BAB V
KESIMPULAN DAN SARAN

5.1 Kesimpulan

Berdasarkan hasil dari analisis dan perhitungan dari perancangan Reaktivasi Jalur Kereta Api Kudus – Pati, maka diperoleh kesimpulan sebagai berikut:

1. Perancangan geometri sesuai topografi pada perancangan jalan rel kereta api Kudus-Pati adalah dengan menggunakan trase berupa *at grade* dikarenakan topografi yang ada cenderung landai. Sesuai dengan kriteria pemilihan, dipilih alternatif trase ke-2 dengan panjang trase 23,6 km serta jenis jalur ganda (*double track*) yang memiliki kelandaian maksimal 2,1‰, 7 buah tikungan, melewati 16 sungai, 34 persimpangan sebidang, dan 131 rumah penduduk.
2. Sesuai dengan Peraturan Menteri Perhubungan No. 60 Tahun 2012 dan Peraturan Dinas No. 10, perancangan jalur rel kereta api Kudus-Pati menggunakan struktur jalan rel kelas I dengan lebar 1067 mm, kecepatan maksimum 120 km/jam, kecepatan rencana 150 km/jam, tipe rel R.60, jenis bantalan beton, memiliki balas dengan ketebalan 0,5 m, sub-balas dengan ketebalan 0,5 m, serta beban gandar seberat 18 ton.
3. Perancangan Jalan Rel kereta api Kudus-Pati memiliki estimasi modal biaya pembangunan awal sebesar Rp4.228.853.178.916,- dan memiliki nilai *Net Present Value* sebesar Rp378.016.117.606,- sehingga dengan perhitungan didapatkan evaluasi kelayakan finansial sebesar 6% dengan lama pengembalian estimasi modal awal selama 29 tahun.
4. Melalui analisis perhitungan tanah yang telah dilakukan pada alternatif trase terpilih, didapatkan bahwa nilai daya dukung tanah pada data uji SPT menggunakan metode Terzaghi didapatkan hasil perhitungan dengan nilai terkecil sebesar 35,28 kN/m^2 dan pada data uji CPT menggunakan metode Mayerhoff didapatkatkan hasil perhitungan dengan nilai terkecil sebesar 58,09 kN/m^2 . Dibandingkan dengan beban struktur jalan rel sebesar 34,65 kN/m^2, kedua nilai perhitungan daya dukung tanah memiliki nilai di atas

beban struktur jalan rel sehingga dapat dikatakan aman. Pada perhitungan penurunan tanah, didapatkan nilai penurunan tanah terbesar 0,892 m dan penurunan tanah terkecil 0,014 m. Penurunan terbesar terjadi pada timbunan dengan tinggi 3,9 m sehingga dilakukan perbaikan tanah dengan memasang geotekstil pada tanah timbunan guna mencegah ketidakstabilan lereng timbunan.

5. Melalui analisis perhitungan drainase mengacu pada Peraturan Menteri Perhubungan No. 60 Tahun 2012 didapatkan debit air permukaan terbesar memiliki nilai 0,21 m^3/detik sehingga digunakan saluran drainase permukaan berbentuk *U-ditch* dengan dimensi 40 mm x 60 mm x 120 mm x 7 mm pada segmen 1 dan dimensi 50 mm x 70 mm x 120 mm x 10 mm pada segmen 2 hingga segmen 5 untuk menjaga agar kecepatan maksimal dibawah 1,5 m/detik. Melalui hasil perhitungan saluran drainase dalam dengan laju infiltrasi sebesar 29,913 mm/jam untuk menjaga 0,75 m di bawah sub-balas tetap kering, maka digunakan 4 buah pipa dengan diameter 0,2 m pada kedalaman 1,75 m dan jarak antar pipa 3,2 m.

5.2 Saran

Berdasarkan dari perencanaan yang telah dilakukan terdapat beberapa saran sebagai berikut:

1. Pada perancangan ini, estimasi biaya pembangunan jembatan menggunakan biaya per meter panjang sehingga akan lebih baik jika dilakukan perhitungan pembangunan dengan konstruksi jembatan secara keseluruhan.
2. Pada perancangan ini, estimasi biaya pembebasan lahan menggunakan perhitungan biaya pembebasan secara rata-rata sehingga akan lebih baik jika melakukan perhitungan nilai setiap petak lahan yang akan dilalui oleh trase jalan rel.

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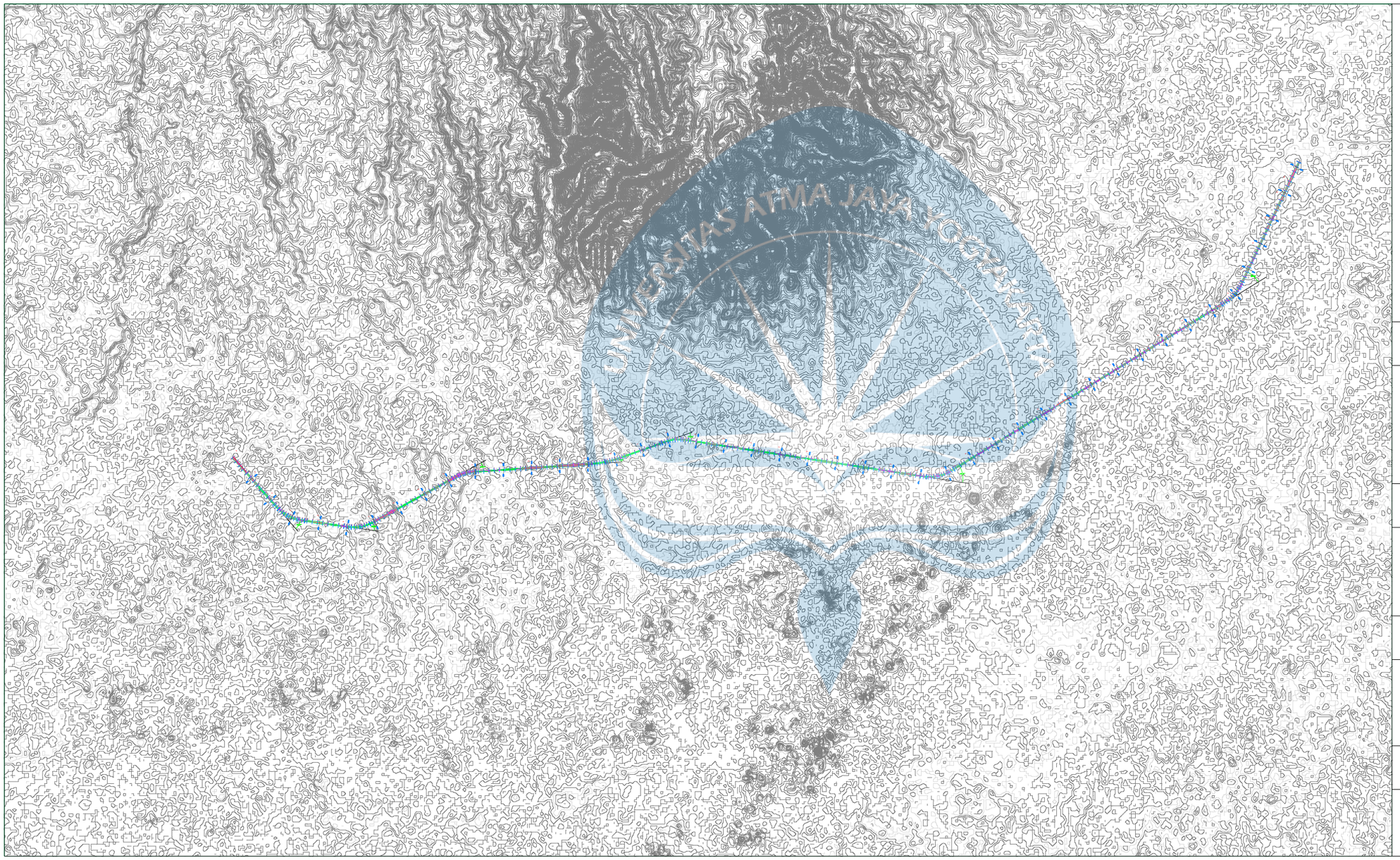

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Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

Dr. Ir. Imam Basuki, M.T.

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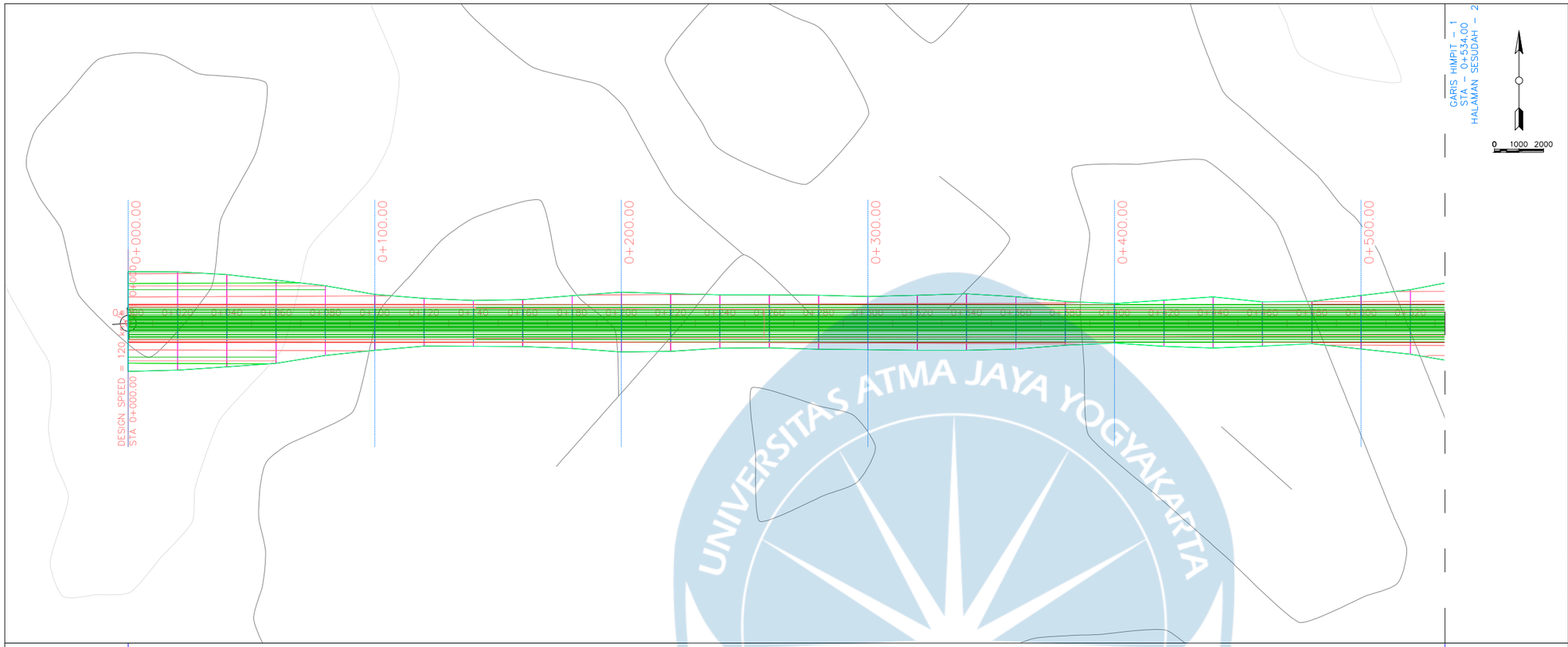

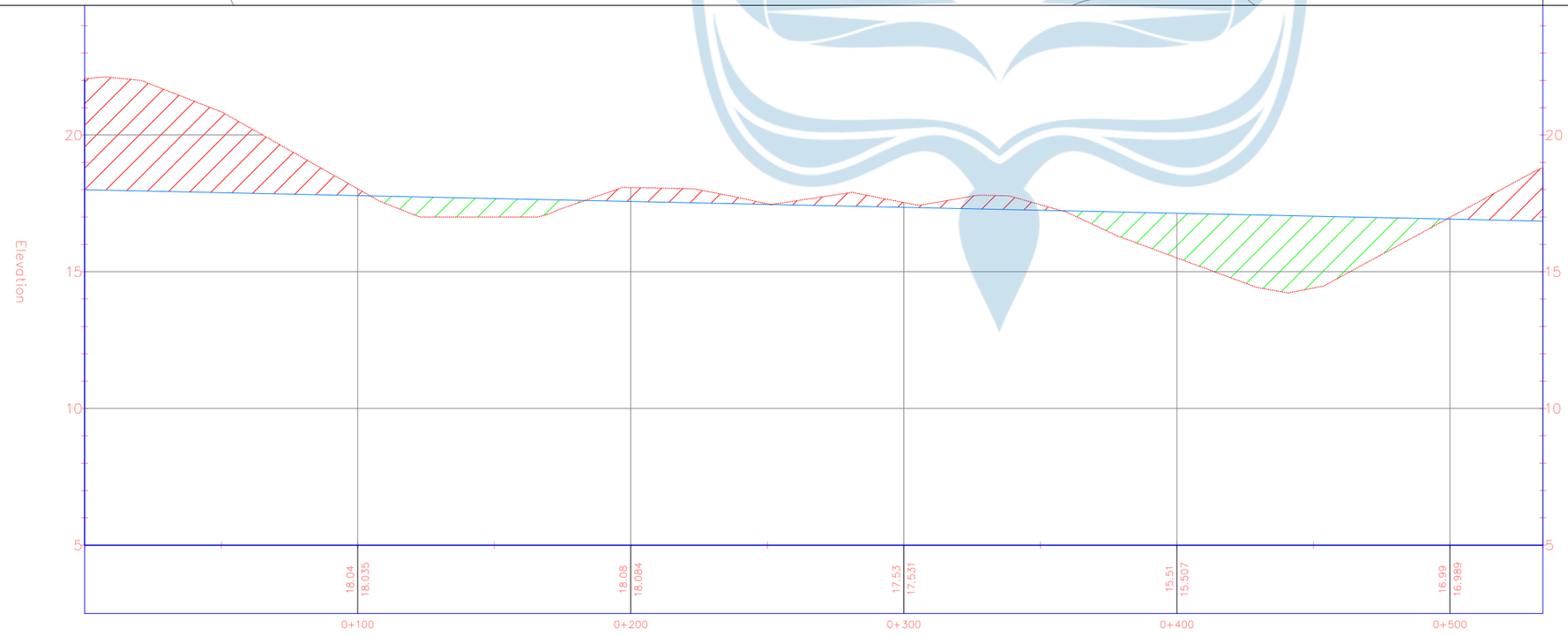

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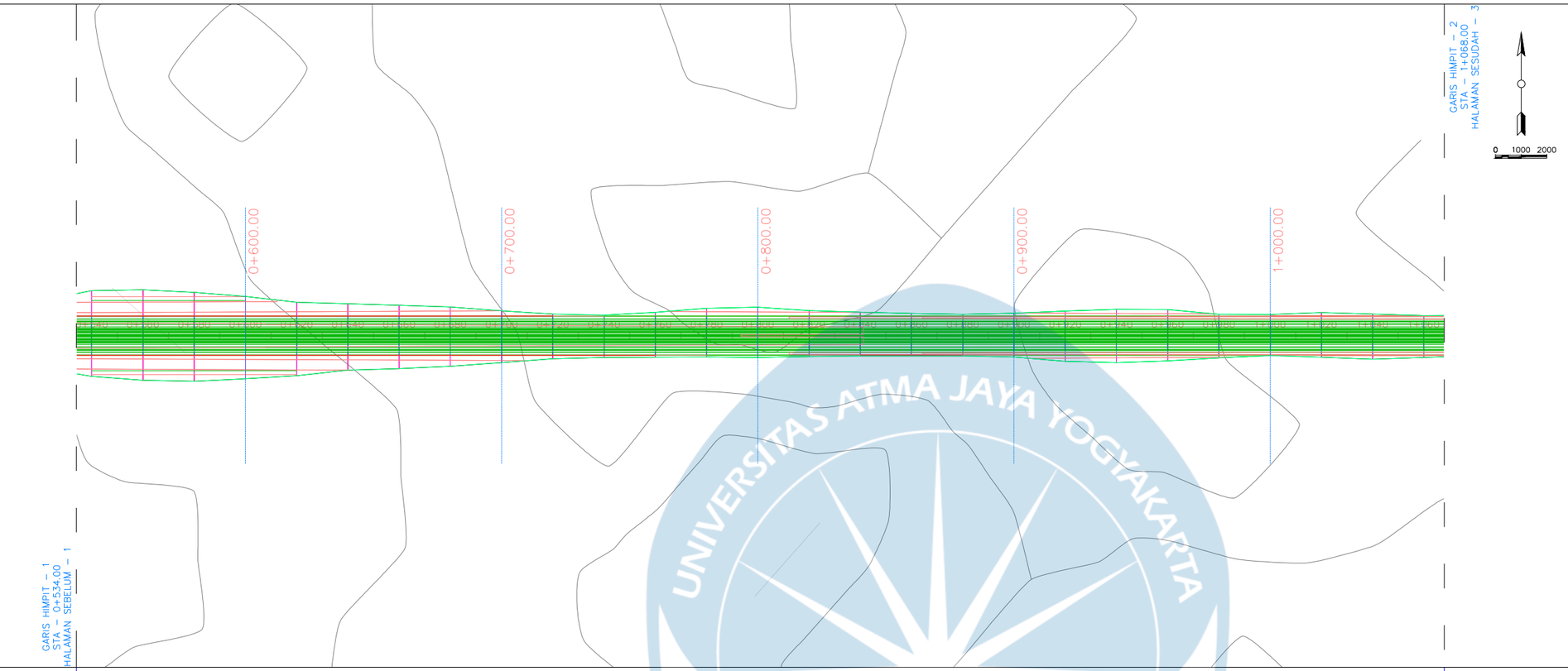

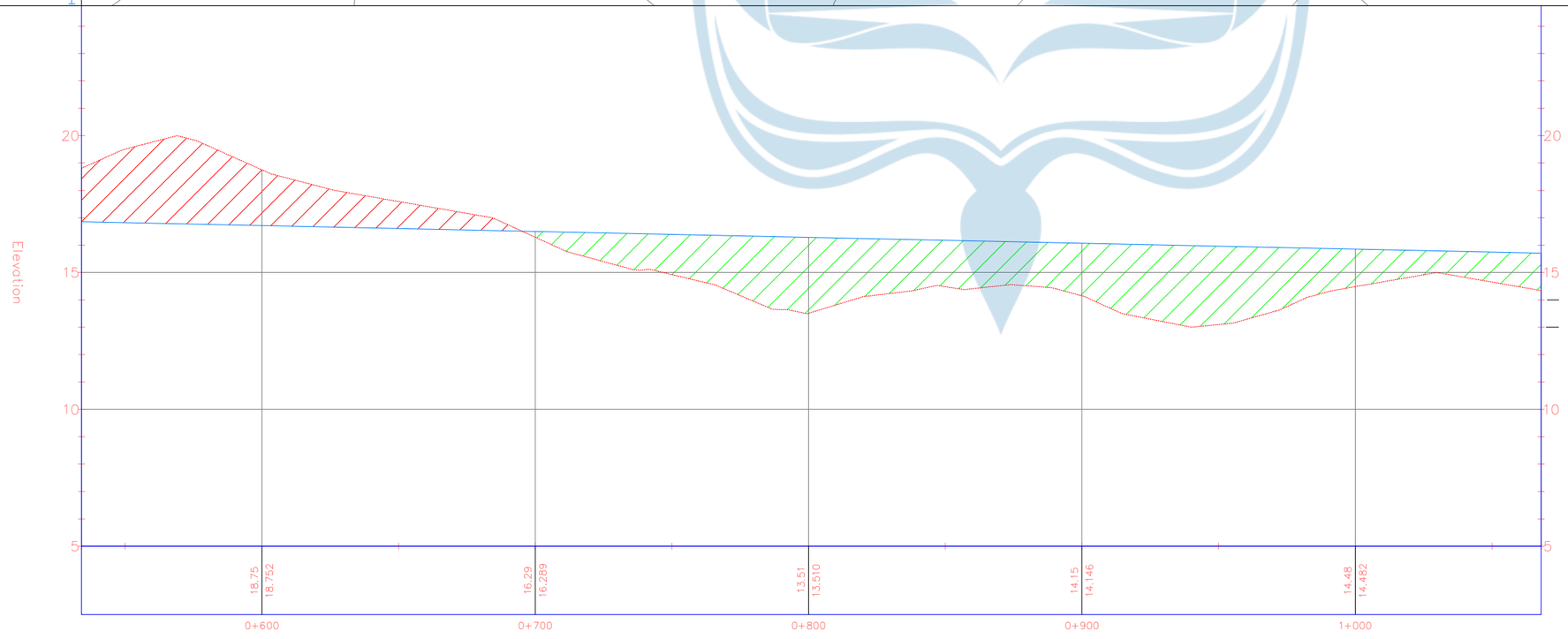

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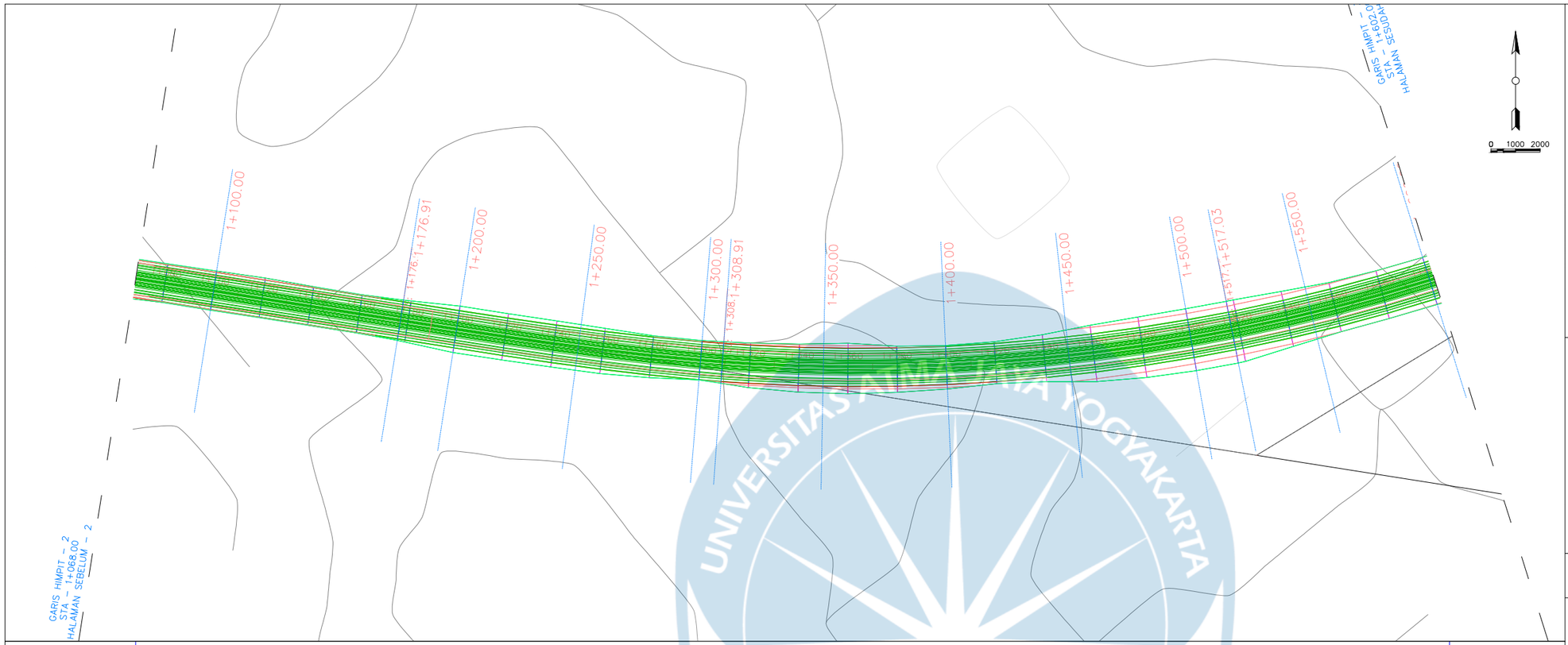

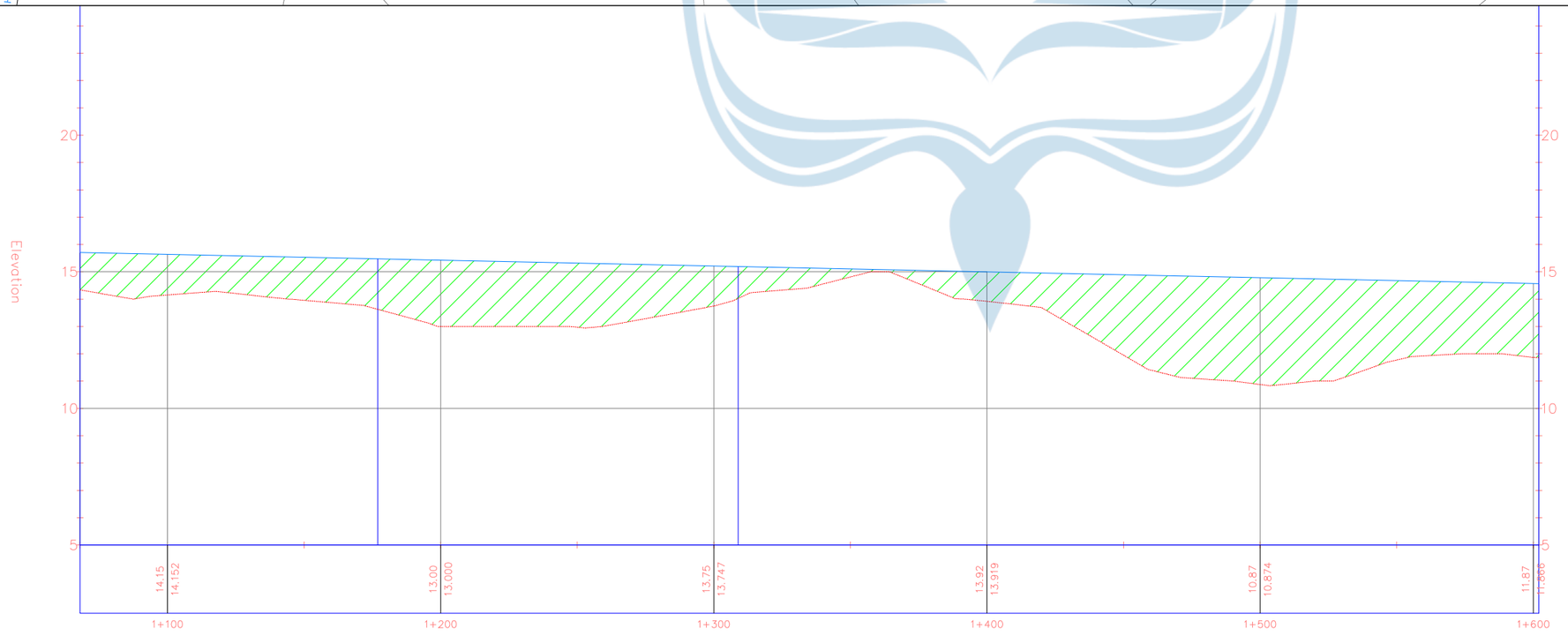

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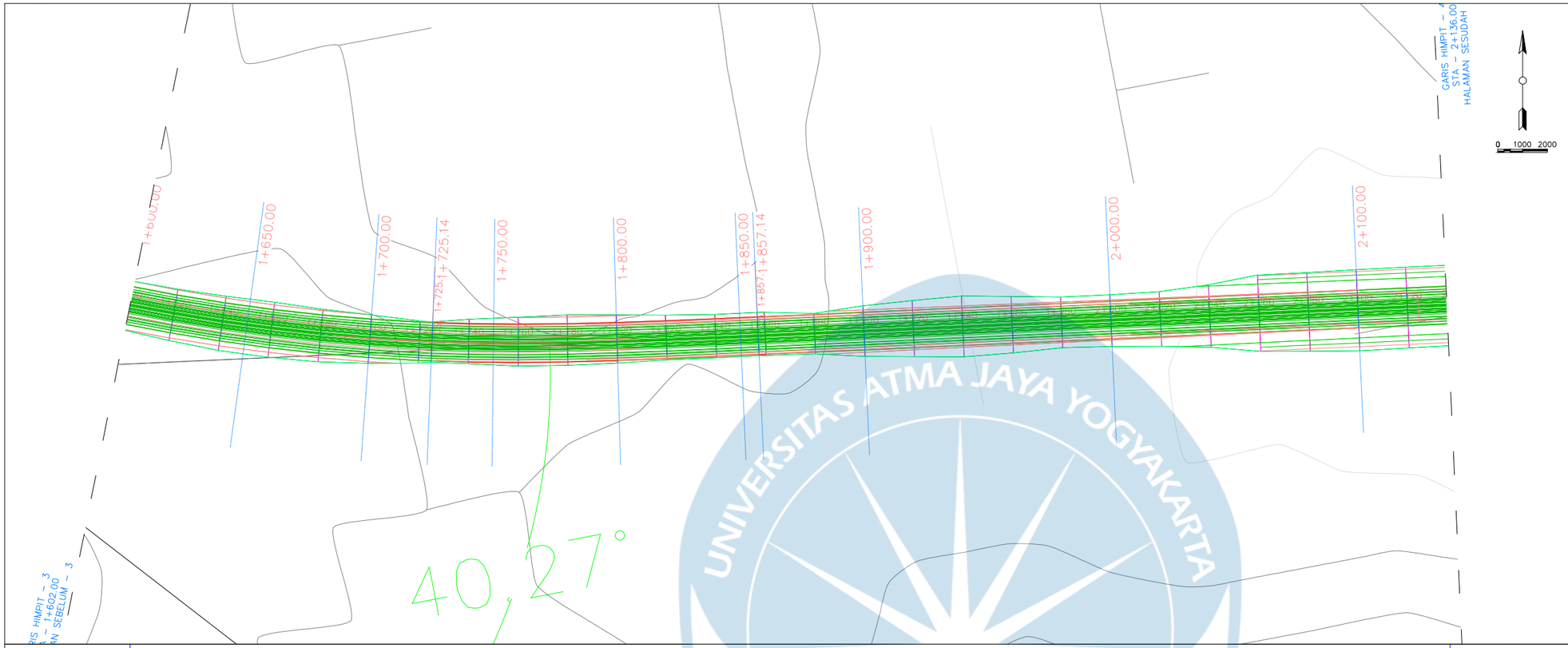

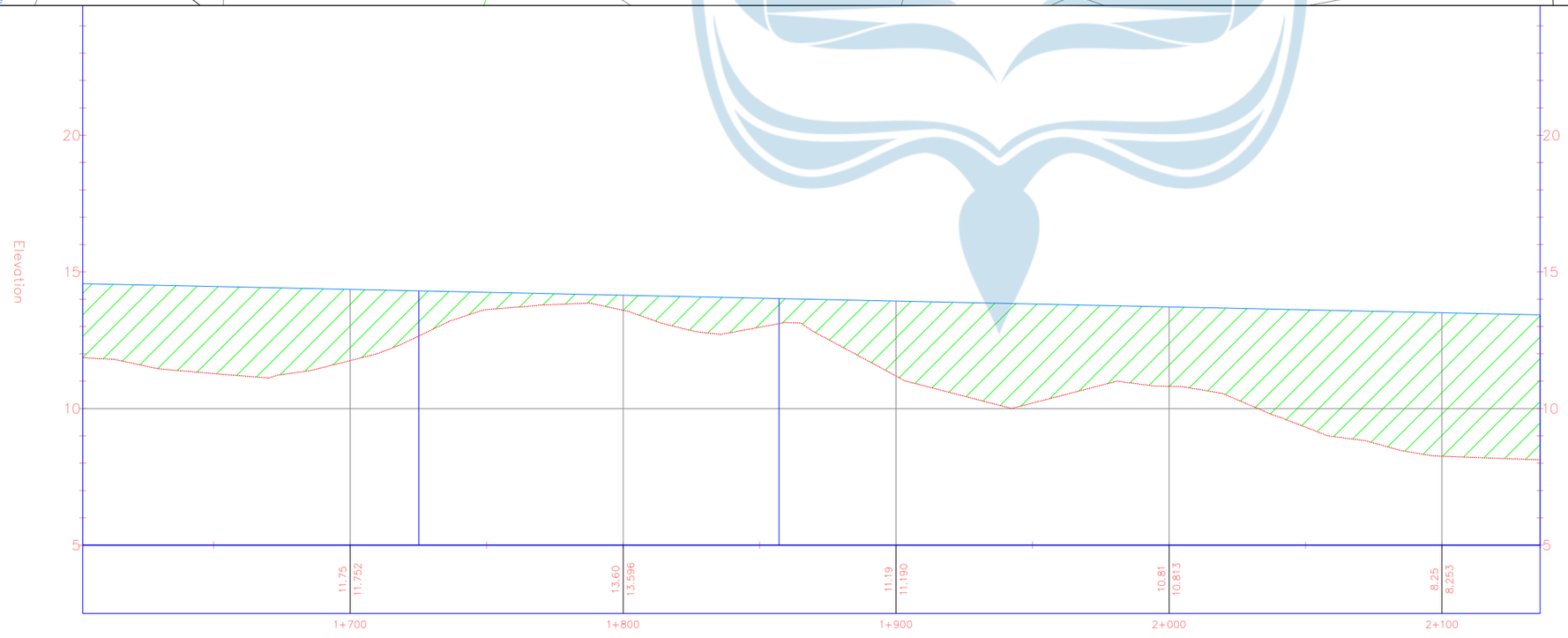

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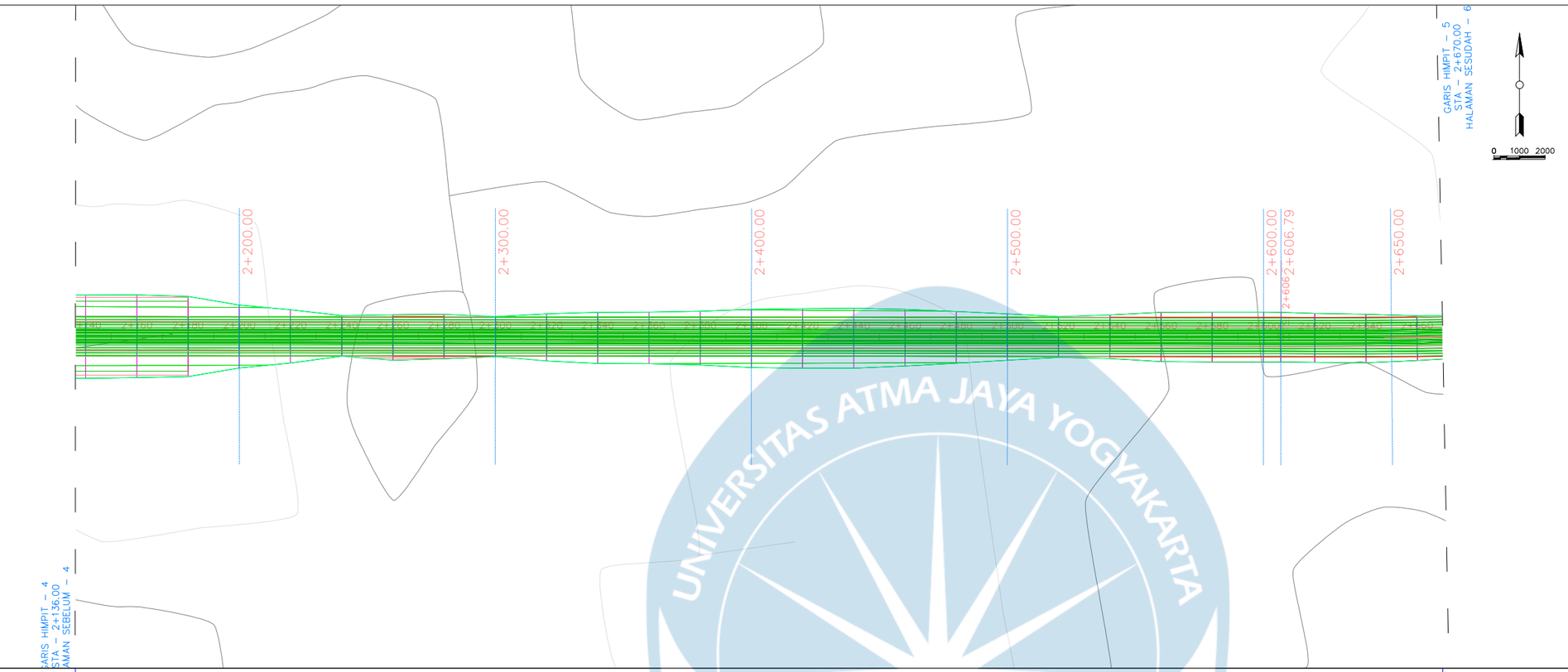

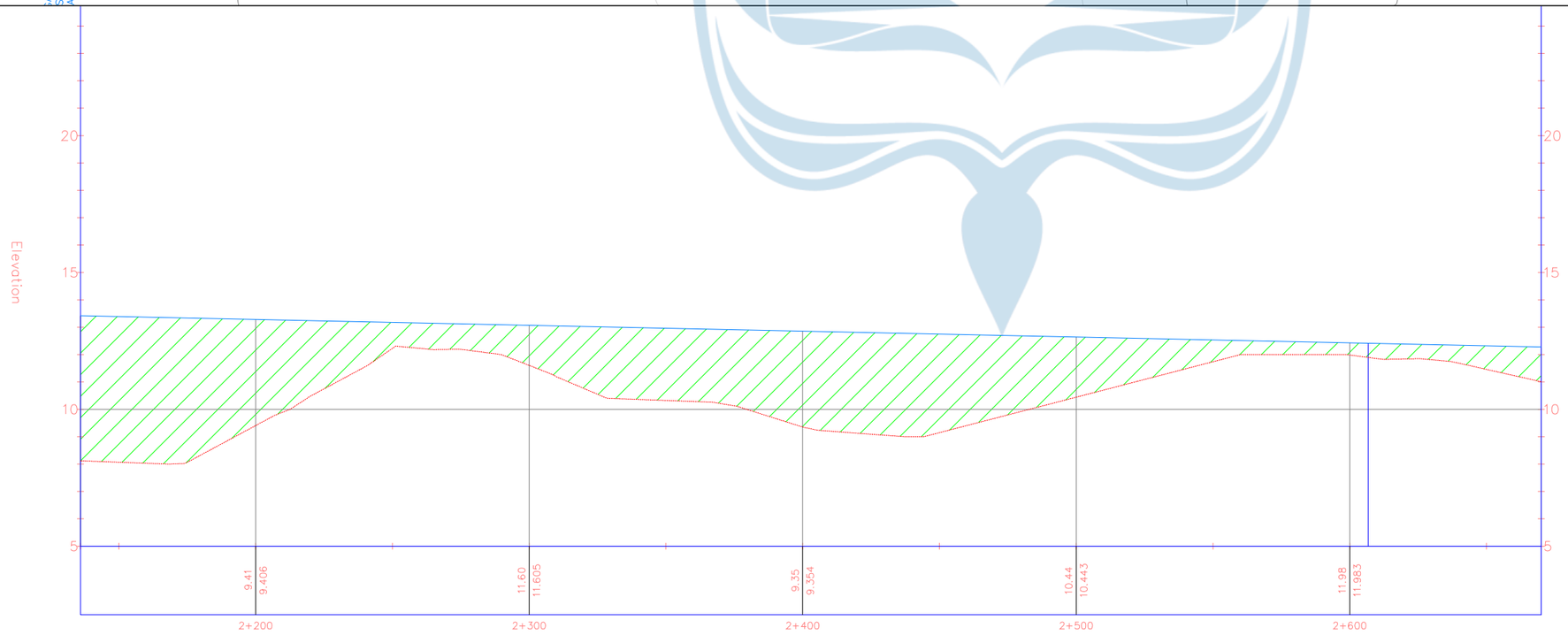

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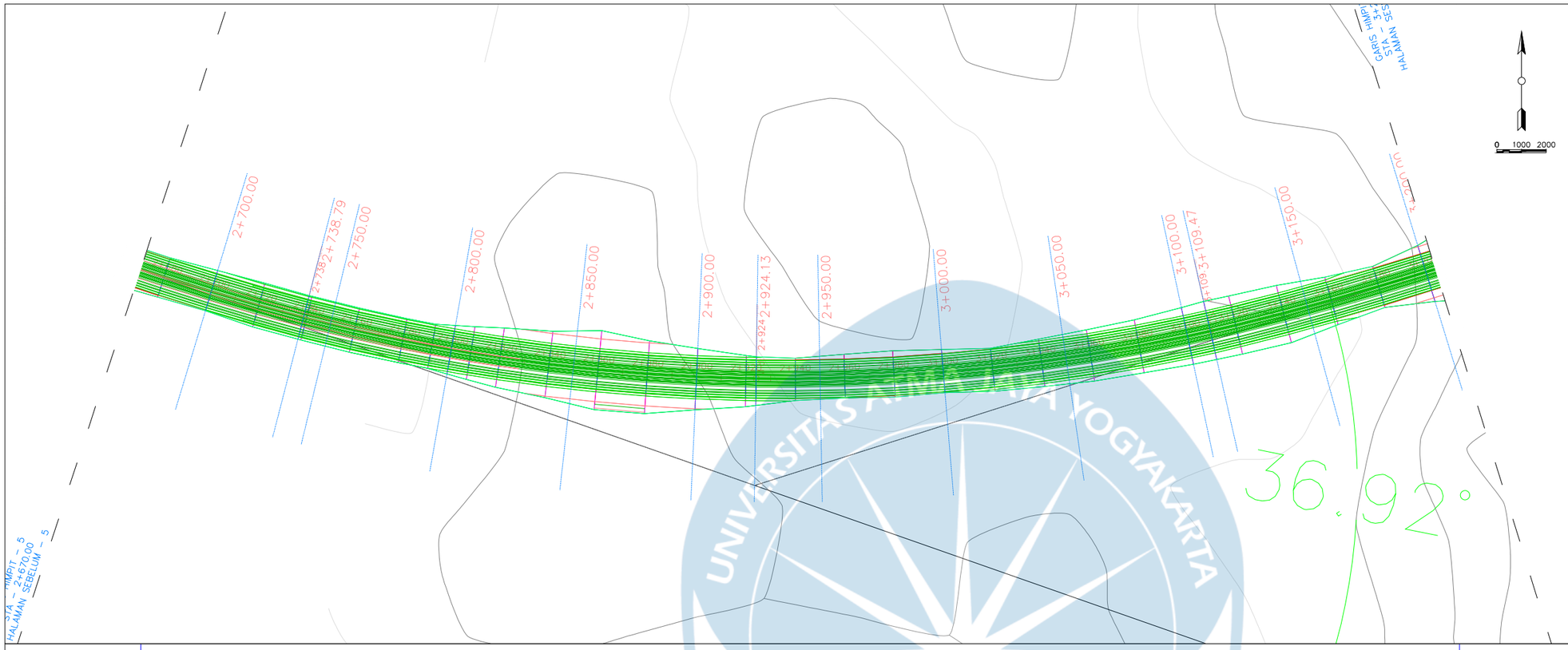

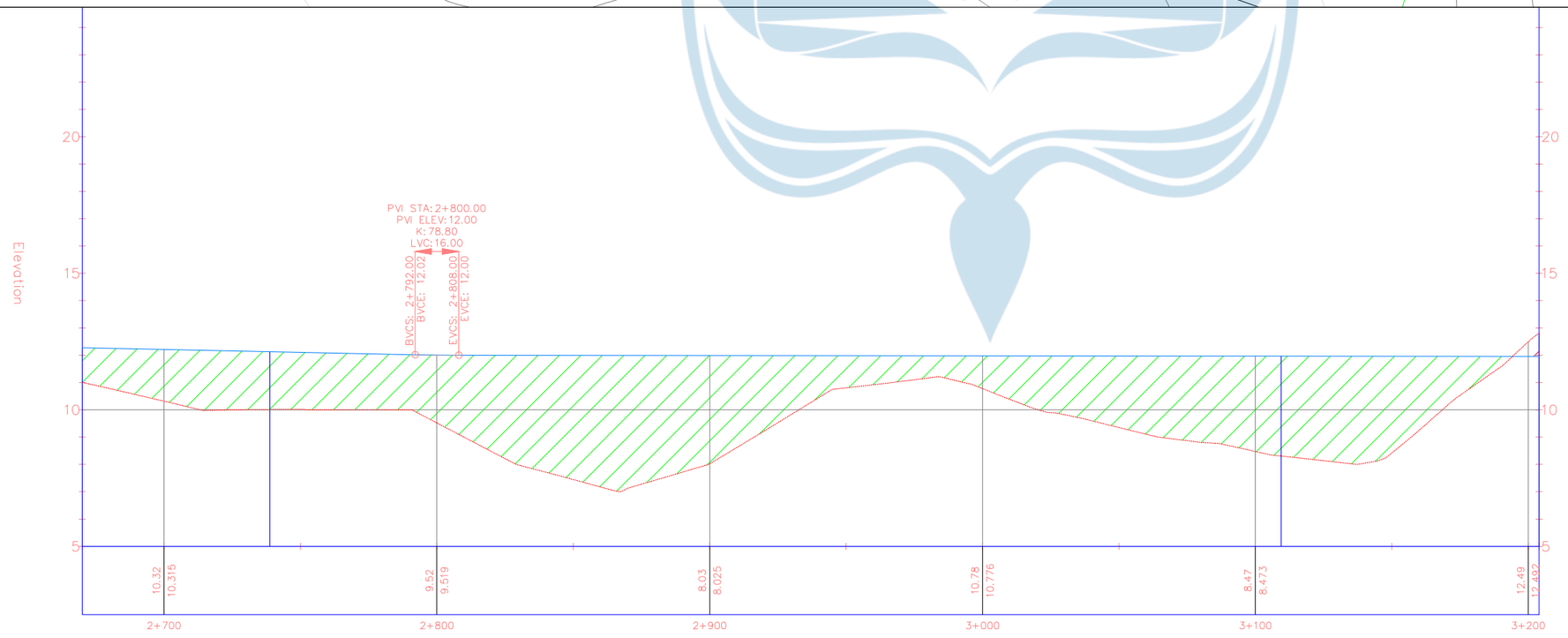

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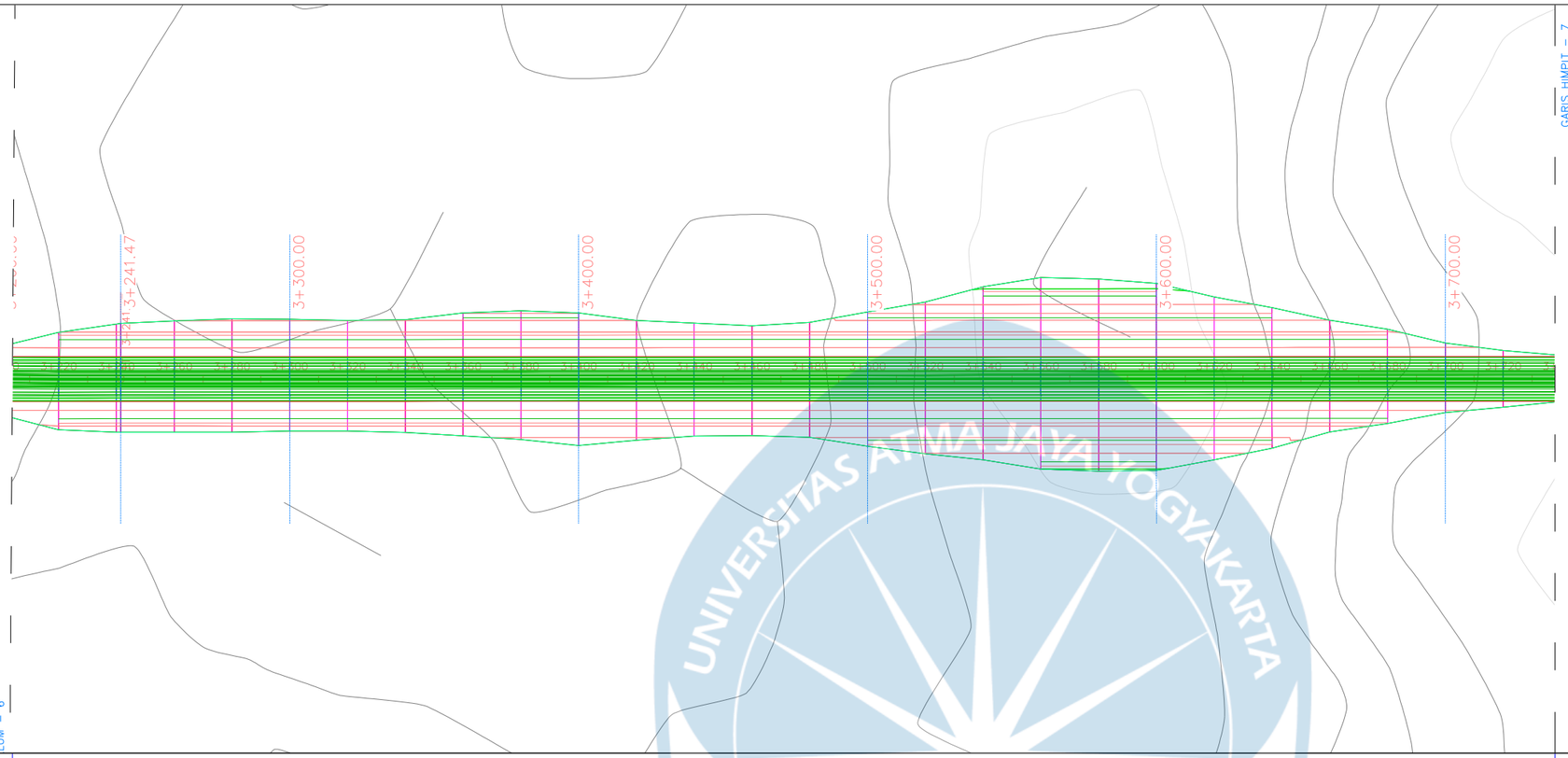

