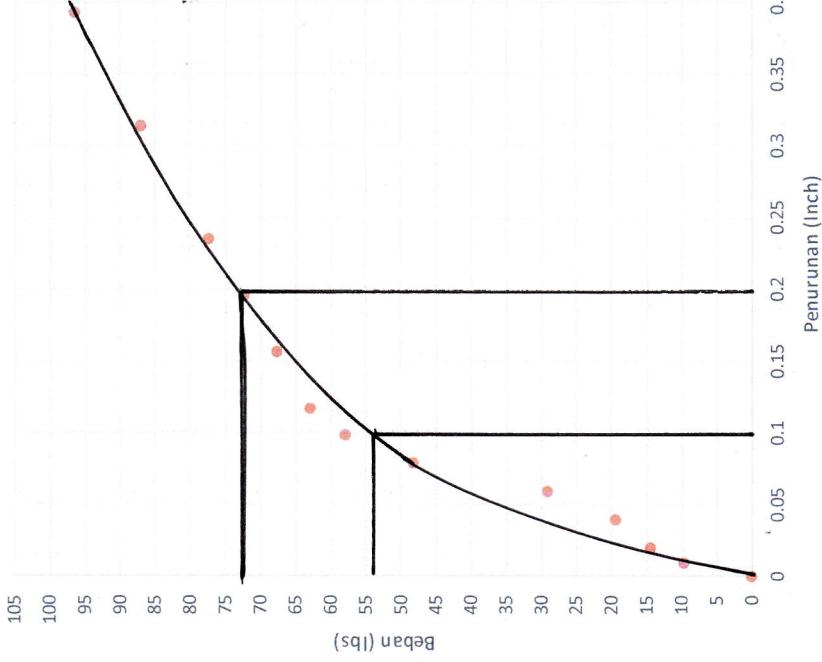
| Penambahan Air              | %      | Atas | Tengah | Bawah | 13 | 13 |
|-----------------------------|--------|------|--------|-------|----|----|
| Berat Cetakan               | gr     |      |        |       |    |    |
| Berat Tanah Basah + Cetakan | gr     |      |        |       |    |    |
| Berat Tanah Basah           | gr     |      |        |       |    |    |
| Isi Cetakan                 | cm³    |      |        |       |    |    |
| Berat Isi Basah (yw)        | gr/cm³ |      |        |       |    |    |
| Berat Isi Kering (yd)       | gr/cm³ |      |        |       |    |    |

CBR SOAKED 15% A

**PENETRASI**

**Kalibrasi**

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 1                      | 9.65        |
| 0.5               | 0.0197           | 1.5                    | 14.475      |
| 1                 | 0.0394           | 2                      | 19.3        |
| 1.5               | 0.0590           | 3                      | 28.95       |
| 2                 | 0.0787           | 5                      | 48.25       |
| 2.5               | 0.0984           | 6                      | 57.9        |
| 3                 | 0.1181           | 6.5                    | 62.725      |
| 4                 | 0.1574           | 7                      | 67.55       |
| 5                 | 0.1968           | 7.5                    | 72.375      |
| 6                 | 0.2362           | 8                      | 77.2        |
| 8                 | 0.3149           | 9                      | 86.85       |
| 10                | 0.3936           | 10                     | 96.5        |



**HARGA CBR**

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| 73                 | 54          | 1,622   |
| 0,2 inch           | 0           | 0       |

**CBR Terendam (Soaked) Tanah Asli + 11.25% Slag Baja + 3.75% Fly Ash**

**Data**

|                  |   |         |
|------------------|---|---------|
| Diameter Cetakan | = | 15.3 cm |
| Tinggi Cetakan   | = | 11.6 cm |