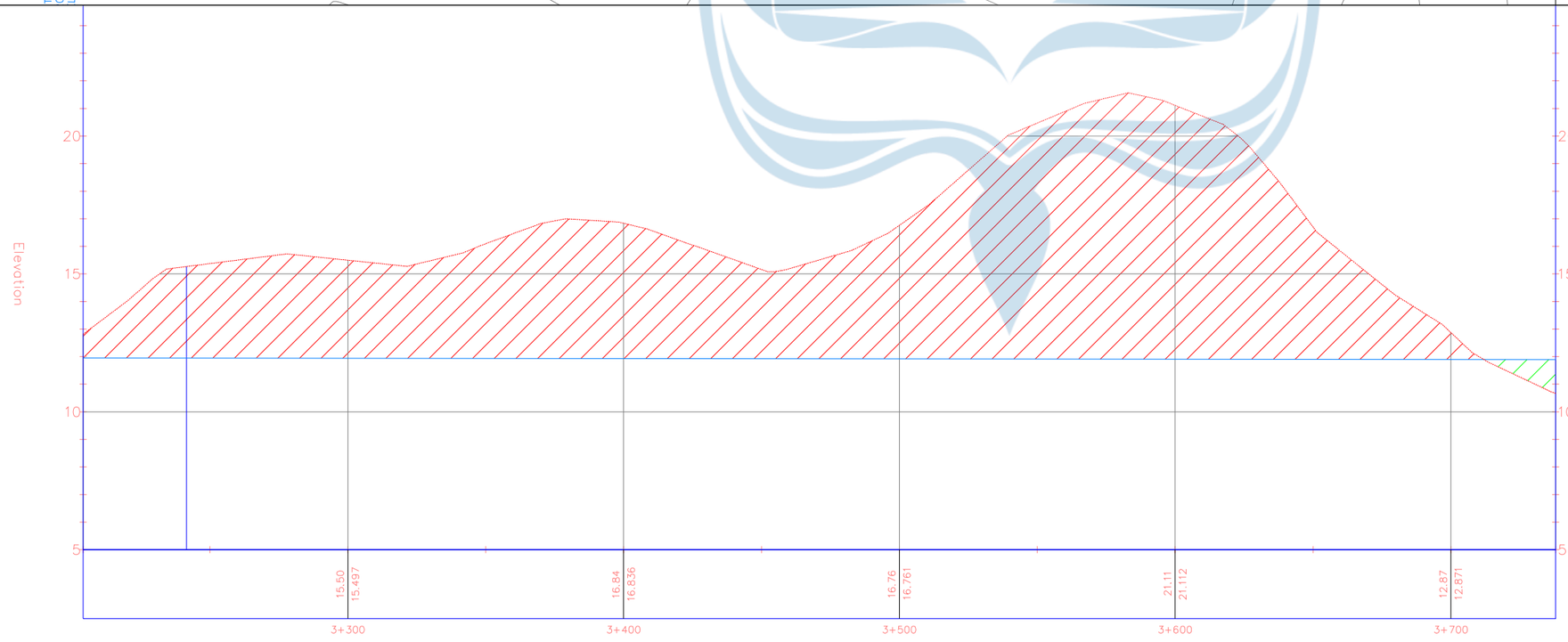

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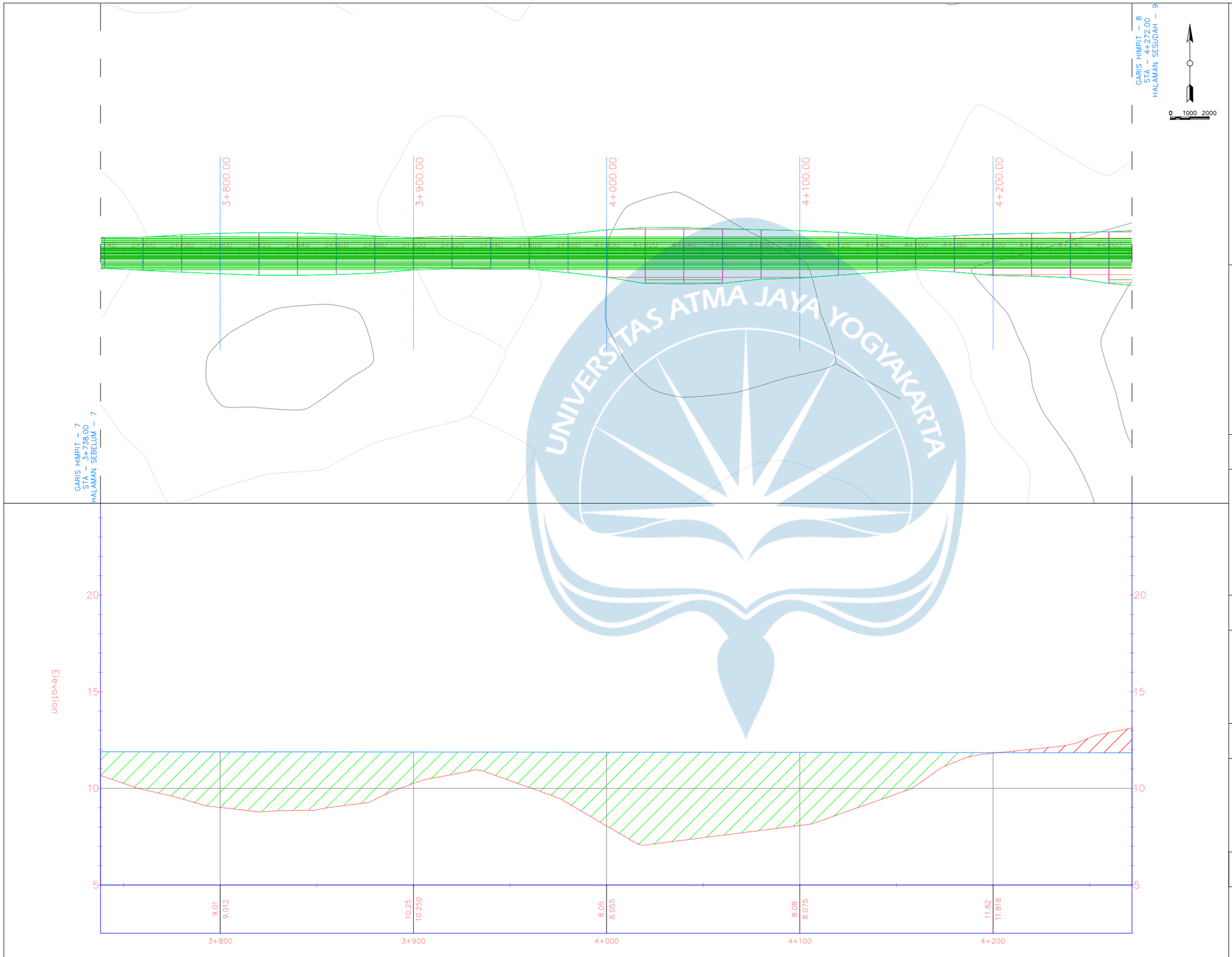

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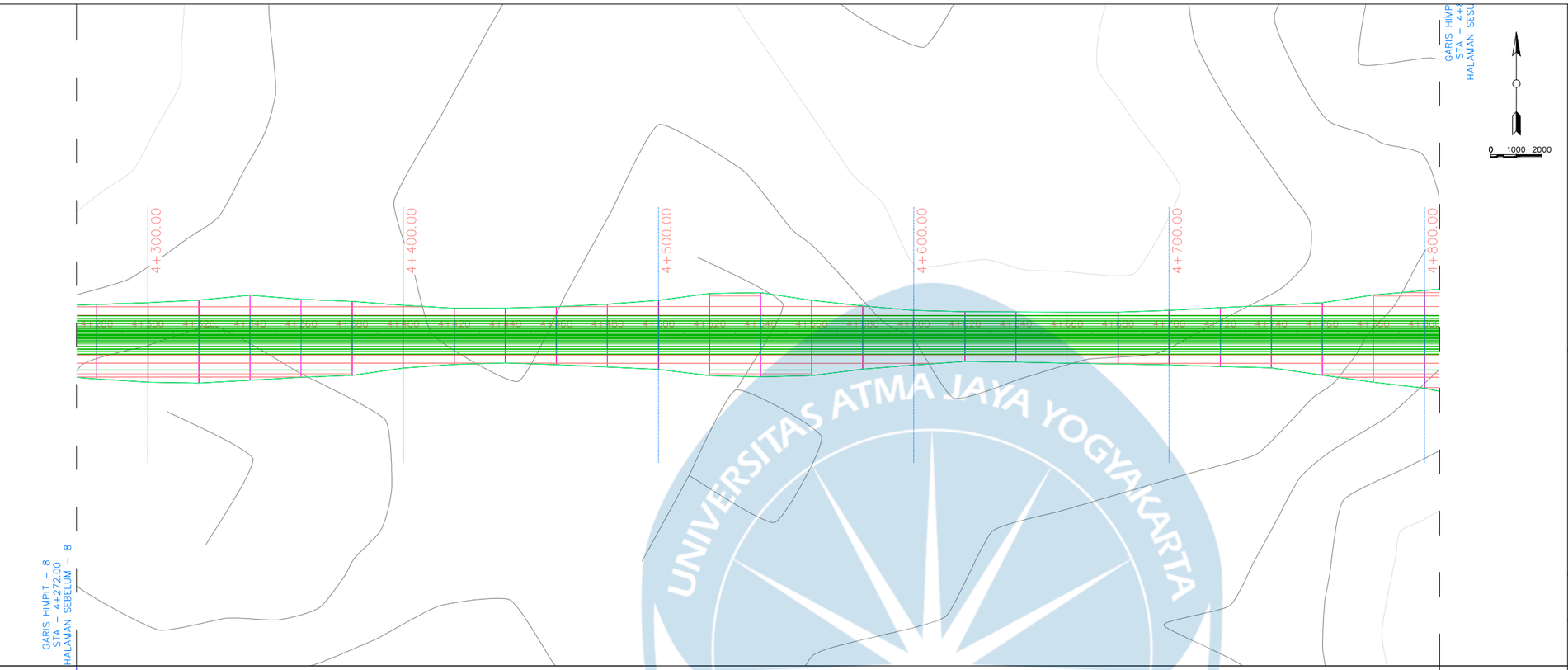

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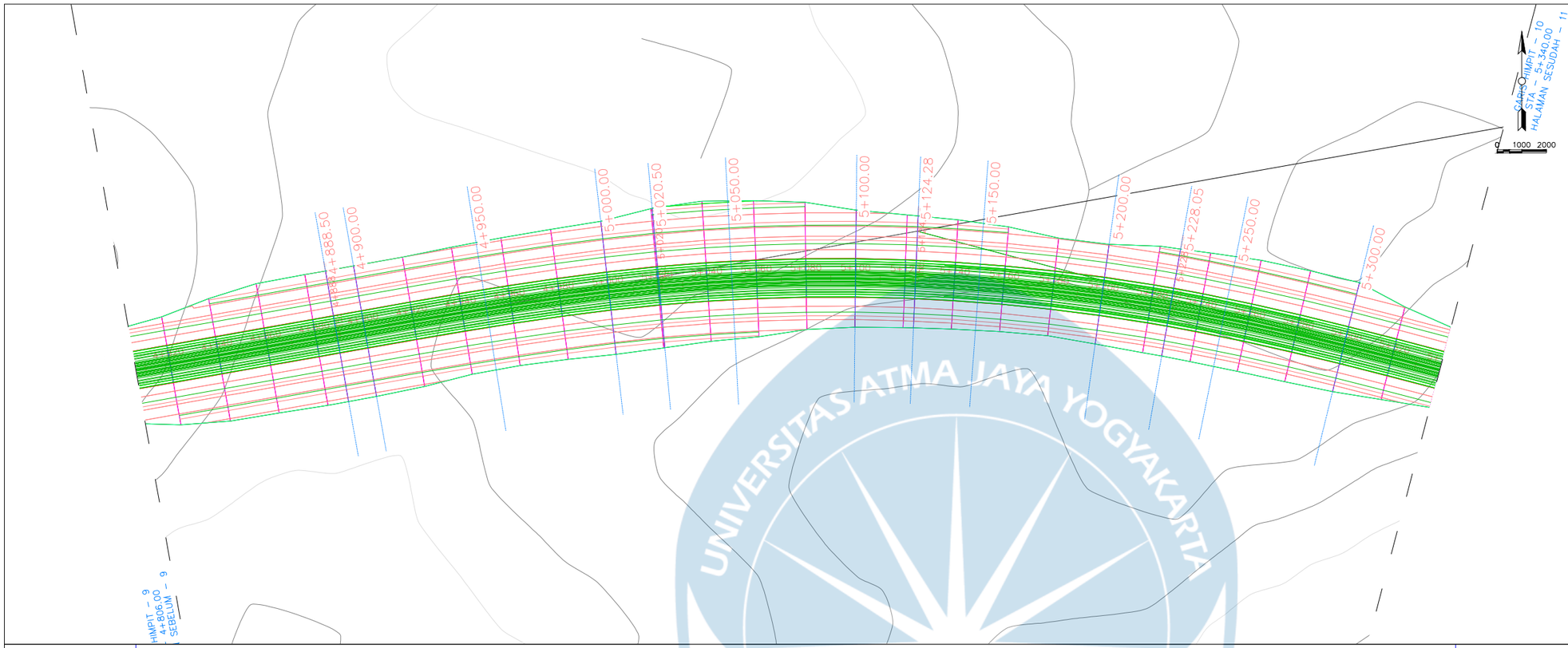

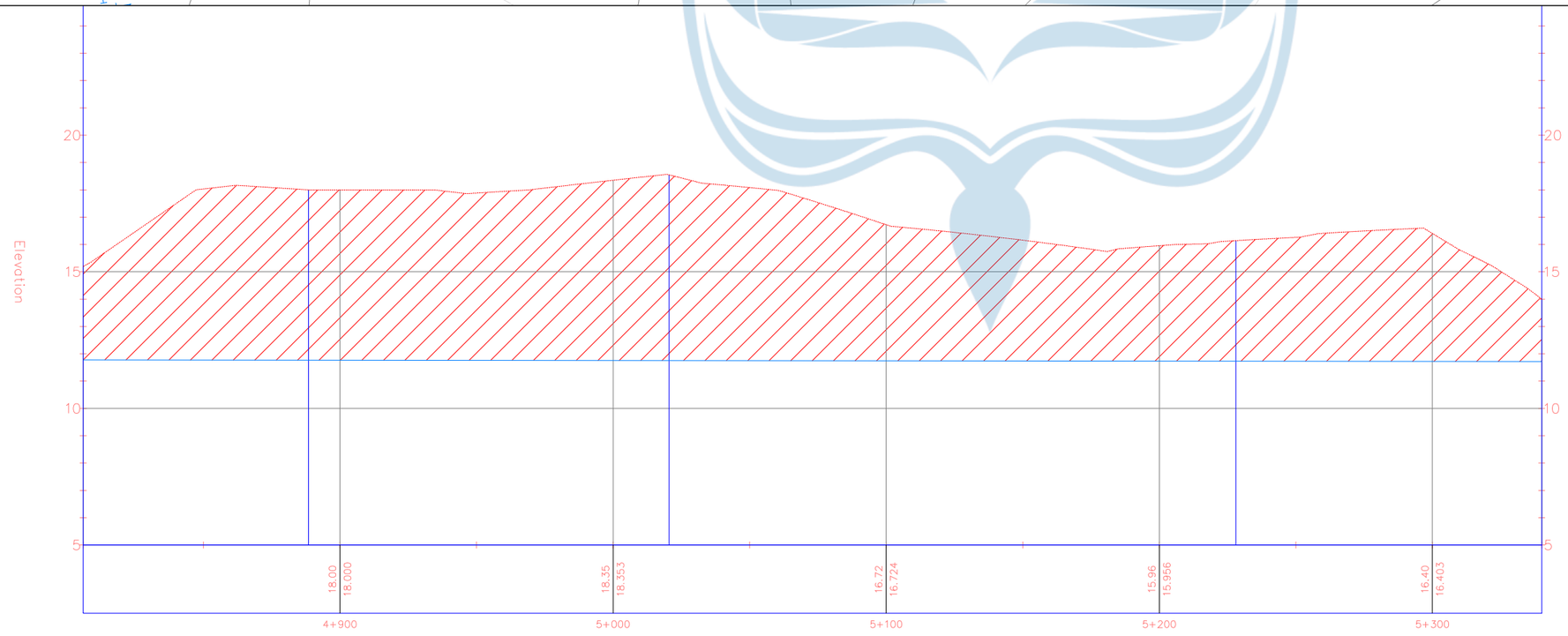

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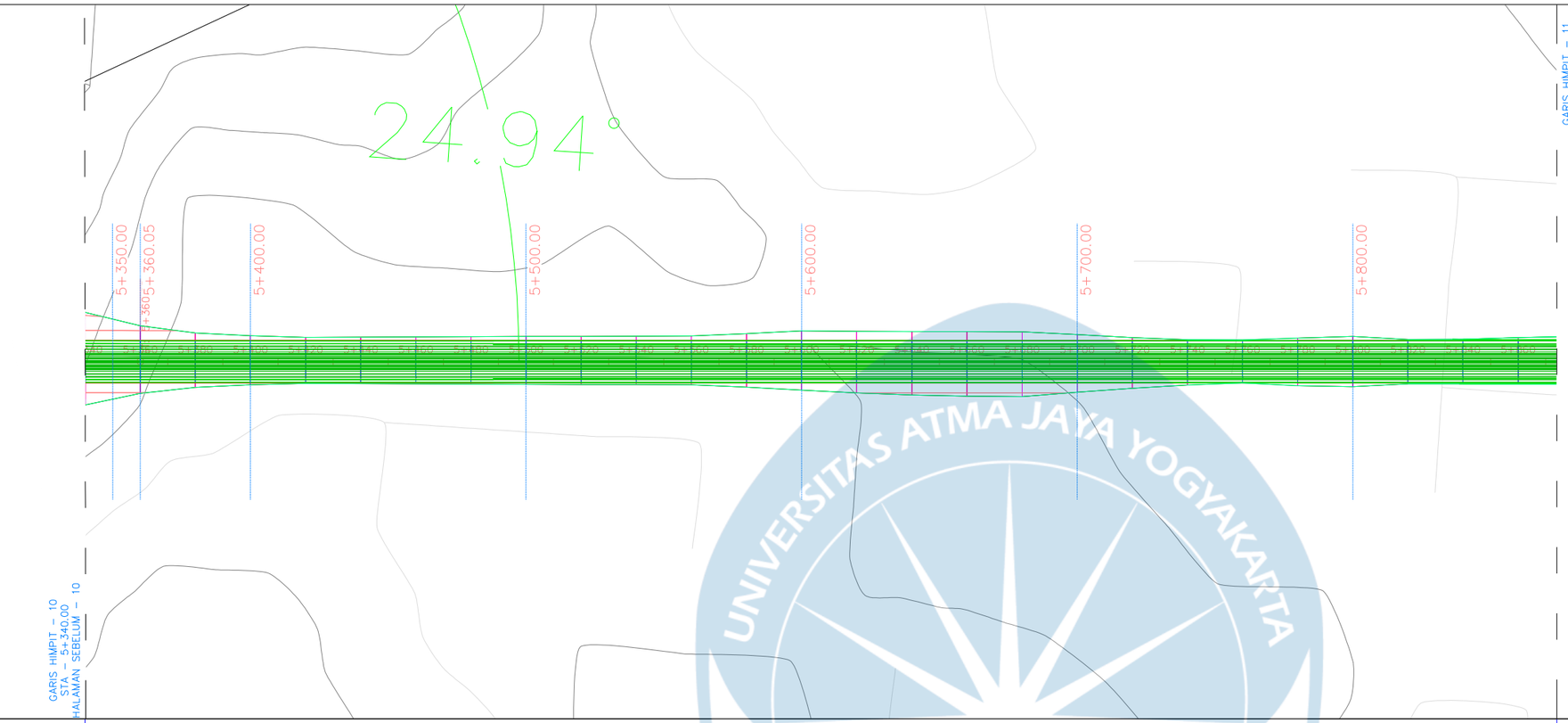

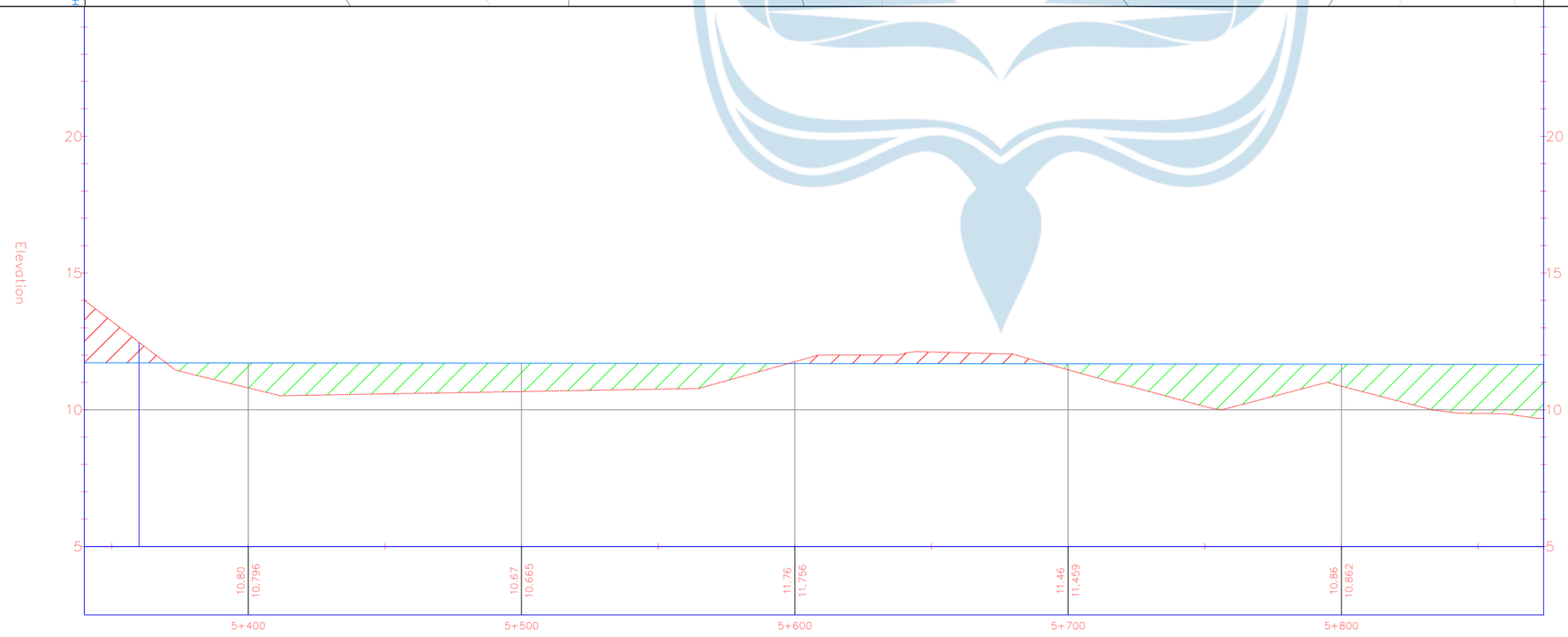

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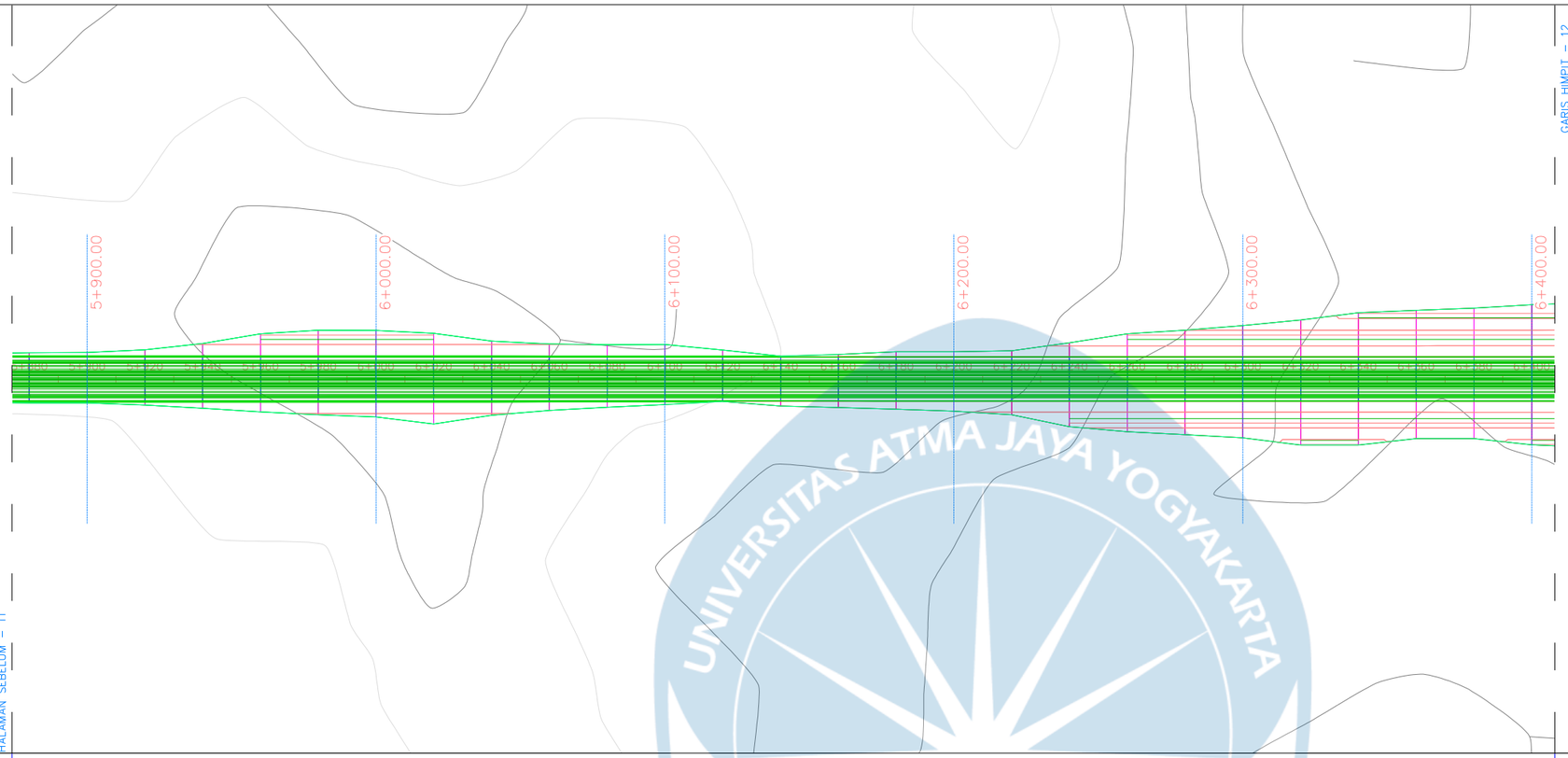

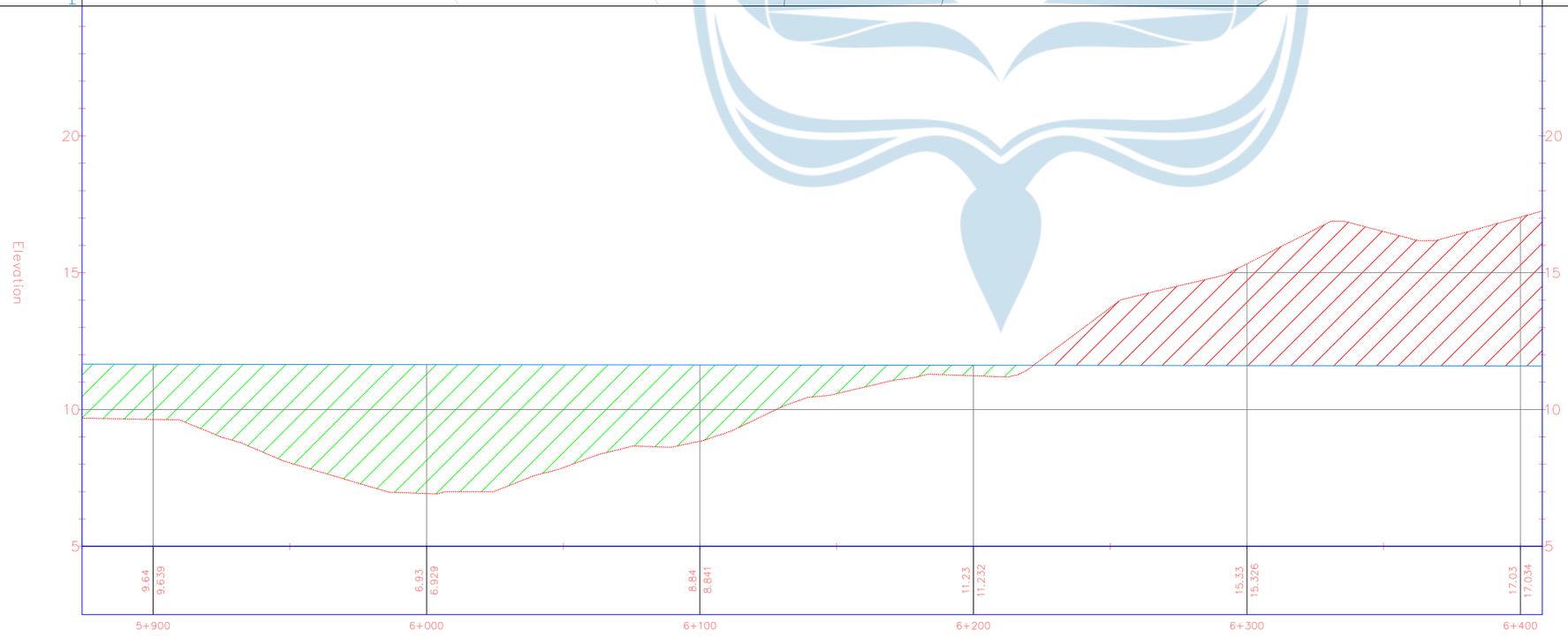

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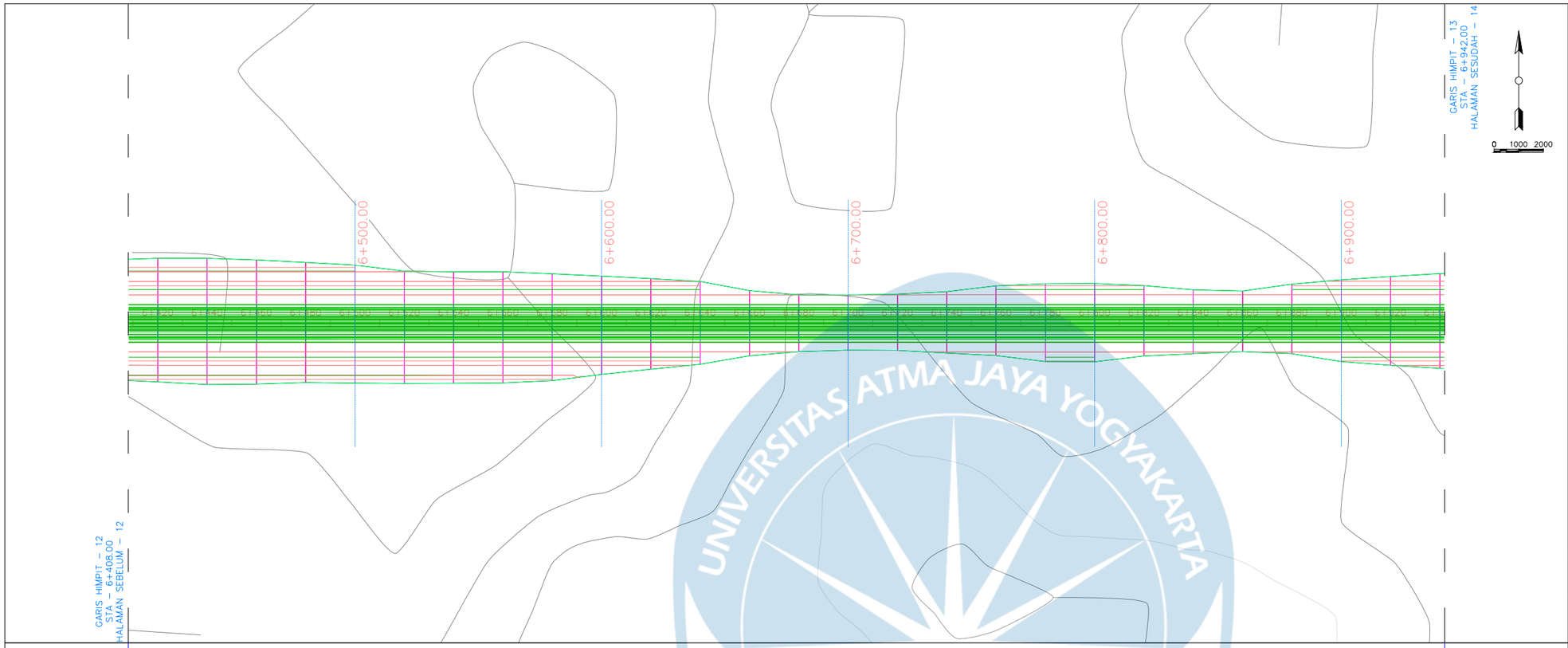

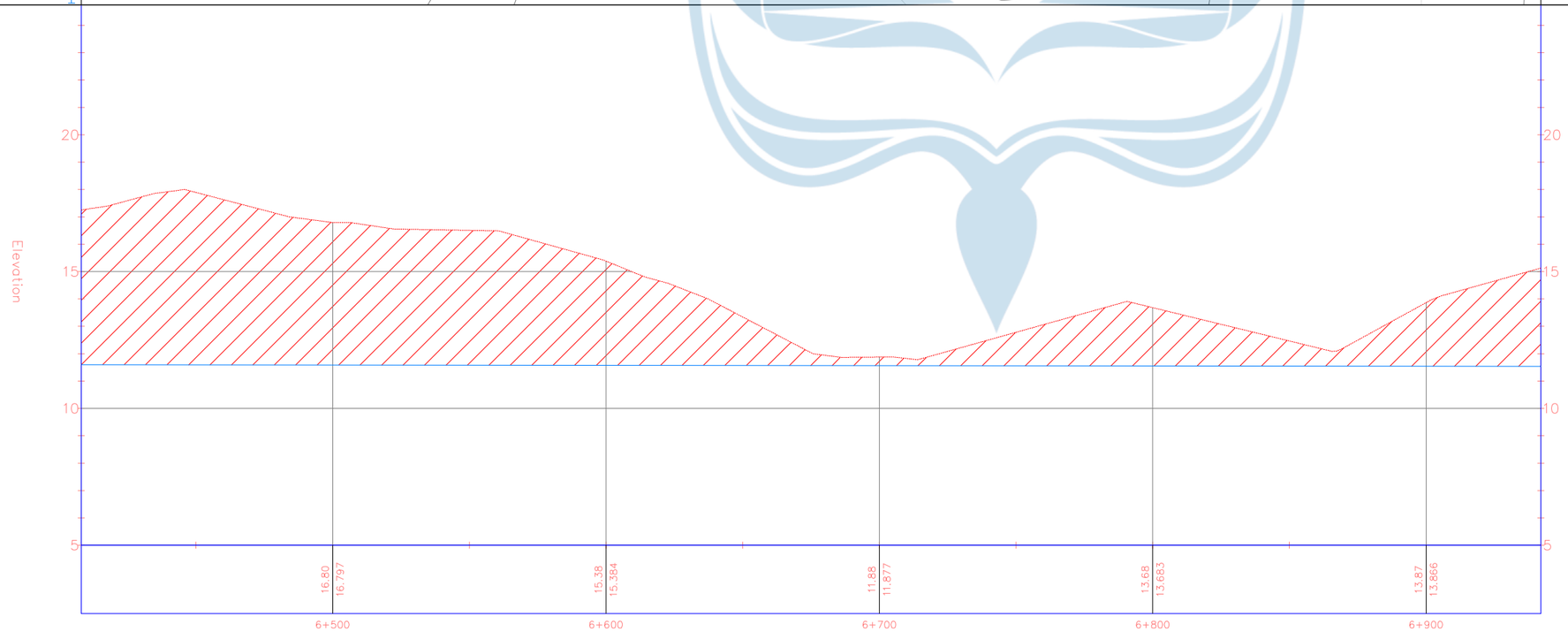

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(200218321)
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(200218355)

Diperiksa Oleh:

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Disetujui Oleh:

Dr. Ir. Imam Basuki, M.T.

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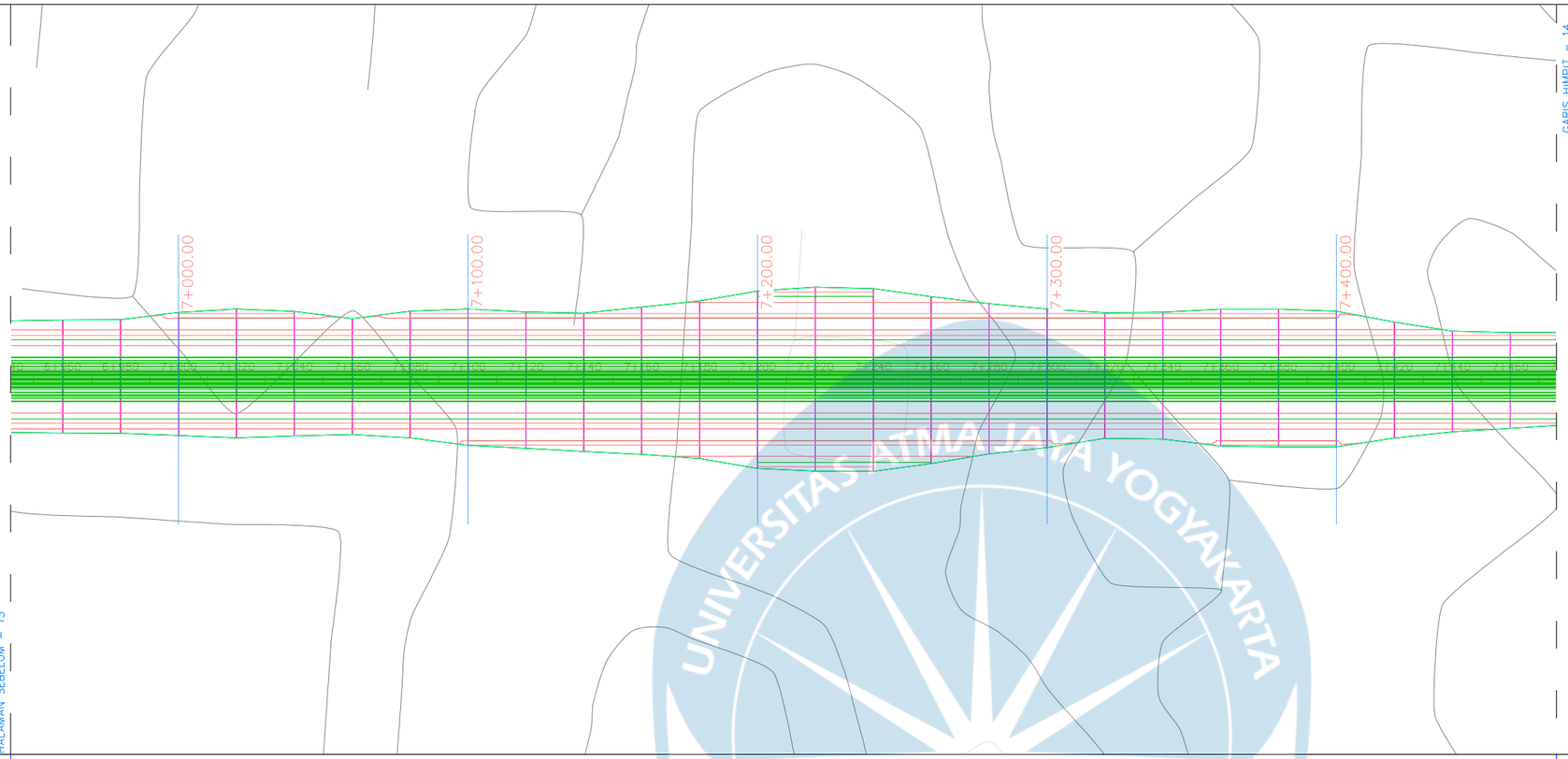

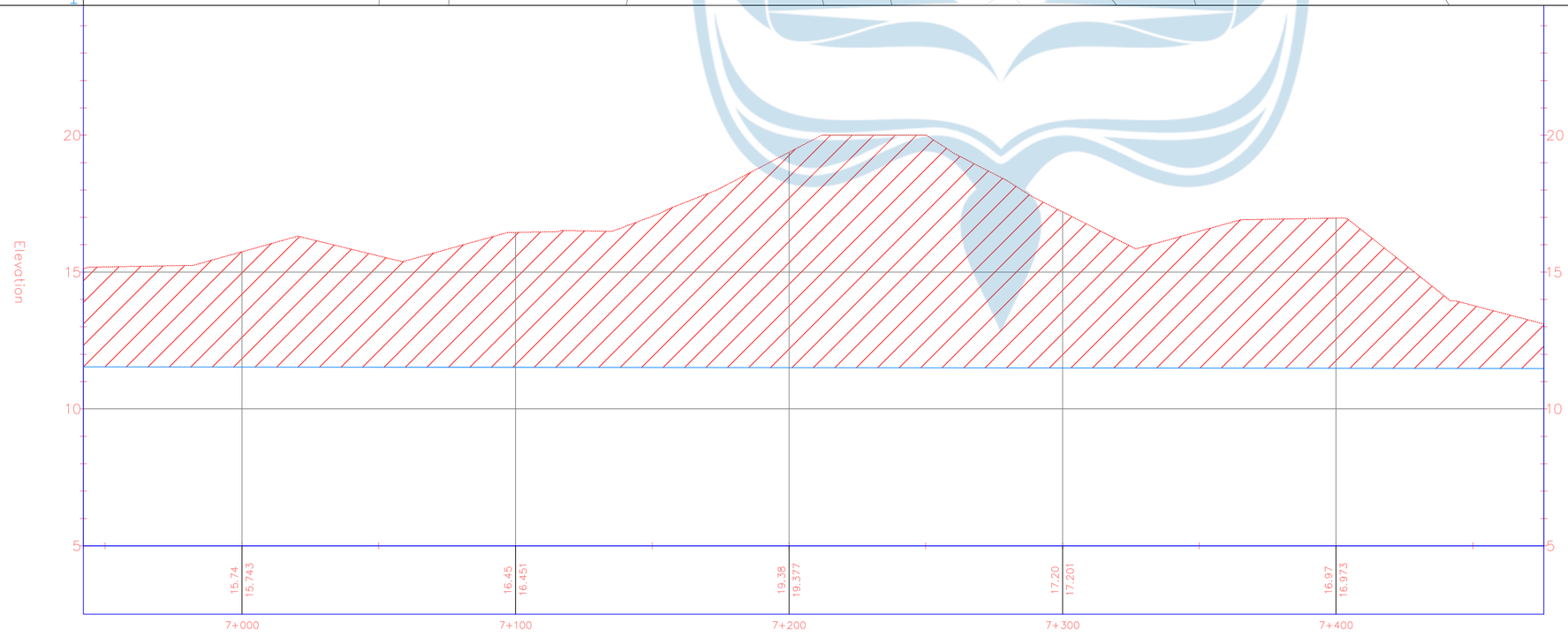

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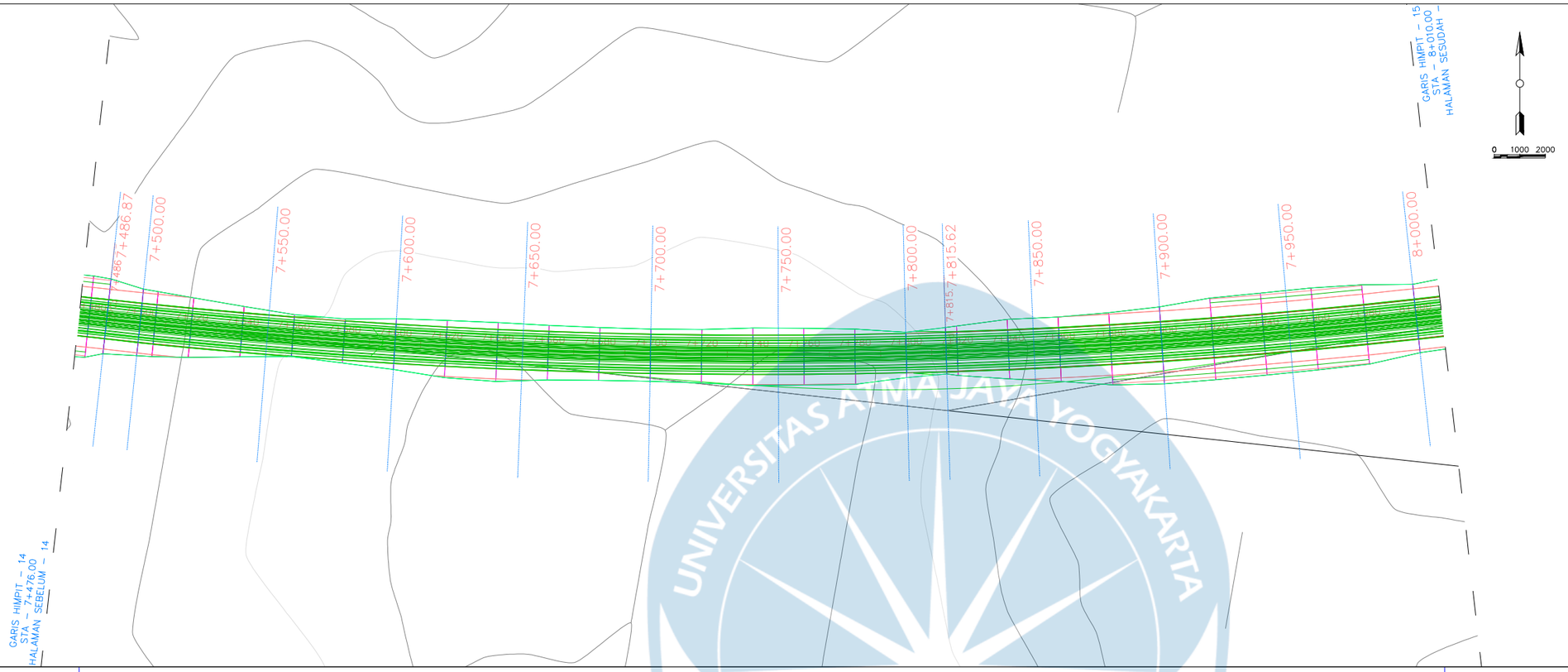

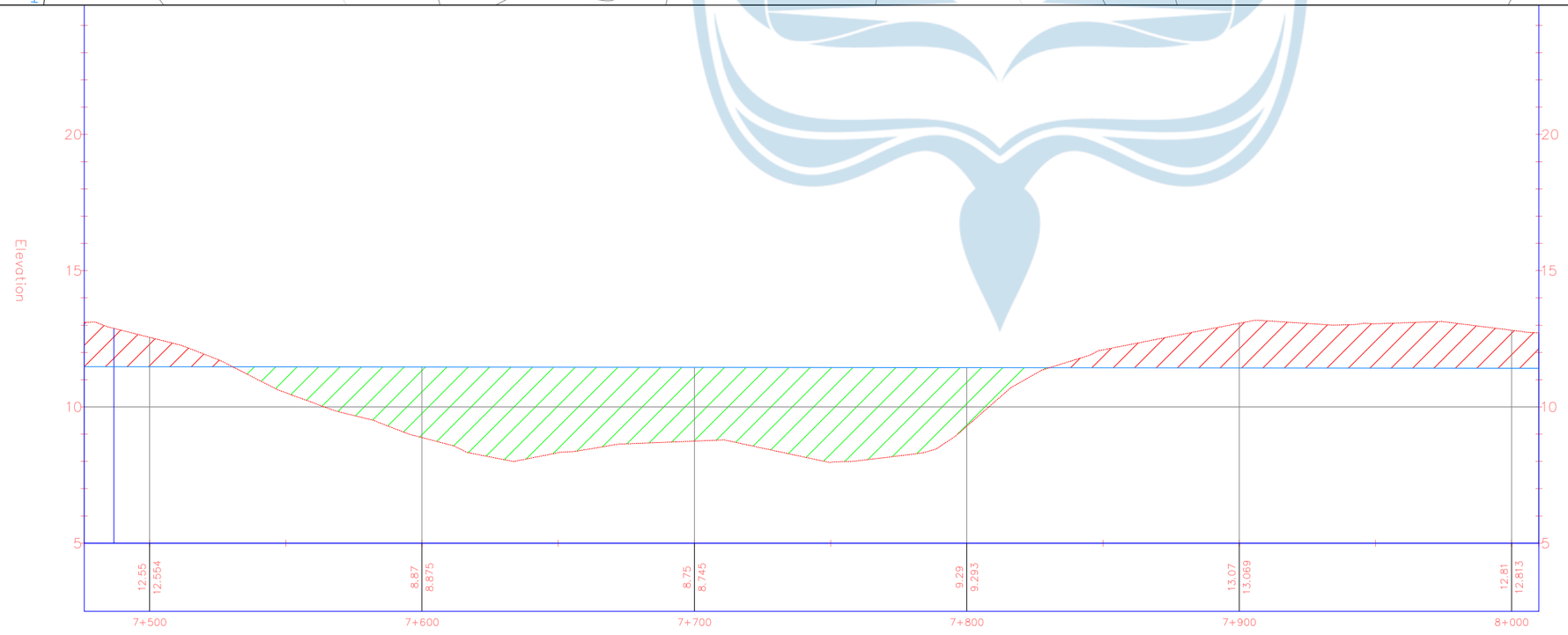

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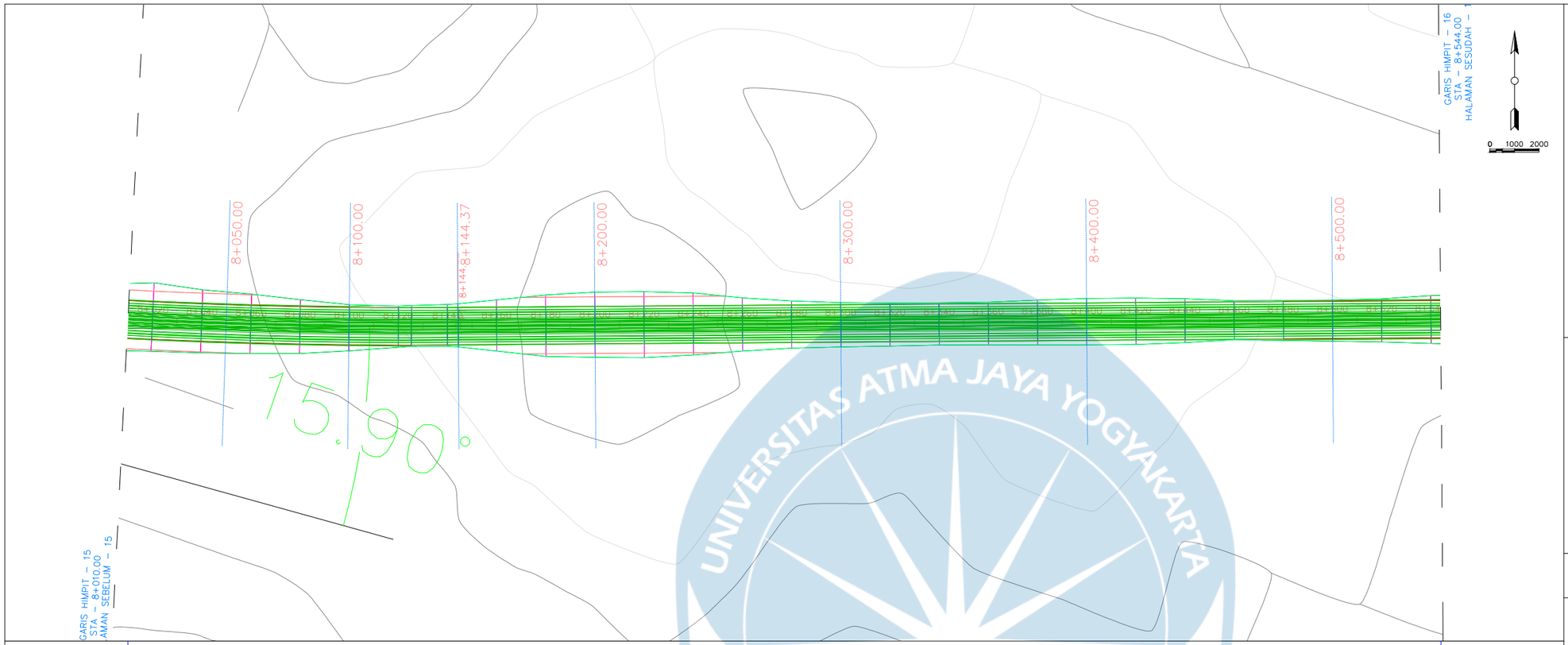

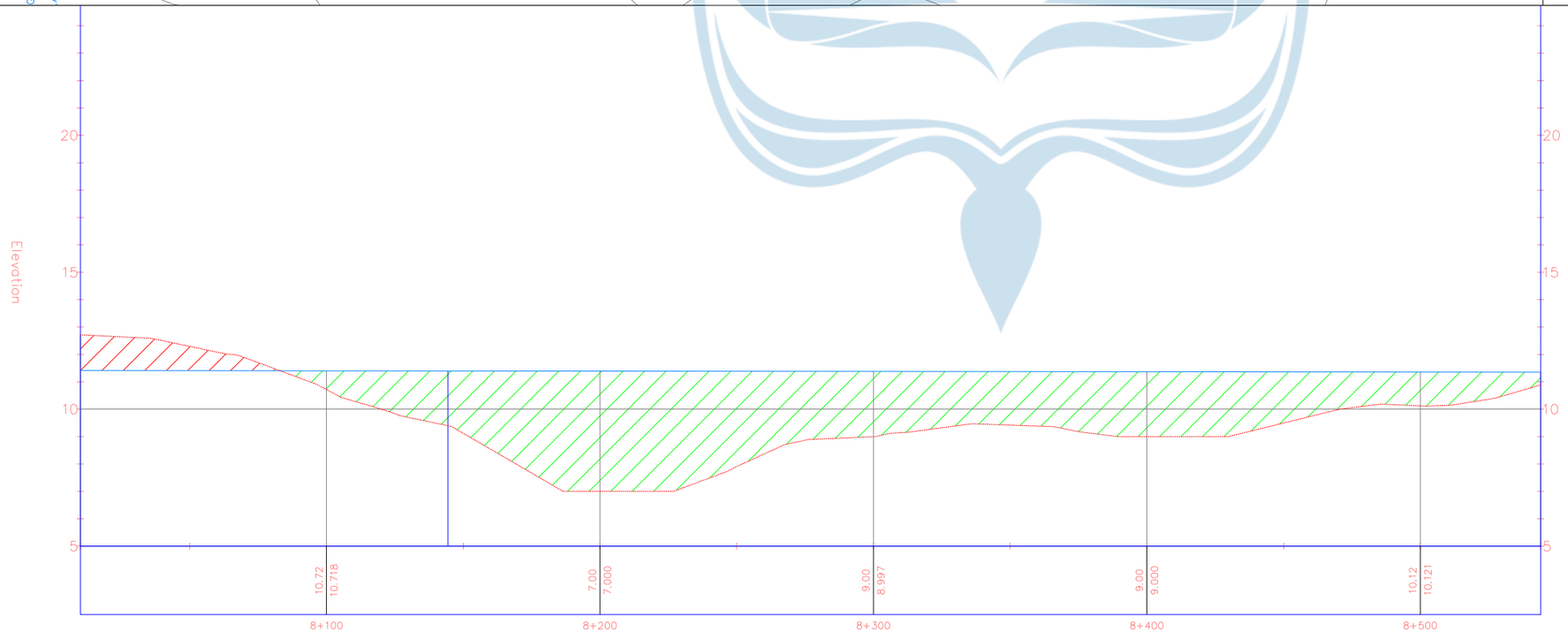

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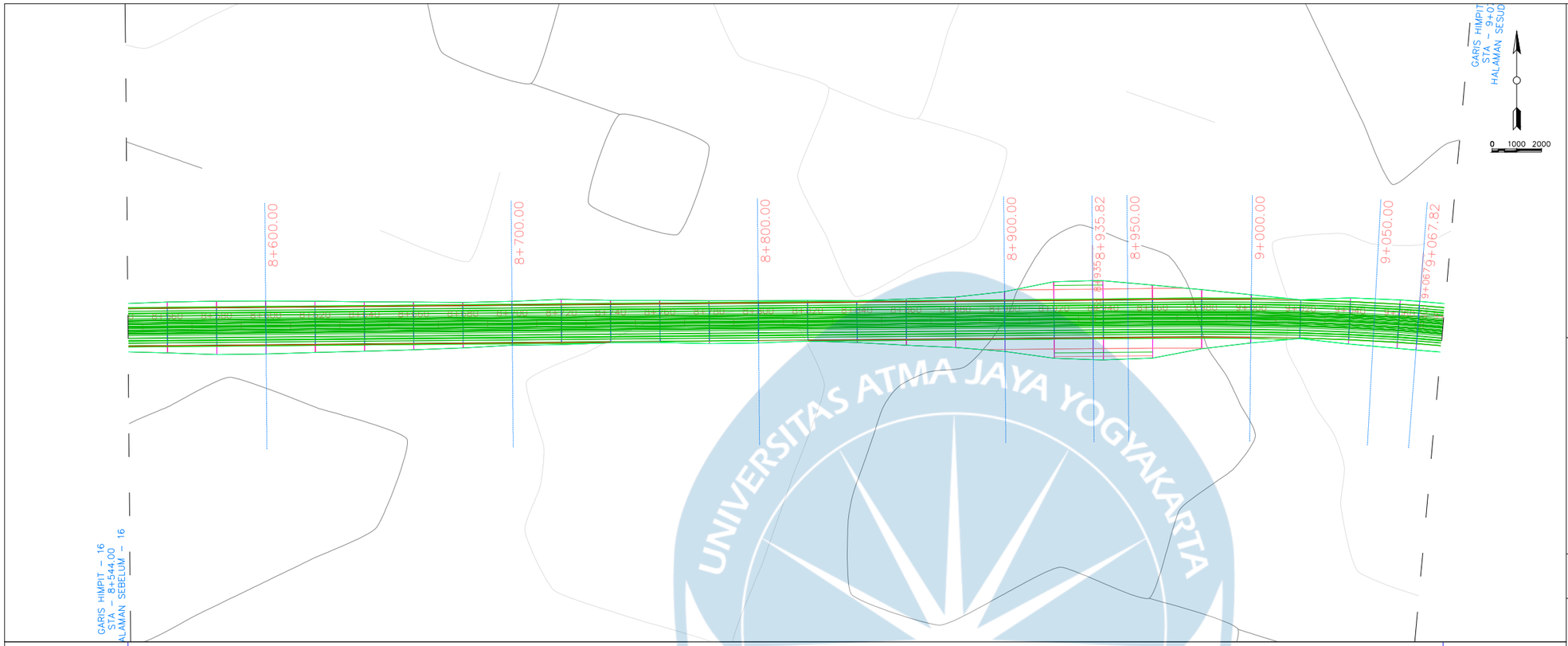

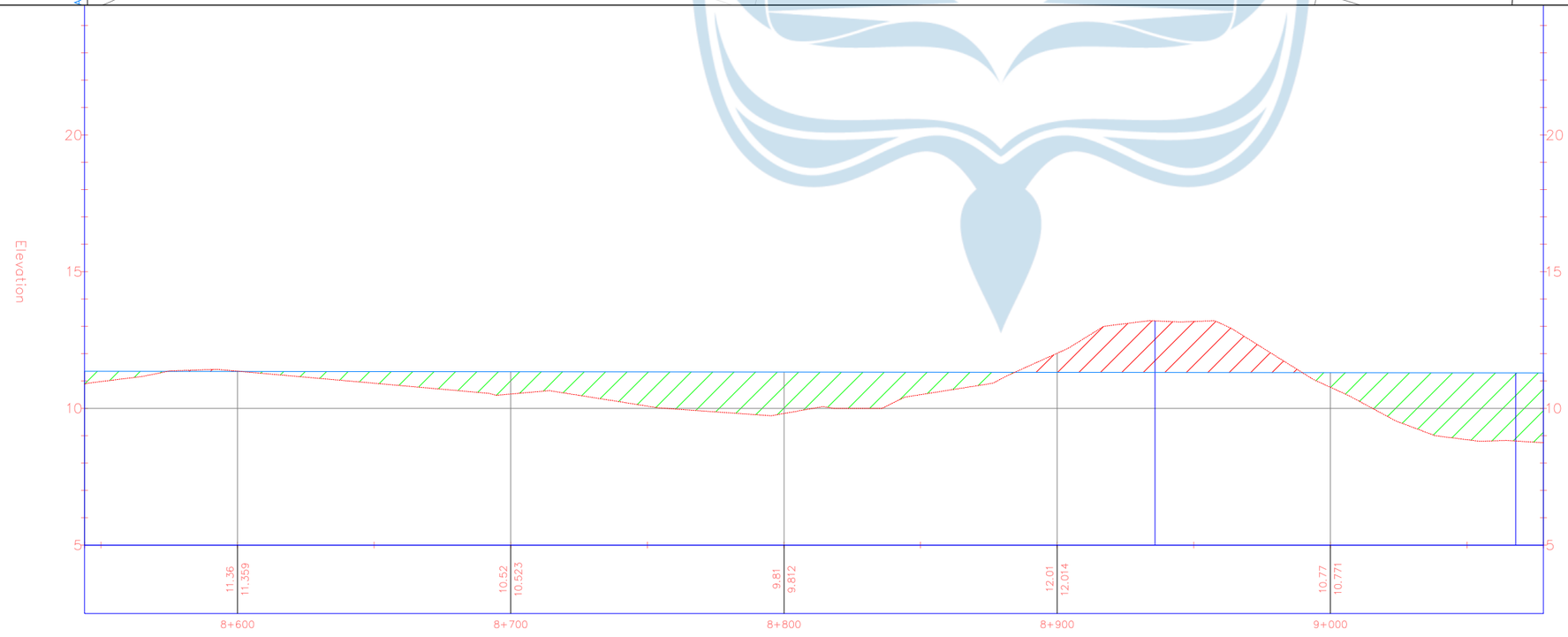

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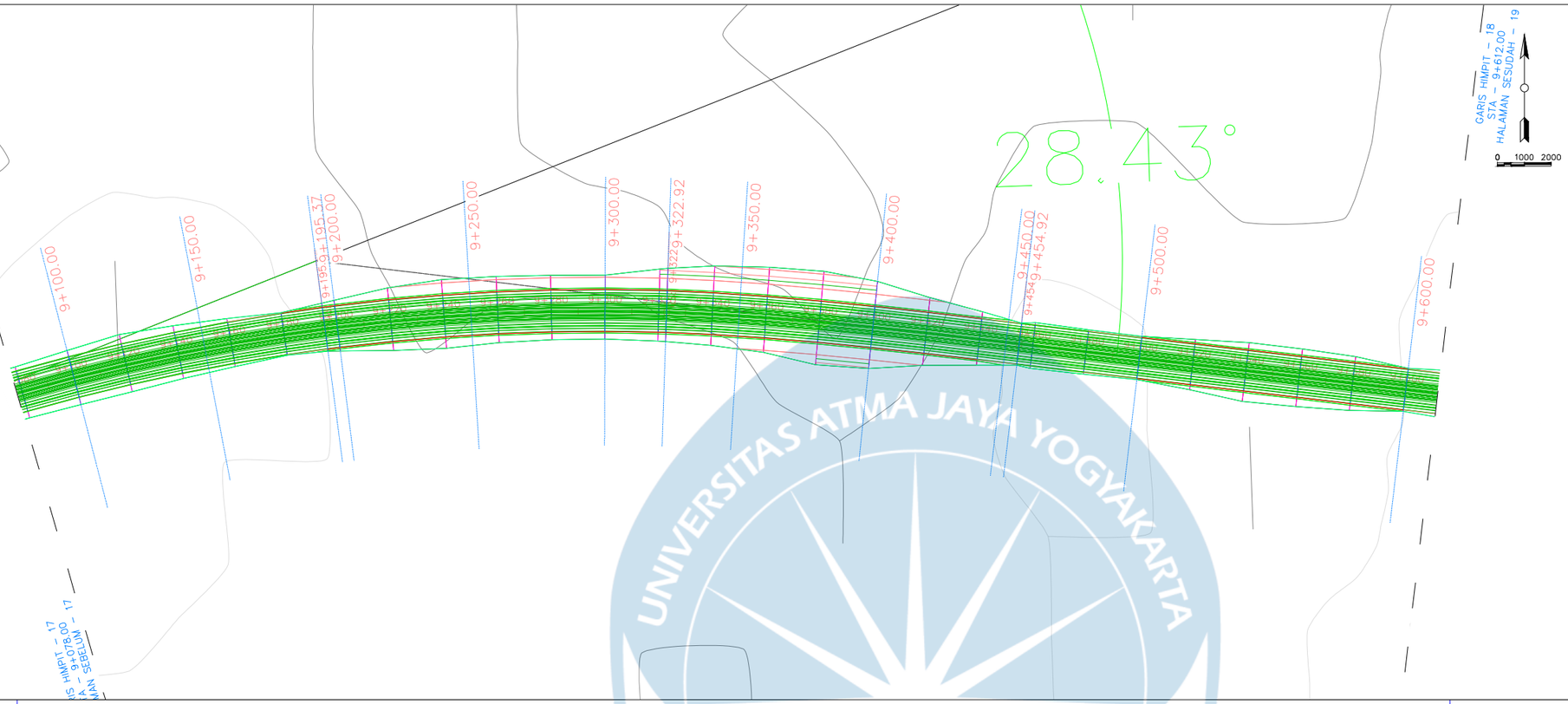

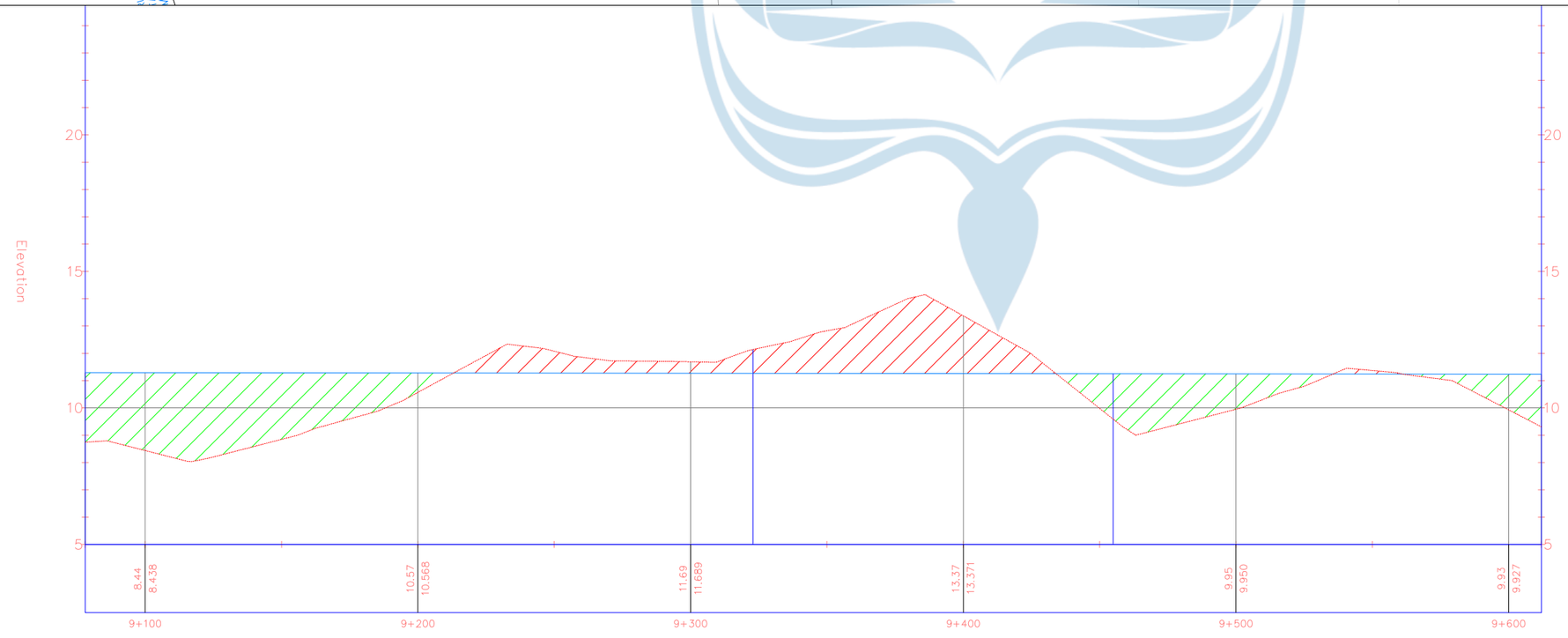

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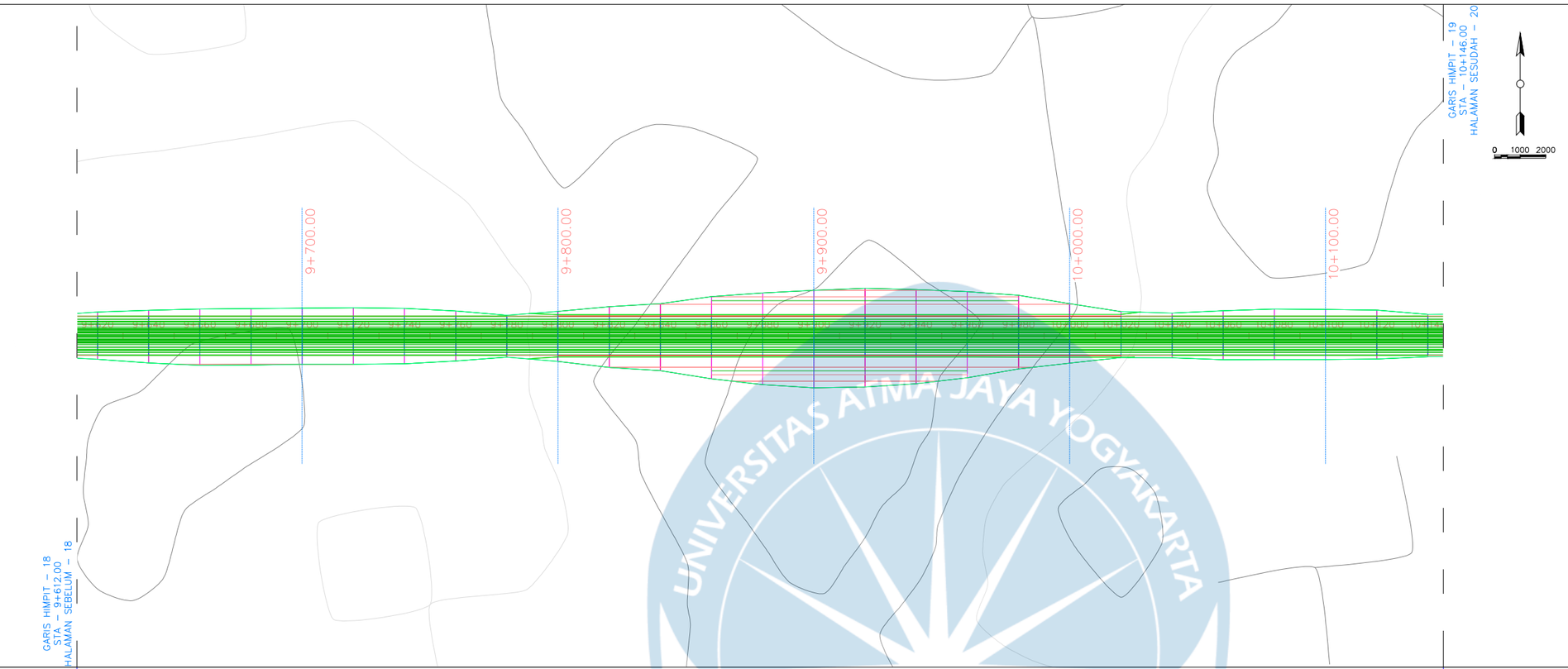

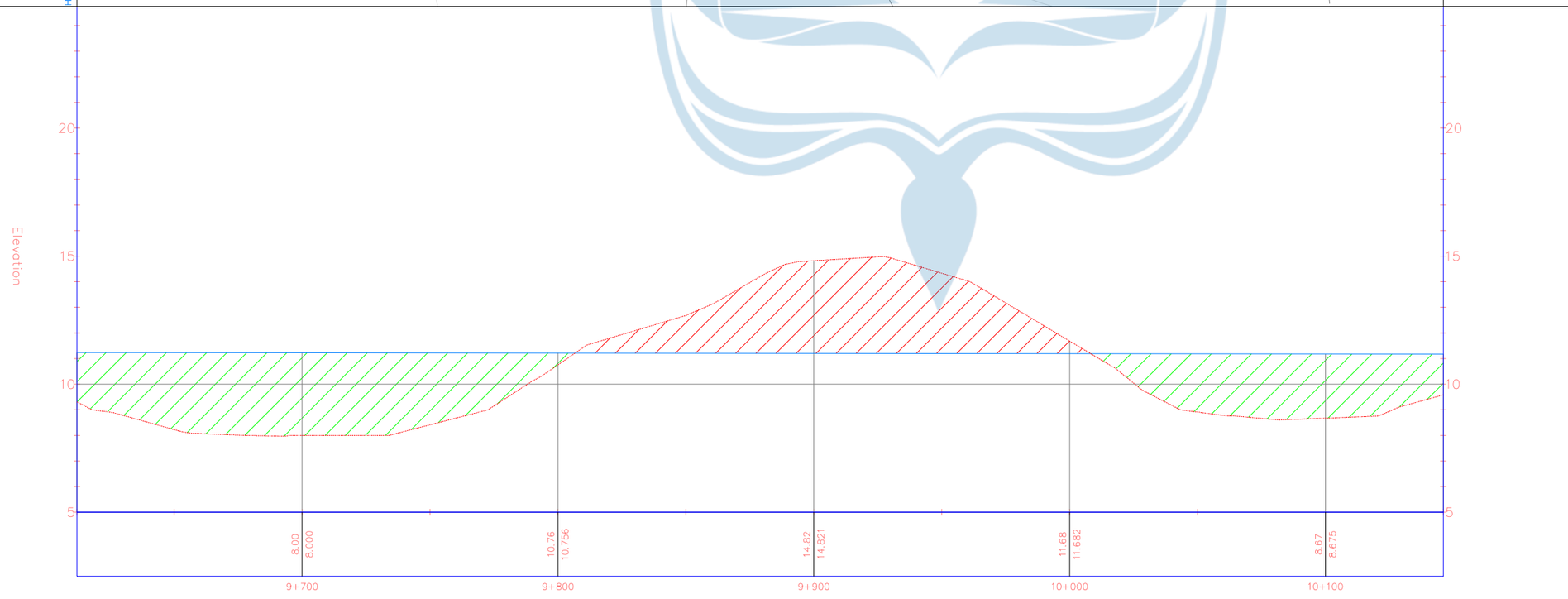

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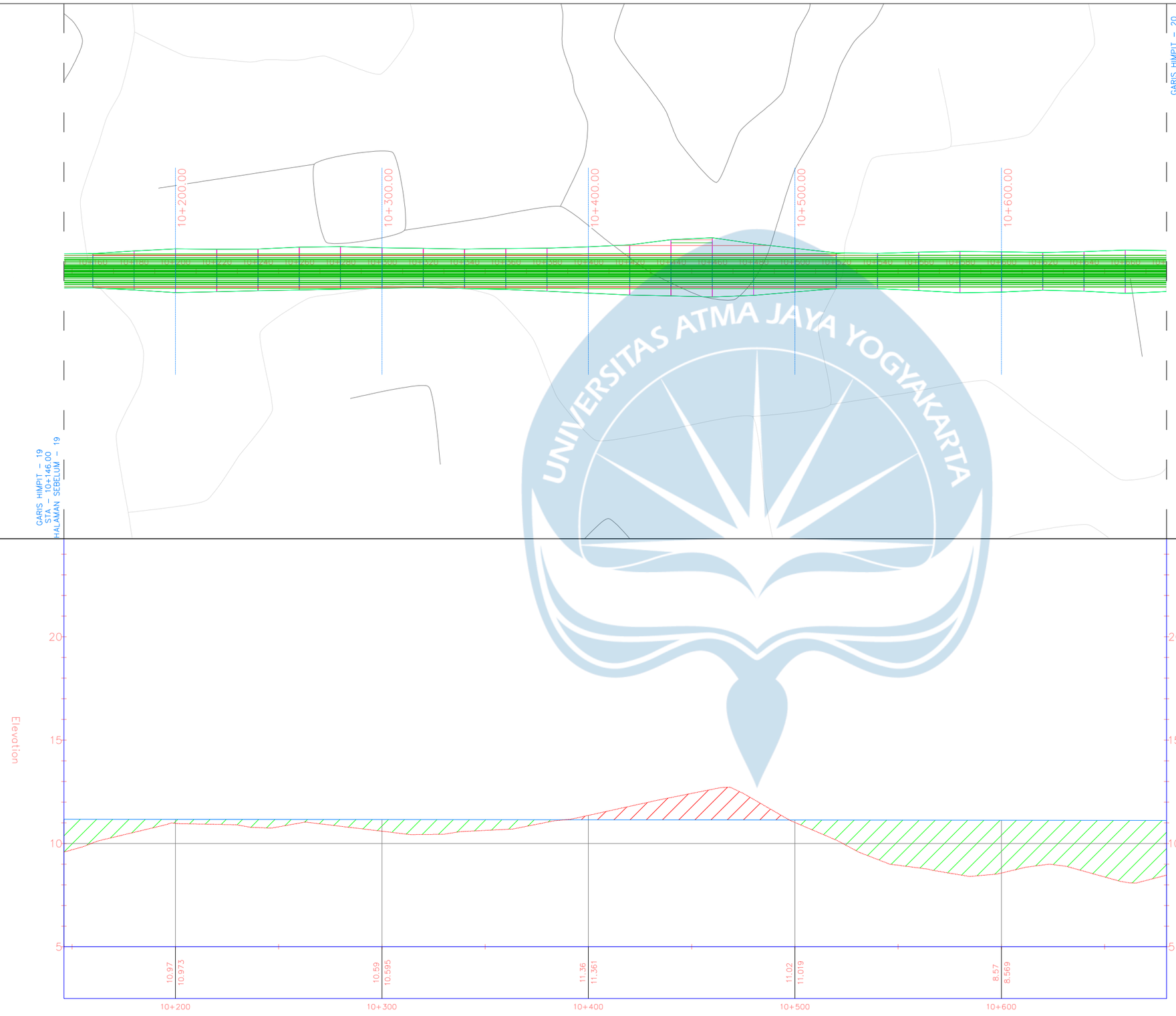

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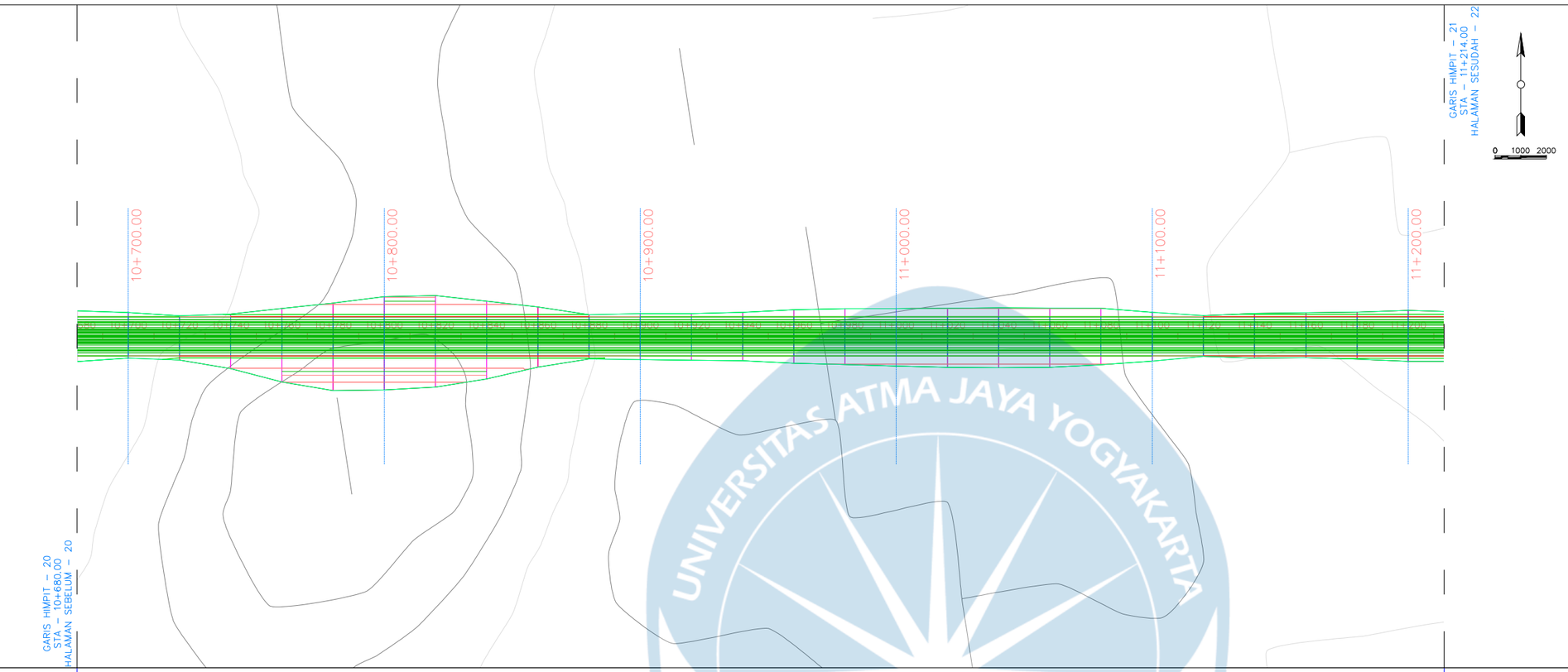

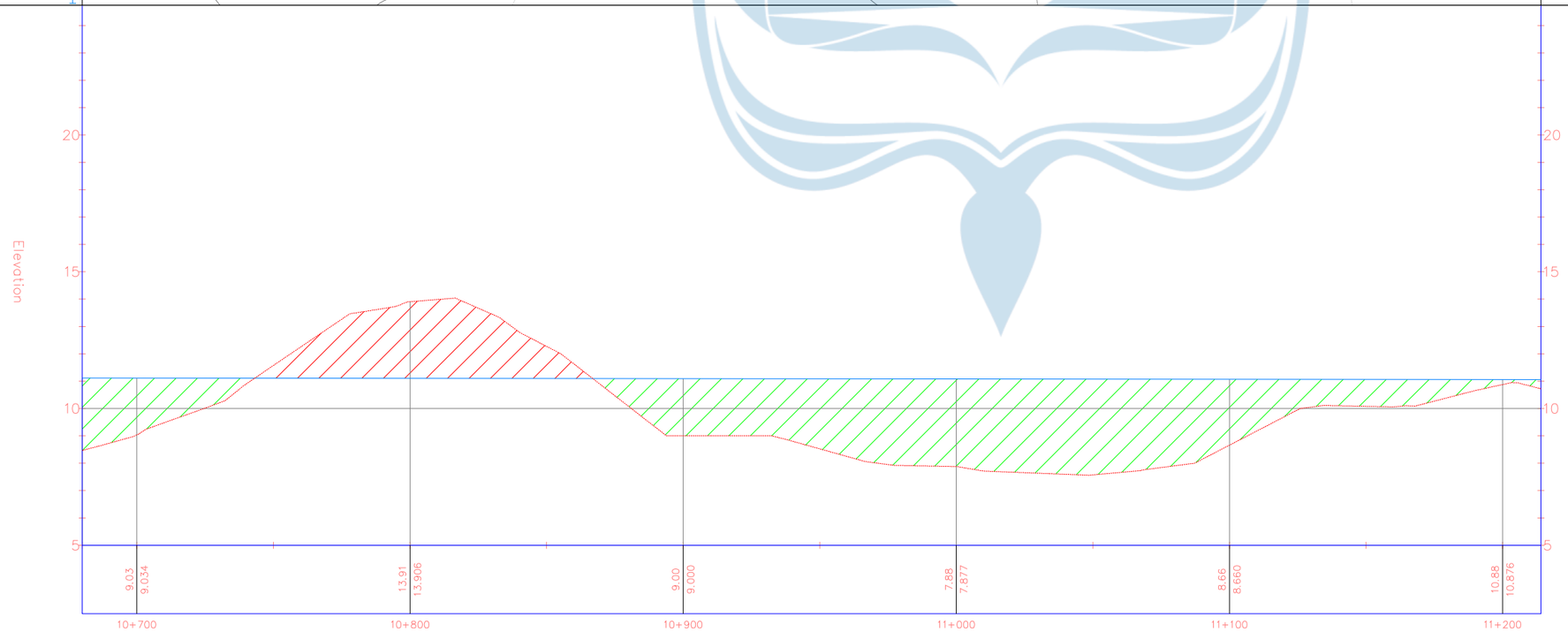

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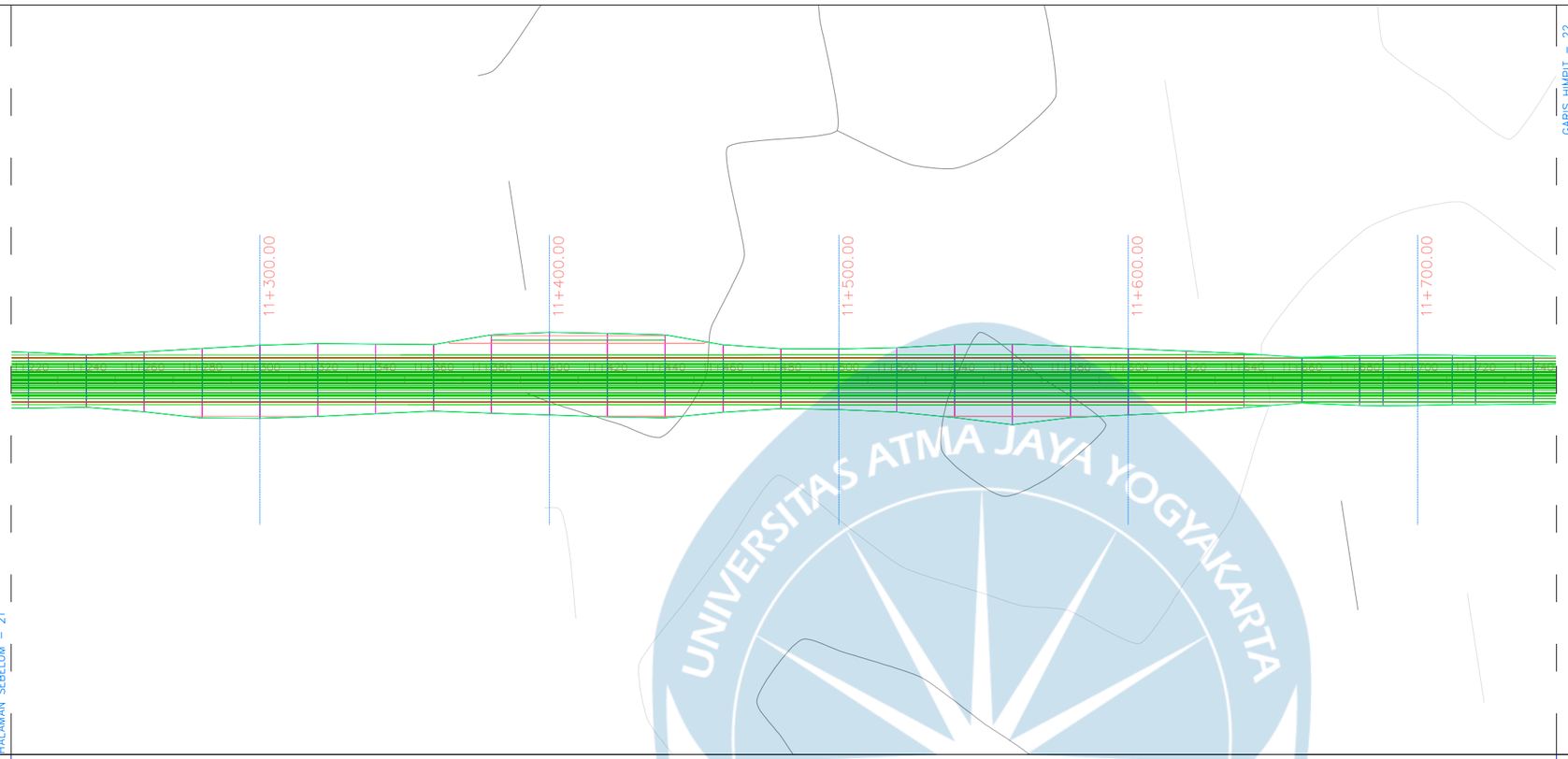

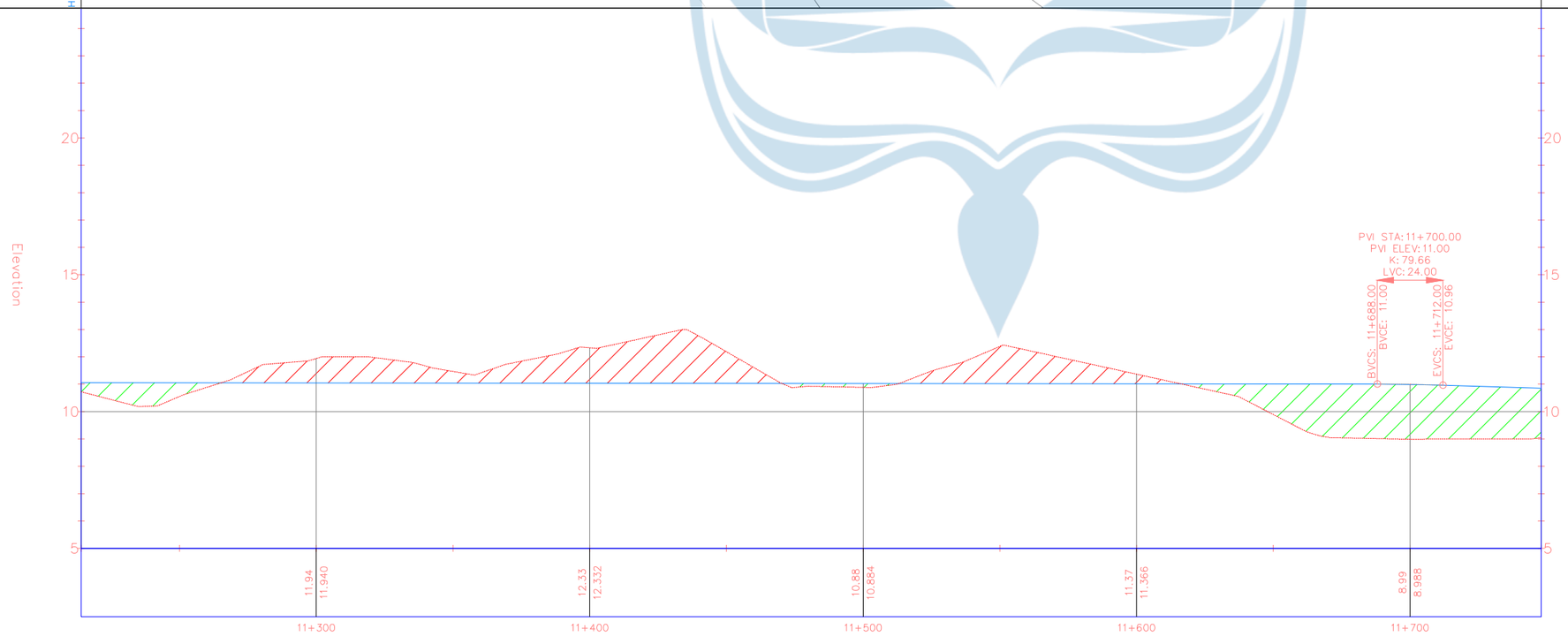

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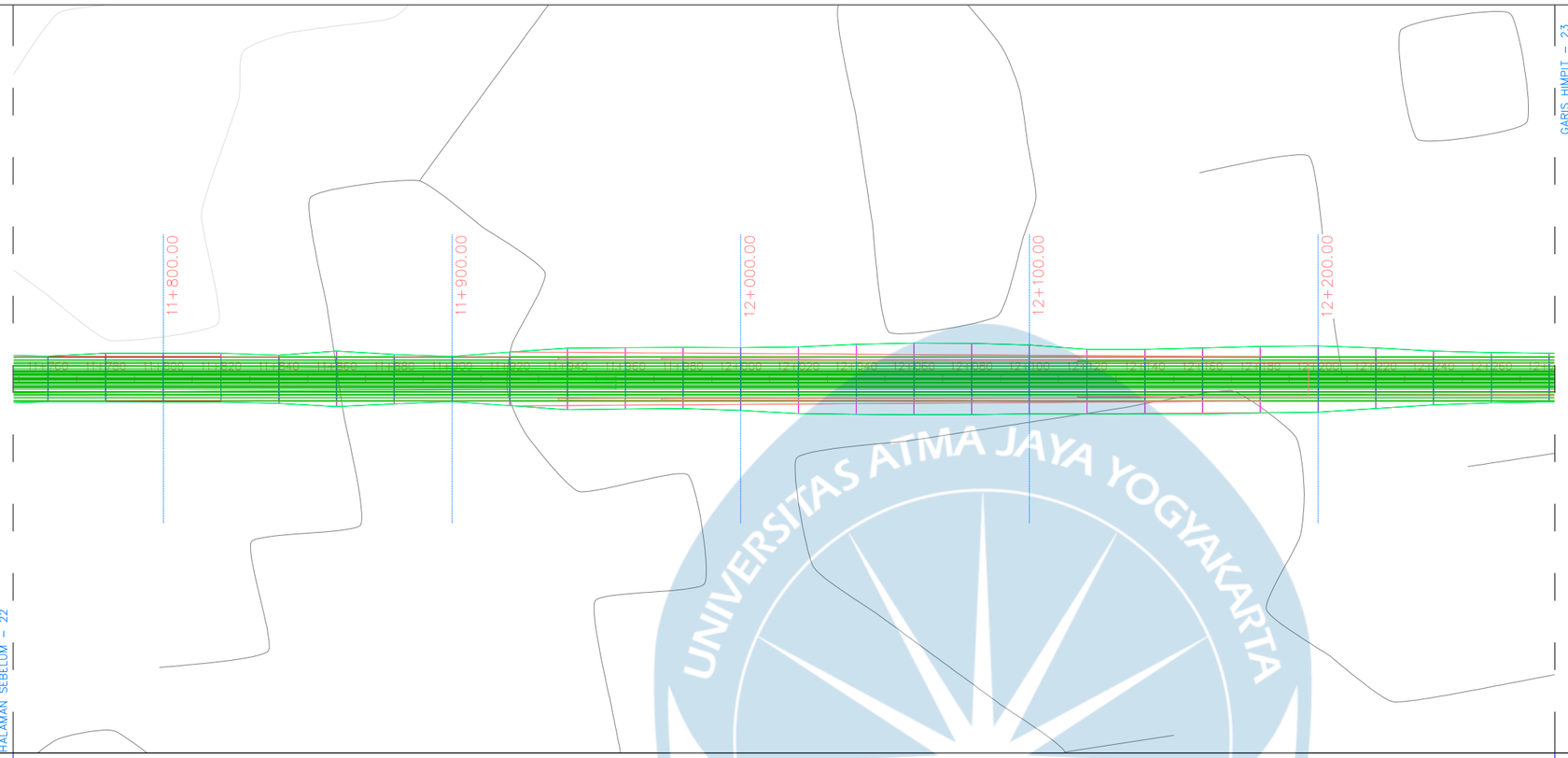

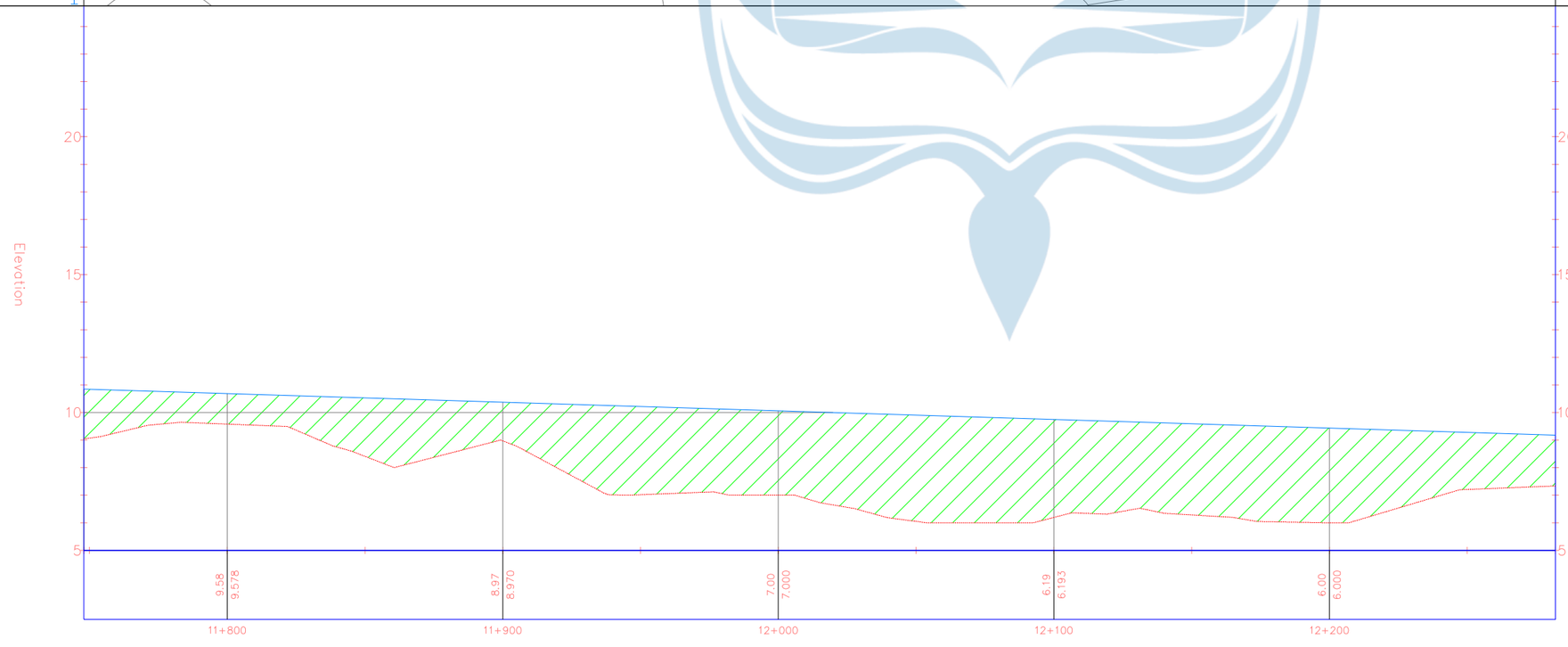

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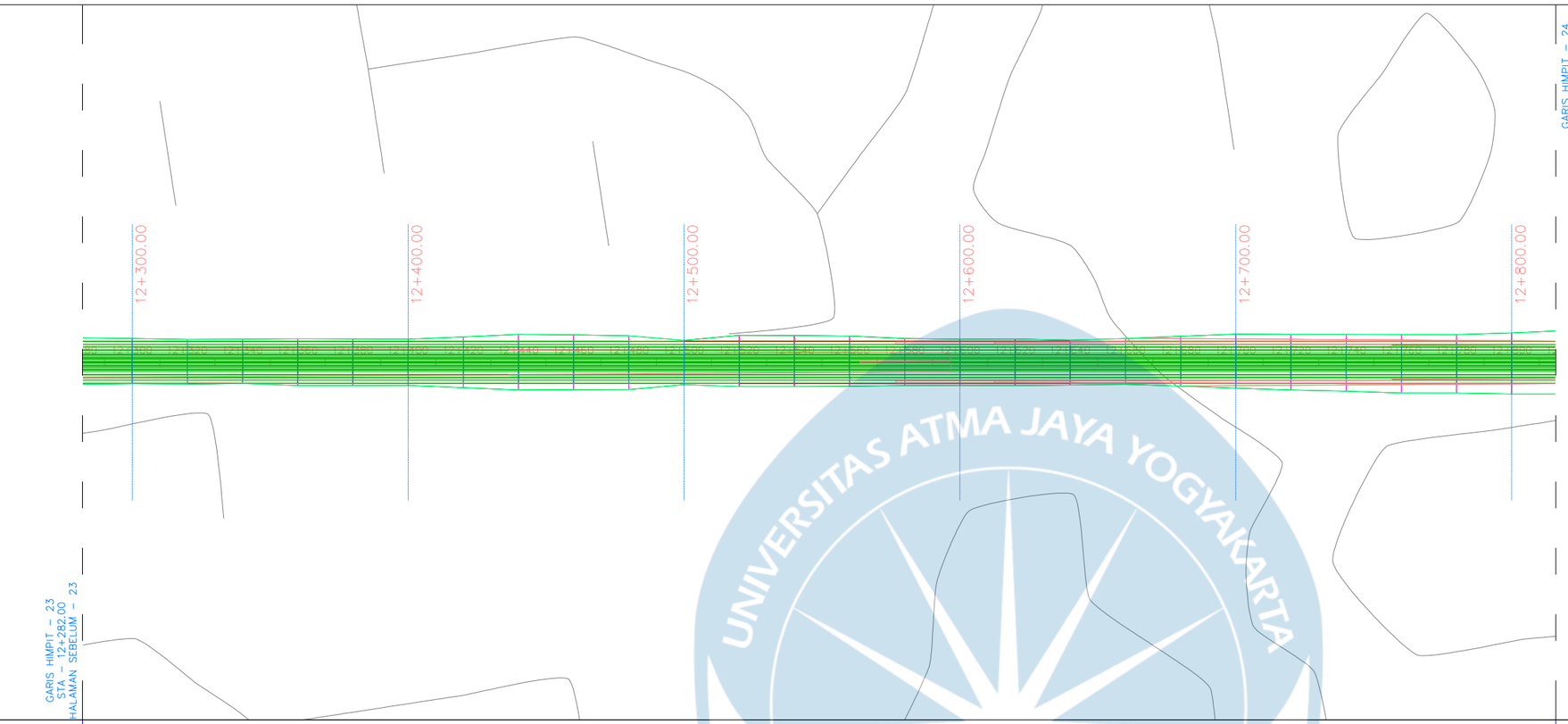