**Kadar Air**

| Penambahan Air            | %  | Atas | Tengah  | Bawah   | 16 | 16 |
|---------------------------|----|------|---------|---------|----|----|
| Berat Cawan               | gr | 5.8  | 4.1     | 4.3     |    |    |
| Berat Tanah Basah + Cawan | gr | 15.6 | 16.2    | 18.1    |    |    |
| Bera Tanah Kering + Cawan | gr | 12.8 | 13.1    | 14.1    |    |    |
| Berat Air (Ww)            | gr | 2.8  | 3.1     | 4       |    |    |
| Berat Tanah Kering (Ws)   | gr | 7    | 9       | 9.8     |    |    |
| Kadar Air                 | %  | 40   | 34.4444 | 40.8163 |    |    |
| Kadar Air Rata-Rata       | %  |      | 38.420  |         |    |    |

**Berat Isi**

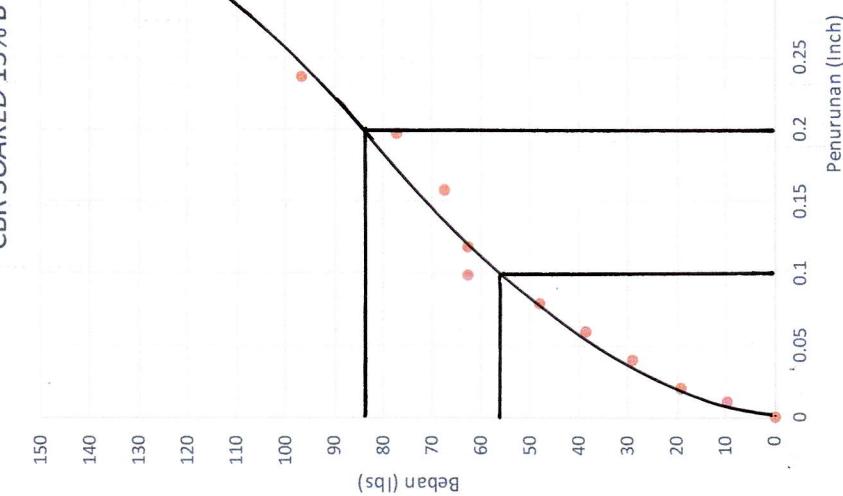
| Penambahan Air              | %                  | Penambahan Air | %  |
|-----------------------------|--------------------|----------------|----|
| Berat Cetakan               | gr                 | Berat Cetakan  | gr |
| Berat Tanah Basah + Cetakan | gr                 | 5260           |    |
| Berat Tanah Basah           | gr                 | 8620           |    |
| Isi Cetakan                 | cm <sup>3</sup>    | 3360           |    |
| Berat Isi Basah (yw)        | gr/cm <sup>3</sup> | 2131.62        |    |
| Berat Isi Kering (yd)       | gr/cm <sup>3</sup> | 1.57626        |    |
|                             | gr/cm <sup>3</sup> | 1.57626        |    |

**CBR SOAKED 15% B**

**PENETRASI**

Kalibrasi = 9.65

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 1                      | 9.65        |
| 0.5               | 0.0197           | 2                      | 19.3        |
| 1                 | 0.0394           | 3                      | 28.95       |
| 1.5               | 0.0590           | 4                      | 38.6        |
| 2                 | 0.0787           | 5                      | 48.25       |
| 2.5               | 0.0984           | 6.5                    | 62.725      |
| 3                 | 0.1181           | 6.5                    | 62.725      |
| 4                 | 0.1574           | 7                      | 67.55       |
| 5                 | 0.1968           | 8                      | 77.2        |
| 6                 | 0.2362           | 10                     | 96.5        |
| 8                 | 0.3149           | 12.5                   | 120.625     |
| 10                | 0.3936           | 14.5                   | 139.925     |



**HARGA CBR**

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| Penurunan 0,2 inch | 84,5        | 1,917   |
|                    | 84,5        | 1,878   |