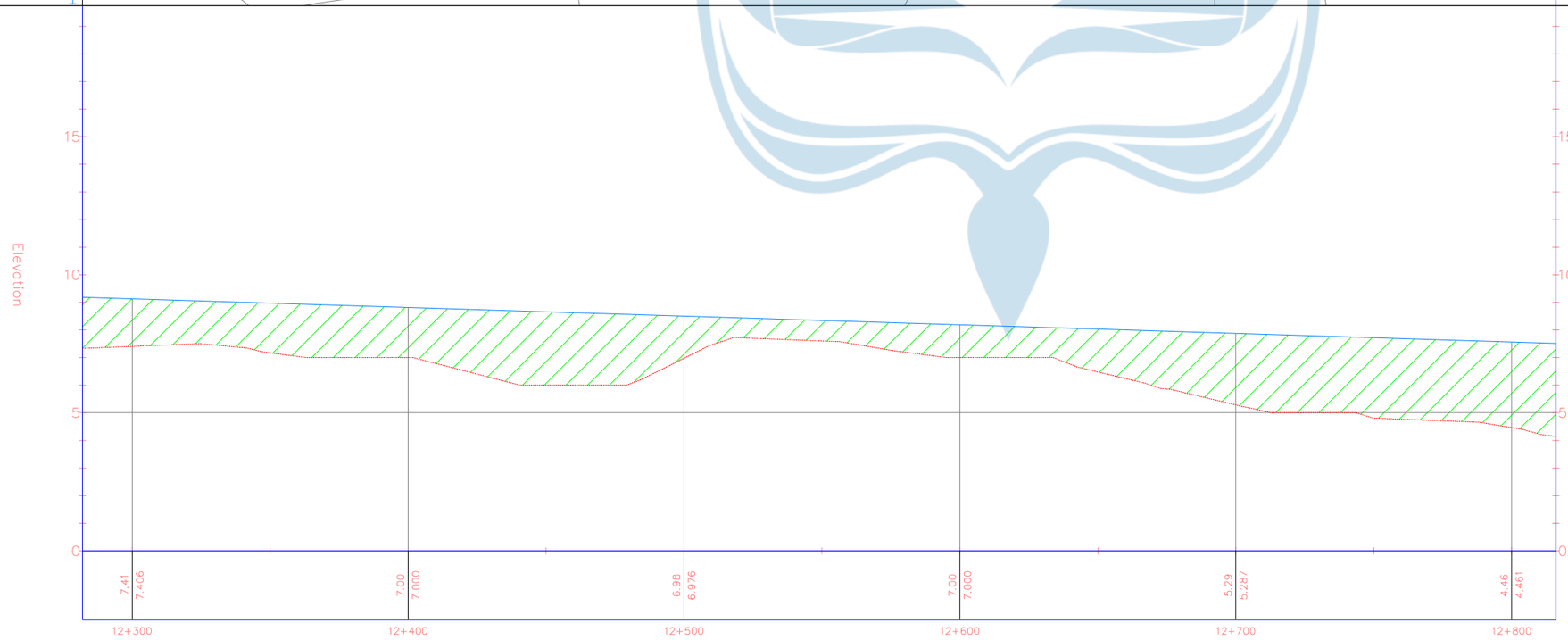

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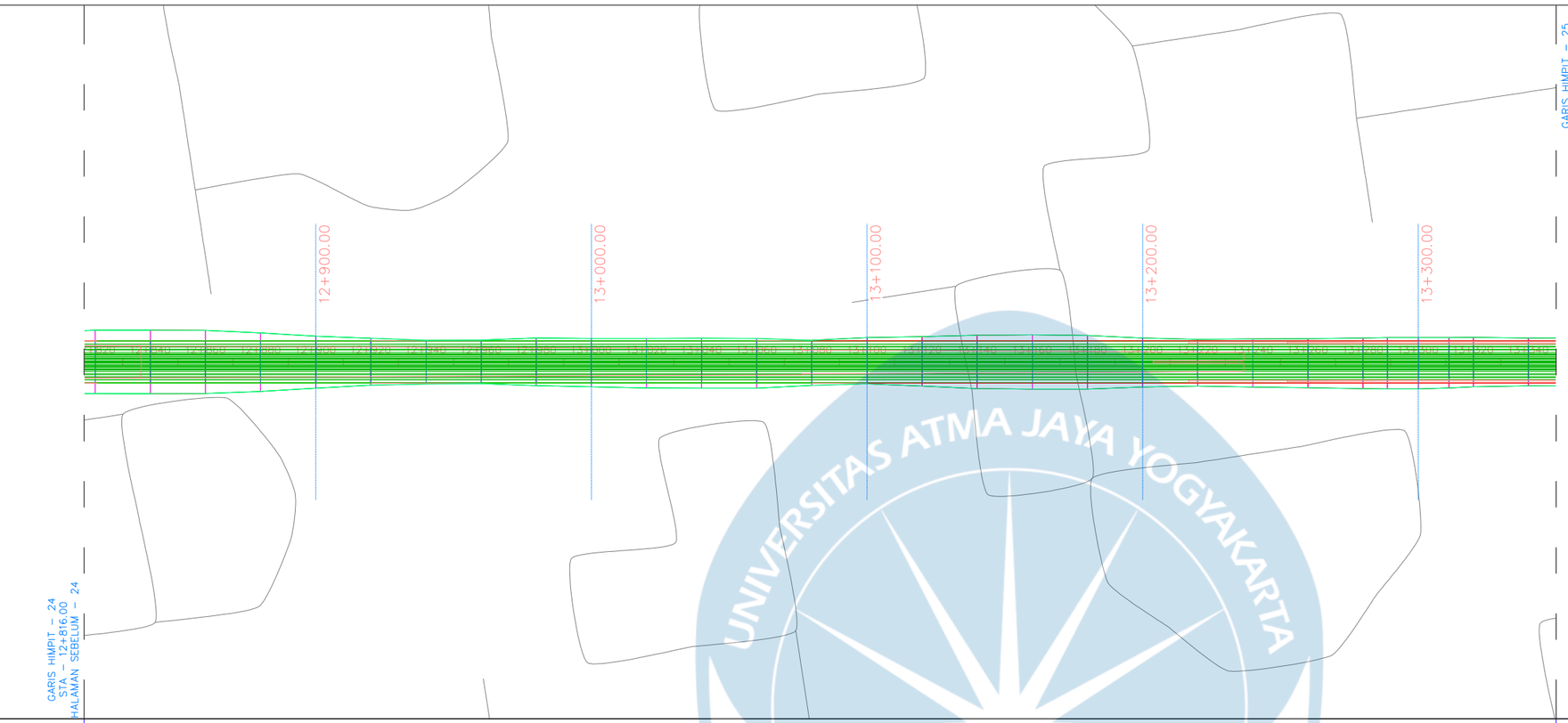

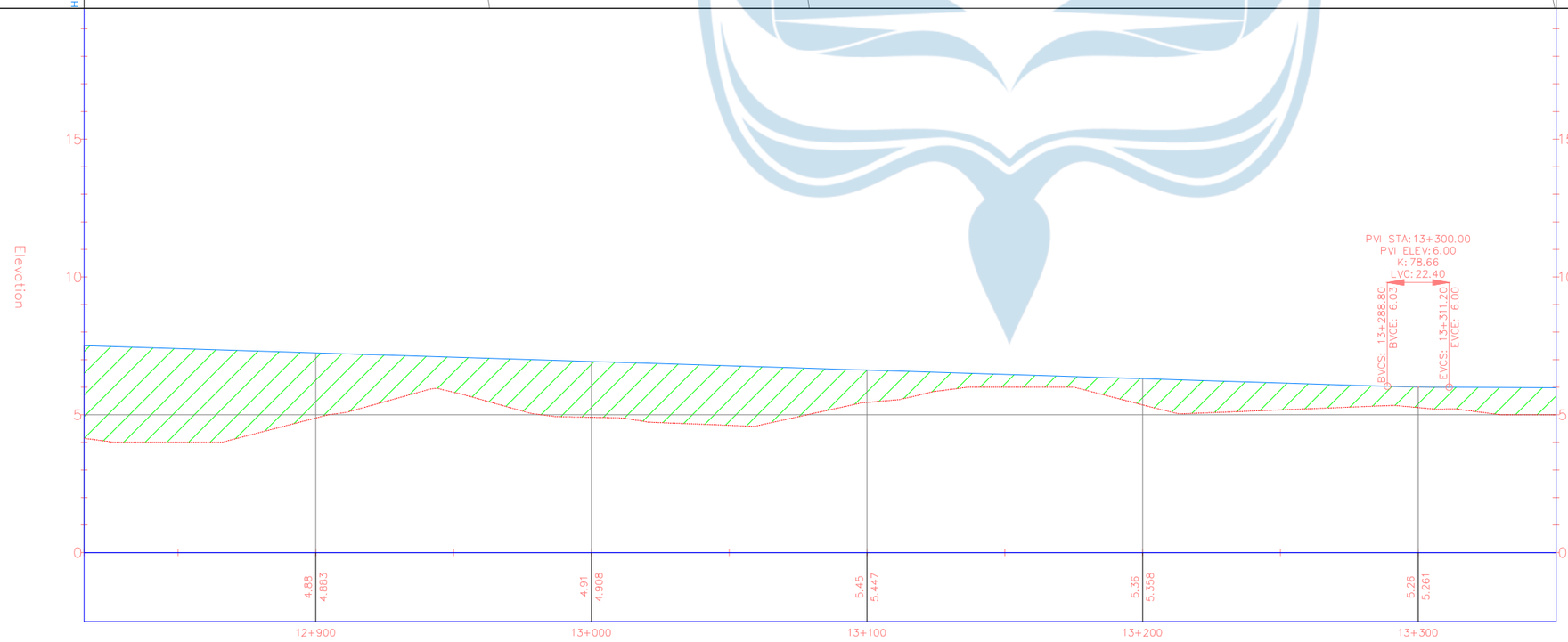

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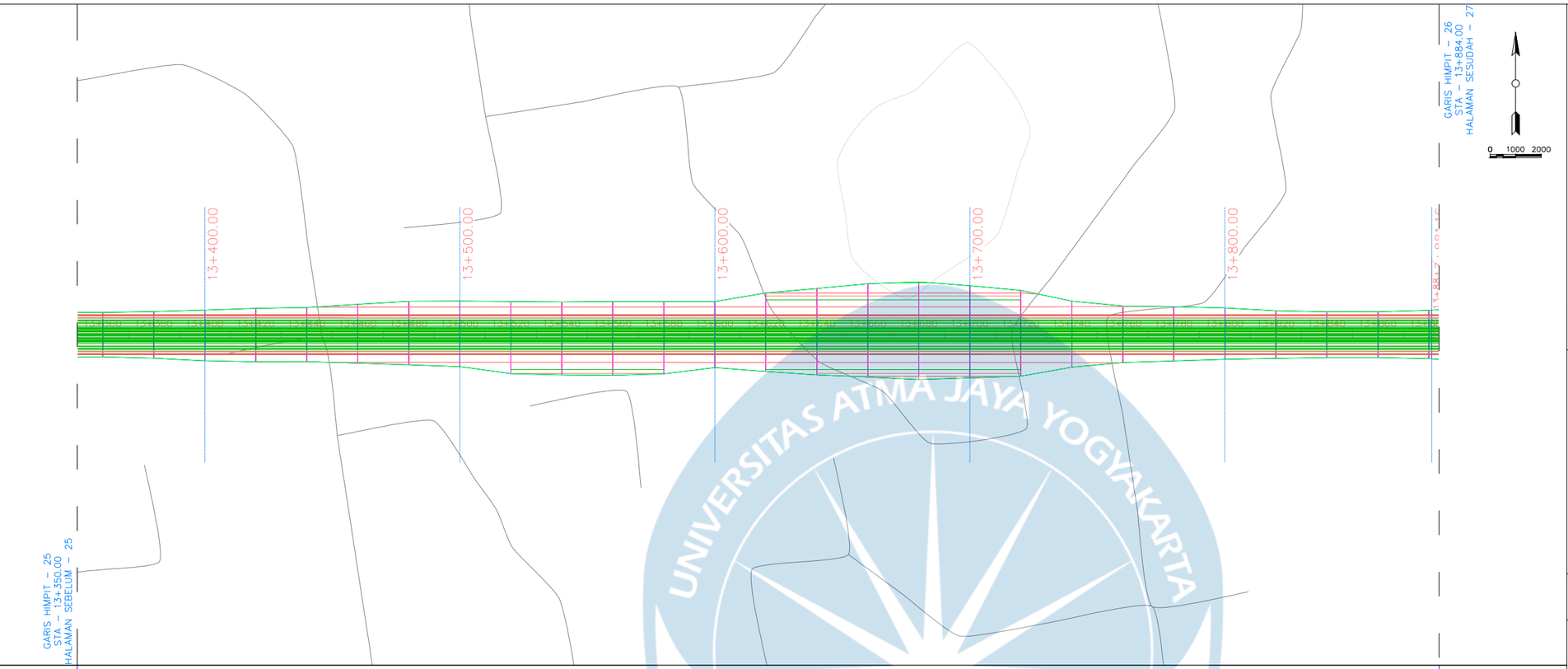

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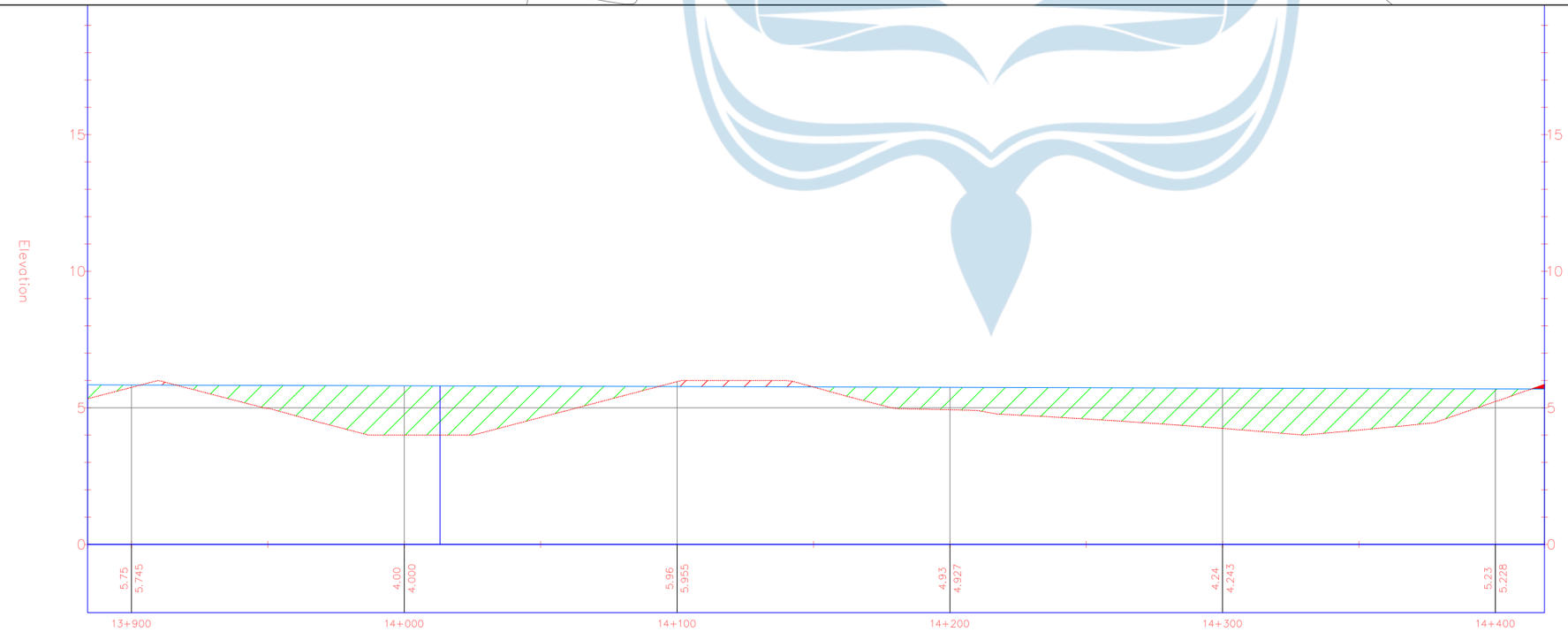

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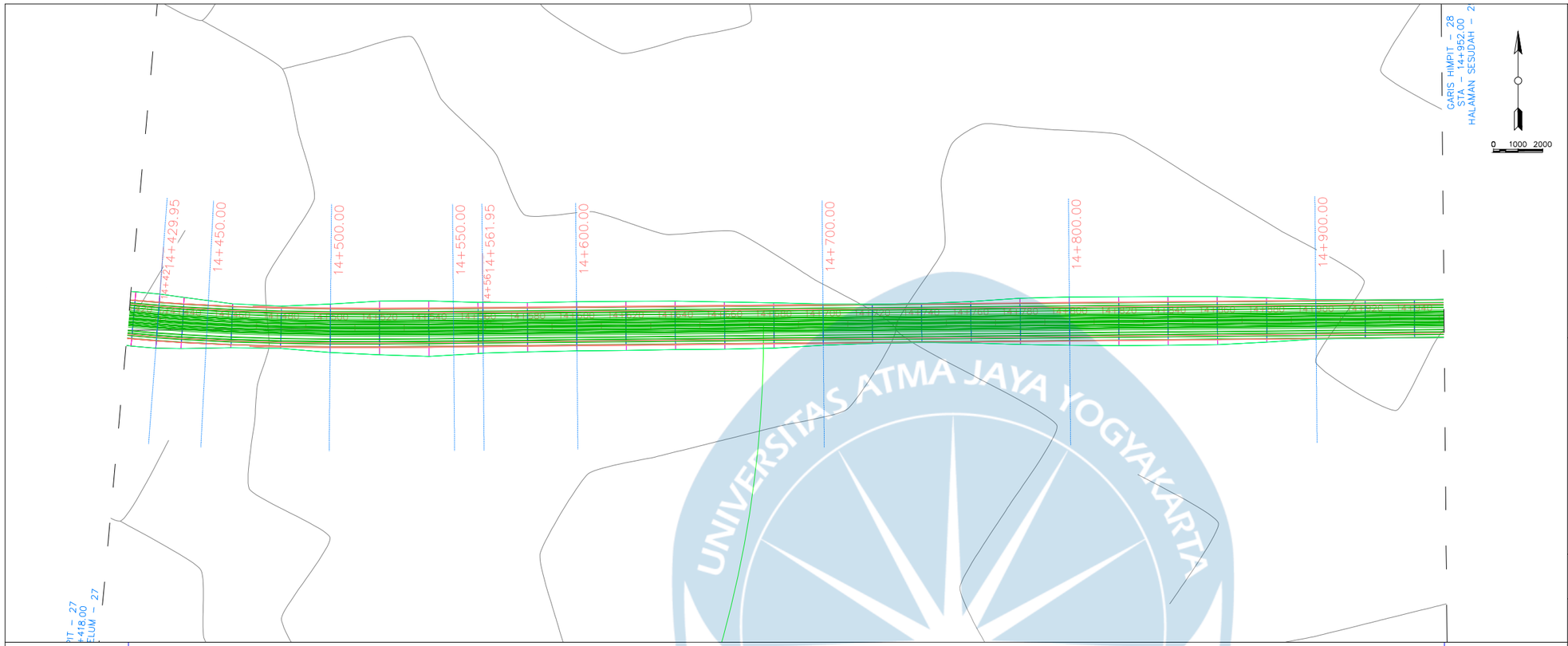

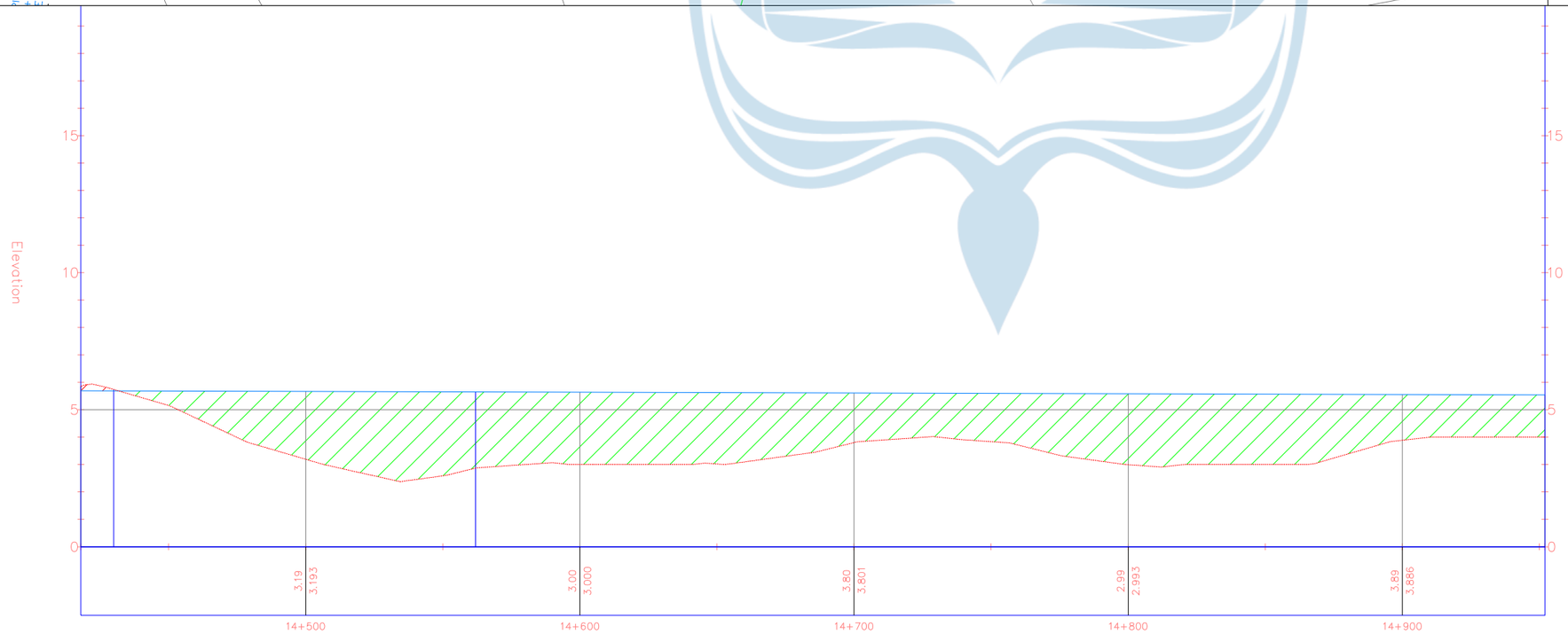

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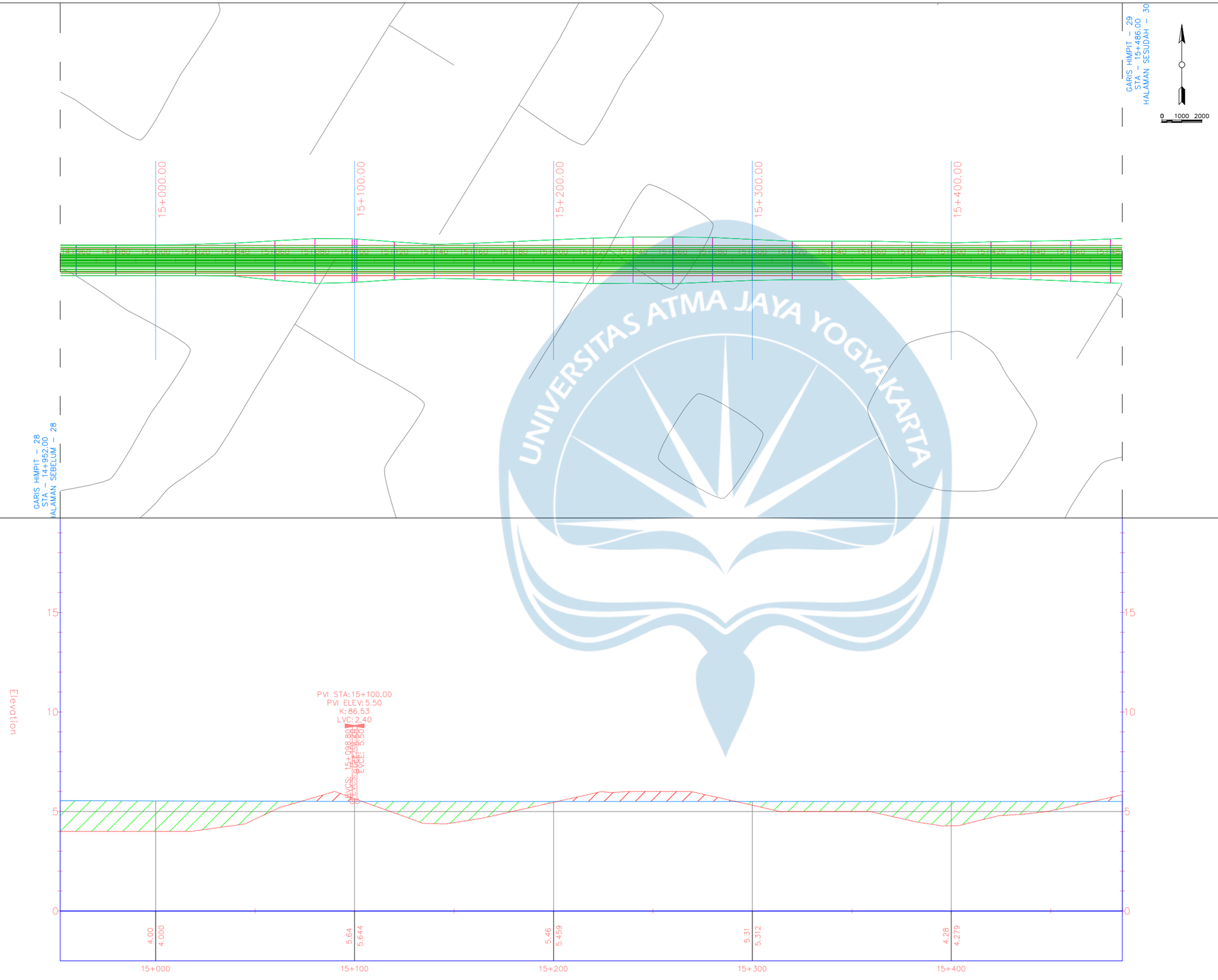

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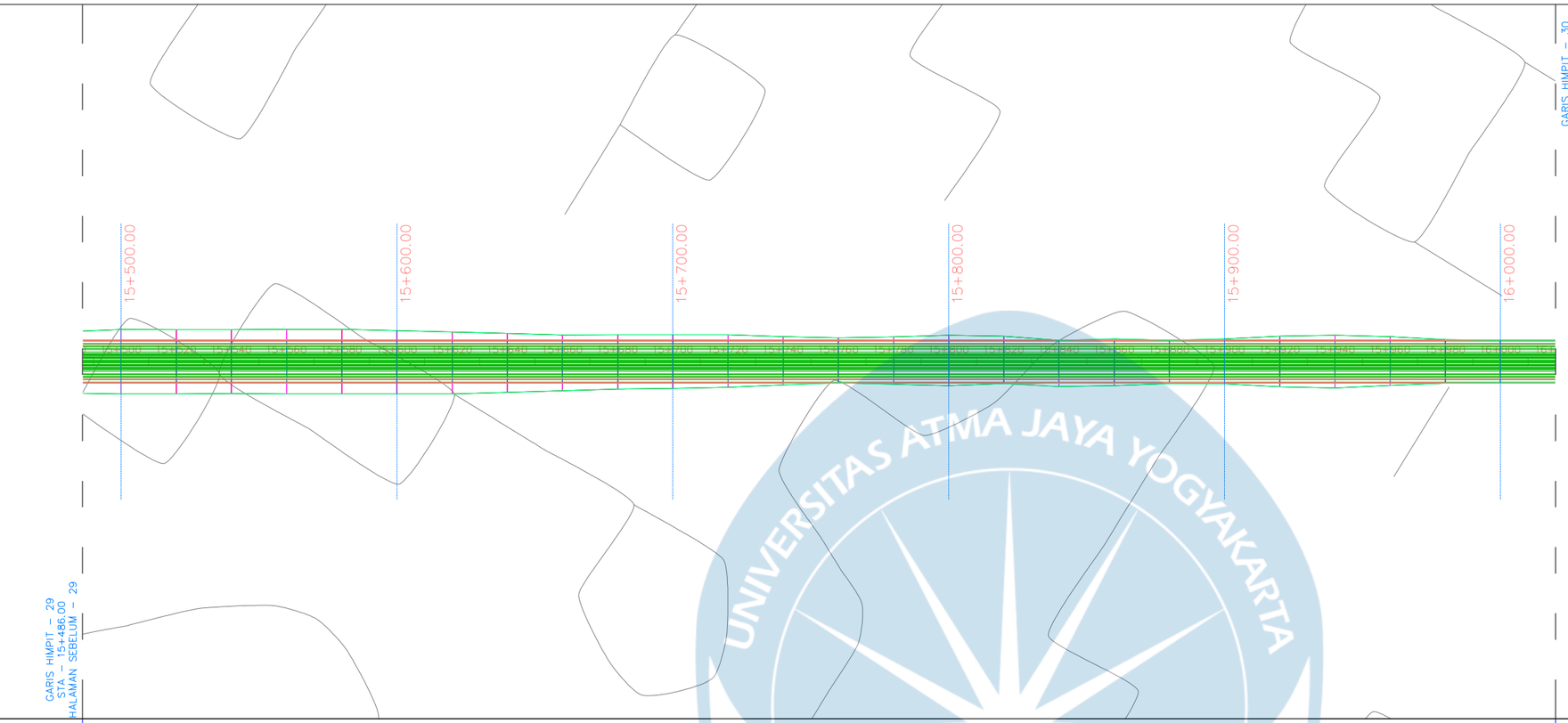

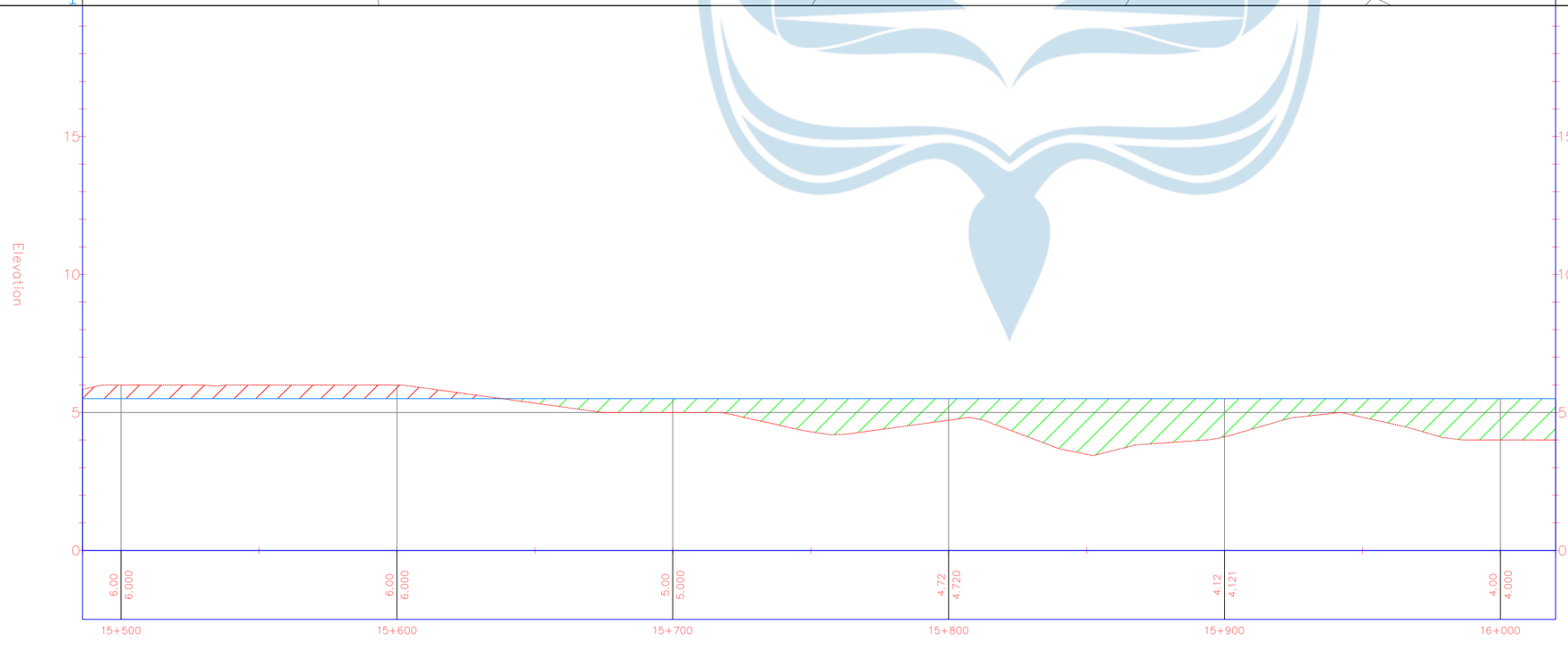

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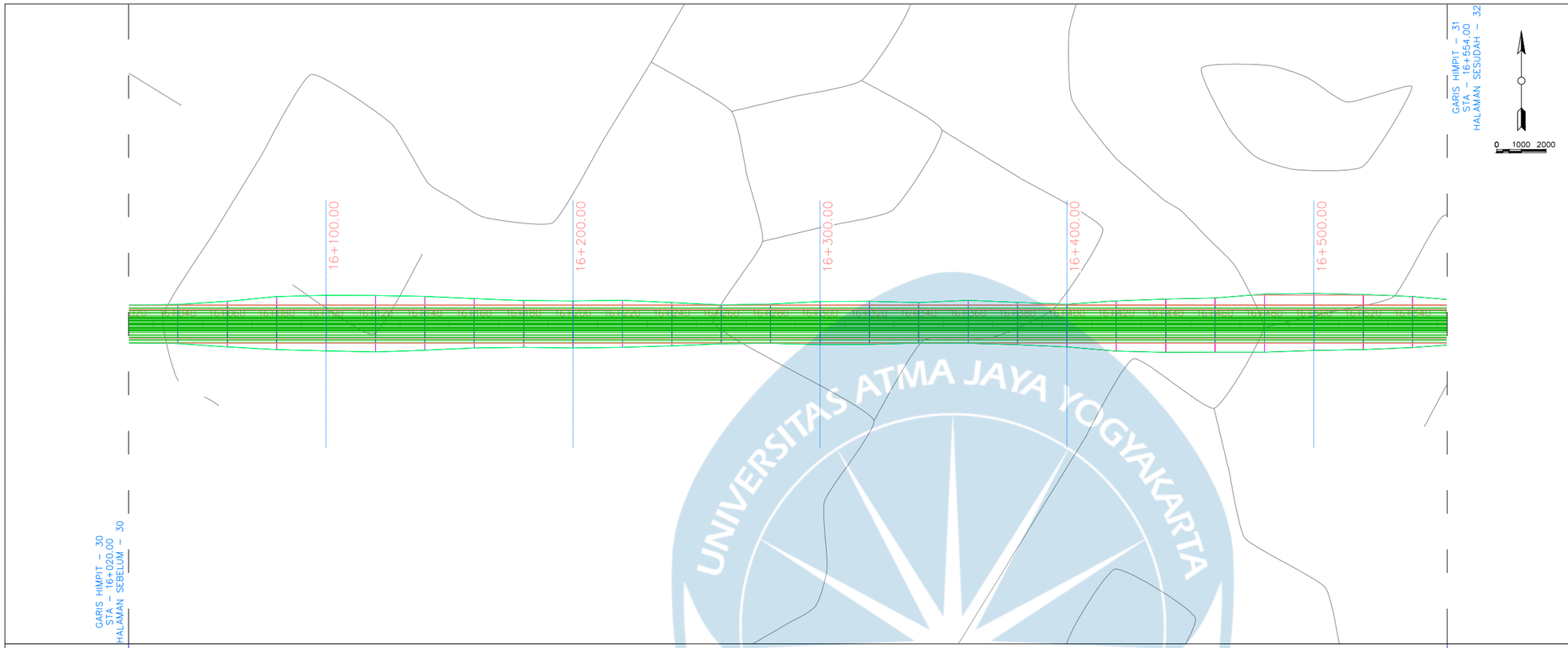

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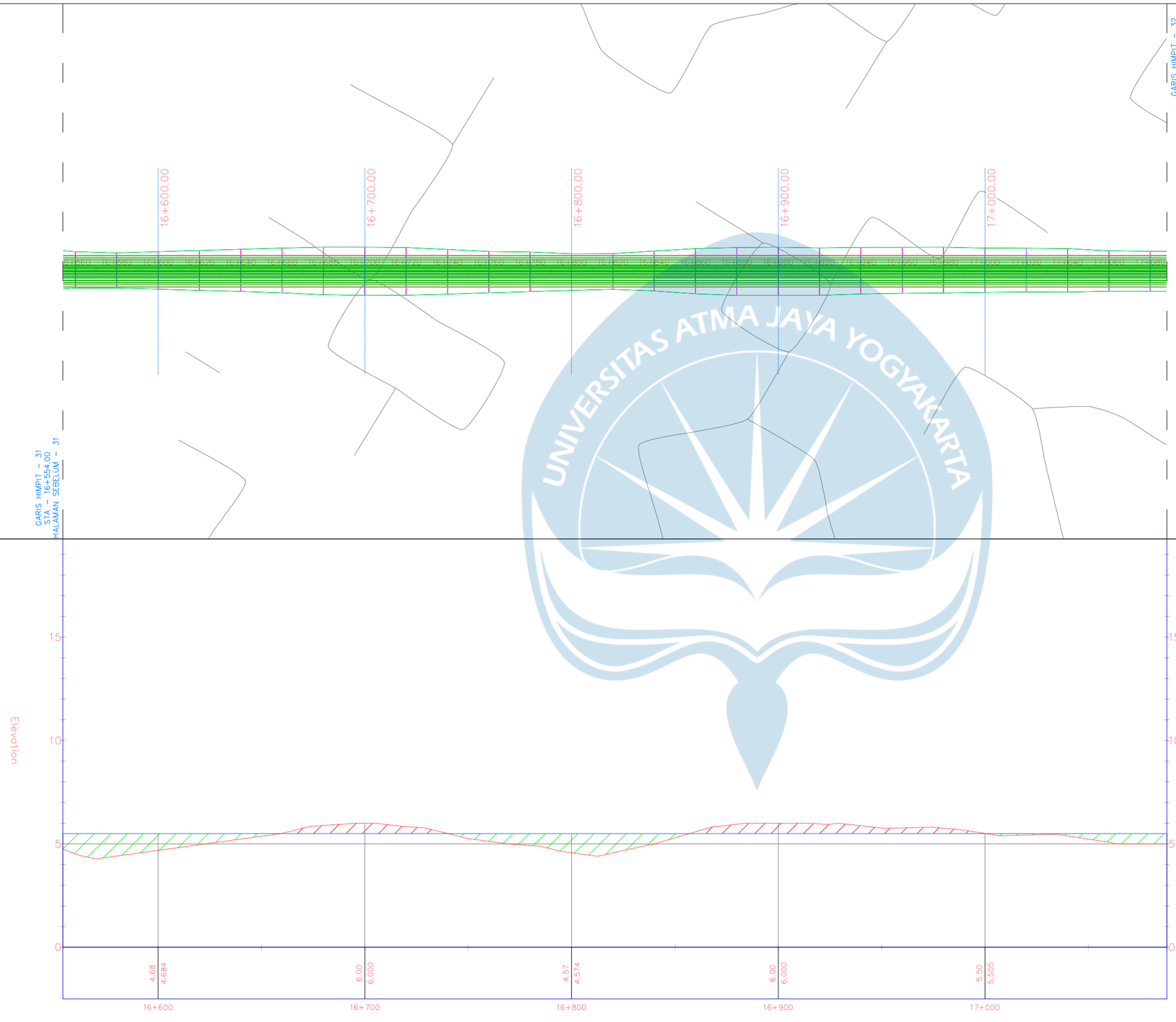

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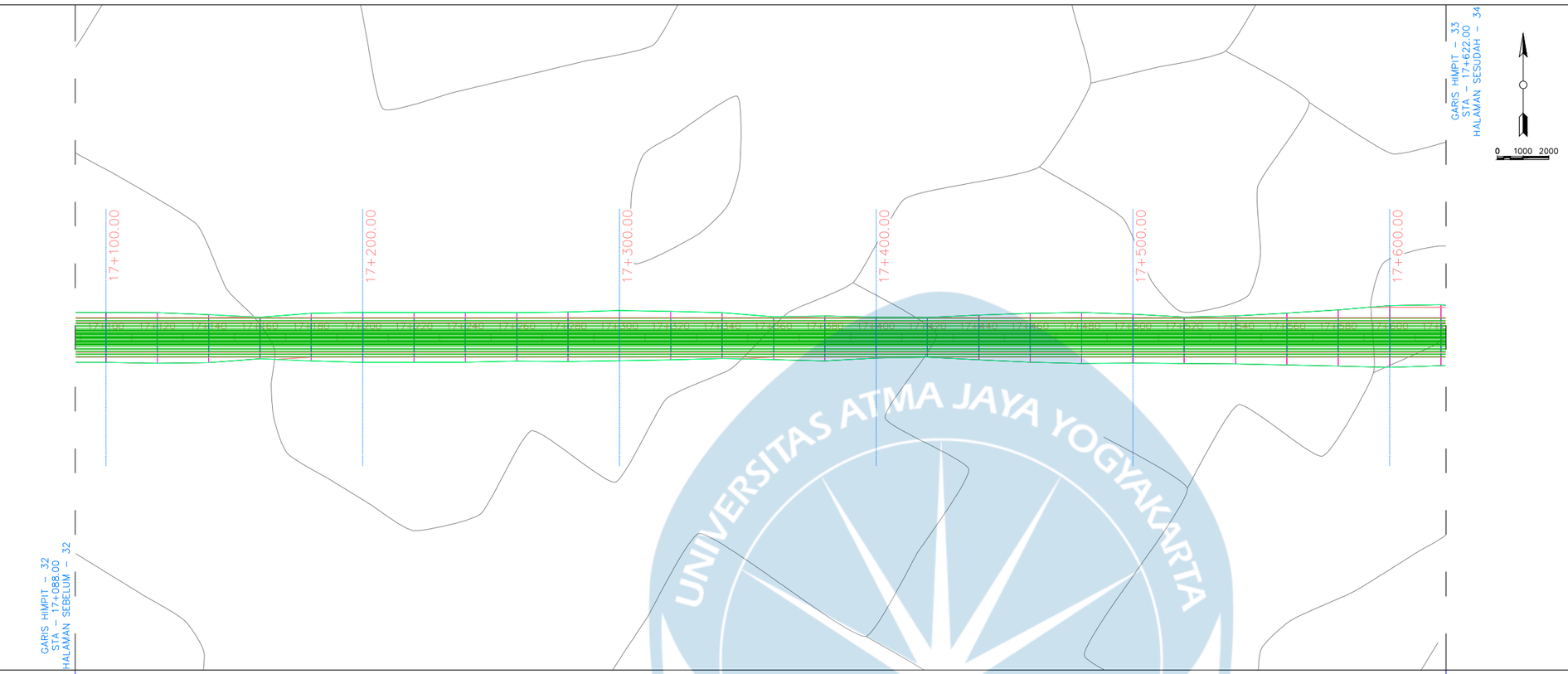

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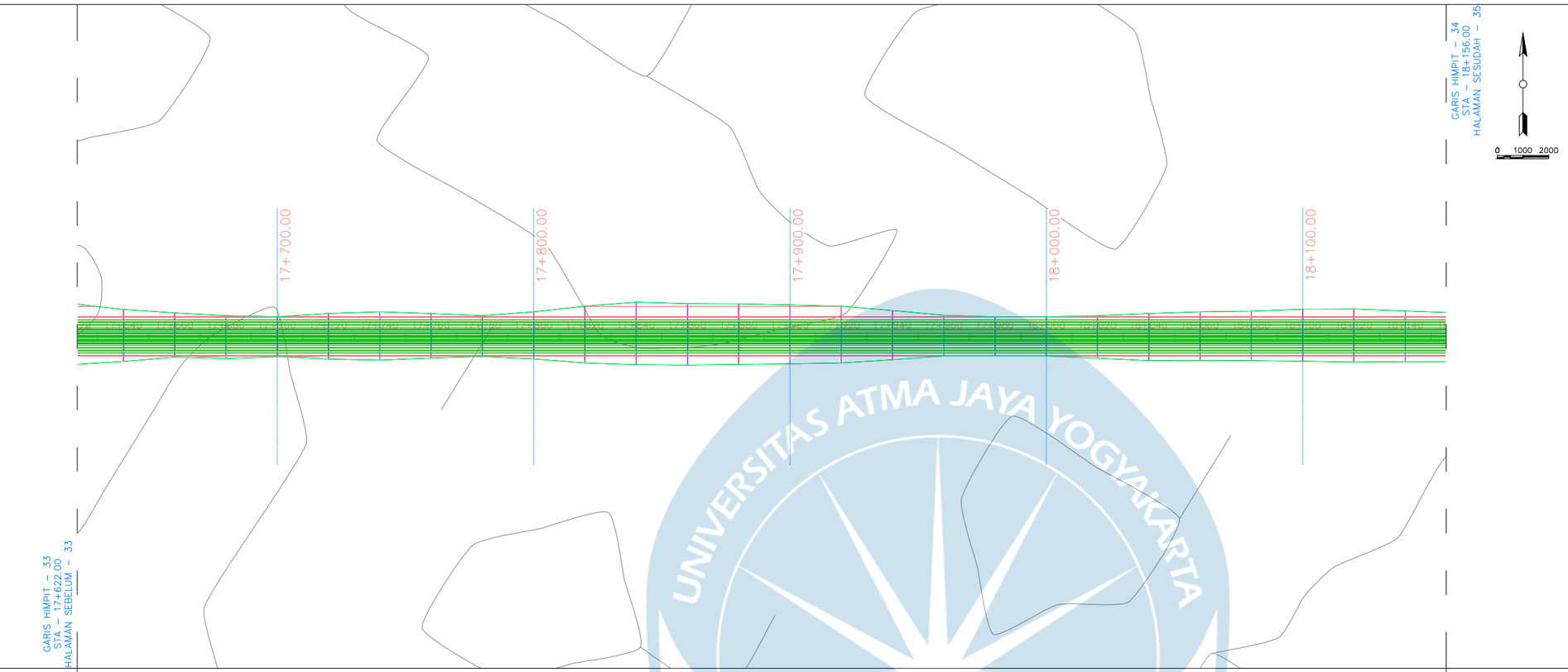

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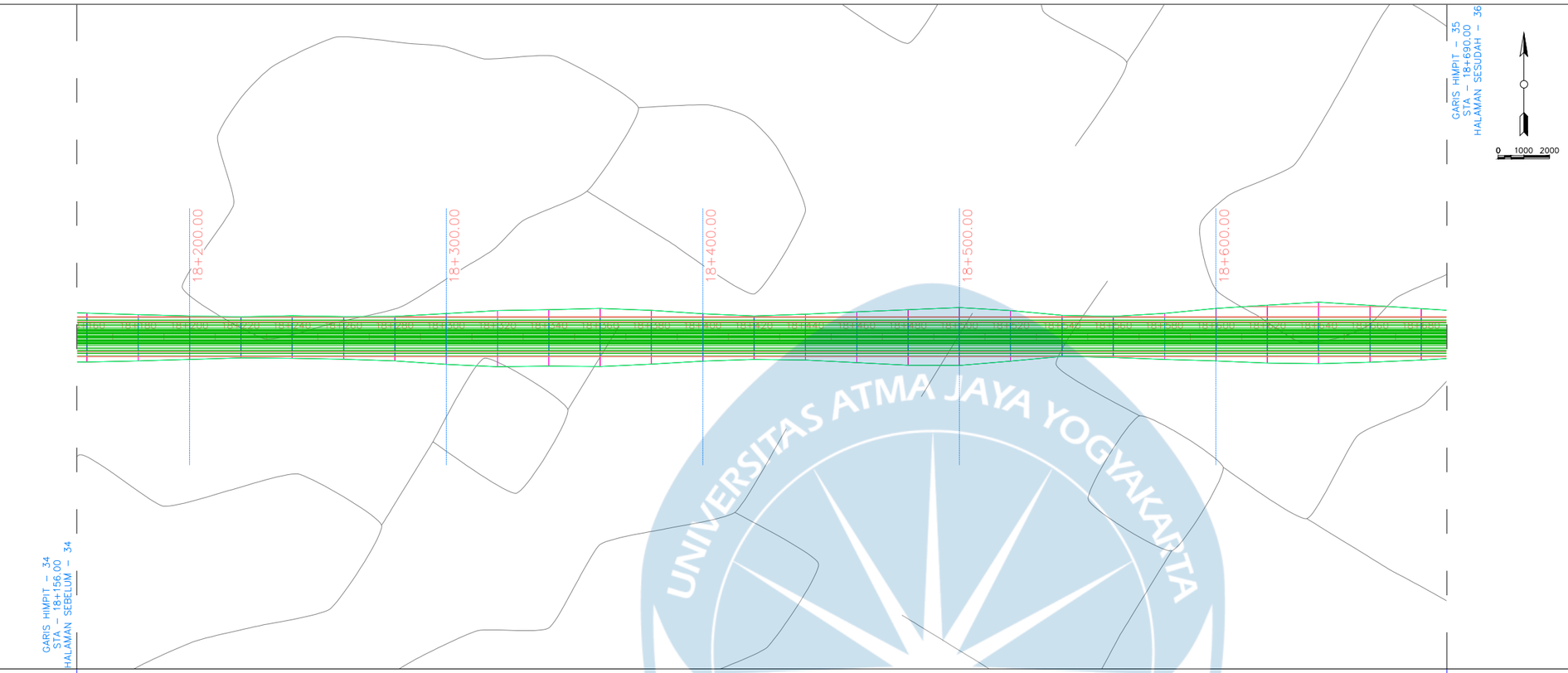
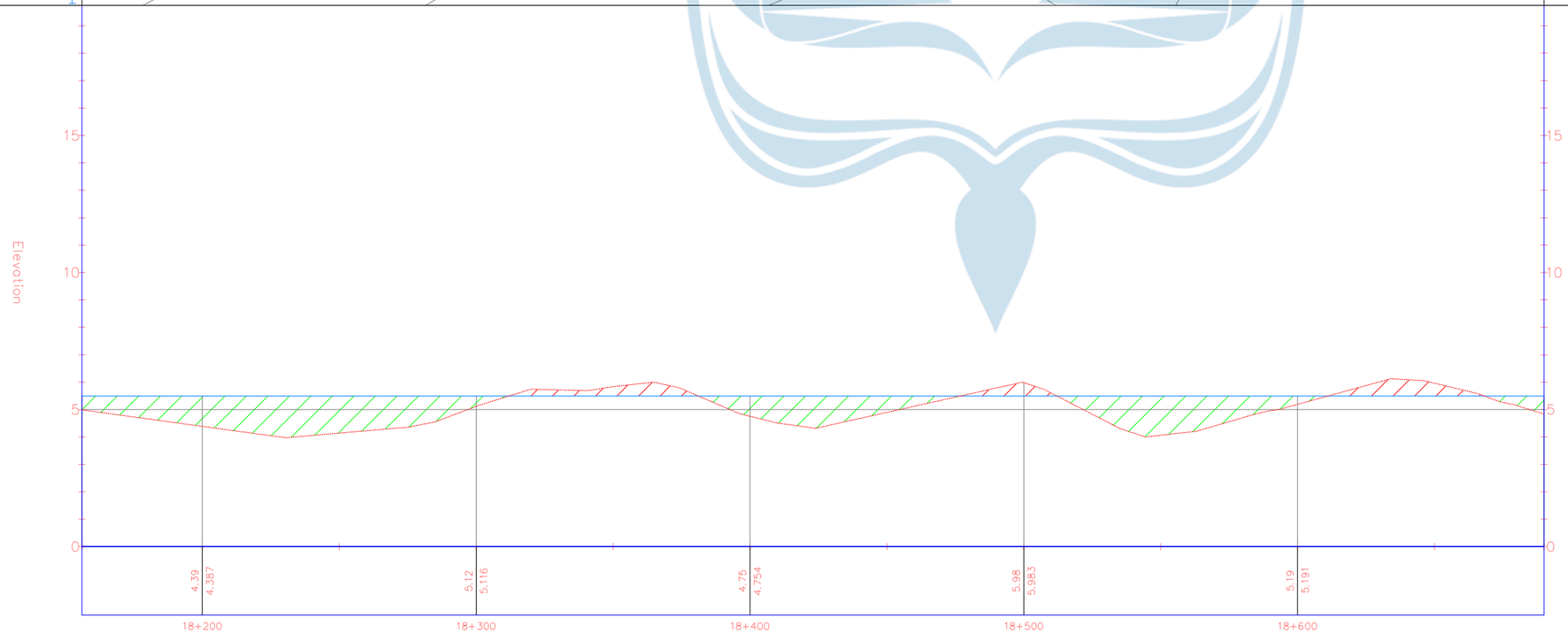




TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

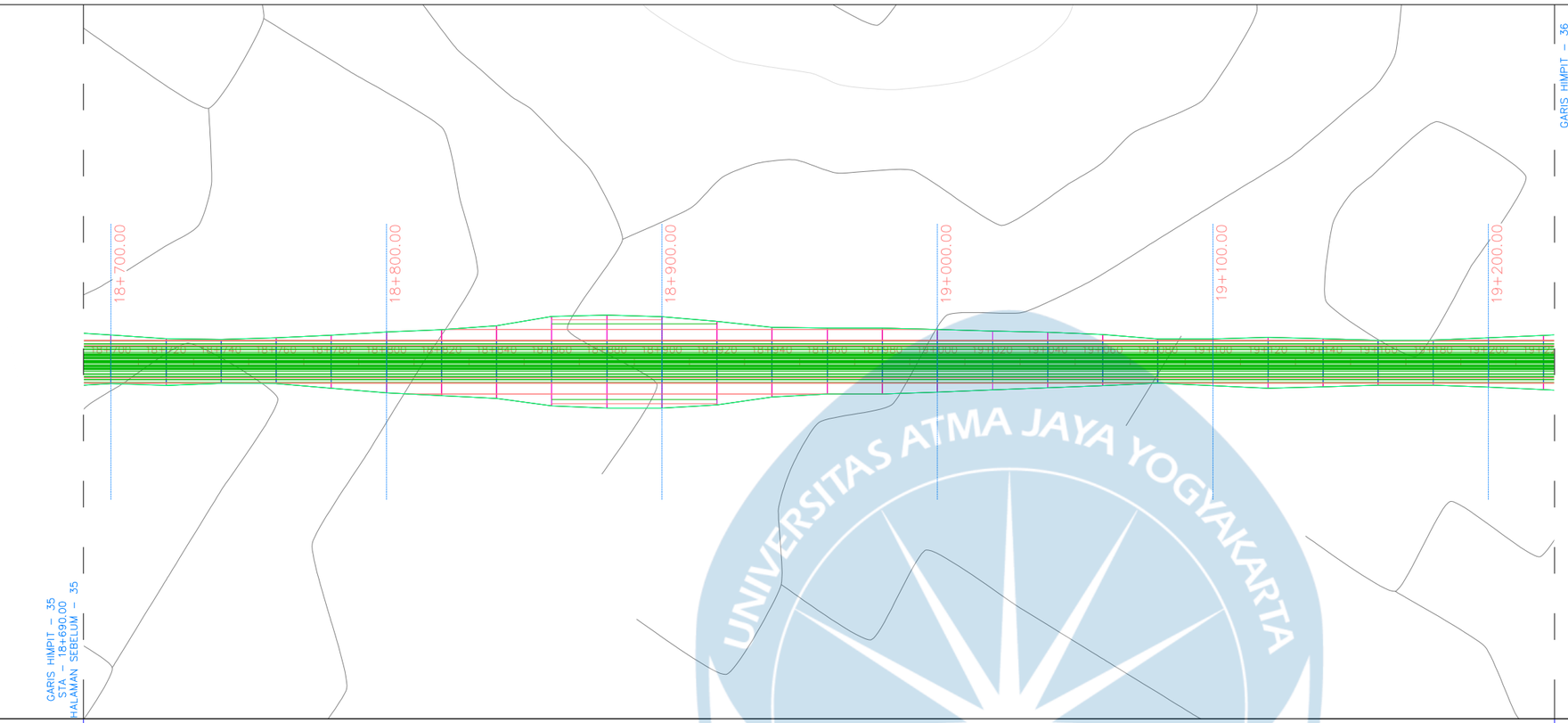
Disetujui Oleh:

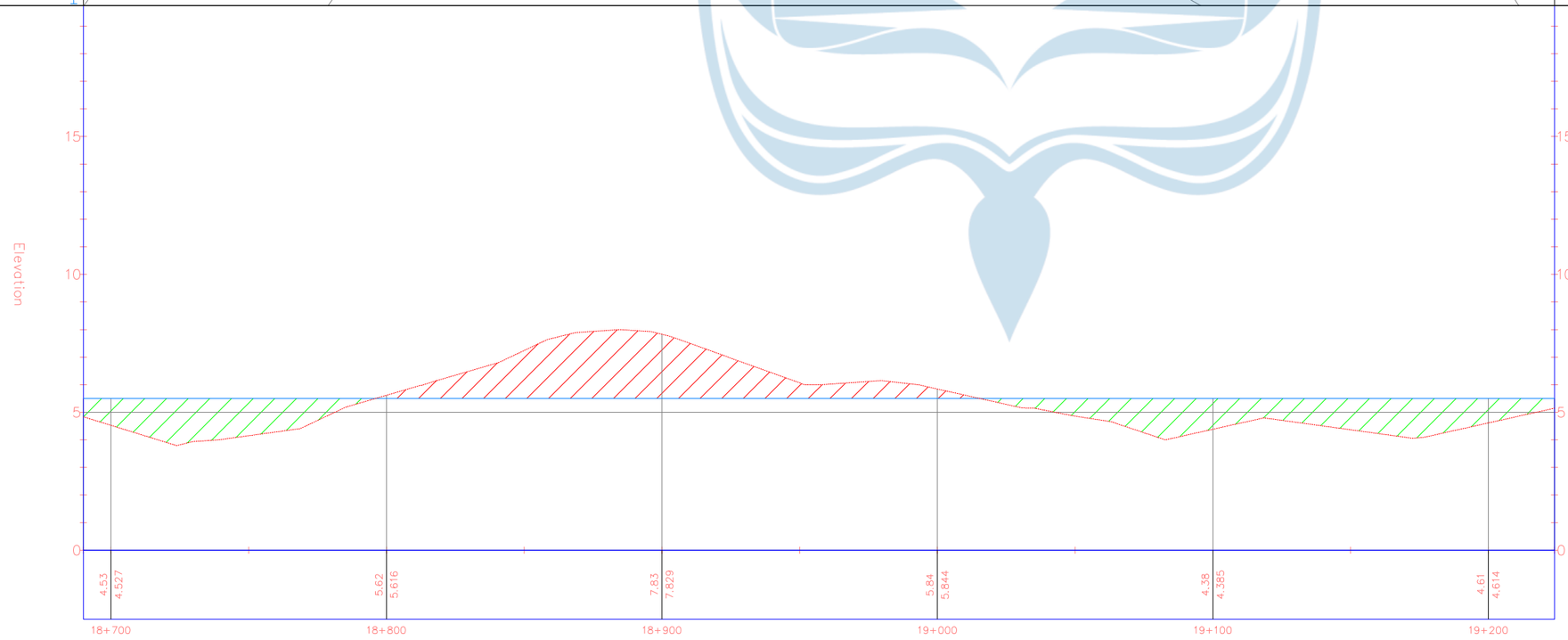
Dr. Ir. Imam Basuki, M.T.

Nama Project

ALINYEMEN

Skala	1 : 1000





UNIVERSITAS ATMA JAYA YOGYAKARTA

TUGAS AKHIR

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INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

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Disetujui Oleh:

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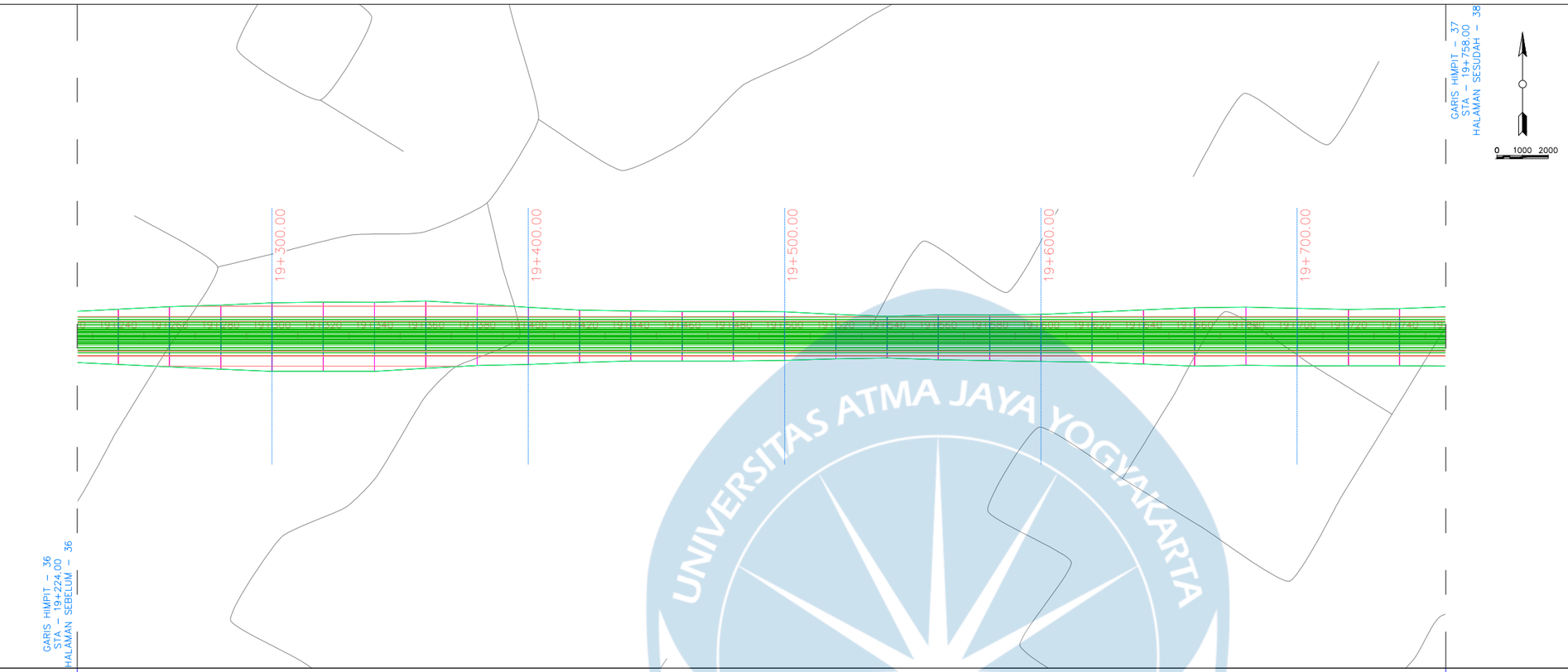
Nama Project

ALINYEMEN

Skala	1 : 1000



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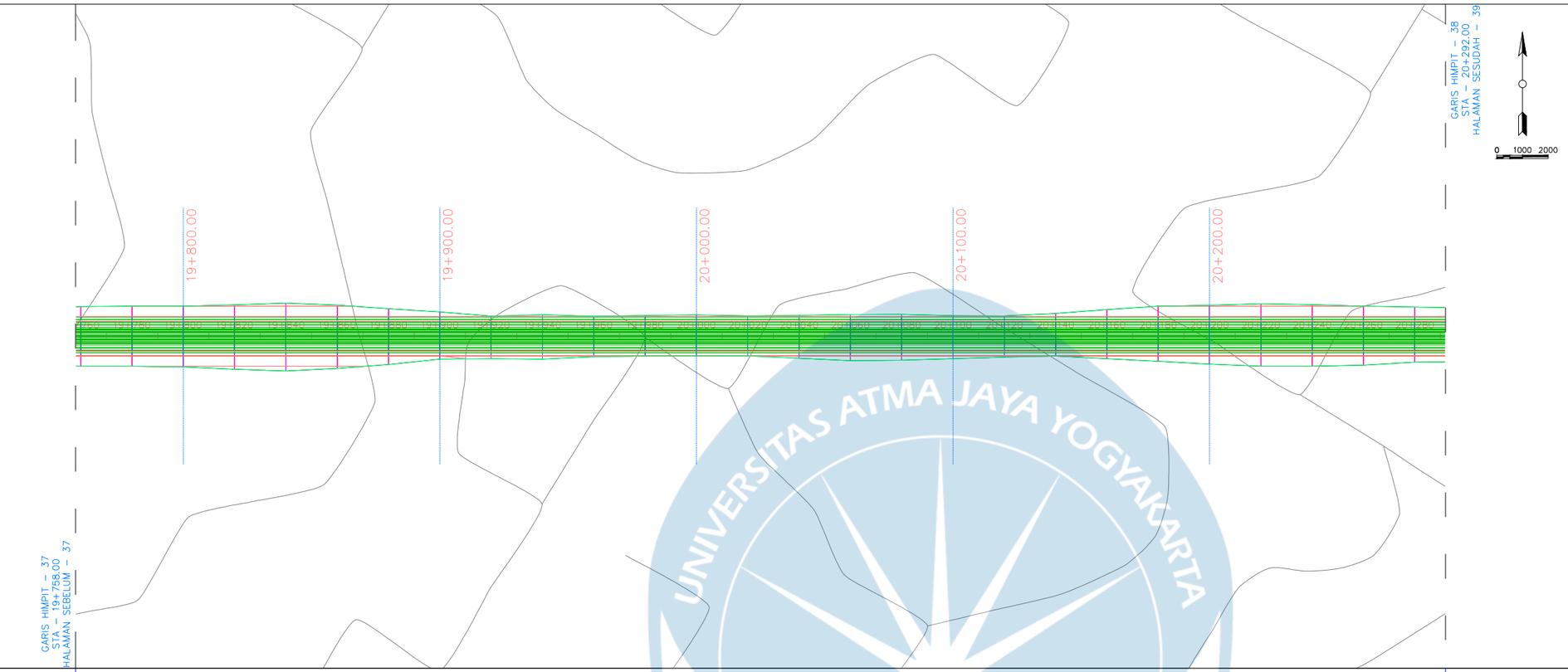
Nama Project

ALINYEMEN

Skala	1 : 1000



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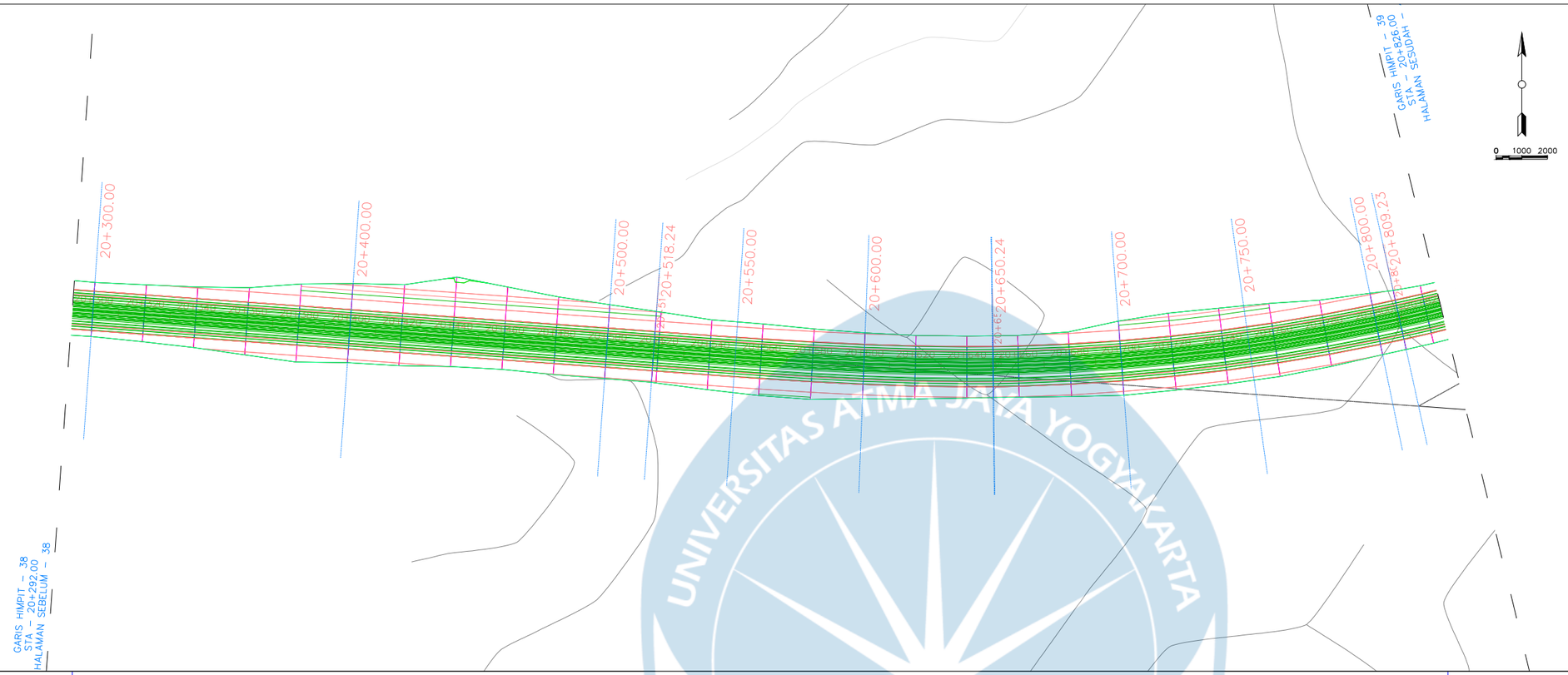
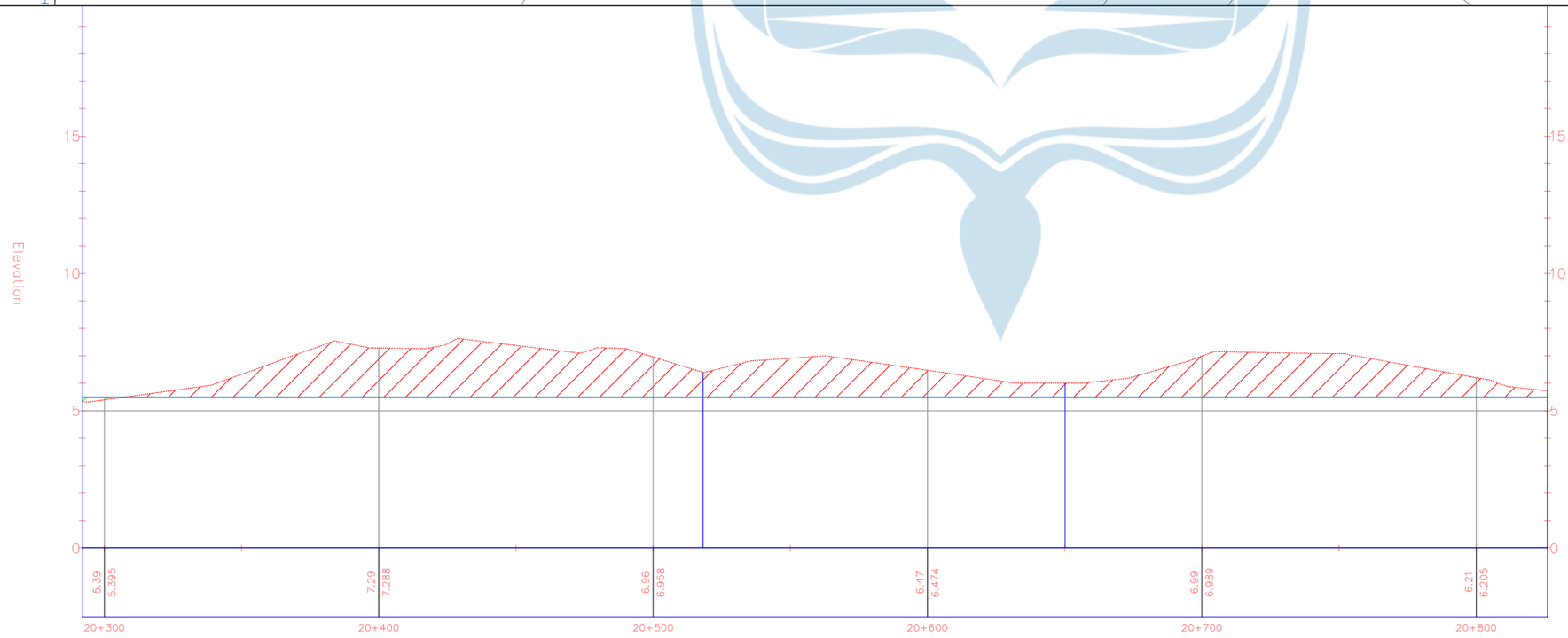
Nama Project

ALINYEMEN

Skala	1 : 1000





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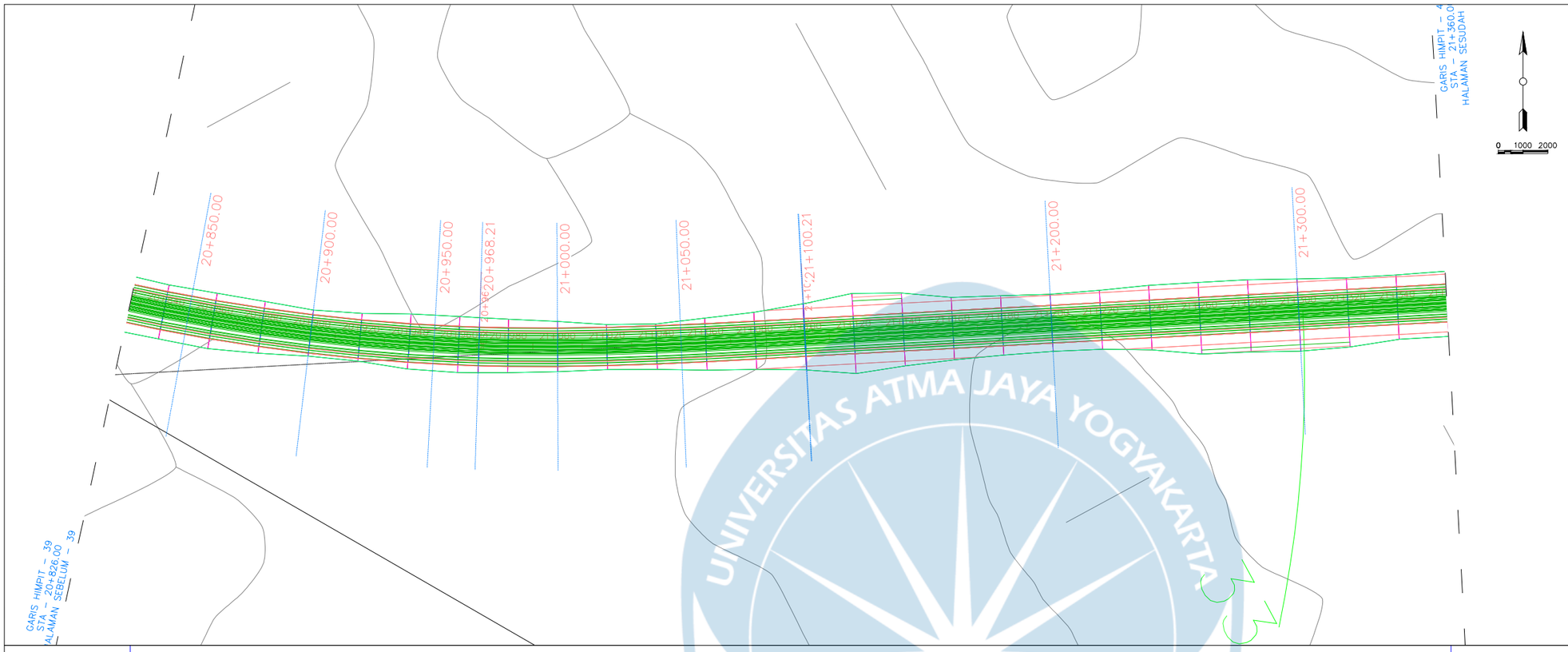
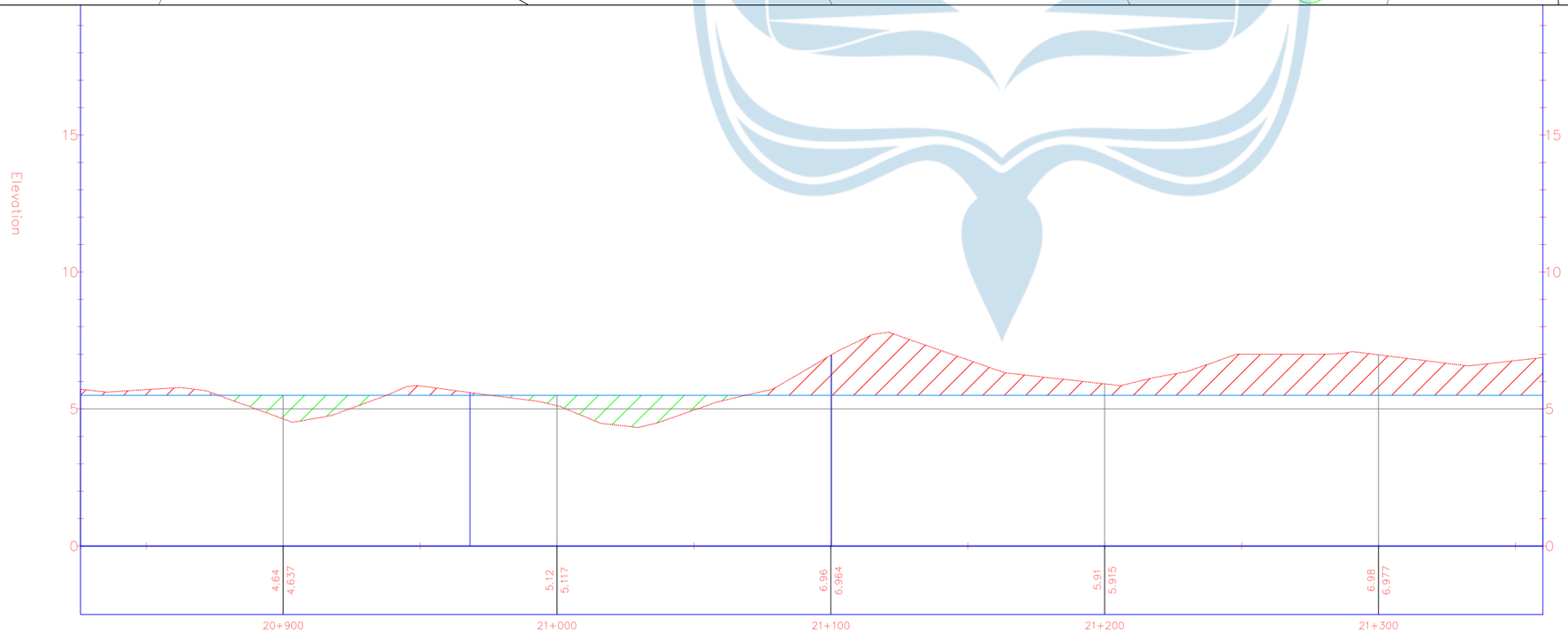
ALINYEMEN

Skala	1 : 1000





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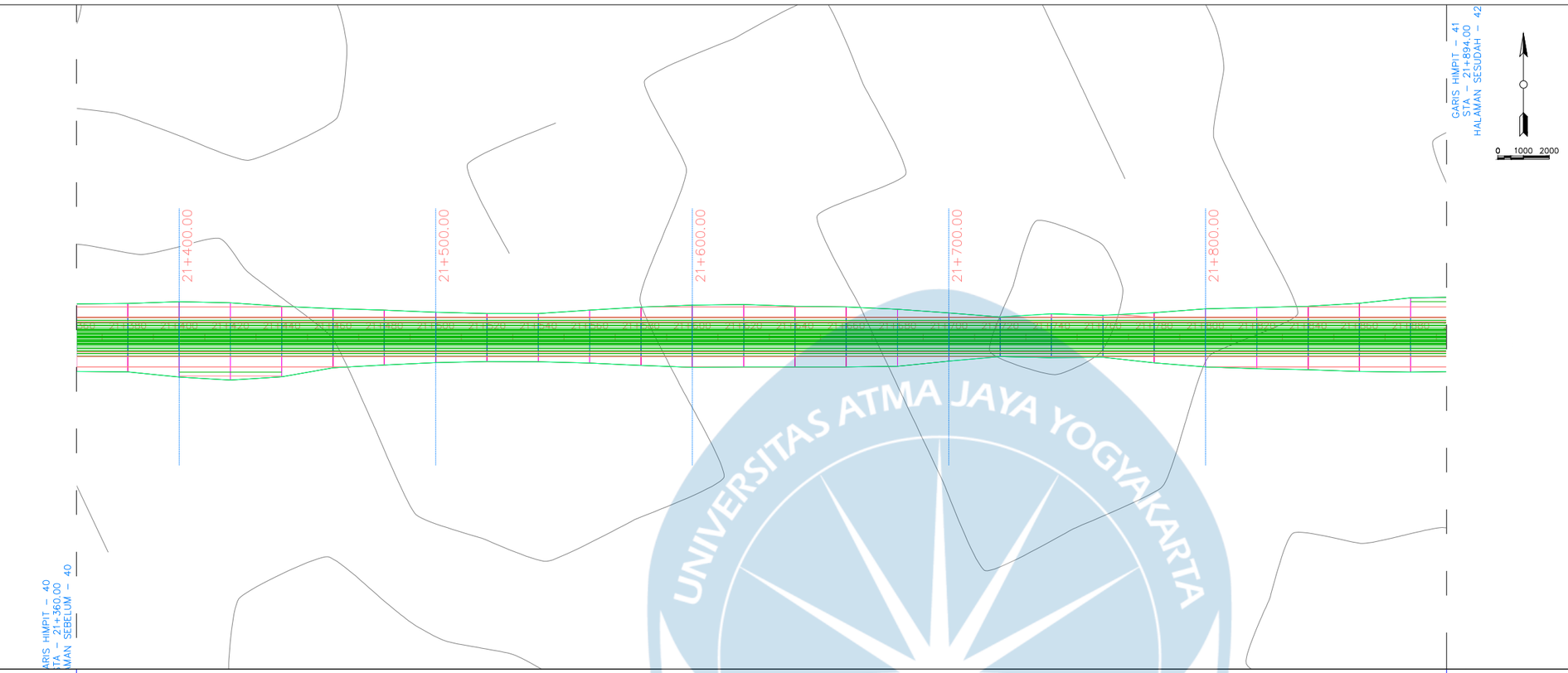
ALINYEMEN

Skala	1 : 1000



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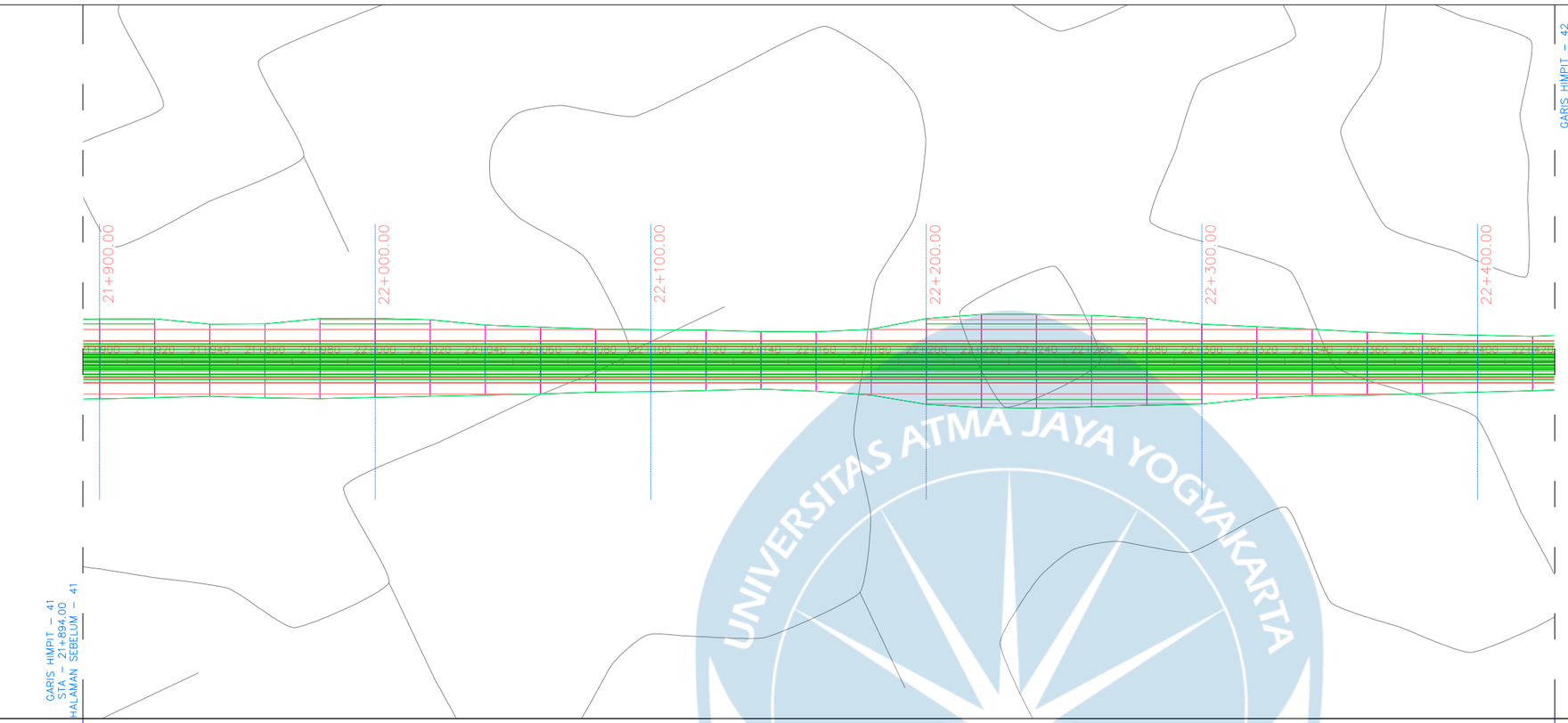
Nama Project

ALINYEMEN

Skala	1 : 1000



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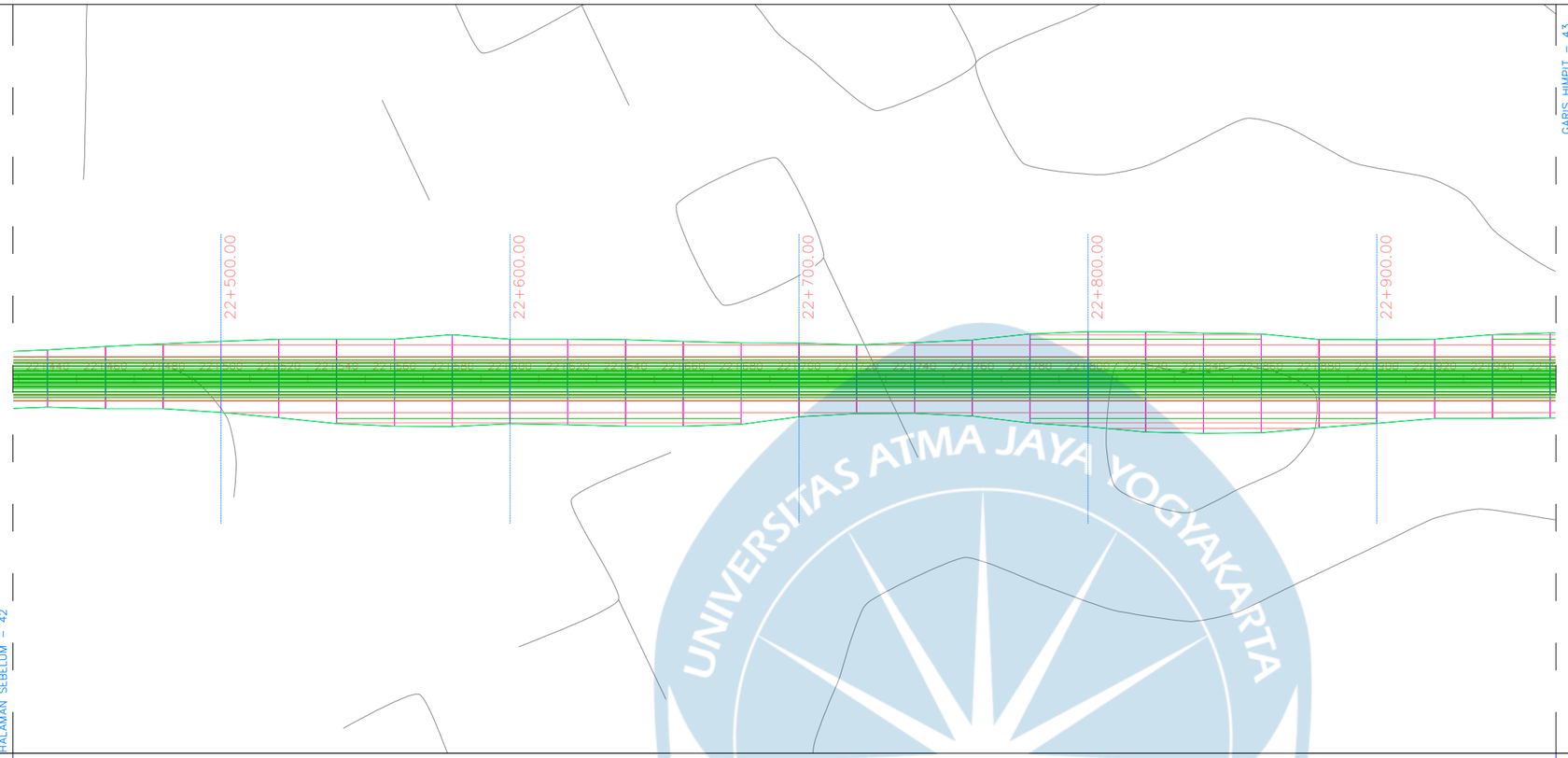
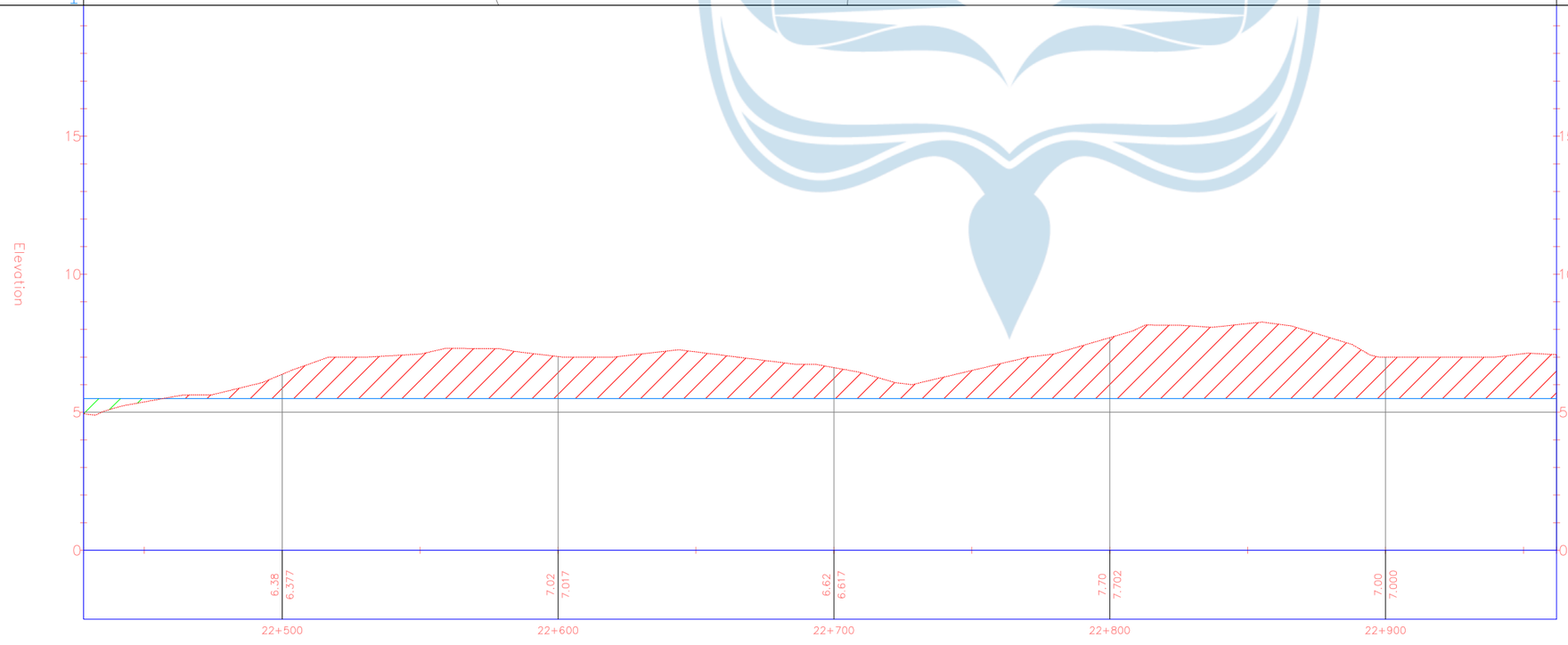
ALINYEMEN

Skala	1 : 1000





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PERANCANGAN

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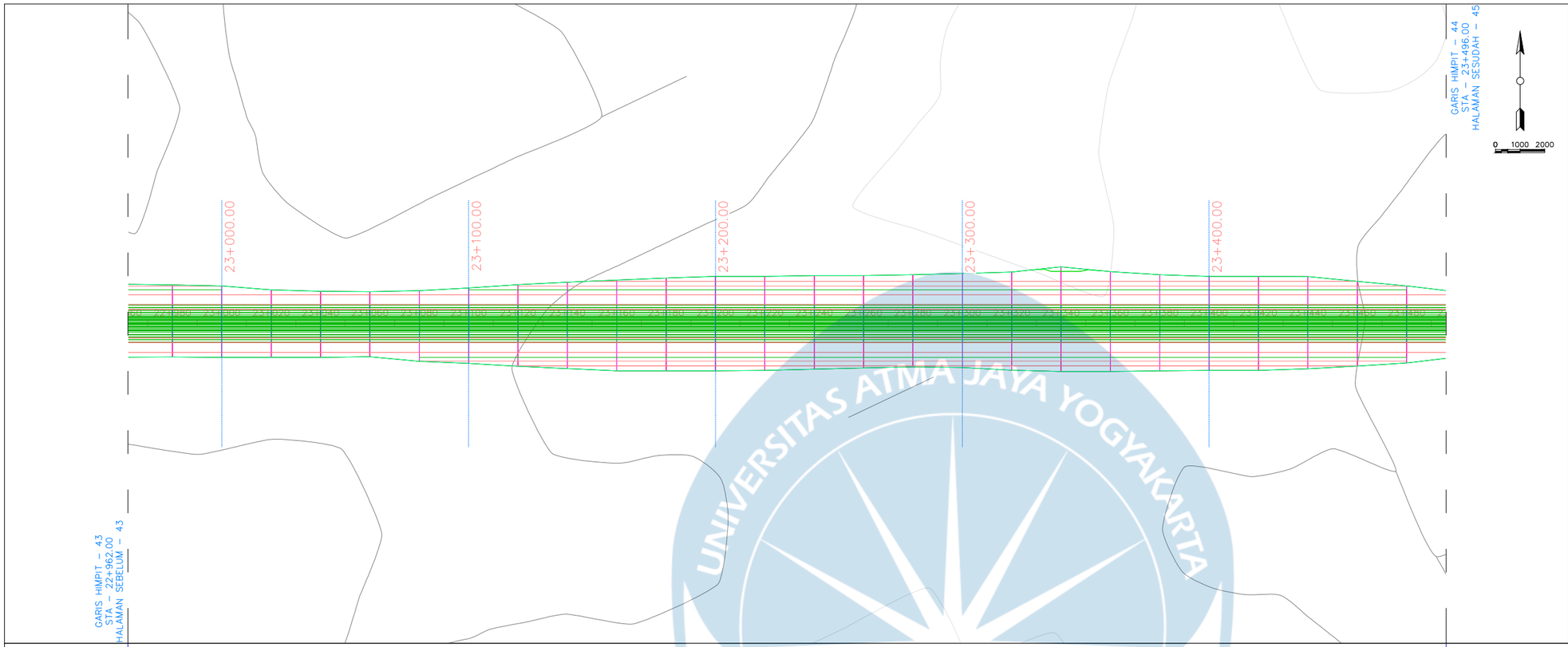
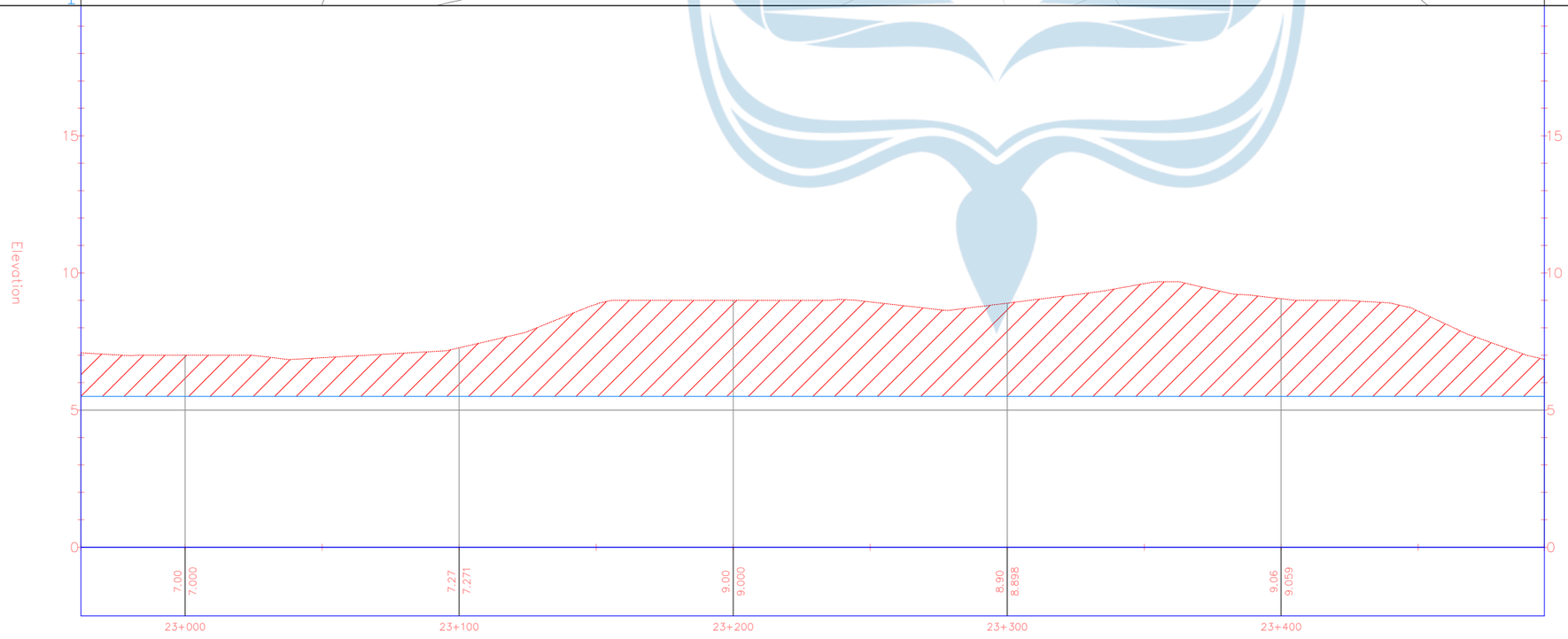
Skala	1 : 1000





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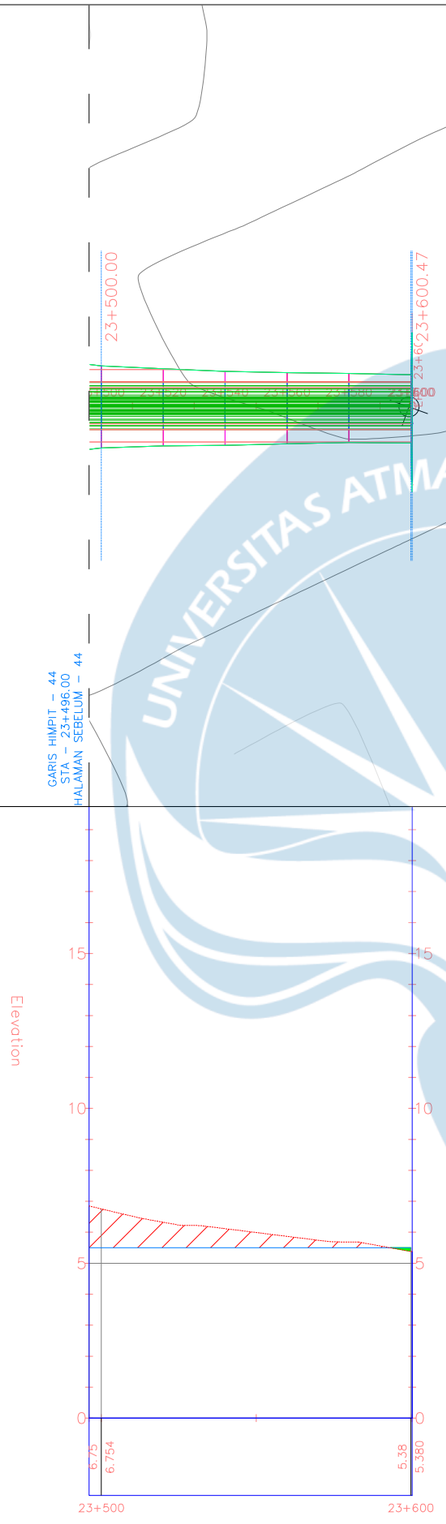
Nama Project

ALINYEMEN

Skala	1 : 1000



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UNIVERSITAS ATMA JAYA YOGYAKARTA

TUGAS AKHIR

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Alan Mikha Wijaya

Disetujui Oleh:

Dr. Ir. Imam Basuki, M.T.