**CBR Terendam (Soaked) Tanah Asli + 11.25% Slag Baja + 3.75% Fly Ash**

**Data**

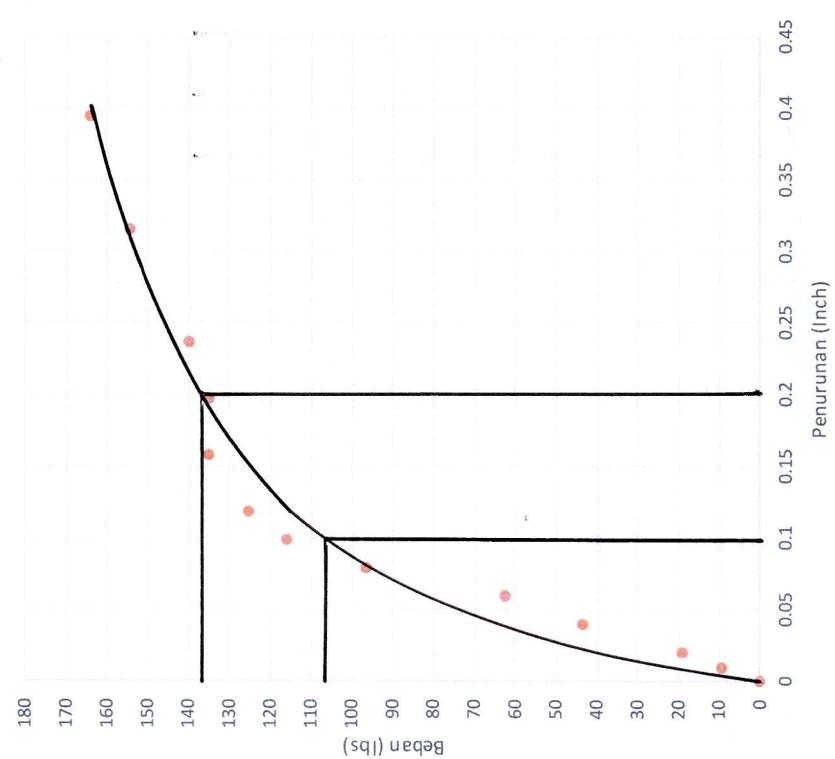
|                  |   |         |
|------------------|---|---------|
| Diameter Cetakan | = | 15.3 cm |
| Tinggi Cetakan   | = | 11.6 cm |
| Kadar Air        |   |         |

**Berat Isi**

| Penambahan Air            | %  | Atas    | Tengah   | Bawah | 22 |
|---------------------------|----|---------|----------|-------|----|
| Berat Cawan               | gr | 5.6     | 6        | 4.4   |    |
| Berat Tanah Basah + Cawan | gr | 17.3    | 14.9     | 21.6  |    |
| Bera Tanah Kering + Cawan | gr | 14.4    | 12       | 16.9  |    |
| Berat Air (Ww)            | gr | 2.9     | 2.9      | 4.7   |    |
| Berat Tanah Kering (Ws)   | gr | 8.8     | 6        | 12.5  |    |
| Kadar Air                 | %  | 32.9545 | 48.33333 | 37.6  |    |
| Kadar Air Rata-Rata       | %  | 39.629  |          |       |    |

| <b>PENETRASI</b>  |                  |                        |             |
|-------------------|------------------|------------------------|-------------|
| Kalibrasi         |                  |                        | = 9.65      |
| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 1                      | 9.65        |
| 0.5               | 0.0197           | 2                      | 19.3        |
| 1                 | 0.0394           | 4.5                    | 43.425      |
| 1.5               | 0.0590           | 6.5                    | 62.725      |
| 2                 | 0.0787           | 10                     | 96.5        |
| 2.5               | 0.0984           | 12                     | 115.8       |
| 3                 | 0.1181           | 13                     | 125.45      |
| 4                 | 0.1574           | 14                     | 135.1       |
| 5                 | 0.1968           | 14                     | 135.1       |
| 6                 | 0.2362           | 14.5                   | 139.925     |
| 8                 | 0.3149           | 16                     | 154.4       |
| 10                | 0.3936           | 17                     | 164.05      |