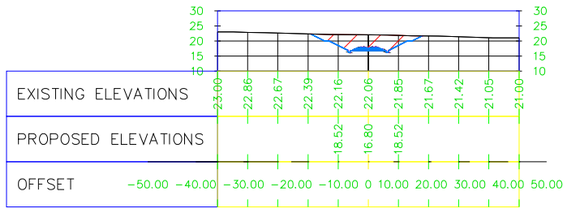
Nama Project

ALINYEMEN

Skala	1 : 1000

LAMPIRAN 3

0+000.00



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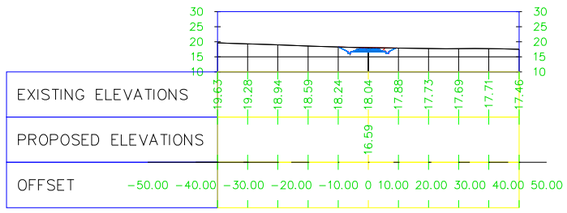

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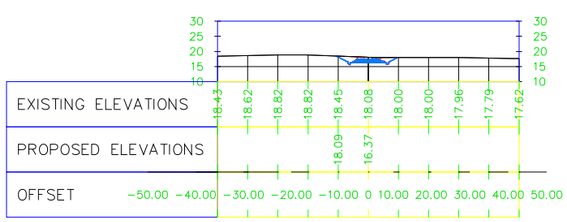

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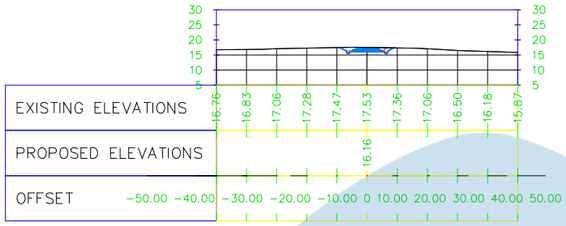

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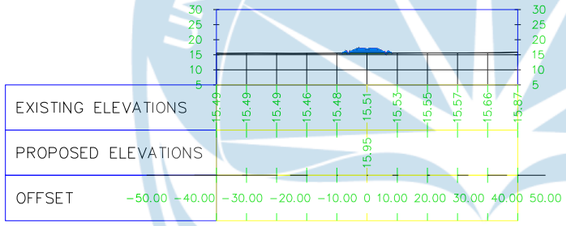

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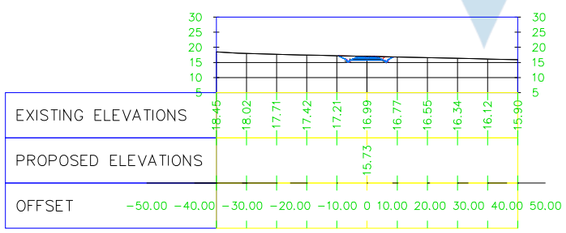

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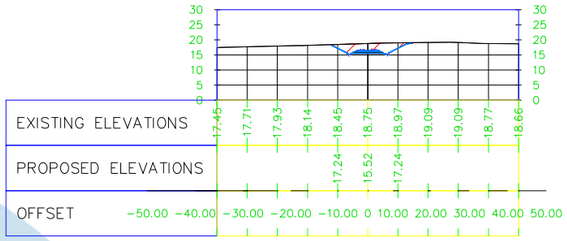

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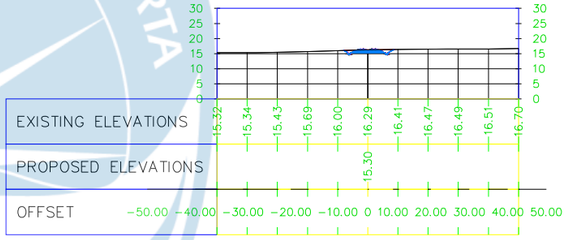

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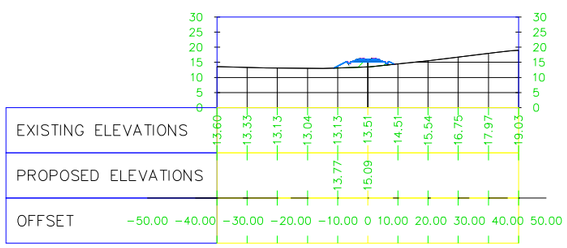


TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

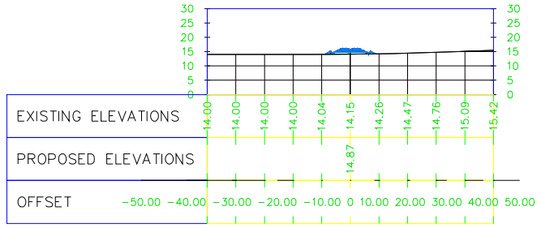
Dr. Ir. Imam Basuki, M.T.

Nama Project

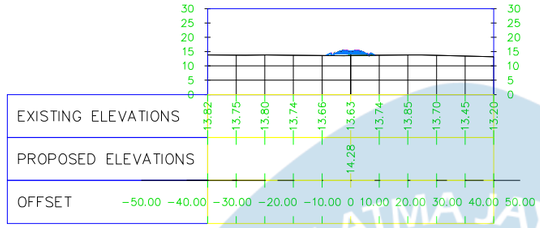
Gambar Potongan

Skala	1 : 1000

0+900.00



1+176.91



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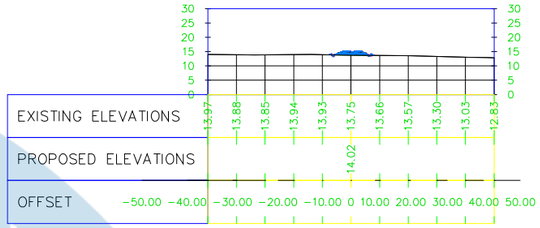

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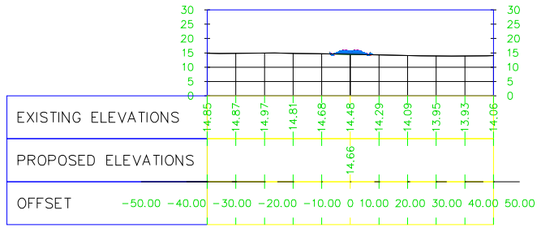

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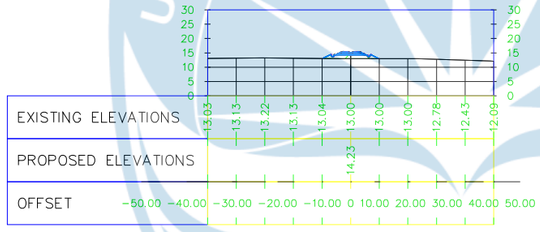

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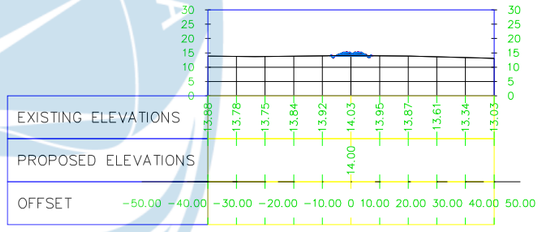

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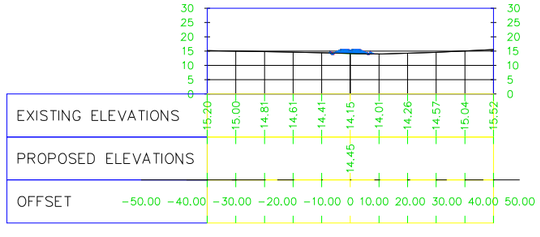

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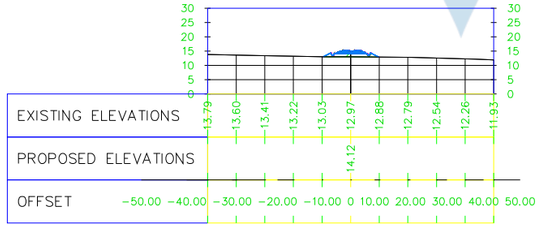

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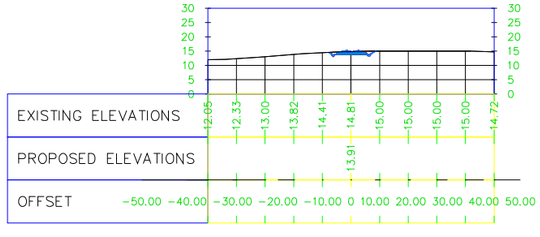

TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
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Disetujui Oleh:

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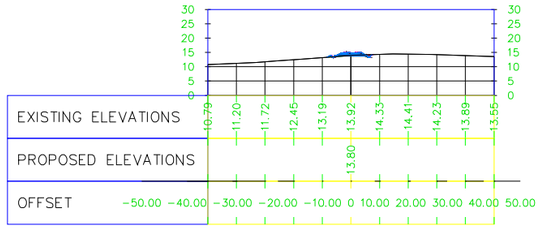
Nama Project

Gambar Potongan

Skala	1 : 1000

1+400.00



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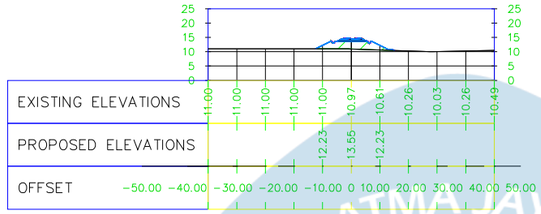

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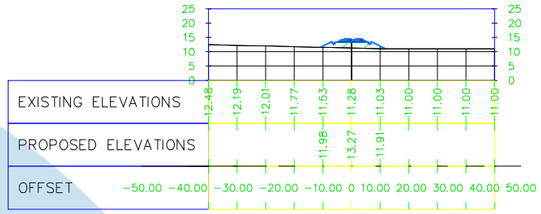

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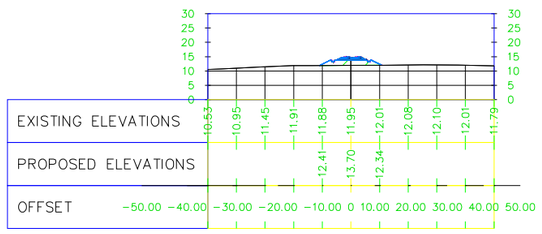

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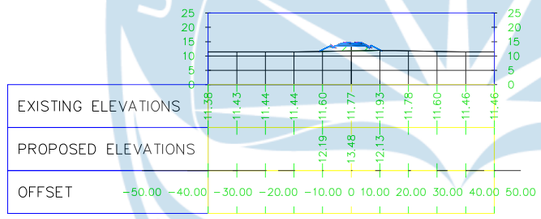

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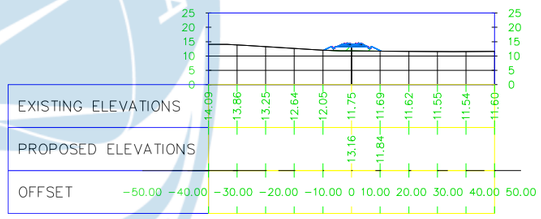

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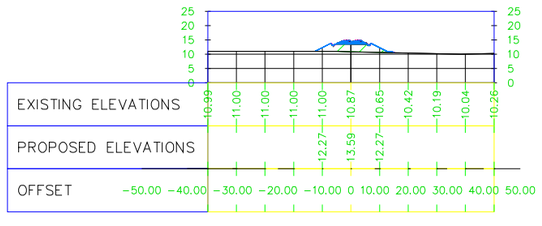

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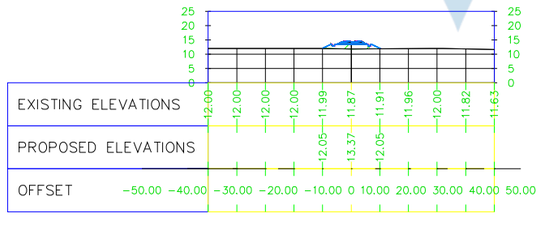

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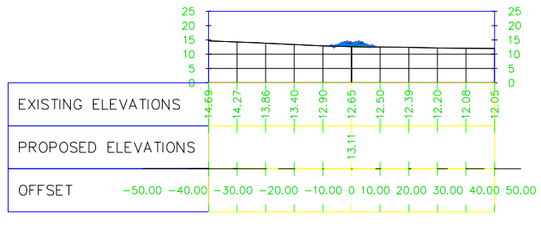

TUGAS AKHIR

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(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

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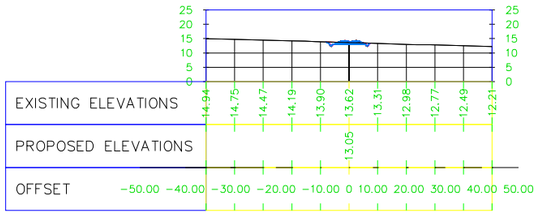
Nama Project

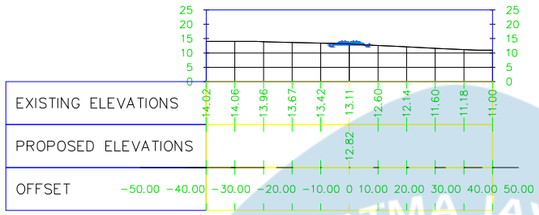
Gambar Potongan

Skala	1 : 1000

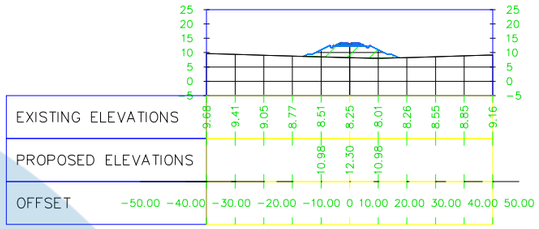
1+750.00



1+857.14



2+100.00

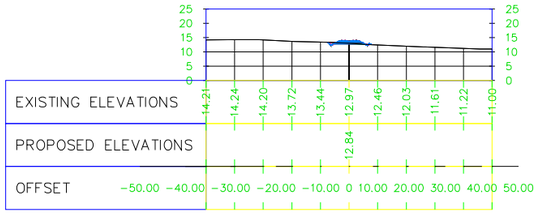


1+800.00

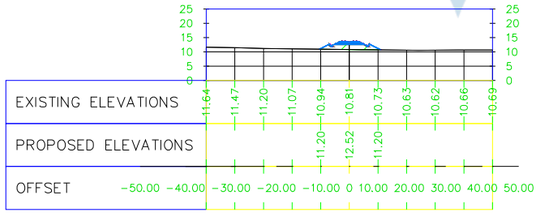
1+900.00

2+200.00

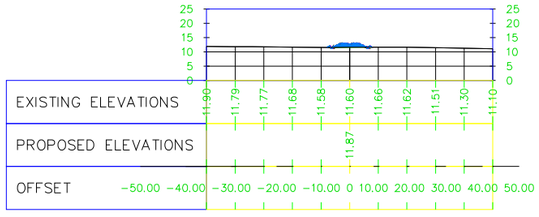
1+850.00



2+000.00



2+300.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

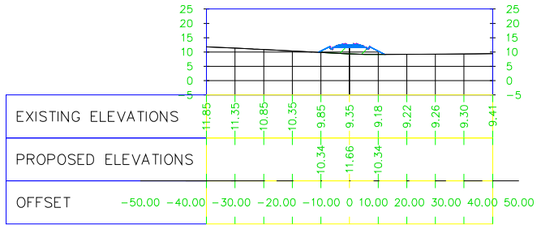
Dr. Ir. Imam Basuki, M.T.

Nama Project

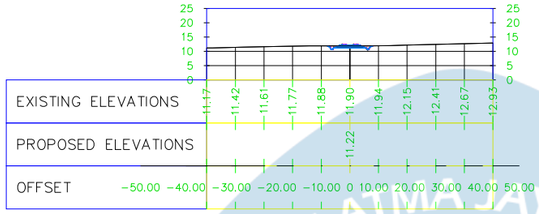
Gambar Potongan

Skala	1 : 1000

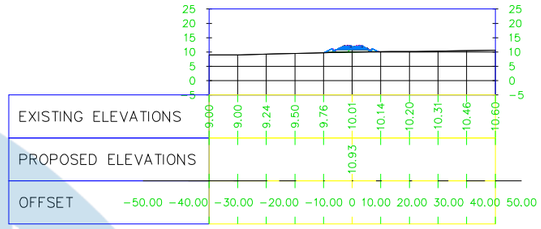
2+400.00



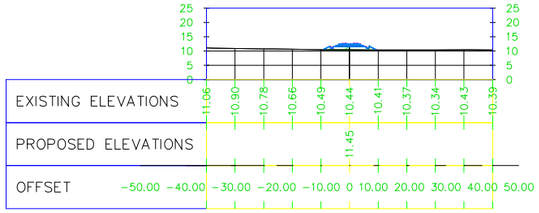
2+606.79



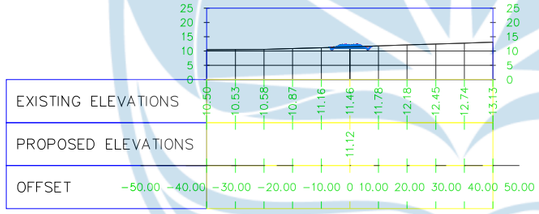
2+738.79



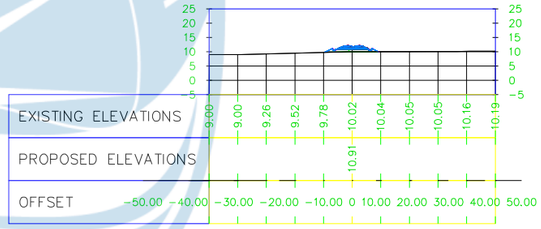
2+500.00



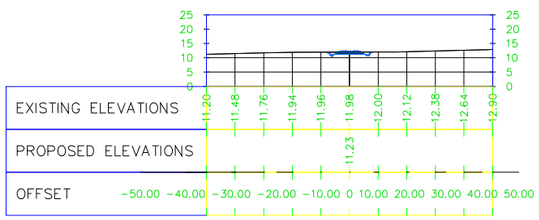
2+650.00



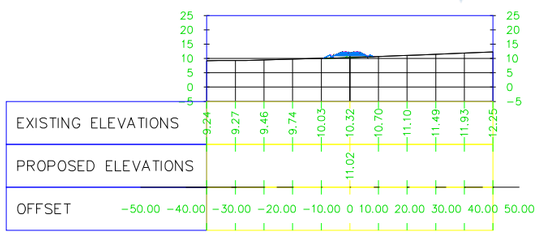
2+750.00



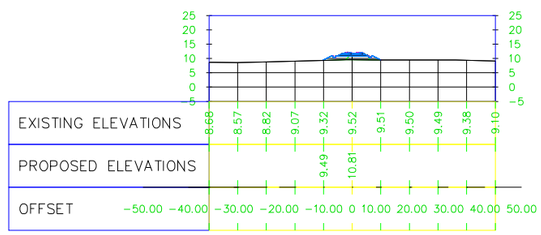
2+600.00



2+700.00



2+800.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

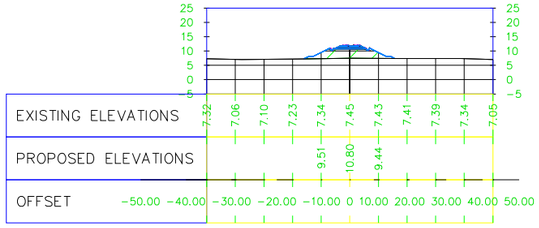
Dr. Ir. Imam Basuki, M.T.

Nama Project

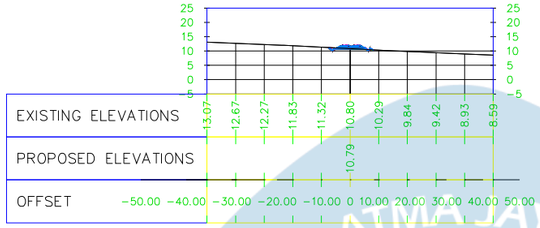
Gambar Potongan

Skala	1 : 1000

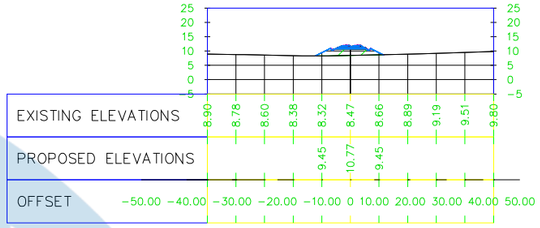
2+850.00



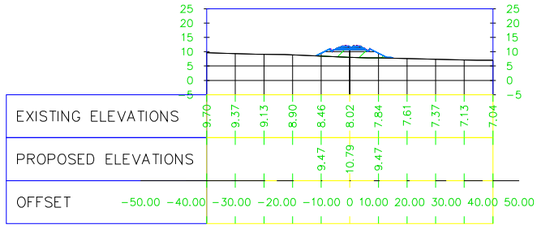
2+950.00



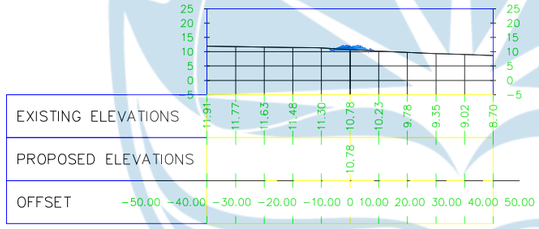
3+100.00



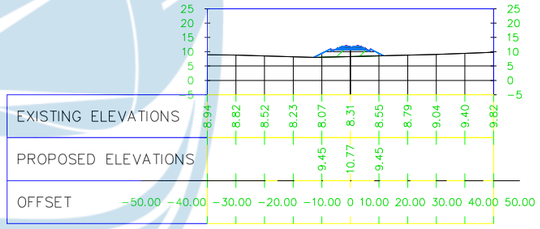
2+900.00



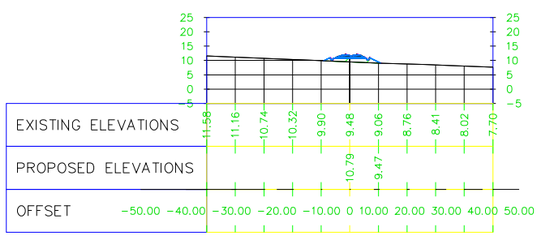
3+000.00



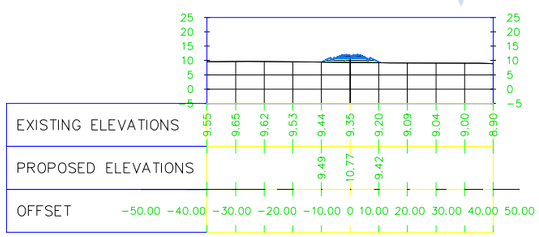
3+109.47



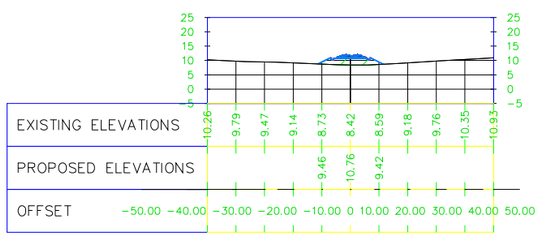
2+924.13



3+050.00



3+150.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

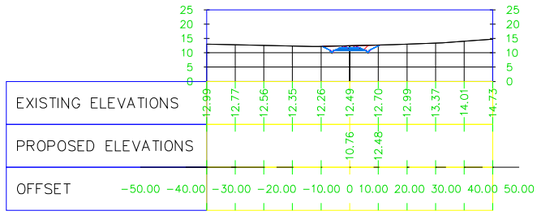
Dr. Ir. Imam Basuki, M.T.

Nama Project

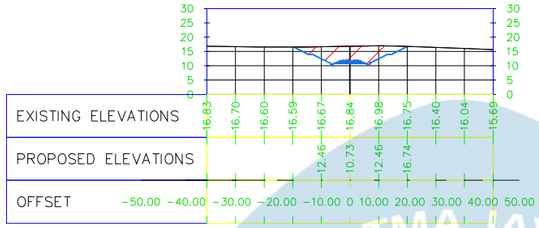
Gambar Potongan

Skala | 1 : 1000

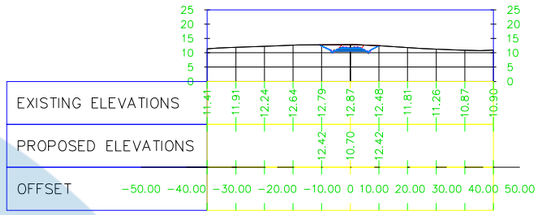
3+200.00



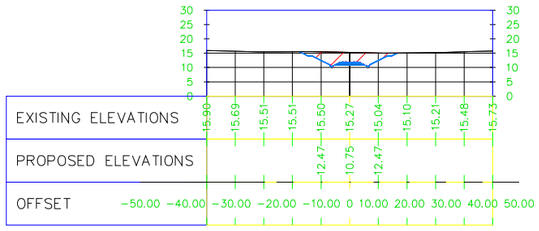
3+400.00



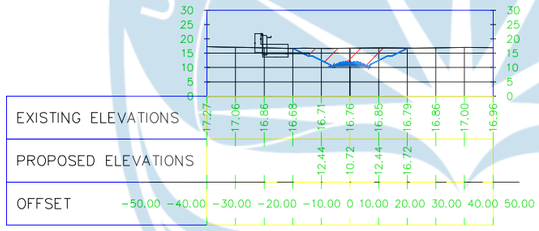
3+700.00



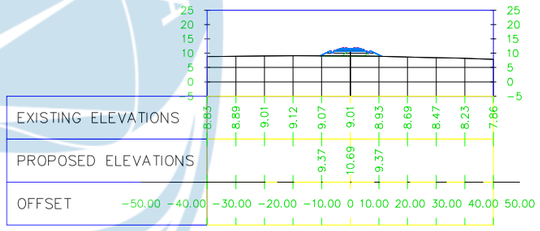
3+241.47



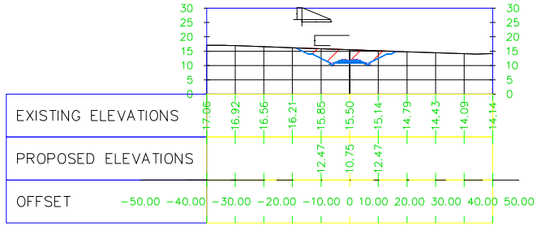
3+500.00



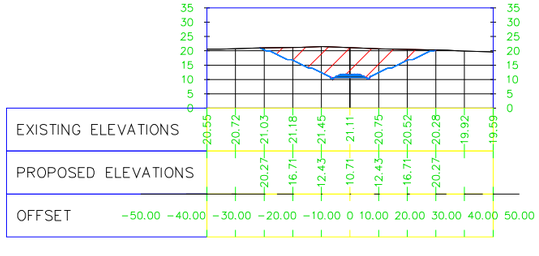
3+800.00



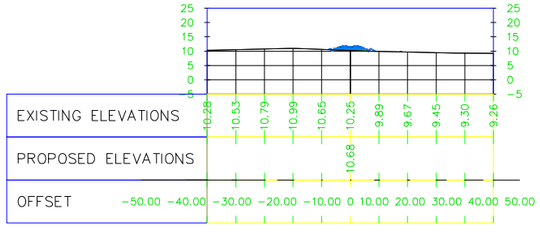
3+300.00



3+600.00



3+900.00



TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

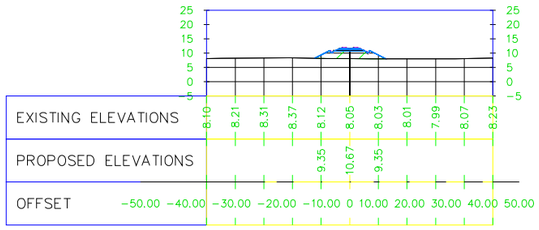
Dr. Ir. Imam Basuki, M.T.

Nama Project

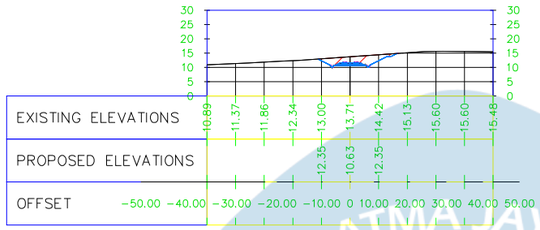
Gambar Potongan

Skala	1 : 1000

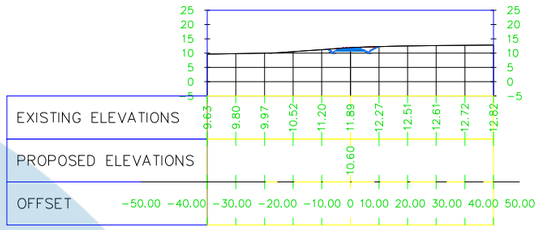
4+000.00



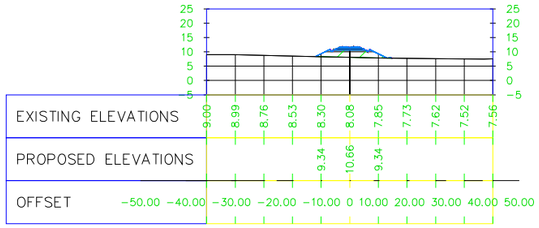
4+300.00



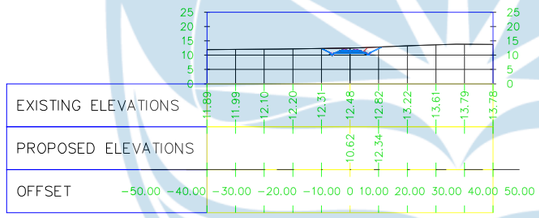
4+600.00



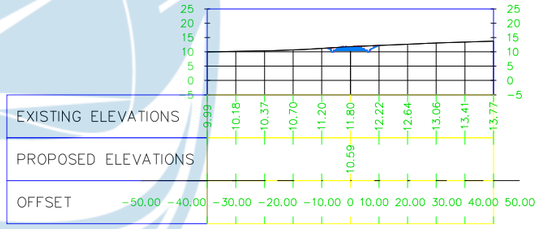
4+100.00



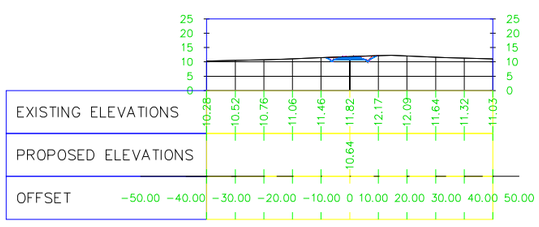
4+400.00



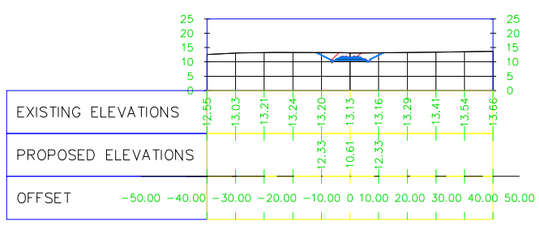
4+700.00



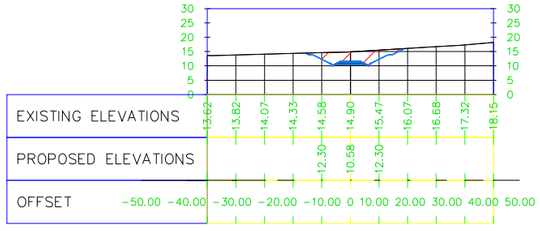
4+200.00



4+500.00



4+800.00



TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

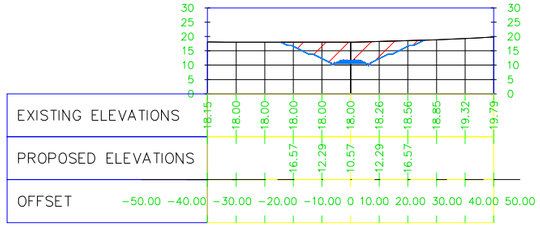
Dr. Ir. Imam Basuki, M.T.

Nama Project

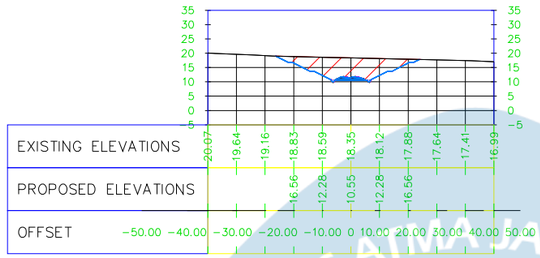
Gambar Potongan

Skala	1 : 1000

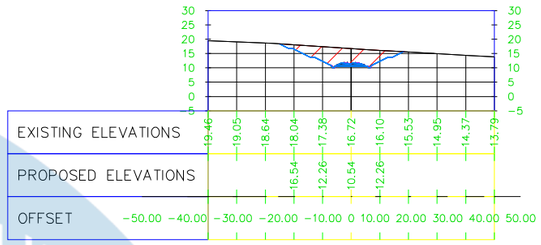
4+888.50



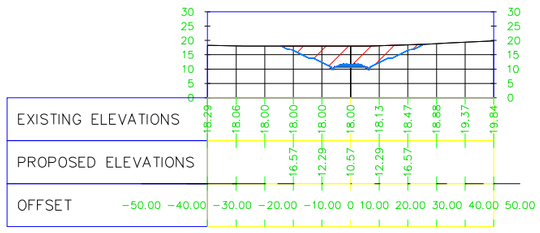
5+000.00



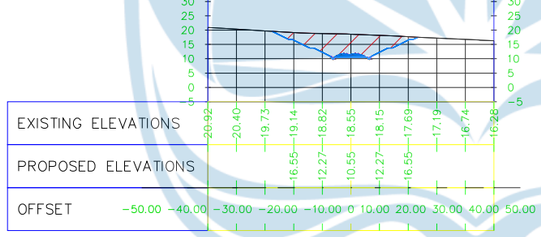
5+100.00



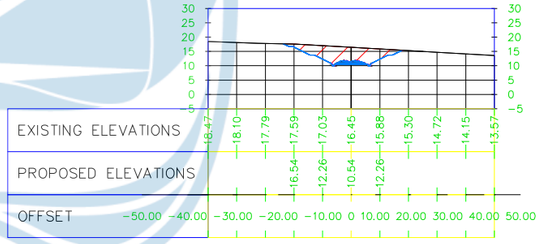
4+900.00



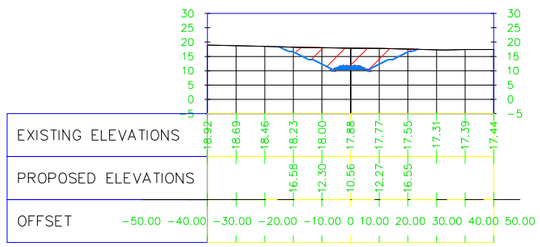
5+020.50



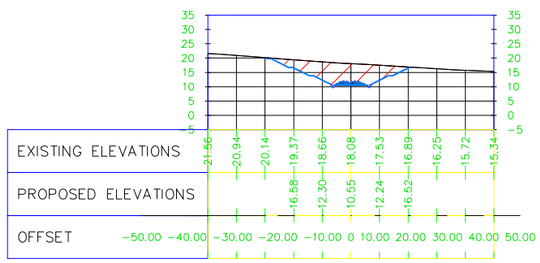
5+124.28



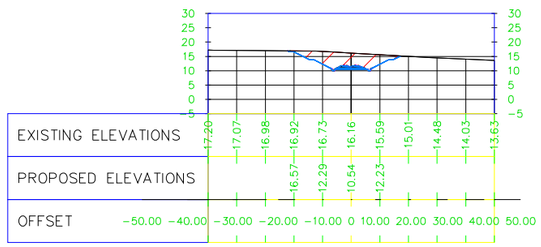
4+950.00



5+050.00



5+150.00



TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

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Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

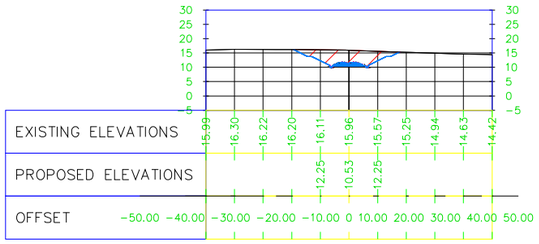
Dr. Ir. Imam Basuki, M.T.

Nama Project

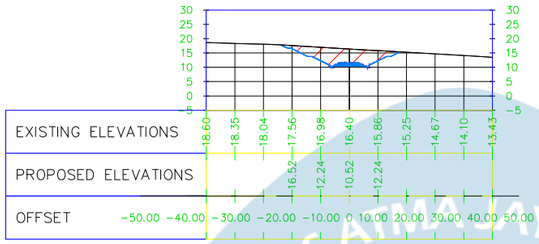
Gambar Potongan

Skala	1 : 1000

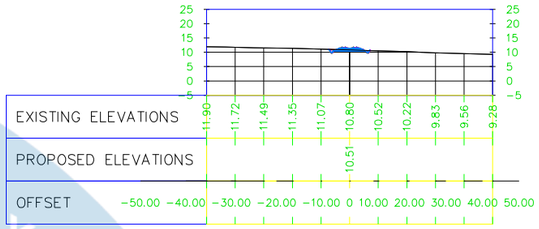
5+200.00



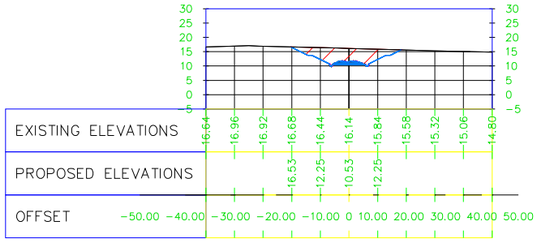
5+300.00



5+400.00



5+228.05



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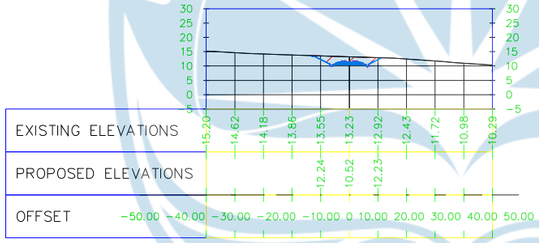

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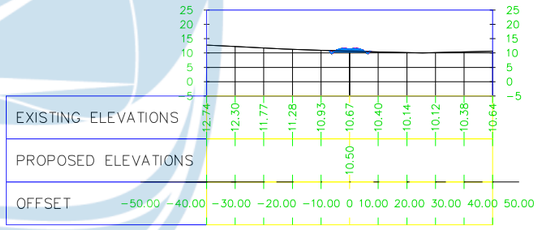

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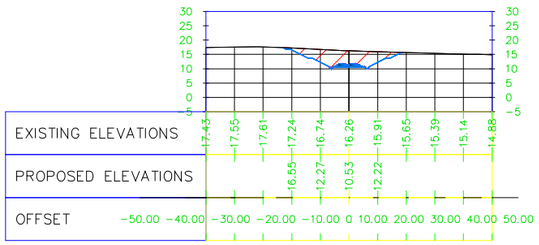
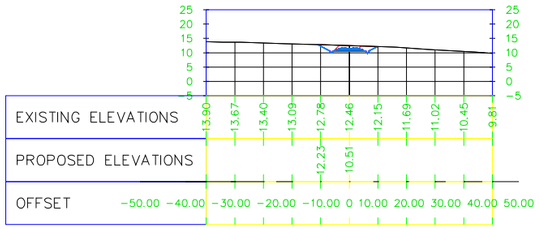


5+360.05



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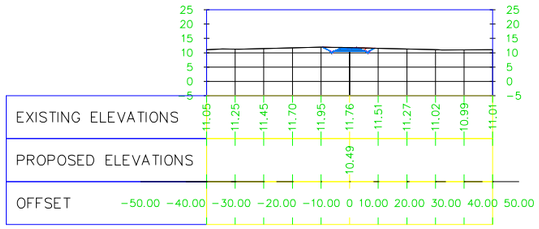


TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

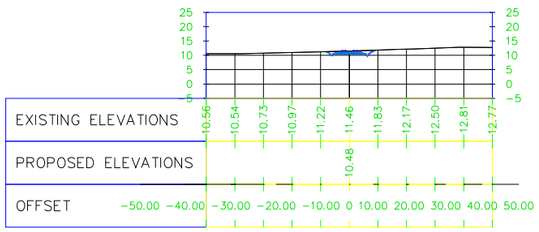
Dr. Ir. Imam Basuki, M.T.

Nama Project

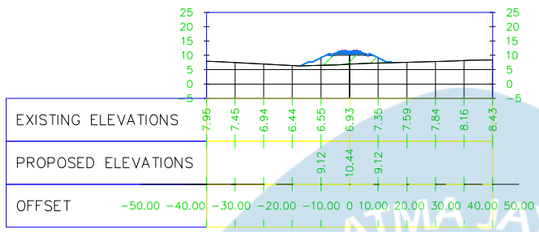
Gambar Potongan

Skala	1 : 1000

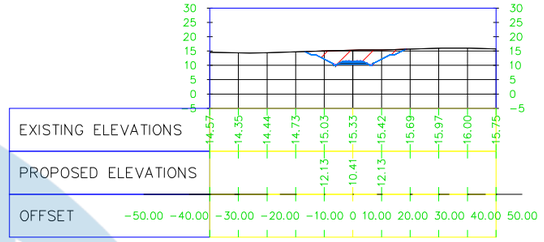
5+700.00



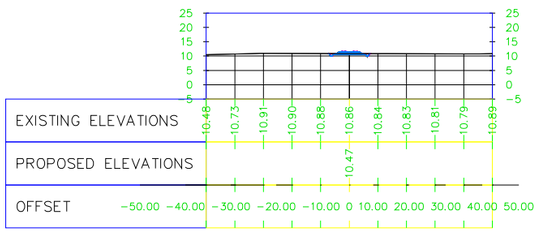
6+000.00



6+300.00



5+800.00



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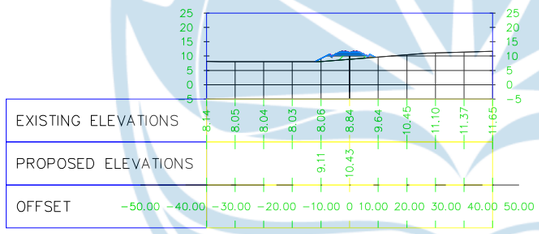

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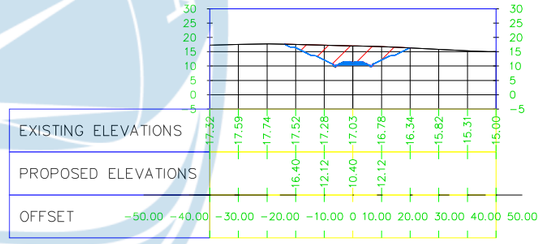
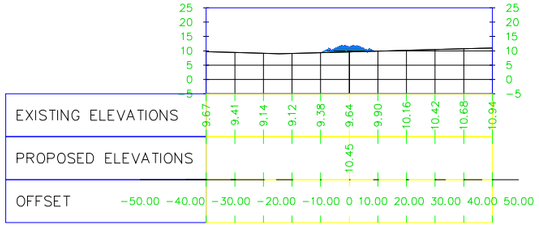
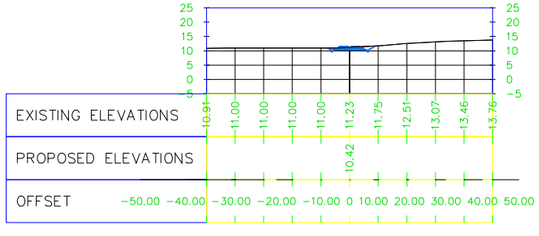


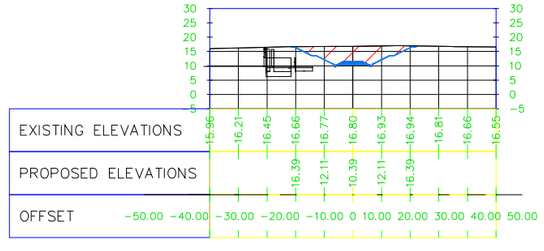
5+900.00



6+200.00



6+500.00



UNIVERSITAS ATMA JAYA YOGYAKARTA

TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

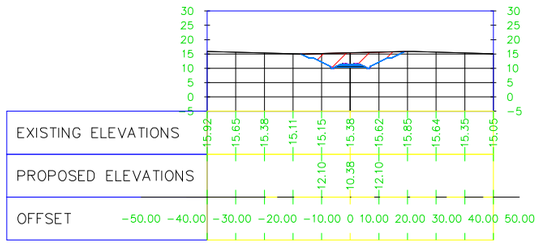
Dr. Ir. Imam Basuki, M.T.

Nama Project

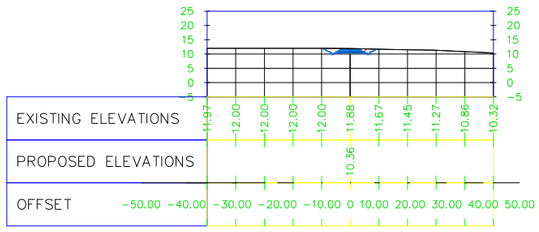
Gambar Potongan

Skala	1 : 1000

6+600.00



6+700.00



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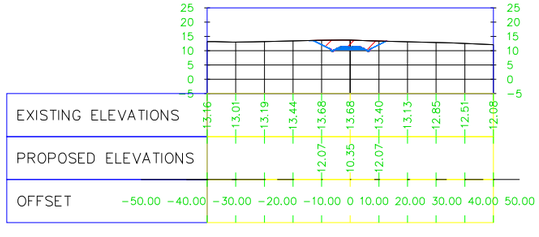
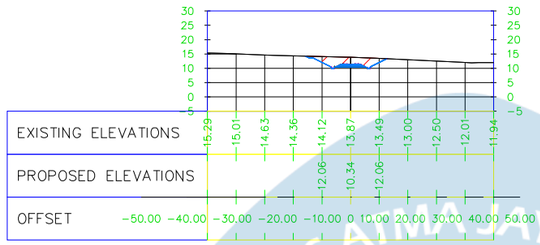
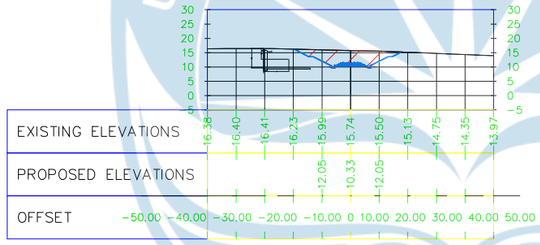


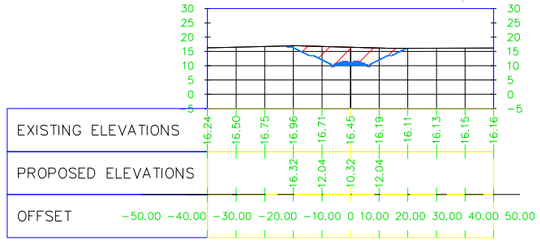
6+900.00



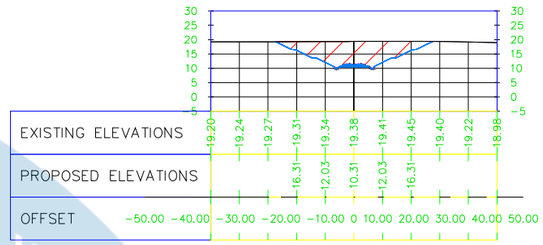
7+000.00



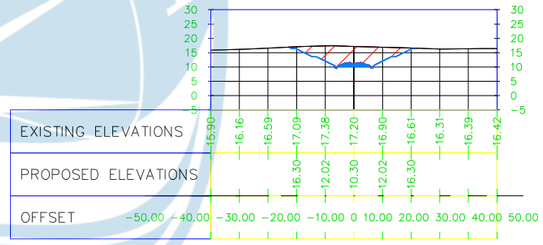
7+100.00



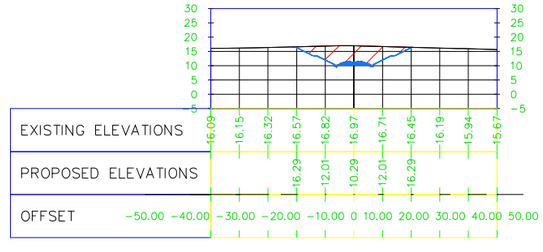
7+200.00



7+300.00



7+400.00



TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

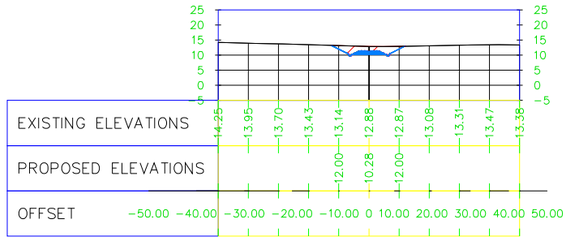
Dr. Ir. Imam Basuki, M.T.

Nama Project

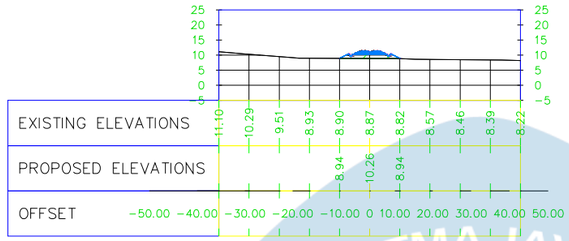
Gambar Potongan

Skala	1 : 1000

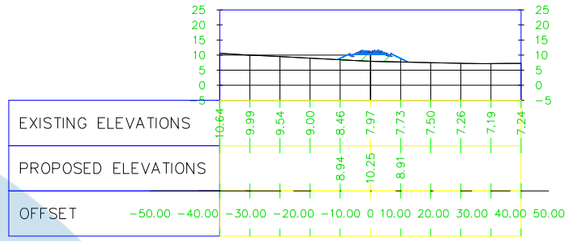
7+486.87



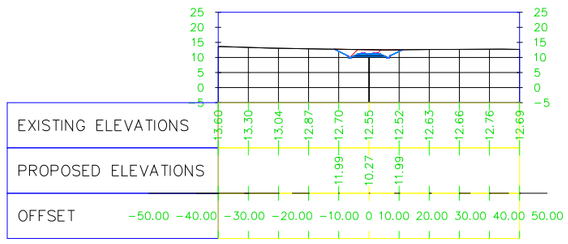
7+600.00



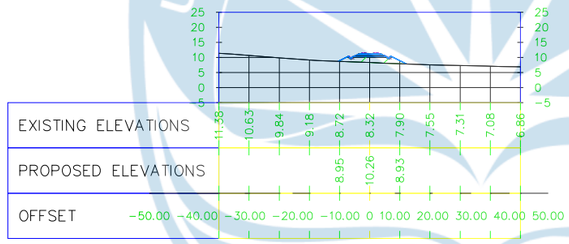
7+750.00



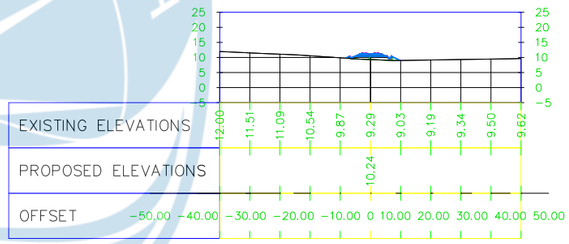
7+500.00



7+650.00



7+800.00



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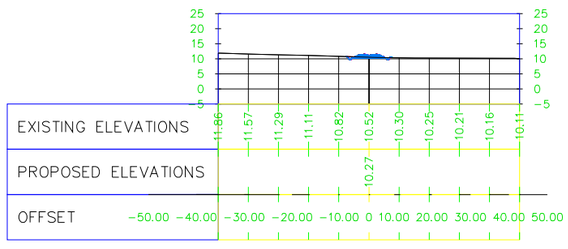

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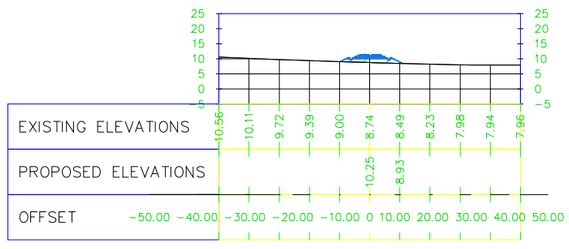
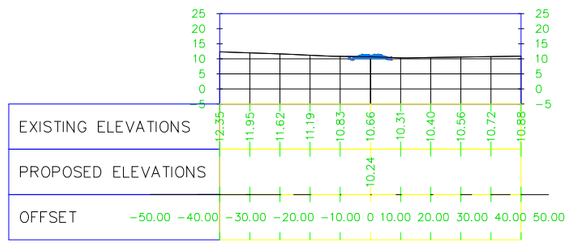


7+815.62



TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

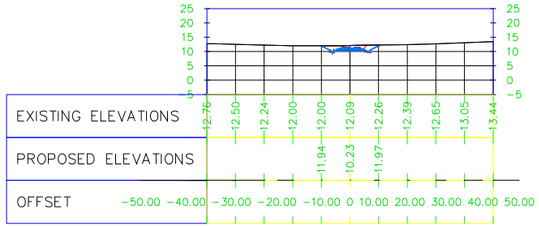
Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

7+850.00



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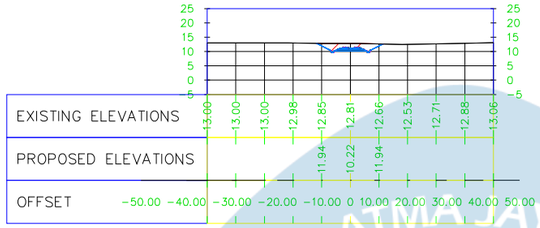
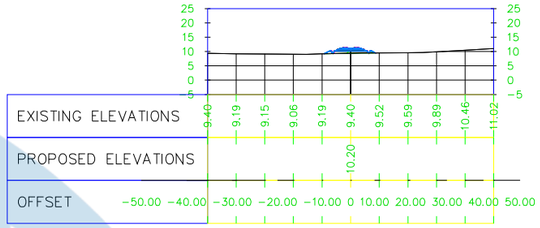
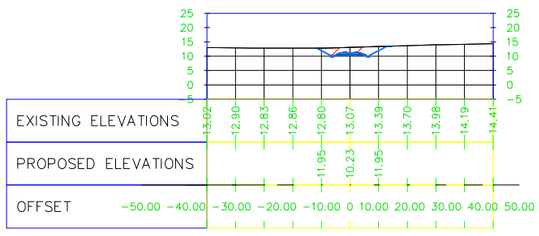


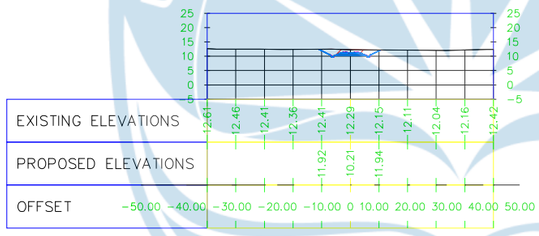
8+144.37



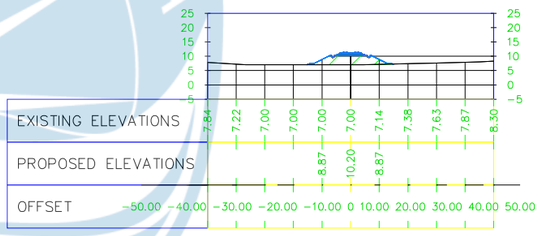
7+900.00



8+050.00



8+200.00



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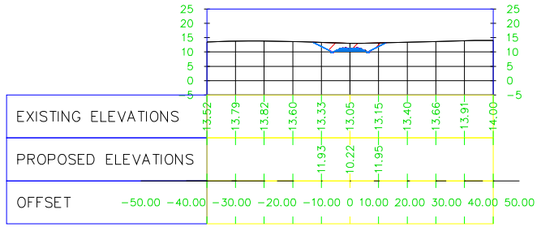

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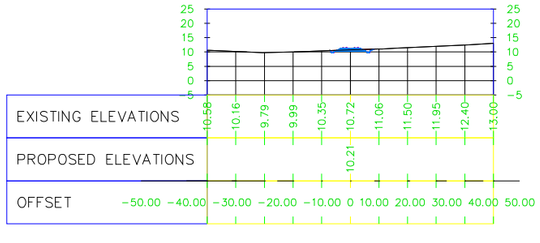
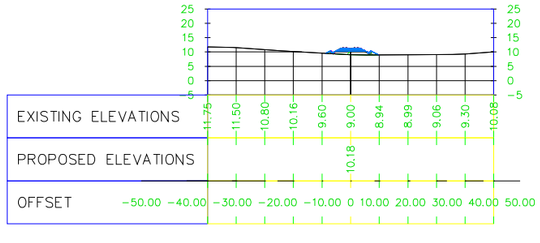


8+300.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

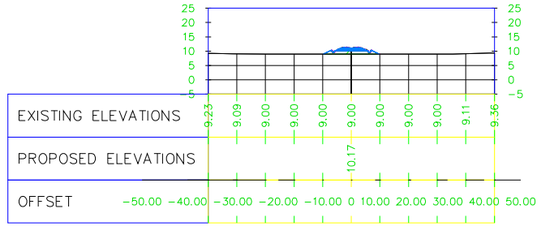
Dr. Ir. Imam Basuki, M.T.

Nama Project

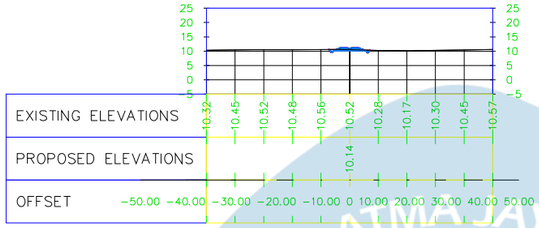
Gambar Potongan

Skala	1 : 1000

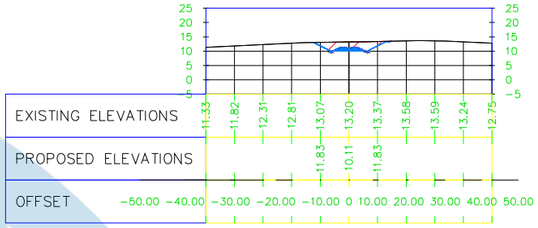
8+400.00



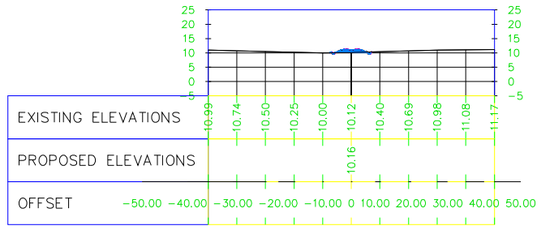
8+700.00



8+935.82



8+500.00



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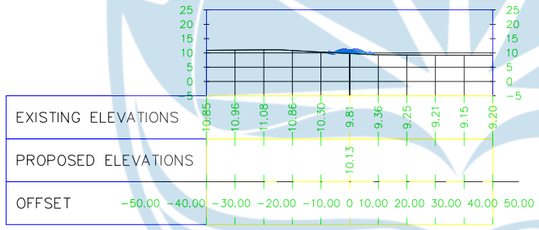

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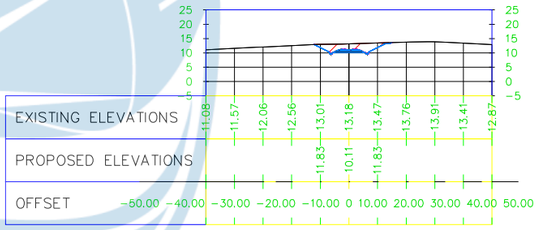

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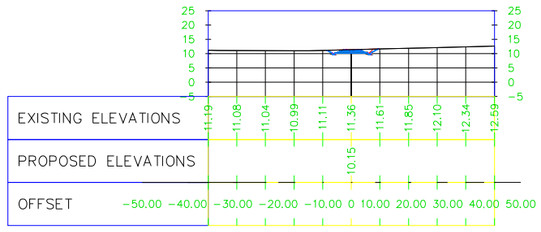

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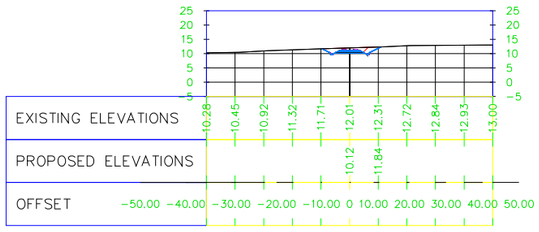
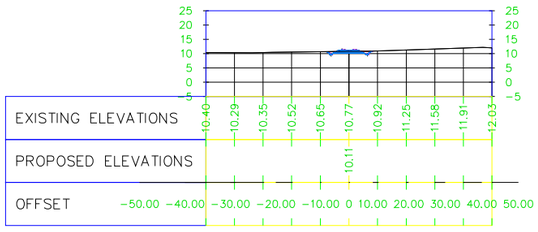


9+000.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

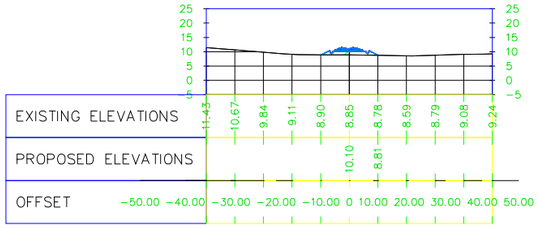
Dr. Ir. Imam Basuki, M.T.

Nama Project

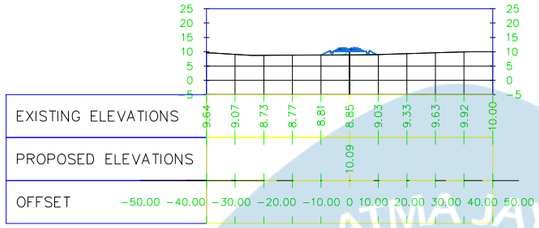
Gambar Potongan

Skala	1 : 1000

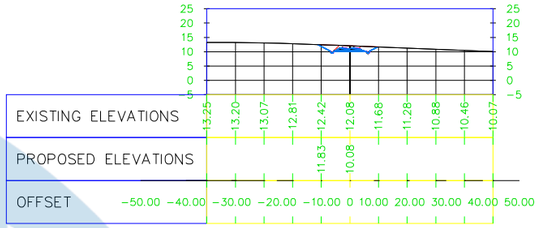
9+050.00



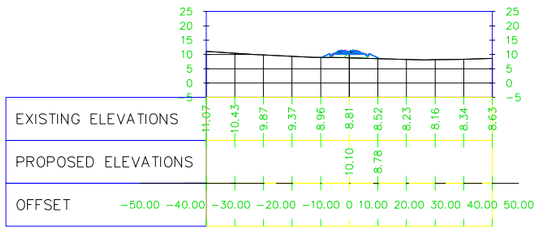
9+150.00



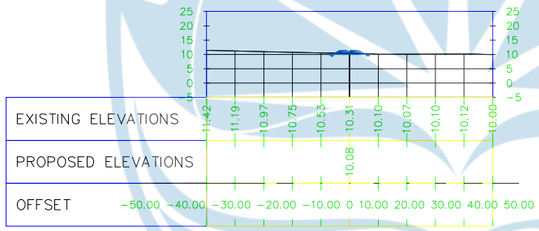
9+250.00



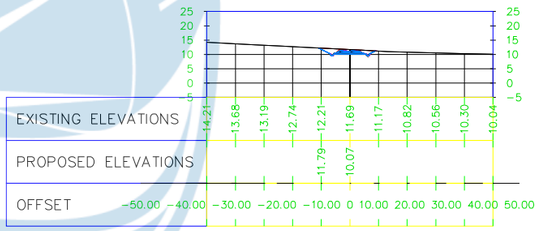
9+067.82



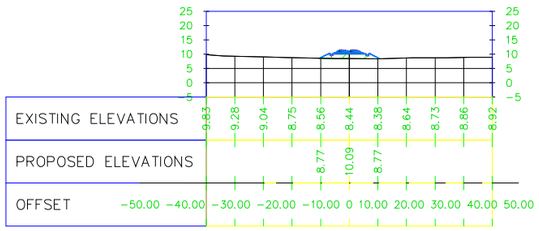
9+195.37



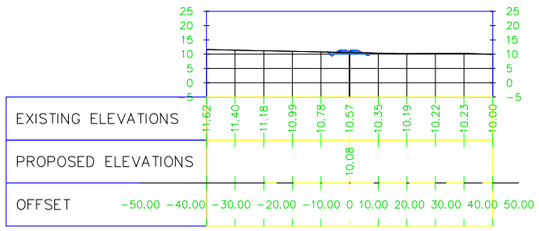
9+300.00



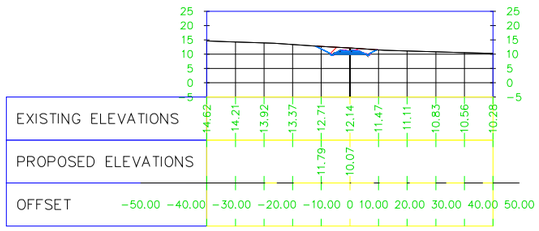
9+100.00



9+200.00



9+322.92



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

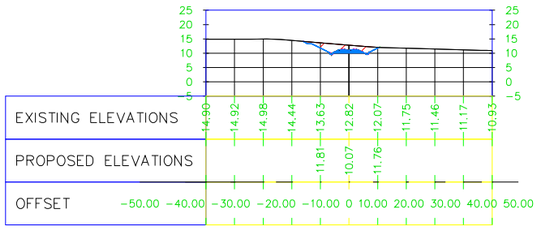
Dr. Ir. Imam Basuki, M.T.

Nama Project

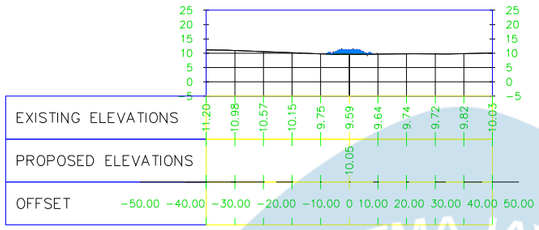
Gambar Potongan

Skala	1 : 1000

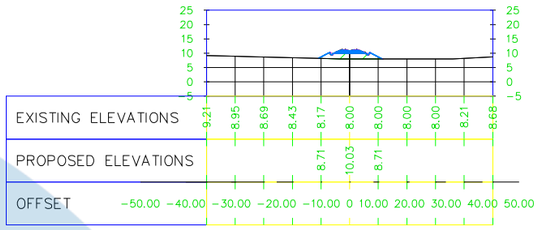
9+350.00



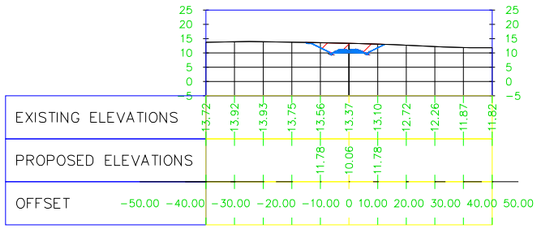
9+454.92



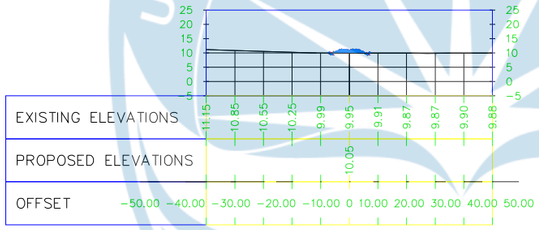
9+700.00



9+400.00



9+500.00



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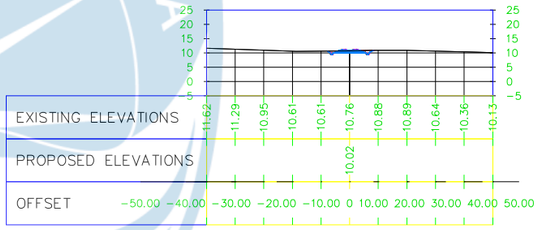

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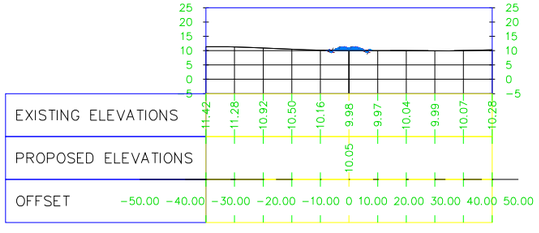
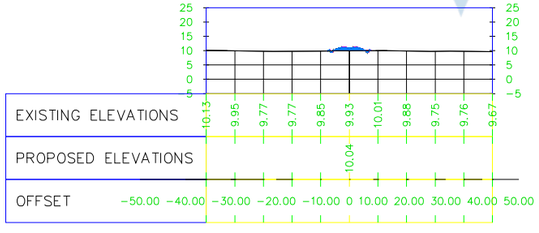
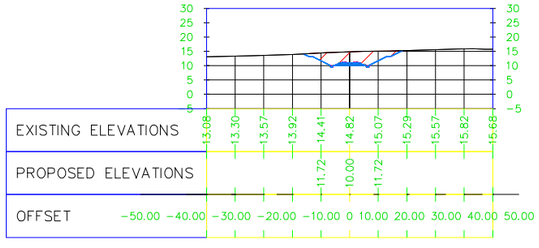


9+600.00



9+900.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
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Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

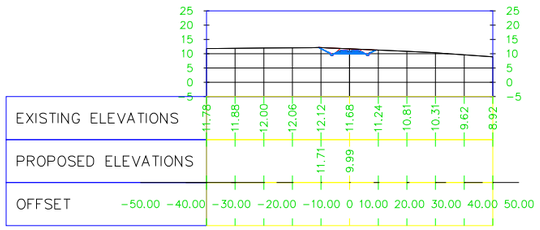
Dr. Ir. Imam Basuki, M.T.

Nama Project

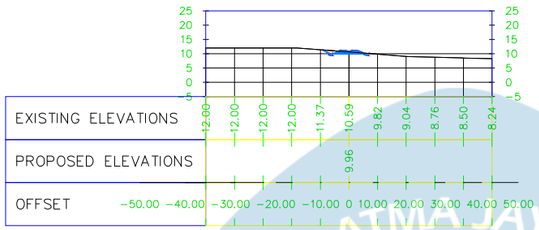
Gambar Potongan

Skala	1 : 1000

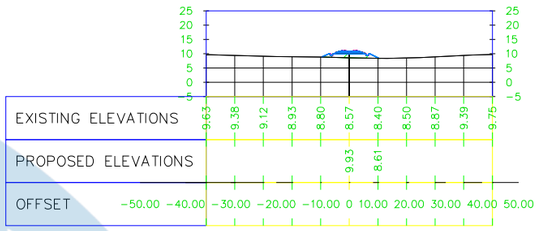
10+000.00



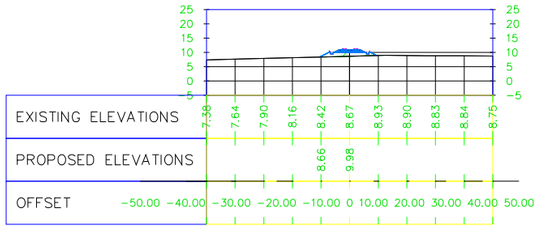
10+300.00



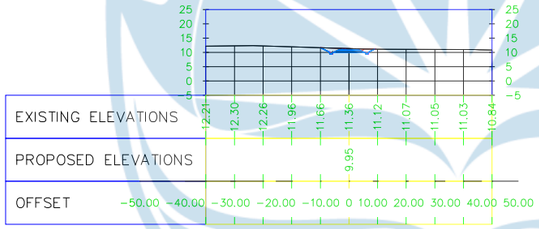
10+600.00



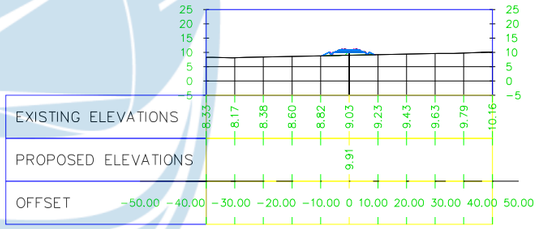
10+100.00



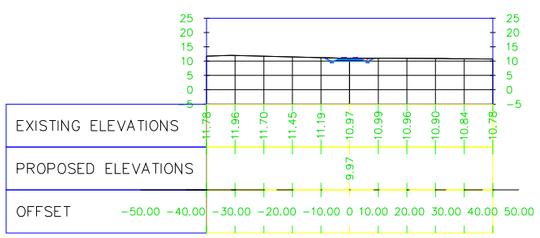
10+400.00



10+700.00



10+200.00



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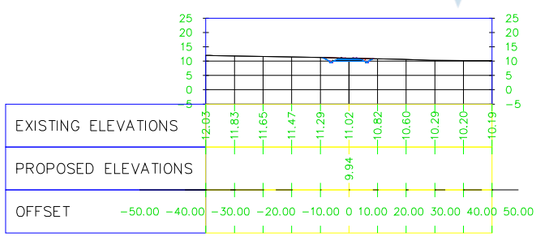
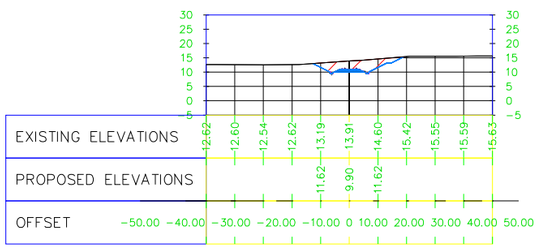


10+800.00



TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

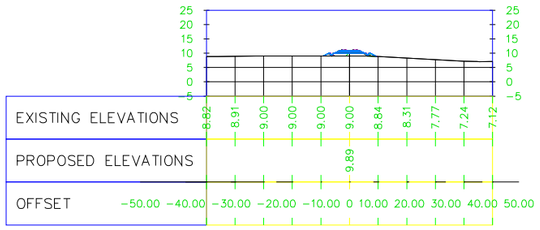
Dr. Ir. Imam Basuki, M.T.

Nama Project

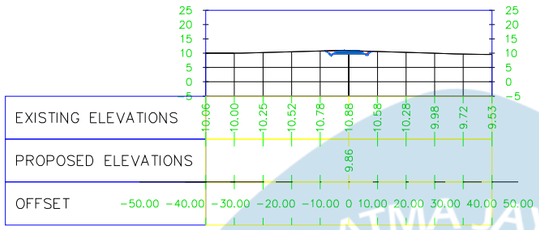
Gambar Potongan

Skala	1 : 1000

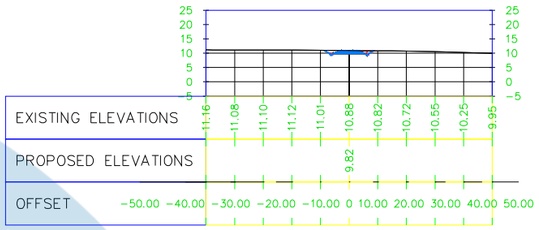
10+900.00



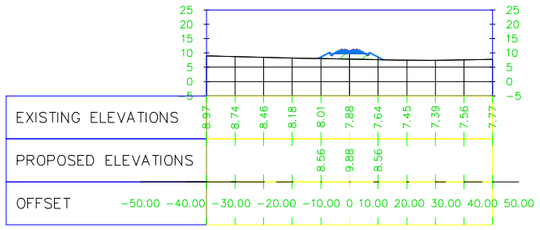
11+200.00



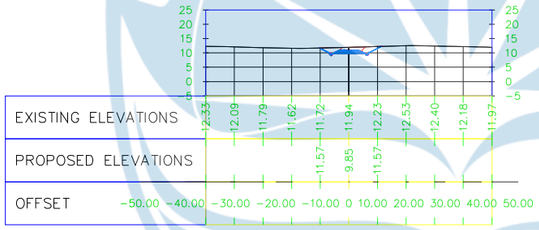
11+500.00



11+000.00



11+300.00



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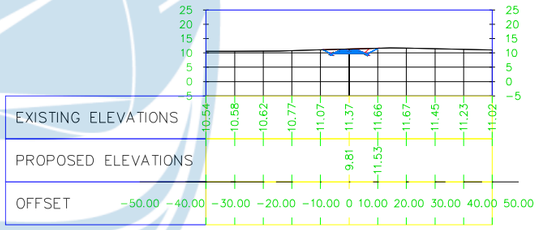
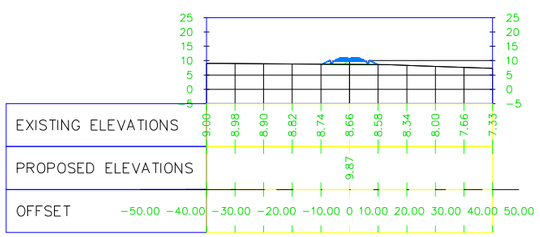


11+100.00



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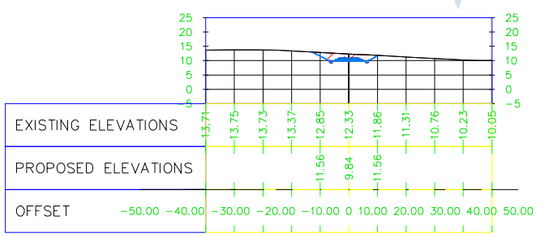
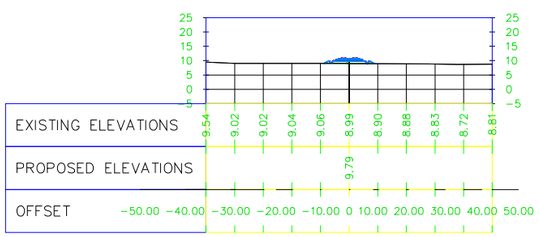


11+700.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

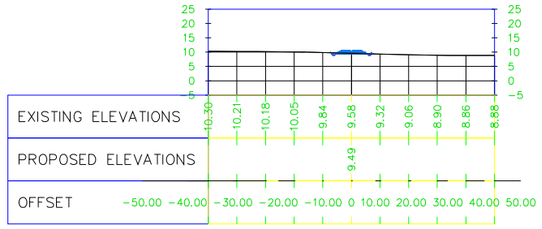
Dr. Ir. Imam Basuki, M.T.

Nama Project

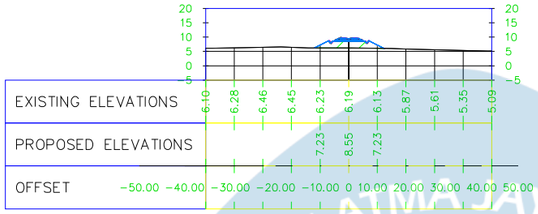
Gambar Potongan

Skala	1 : 1000

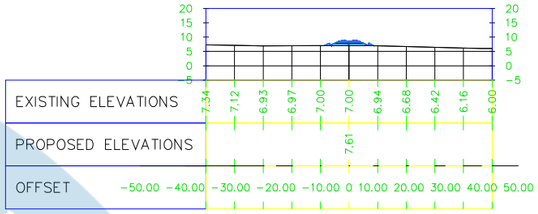
11+800.00



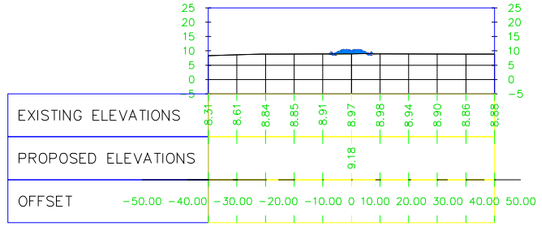
12+100.00



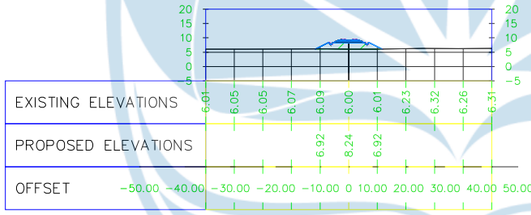
12+400.00



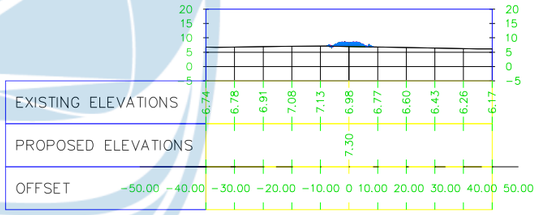
11+900.00



12+200.00



12+500.00



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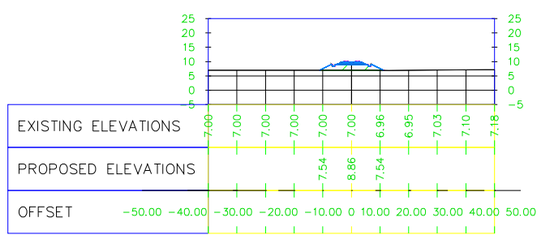

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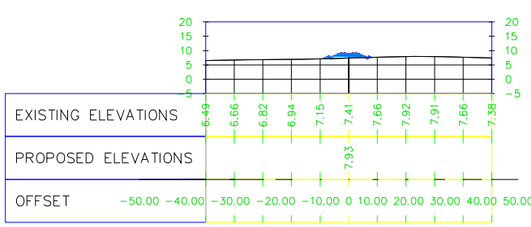

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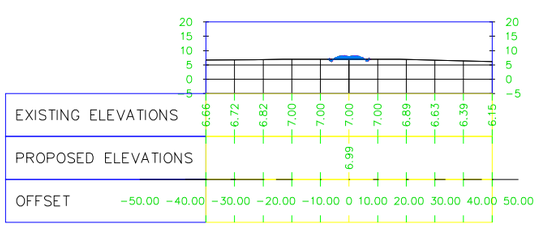


TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

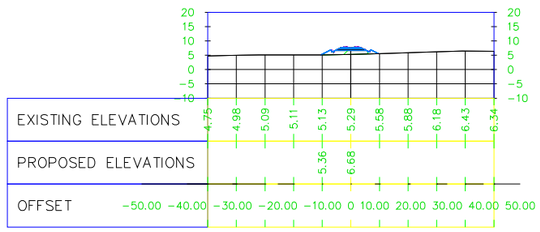
Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

12+700.00



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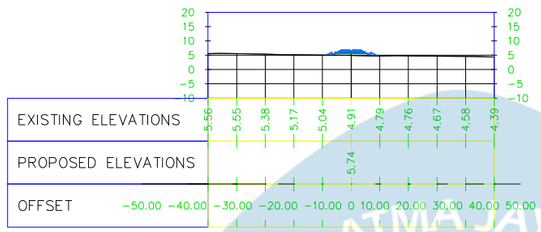
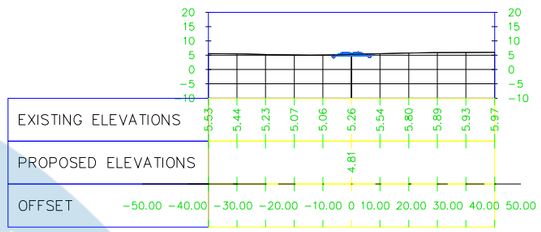
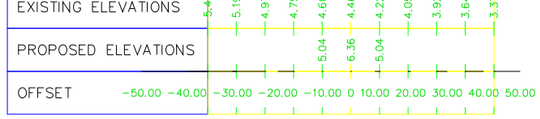


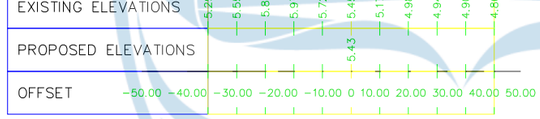
13+300.00



12+800.00



13+100.00



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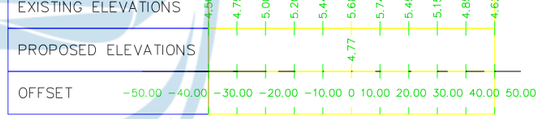
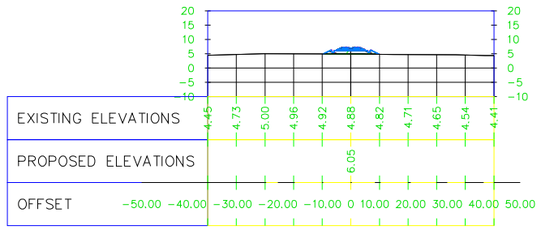


12+900.00



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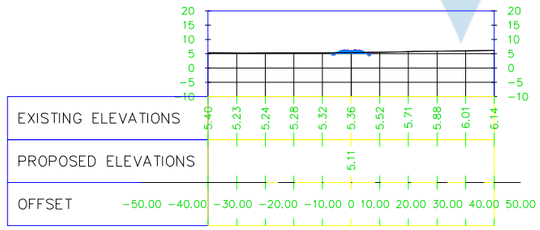

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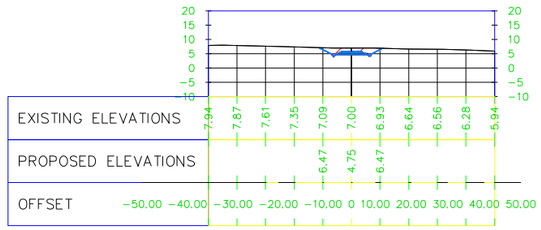

TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

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Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

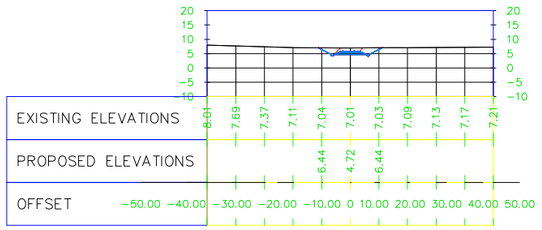
Dr. Ir. Imam Basuki, M.T.

Nama Project

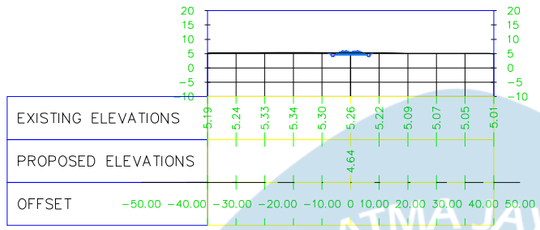
Gambar Potongan

Skala	1 : 1000

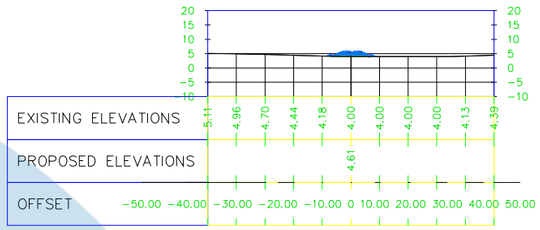
13+600.00



13+881.16



14+000.00



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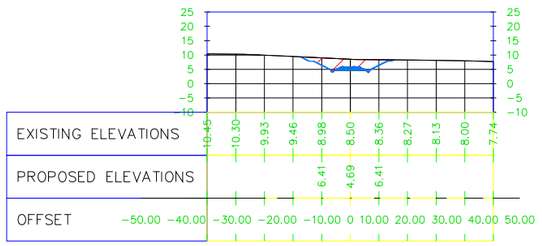

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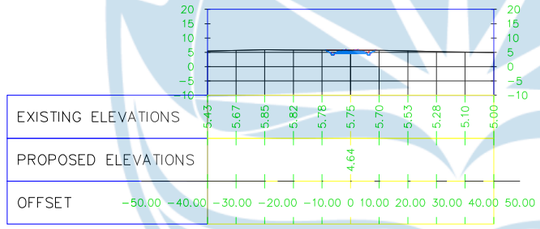

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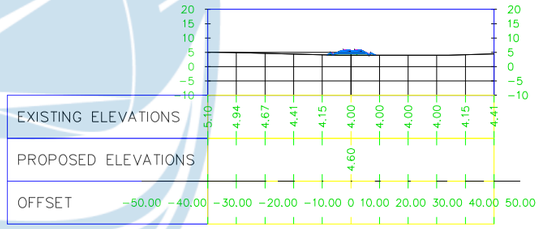

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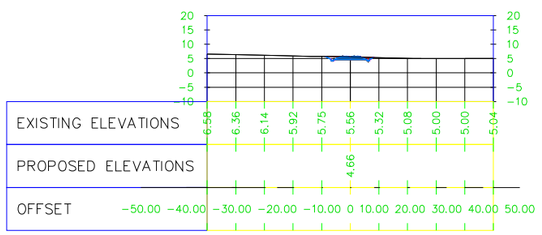

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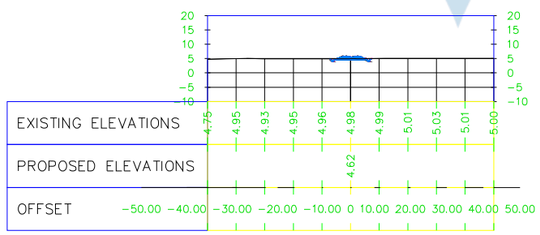
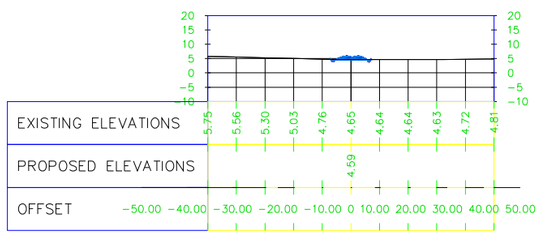


14+050.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

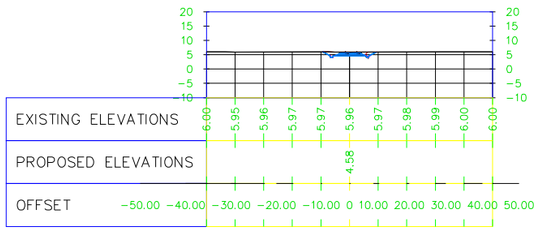
Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

14+100.00



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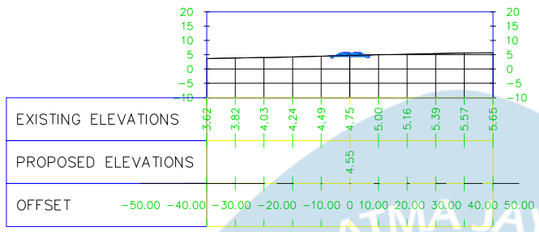

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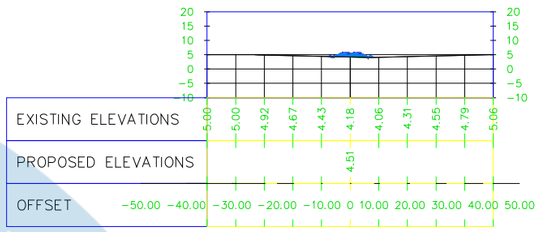

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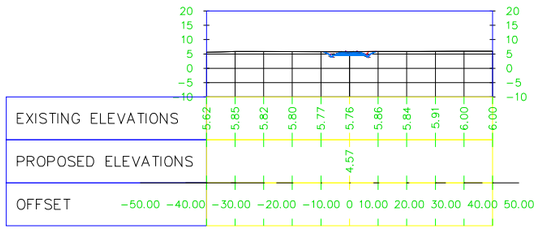

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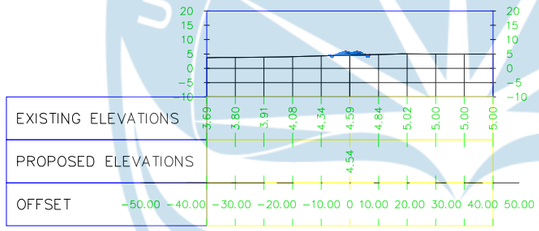

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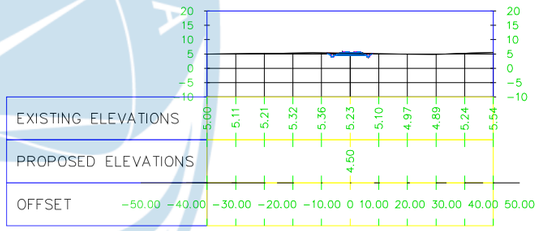

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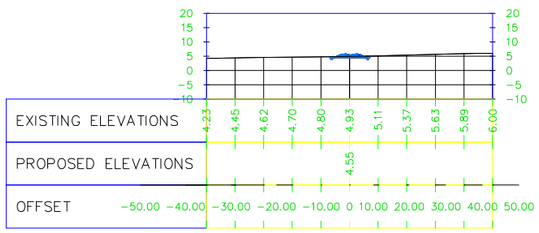
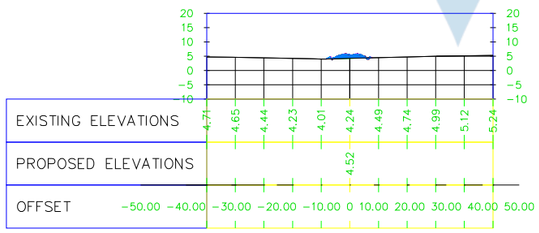
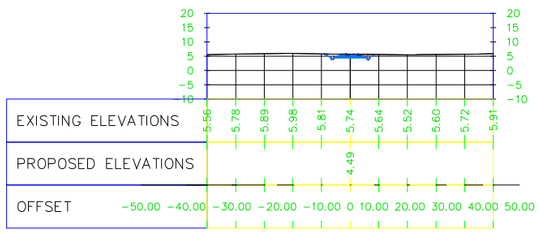


14+300.00



14+429.95



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

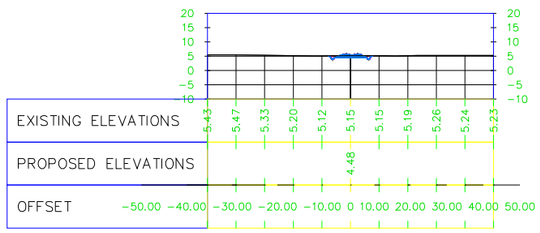
Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

14+450.00



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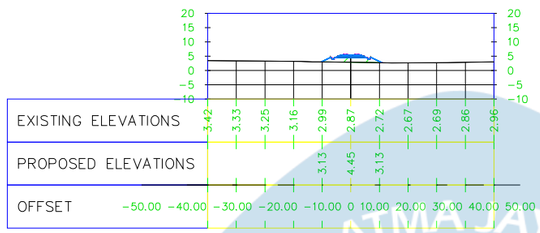

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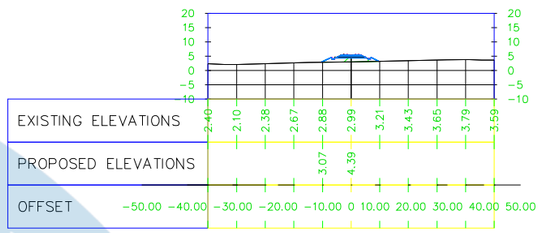

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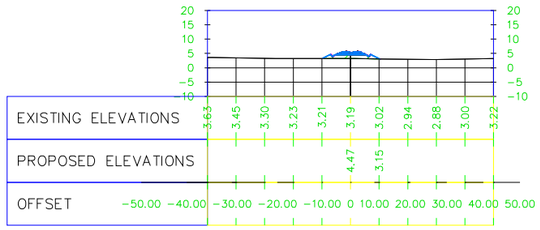

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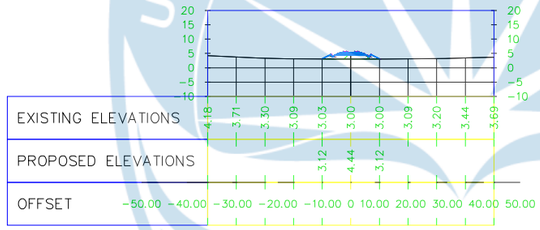

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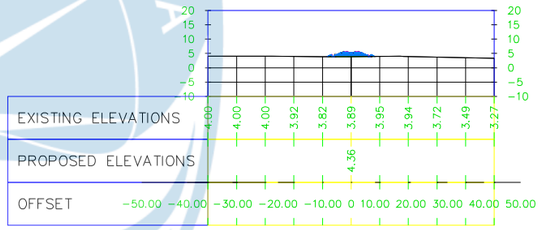
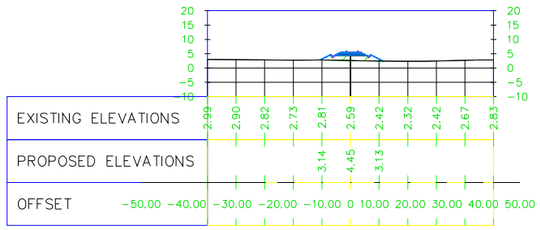


14+550.00



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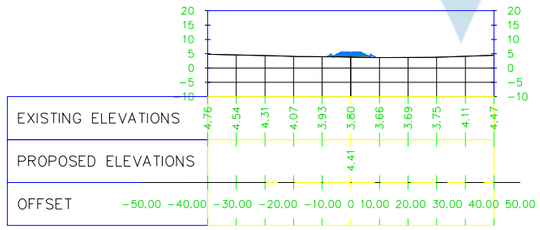
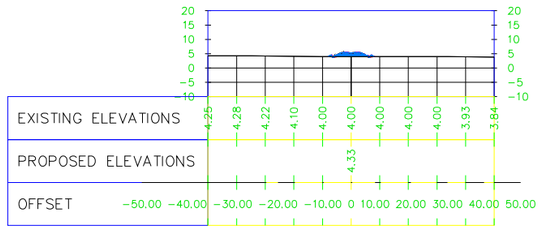


15+000.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

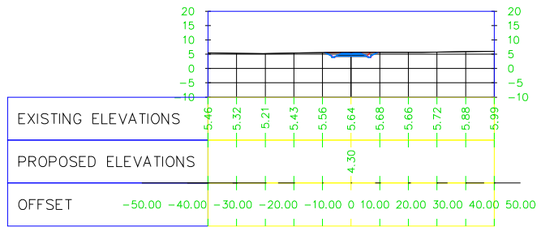
Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

15+100.00



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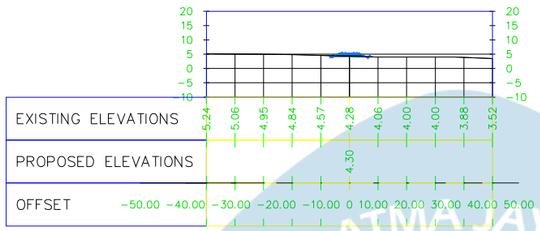

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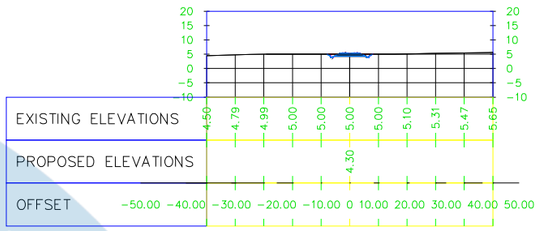
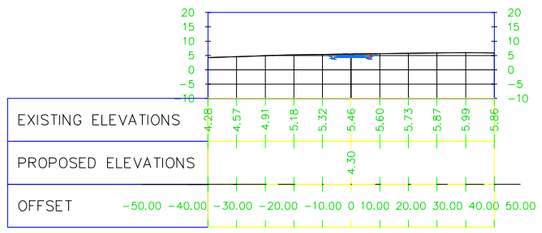
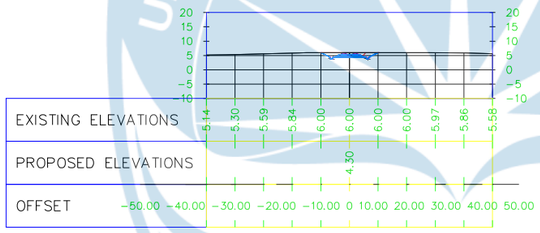


15+200.00



15+500.00



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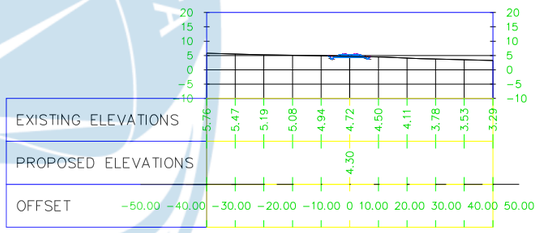

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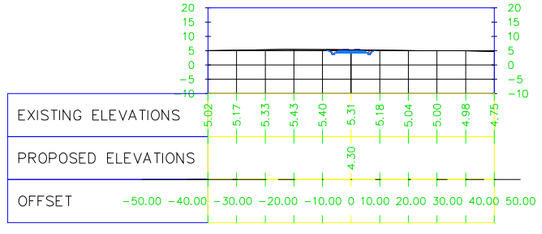

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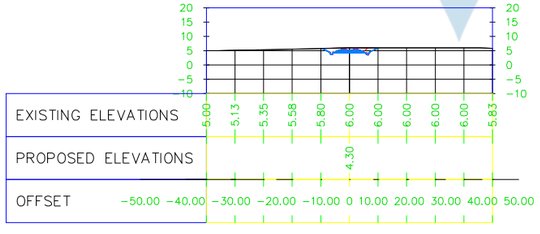

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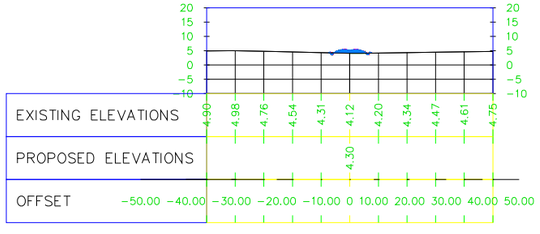


TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

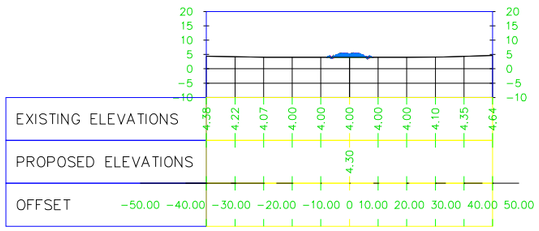
Dr. Ir. Imam Basuki, M.T.