CBR SOAKED 15% C



| <b>HARGA CBR</b>   |             |         |
|--------------------|-------------|---------|
| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
| Penurunan 0,2 inch | 108         | 3.62    |
| Penurunan 0,2 inch | 132         | 3.62    |

**CBR Terendam (Soaked) Tanah Asli + 11.25% Slag Baja + 3.75% Fly Ash**

**Data**

Diameter Cetakan = 15.3 cm  
Tinggi Cetakan = 11.6 cm

**Kadar Air**

| Penambahan Air            | %  | Atas | Tengah  | Bawah   | 25 |
|---------------------------|----|------|---------|---------|----|
| Berat Cawan               | gr | 5.9  | 5.9     | 5.6     |    |
| Berat Tanah Basah + Cawan | gr | 17.3 | 17.2    | 13.3    |    |
| Bera Tanah Kering + Cawan | gr | 13.9 | 14.3    | 11.3    |    |
| Berat Air (Ww)            | gr | 3.4  | 2.9     | 2       |    |
| Berat Tanah Kering (Ws)   | gr | 8    | 8.4     | 5.7     |    |
| Kadar Air                 | %  | 42.5 | 34.5238 | 35.0877 |    |
| Kadar Air Rata-Rata       | %  |      | 37.371  |         |    |

**Berat Isi**

| Penambahan Air            | %  | Berat Cetakan | Berat Tanah Basah + Cetakan | Berat Tanah Basah | Isi Cetakan     | Berat Isi Basah (yw) | Berat Isi Kering (yd) | 25       |
|---------------------------|----|---------------|-----------------------------|-------------------|-----------------|----------------------|-----------------------|----------|
| Berat Cawan               | gr |               | gr                          | gr                | cm <sup>3</sup> | gr/cm <sup>3</sup>   | gr/cm <sup>3</sup>    | 6080     |
| Berat Tanah Basah + Cawan | gr |               | gr                          | gr                |                 | 1.810826             | 1.308309              | 9940     |
| Bera Tanah Kering + Cawan | gr |               | gr                          | gr                |                 |                      |                       | 3860     |
| Berat Air (Ww)            | gr |               | gr                          | gr                |                 |                      |                       | 2131.624 |
| Berat Tanah Kering (Ws)   | gr |               | gr                          | gr                |                 |                      |                       |          |
| Kadar Air                 | %  |               |                             |                   |                 |                      |                       |          |

**CBR SOAKED 15% D**

50

45

40

35

30

25

20

15

10

5

0

Beban (lbs)

**PENETRASI**

Kalibrasi = 9.65

| Dial Reading (mm) | Penurunan (inch) | Pembacaan Proving Ring | Beban (lbs) |
|-------------------|------------------|------------------------|-------------|
| 0                 | 0                | 0                      | 0           |
| 0.25              | 0.0098           | 1                      | 9.65        |
| 0.5               | 0.0197           | 1                      | 9.65        |
| 1                 | 0.0394           | 1                      | 9.65        |
| 1.5               | 0.0590           | 1.5                    | 14.475      |
| 2                 | 0.0787           | 1.5                    | 14.475      |
| 2.5               | 0.0984           | 1.5                    | 14.475      |
| 3                 | 0.1181           | 2                      | 19.3        |
| 4                 | 0.1574           | 2.5                    | 24.125      |
| 5                 | 0.1968           | 2.5                    | 24.125      |
| 6                 | 0.2362           | 3                      | 28.95       |
| 8                 | 0.3149           | 3.5                    | 33.775      |
| 10                | 0.3936           | 4.5                    | 43.425      |

**HARGA CBR**

| Penurunan 0,1 inch | Beban (lbs) | CBR (%) |
|--------------------|-------------|---------|
| Penurunan 0,2 inch | 27          | Or 667  |
|                    | 24          | Or 6    |