Nama Project

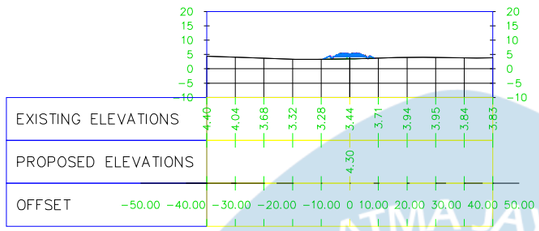
Gambar Potongan

Skala	1 : 1000

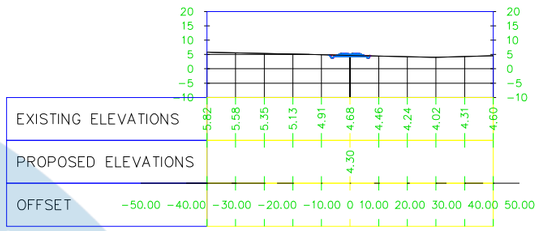
16+000.00



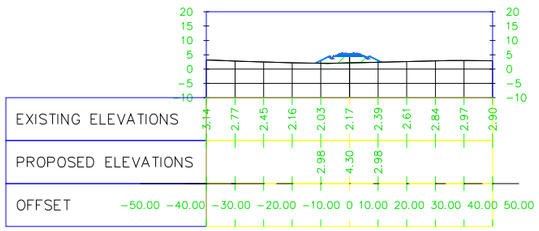
16+300.00



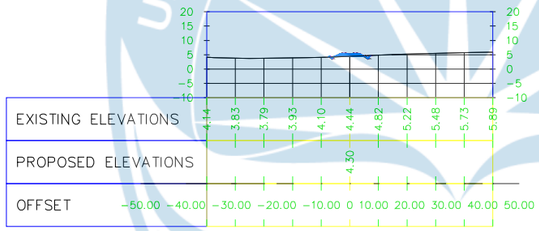
16+600.00



16+100.00



16+400.00



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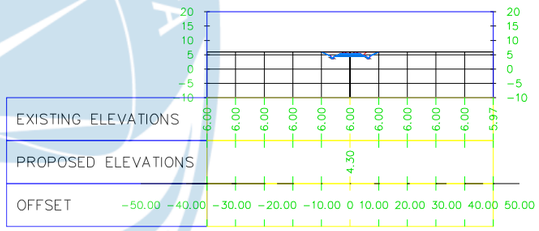

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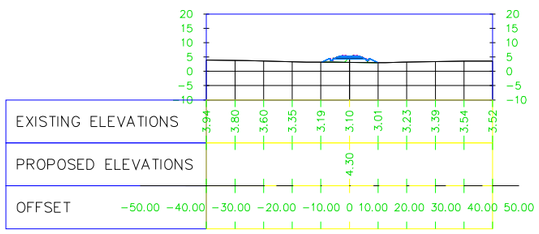

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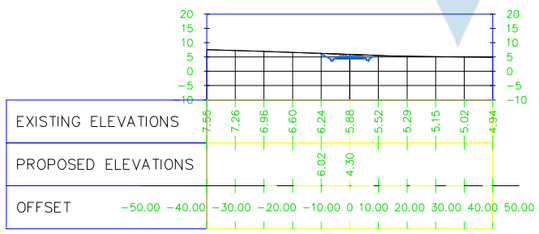

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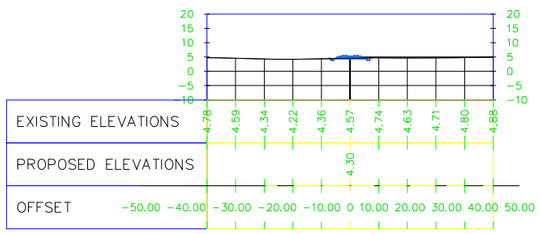


TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius

(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

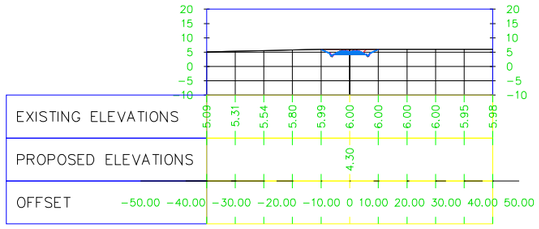
Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

16+900.00



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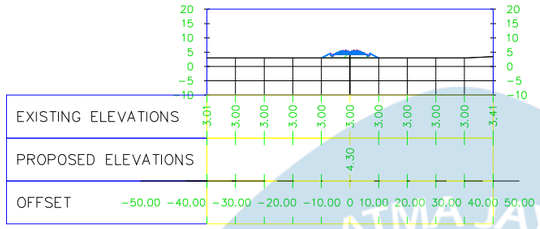
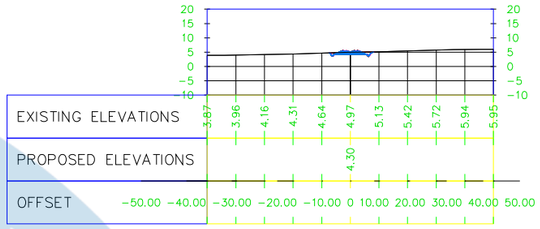
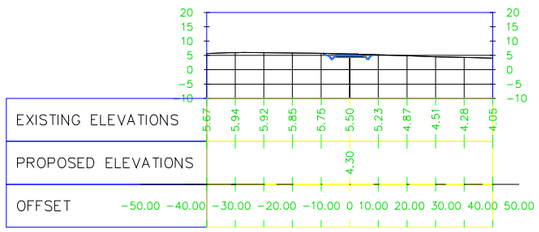


17+500.00



17+000.00



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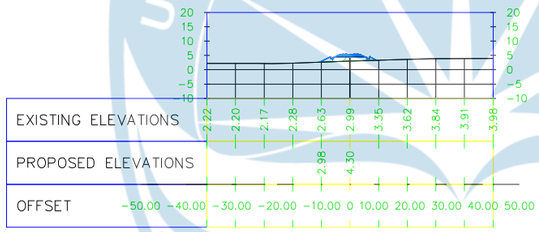

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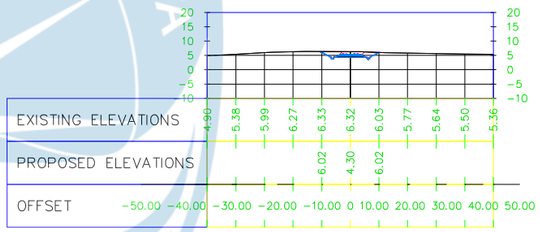

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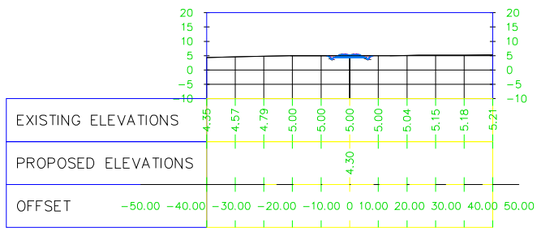

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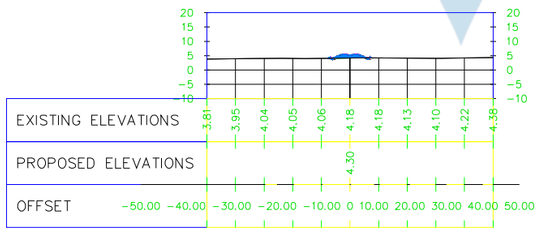

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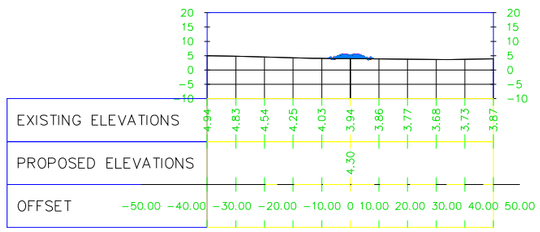


TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

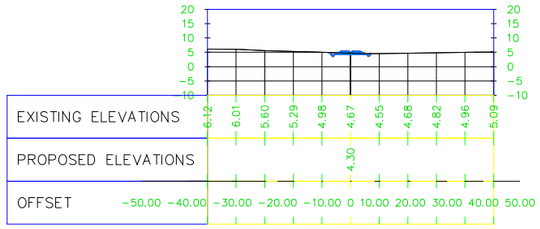
Dr. Ir. Imam Basuki, M.T.

Nama Project

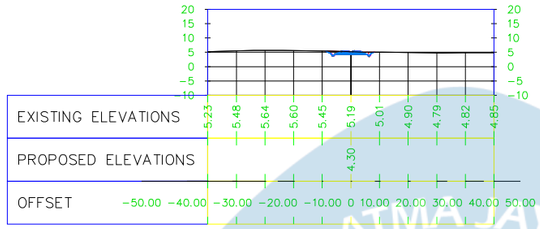
Gambar Potongan

Skala	1 : 1000

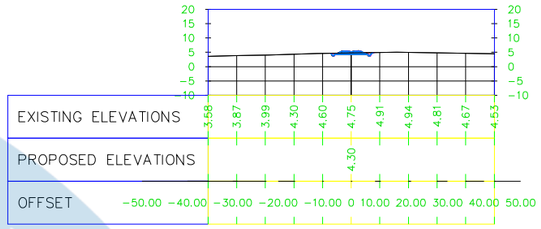
17+800.00



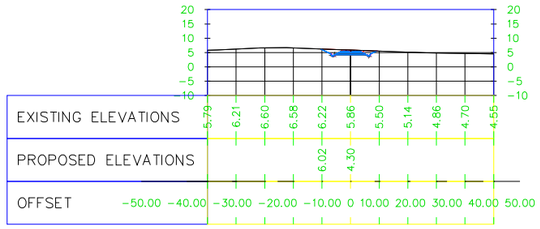
18+100.00



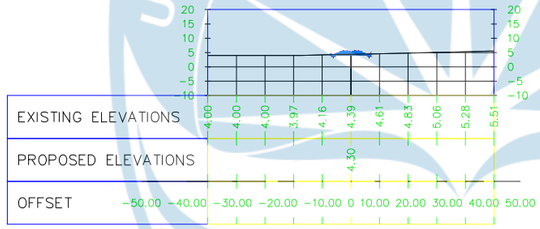
18+400.00



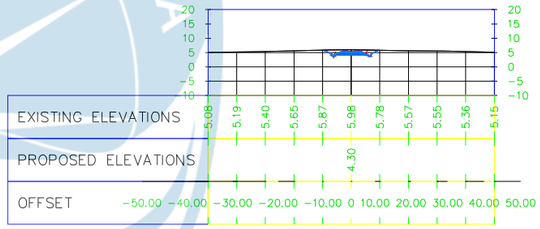
17+900.00



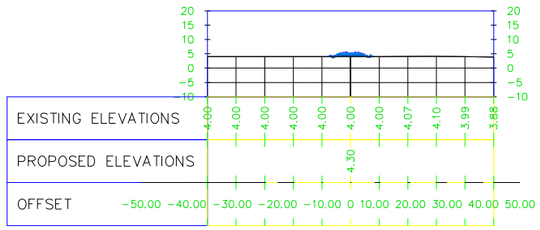
18+200.00



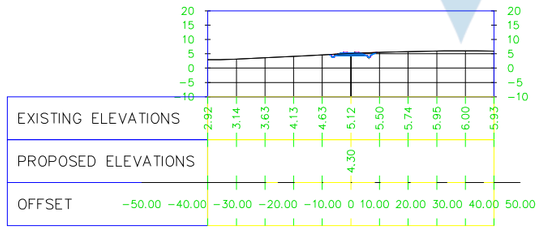
18+500.00



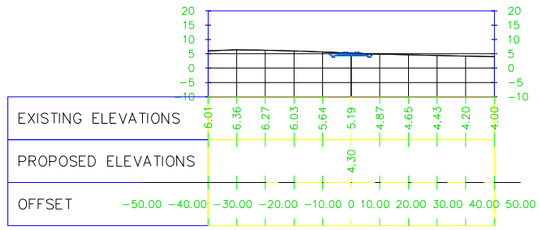
18+000.00



18+300.00



18+600.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

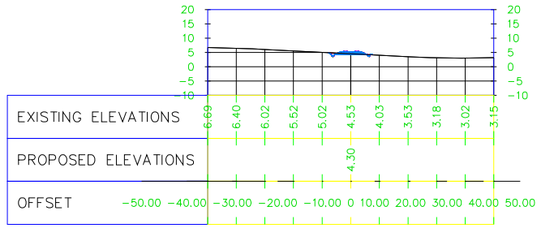
Dr. Ir. Imam Basuki, M.T.

Nama Project

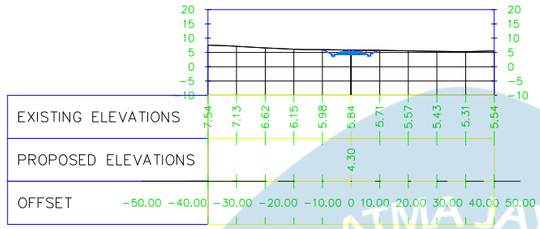
Gambar Potongan

Skala	1 : 1000

18+700.00



19+000.00



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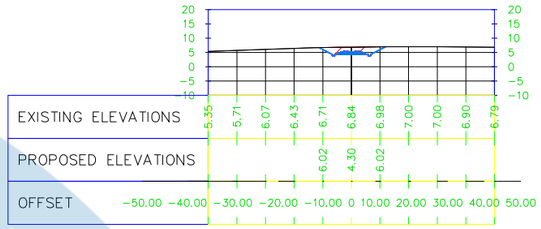

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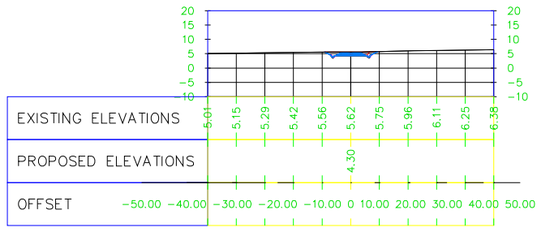
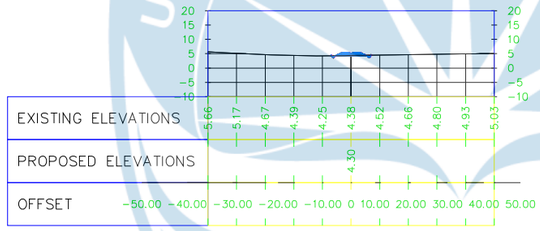


19+100.00



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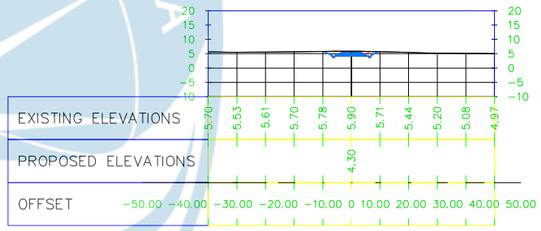
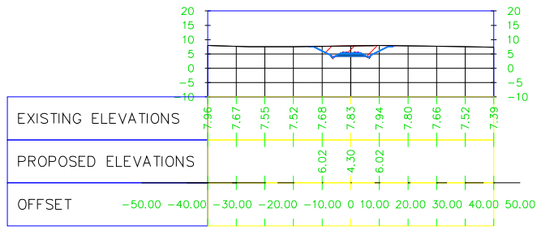
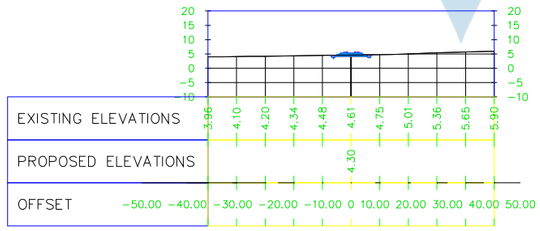


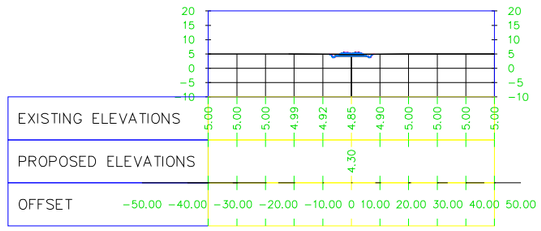
18+900.00



19+200.00



19+500.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

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Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

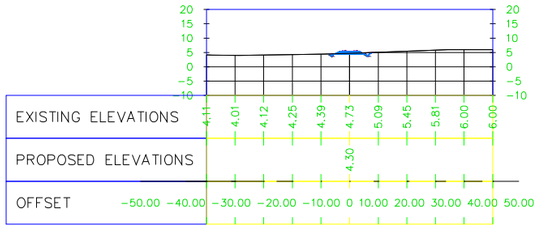
Dr. Ir. Imam Basuki, M.T.

Nama Project

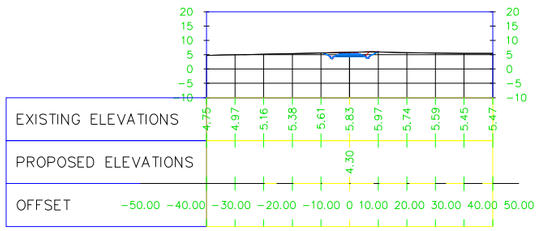
Gambar Potongan

Skala	1 : 1000

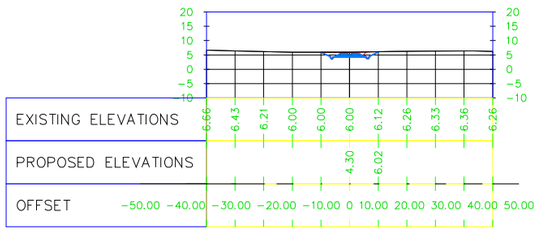
19+600.00



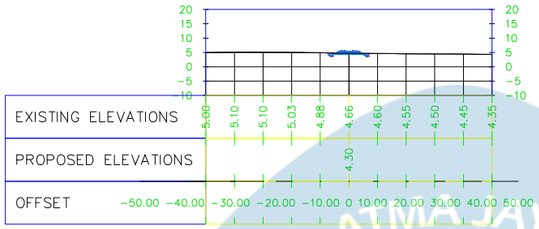
19+700.00



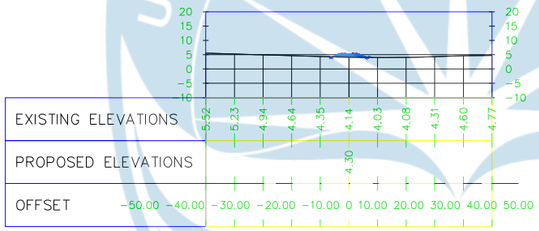
19+800.00



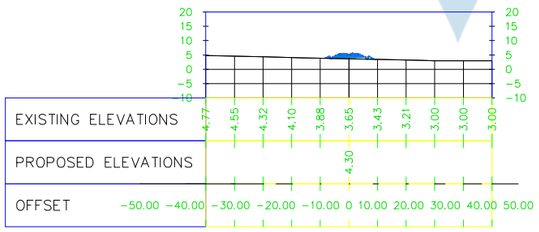
19+900.00



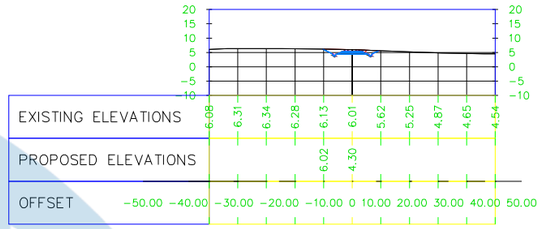
20+000.00



20+100.00



20+200.00



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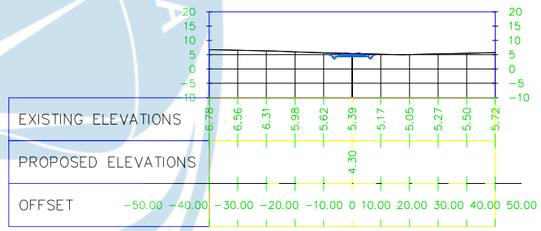
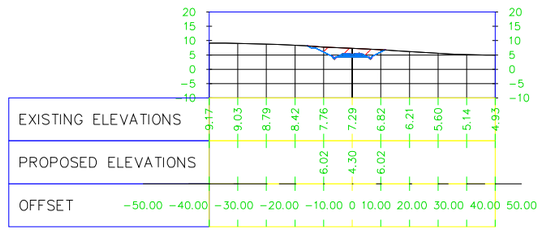


20+400.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

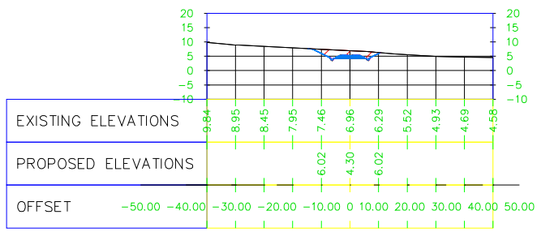
Dr. Ir. Imam Basuki, M.T.

Nama Project

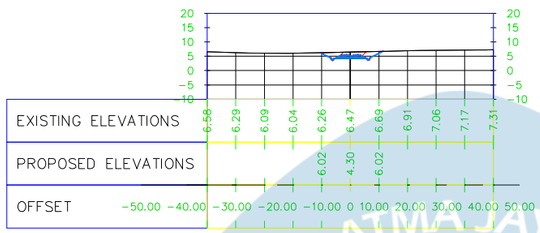
Gambar Potongan

Skala	1 : 1000

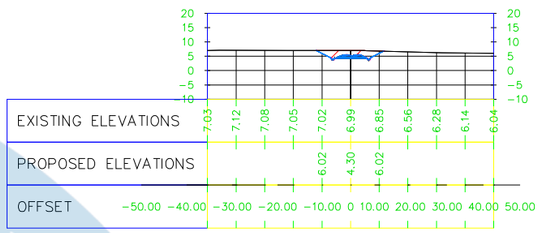
20+500.00



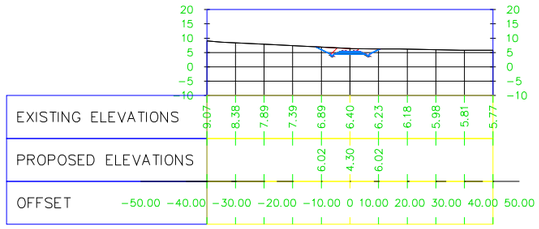
20+600.00



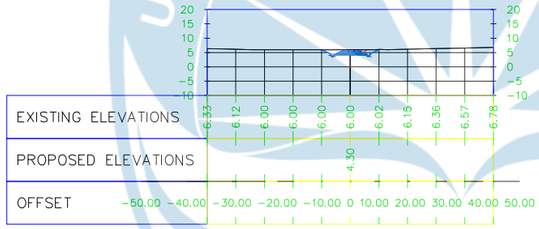
20+700.00



20+518.24



20+650.00



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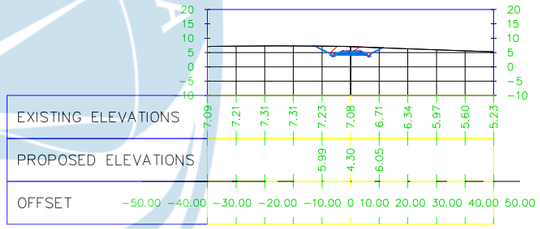

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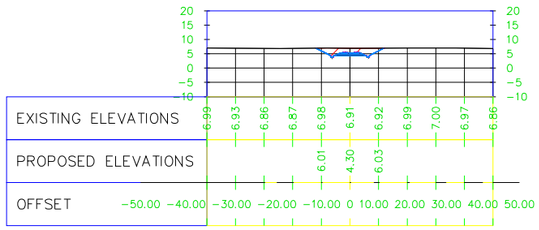

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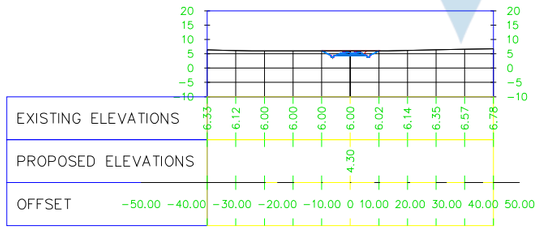
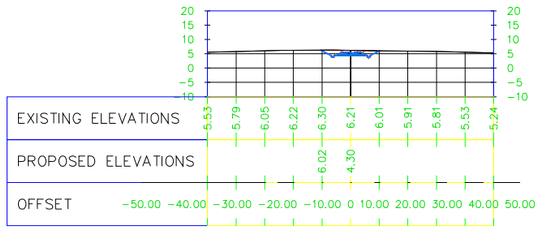


20+800.00



TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

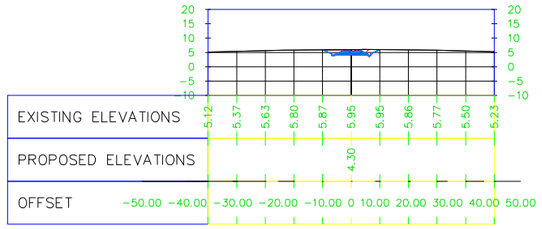
Dr. Ir. Imam Basuki, M.T.

Nama Project

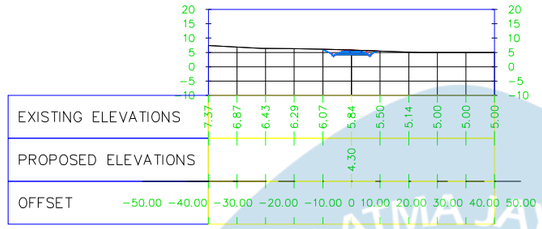
Gambar Potongan

Skala	1 : 1000

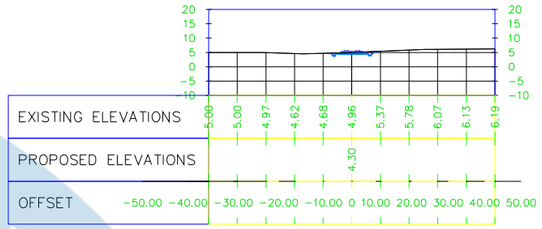
20+809.23



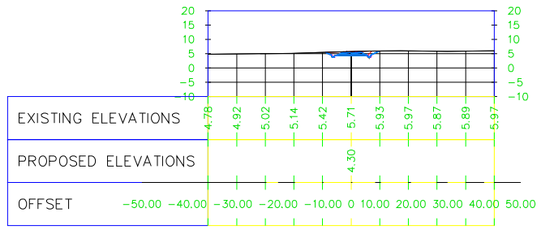
20+950.00



21+050.00



20+850.00



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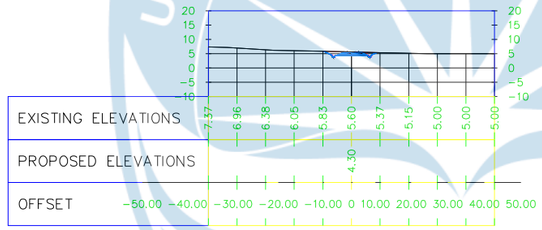

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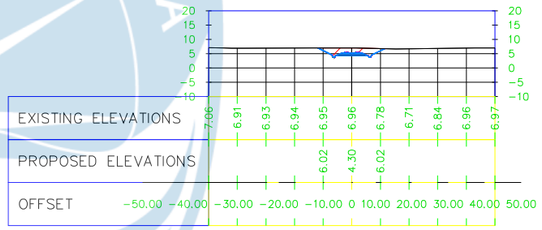

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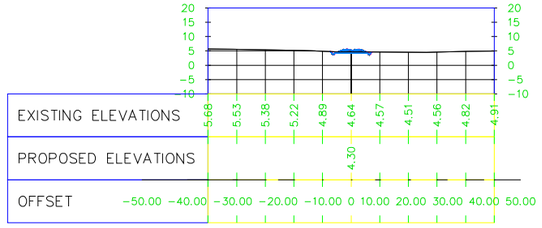

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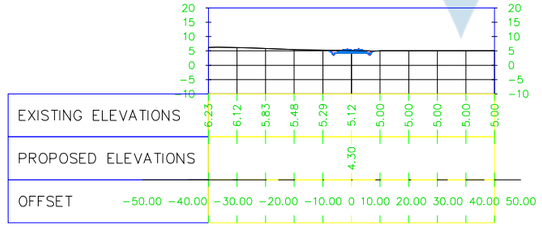

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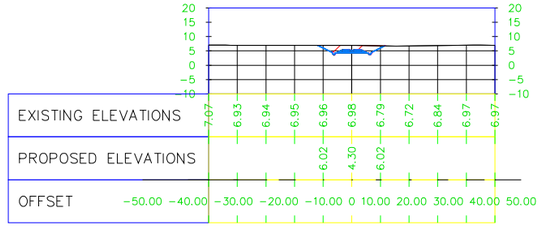

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TAHUN AJARAN 2022/2023

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Disetujui Oleh:

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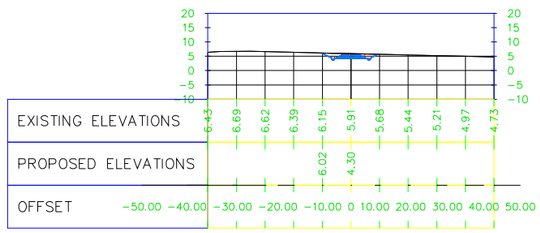
Nama Project

Gambar Potongan

Skala	1 : 1000

21+200.00



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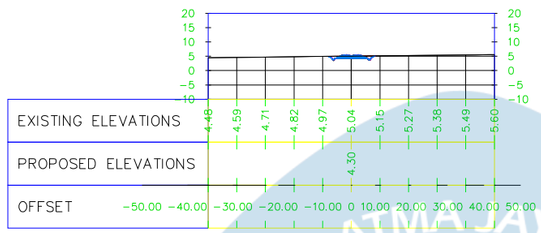

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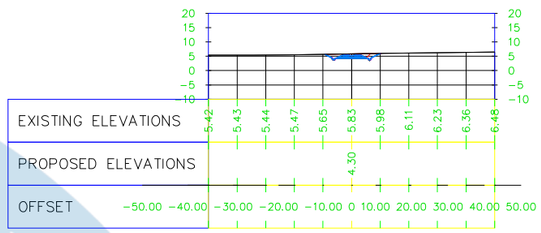

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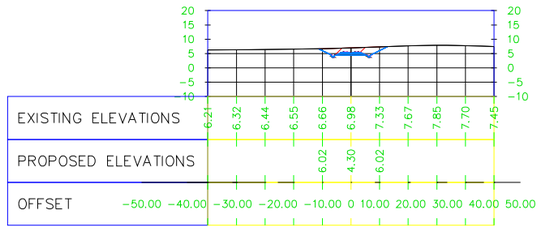

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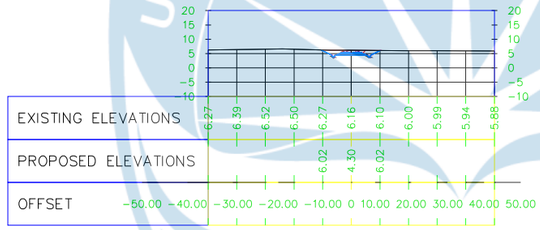

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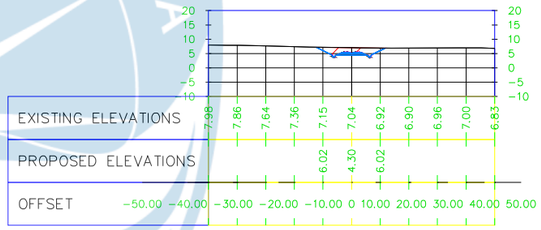

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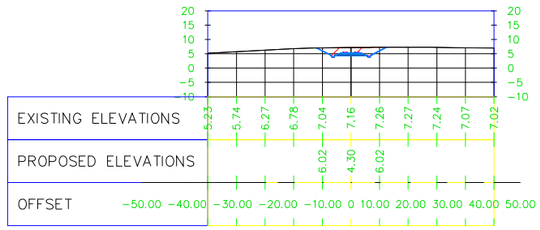

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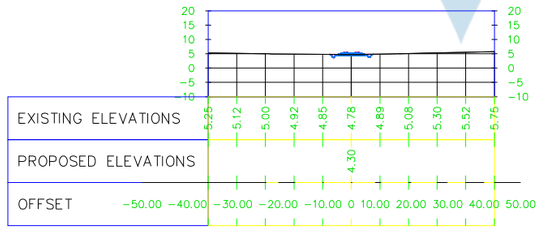

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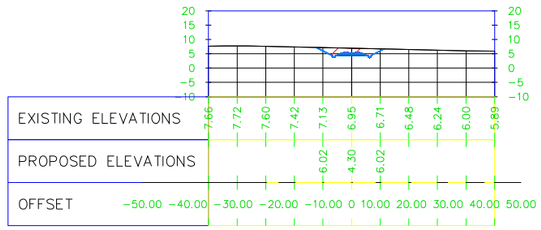

UNIVERSITAS ATMA JAYA YOGYAKARTA

TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

Filipus Elvanus Purnama Ggegerius
(200218321)
Valerianus Samba Setyadi
(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

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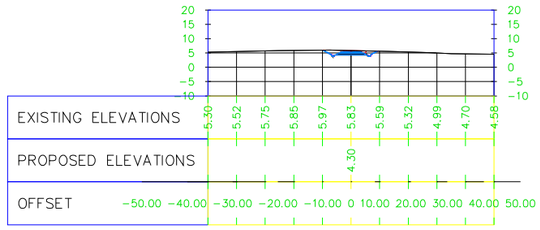

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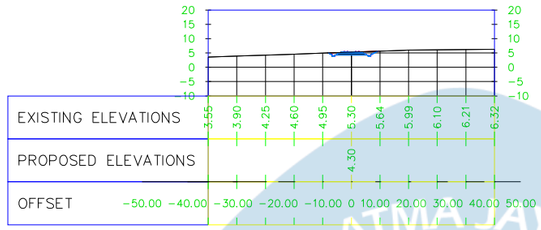

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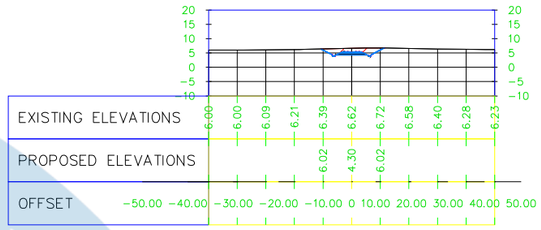

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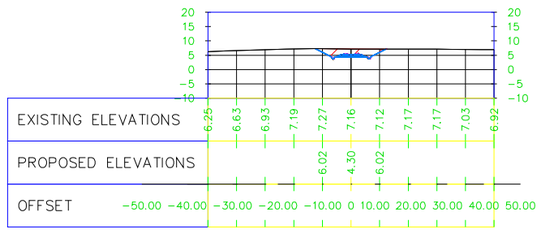

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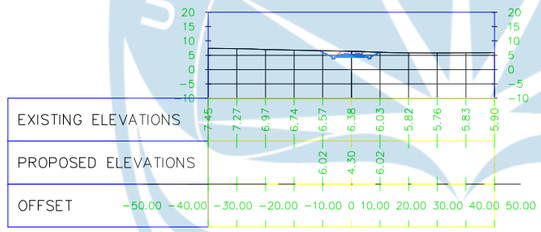

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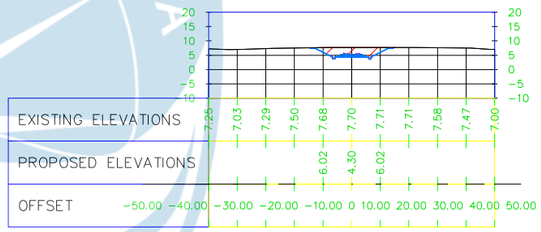

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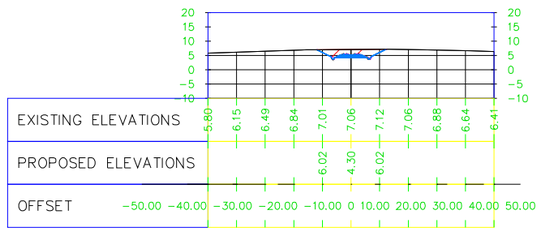

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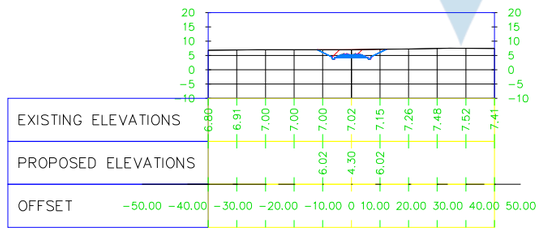

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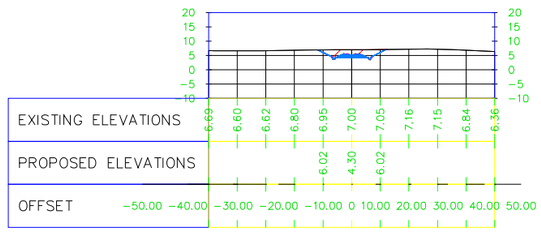

TUGAS AKHIR

PERANCANGAN

INFRASTRUKTUR JALAN REL

TAHUN AJARAN 2022/2023

Digambar oleh:

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(200218321)

Valerianus Samba Setyadi

(200218355)

Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

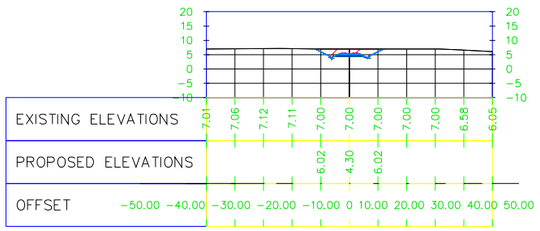
Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

23+000.00



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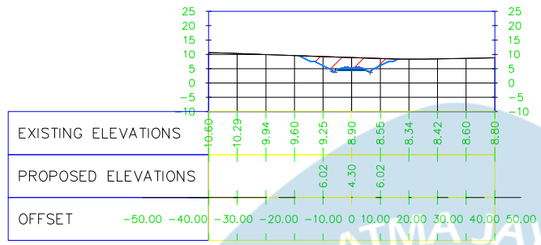

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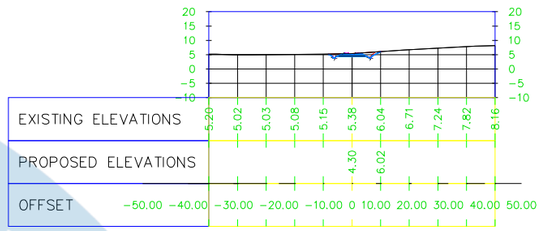

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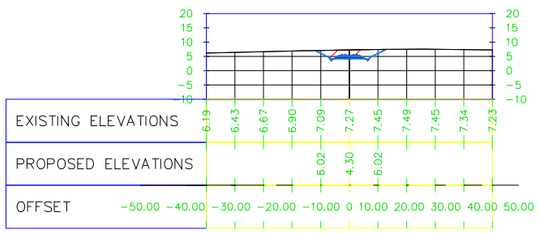

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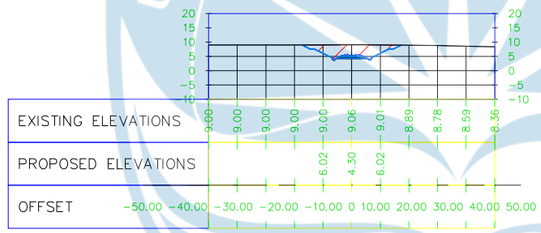

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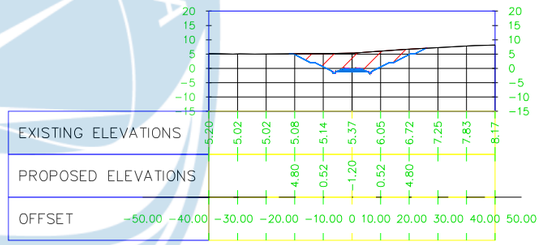

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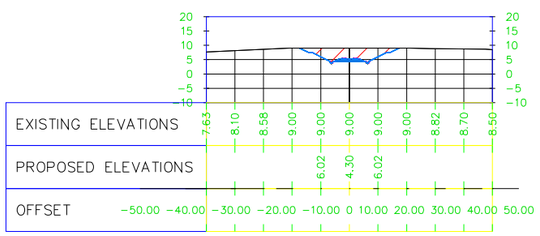

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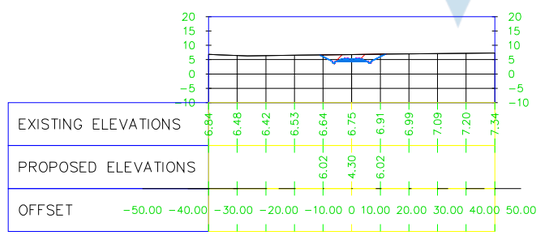

TUGAS AKHIR
PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar oleh:

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Diperiksa Oleh:

Alan Mikha Wijaya

Disetujui Oleh:

Dr. Ir. Imam Basuki, M.T.

Nama Project

Gambar Potongan

Skala	1 : 1000

LAMPIRAN 4

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
0+000.00	0.00	129.93	0.00	0.00	0.00	0.00
0+100.00	0.00	24.34	0.00	7713.68	0.00	7713.68
0+200.00	0.00	30.60	0.00	2747.10	0.00	10460.78
0+300.00	0.00	22.28	0.00	2643.97	0.00	13104.74
0+400.00	6.10	0.17	304.84	1122.33	304.84	14227.07
0+500.00	0.00	20.81	304.84	1048.94	609.68	15276.01
0+600.00	0.00	64.54	0.00	4267.36	609.68	19543.36
0+700.00	0.00	15.45	0.00	3999.44	609.68	23542.80
0+800.00	25.32	0.00	1266.19	772.67	1875.86	24315.47
0+900.00	10.88	0.00	1810.17	0.00	3686.03	24315.47
1+000.00	2.45	0.63	666.61	31.65	4352.64	24347.12
1+100.00	3.84	0.49	314.61	55.97	4667.25	24403.09
1+176.91	9.17	0.00	500.23	18.71	5167.48	24421.80
1+200.00	20.15	0.00	338.39	0.00	5505.87	24421.80
1+250.00	18.88	0.00	975.74	0.00	6481.61	24421.80
1+300.00	3.47	0.50	558.83	12.53	7040.44	24434.32
1+308.91	0.14	1.35	16.06	8.24	7056.50	24442.56
1+350.00	0.00	14.41	2.81	324.04	7059.31	24766.60
1+400.00	1.13	2.75	28.04	429.91	7087.36	25196.51
1+450.00	30.94	0.00	801.42	69.20	7888.77	25265.72

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
1+500.00	54.87	0.00	2146.26	0.00	10035.03	25265.72
1+517.03	53.54	0.00	923.79	0.00	10958.82	25265.72
1+550.00	30.18	0.04	1380.60	0.71	12339.42	25266.42
1+600.00	24.96	0.00	1378.09	1.07	13717.51	25267.50
1+650.00	36.41	0.00	1534.94	0.00	15252.45	25267.50
1+700.00	23.11	0.00	1488.94	0.00	16741.39	25267.50
1+725.14	6.29	0.20	369.91	2.44	17111.30	25269.94
1+750.00	0.00	9.31	78.30	118.00	17189.60	25387.94
1+800.00	0.00	10.65	0.00	498.45	17189.60	25886.39
1+850.00	0.57	3.33	14.28	349.46	17203.88	26235.85
1+857.14	0.12	4.65	2.48	28.51	17206.36	26264.37
1+900.00	27.16	0.00	584.60	99.71	17790.96	26364.08
2+000.00	29.80	0.00	2848.03	0.00	20638.99	26364.08
2+100.00	94.25	0.00	6202.79	0.00	26841.79	26364.08
2+200.00	52.18	0.00	7321.63	0.00	34163.42	26364.08
2+300.00	3.65	0.45	2791.24	22.29	36954.66	26386.36
2+400.00	42.14	0.00	2289.26	22.29	39243.92	26408.65
2+500.00	15.85	0.00	2899.44	0.00	42143.36	26408.65
2+600.00	0.00	12.07	792.46	603.41	42935.82	27012.06
2+606.79	0.00	10.90	0.00	77.97	42935.82	27090.03

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
2+650.00	0.03	5.76	0.73	359.99	42936.55	27450.02
2+700.00	10.36	0.06	259.52	145.76	43196.07	27595.78
2+738.79	14.87	0.00	488.71	1.20	43684.78	27596.98
2+750.00	14.62	0.00	165.29	0.00	43850.07	27596.98
2+800.00	22.20	0.00	920.02	0.00	44770.09	27596.98
2+850.00	74.13	0.00	2407.56	0.00	47177.65	27596.98
2+900.00	53.96	0.00	3203.47	0.00	50381.12	27596.98
2+924.13	22.19	0.00	919.98	0.00	51301.10	27596.98
2+950.00	1.11	2.22	302.02	28.58	51603.12	27625.56
3+000.00	1.33	1.92	61.55	103.02	51664.67	27728.58
3+050.00	24.26	0.00	640.30	47.79	52304.97	27776.37
3+100.00	43.34	0.00	1689.68	0.00	53994.65	27776.37
3+109.47	47.53	0.00	430.21	0.00	54424.86	27776.37
3+150.00	42.30	0.00	1819.90	0.00	56244.76	27776.37
3+200.00	0.00	29.83	1057.63	746.06	57302.40	28522.43
3+241.47	0.00	105.18	0.00	2799.48	57302.40	31321.91
3+300.00	0.00	113.73	0.00	6406.59	57302.40	37728.50
3+400.00	0.00	162.18	0.00	13795.54	57302.40	51524.04
3+500.00	0.00	161.56	0.00	16187.28	57302.40	67711.33
3+600.00	0.00	378.65	0.00	27010.68	57302.40	94722.01

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
3+700.00	0.00	36.72	0.00	20768.66	57302.40	115490.67
3+800.00	29.47	0.00	1473.49	1836.20	58775.89	117326.86
3+900.00	6.28	0.31	1787.38	15.34	60563.27	117342.21
4+000.00	50.98	0.00	2863.00	15.34	63426.27	117357.55
4+100.00	50.68	0.00	5082.91	0.00	68509.18	117357.55
4+200.00	0.00	19.41	2533.80	970.44	71042.98	118327.99
4+300.00	0.00	63.31	0.00	4136.05	71042.98	122464.04
4+400.00	0.00	33.09	0.00	4820.11	71042.98	127284.15
4+500.00	0.00	47.29	0.00	4019.24	71042.98	131303.39
4+600.00	0.00	20.70	0.00	3399.88	71042.98	134703.27
4+700.00	0.00	19.62	0.00	2016.16	71042.98	136719.43
4+800.00	0.00	102.97	0.00	6129.74	71042.98	142849.18
4+888.50	0.00	233.08	0.00	14870.42	71042.98	157719.60
4+900.00	0.00	230.64	0.00	2666.14	71042.98	160385.74
4+950.00	0.00	219.83	0.07	11261.94	71043.05	171647.68
5+000.00	0.00	243.34	0.07	11587.38	71043.13	183235.06
5+020.50	0.00	250.71	0.00	5072.04	71043.13	188307.10
5+050.00	0.00	235.73	0.00	7193.87	71043.13	195500.96
5+100.00	0.00	173.65	0.00	10267.95	71043.13	205768.91
5+124.28	0.00	159.96	0.00	4061.46	71043.13	209830.37

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
5+150.00	0.00	145.38	0.03	3936.34	71043.16	213766.72
5+200.00	0.00	133.94	0.06	6994.05	71043.22	220760.77
5+228.05	0.00	145.02	0.00	3917.47	71043.22	224678.24
5+250.00	0.00	154.16	0.00	3287.38	71043.22	227965.62
5+300.00	0.00	159.35	0.00	7849.31	71043.22	235814.93
5+350.00	0.00	52.07	0.00	5285.47	71043.22	241100.40
5+360.05	0.00	34.47	0.00	435.04	71043.22	241535.44
5+400.00	0.02	5.05	0.30	789.21	71043.52	242324.65
5+500.00	0.06	3.33	3.78	419.01	71047.30	242743.66
5+600.00	0.00	20.94	3.02	1213.81	71050.32	243957.47
5+700.00	0.00	16.46	0.00	1870.13	71050.32	245827.60
5+800.00	0.00	6.59	0.00	1152.23	71050.32	246979.83
5+900.00	12.54	0.00	626.80	329.26	71677.12	247309.09
6+000.00	78.04	0.00	4528.84	0.00	76205.97	247309.09
6+100.00	28.84	0.00	5344.13	0.00	81550.10	247309.09
6+200.00	0.00	13.66	1442.10	683.10	82992.20	247992.19
6+300.00	0.00	116.70	0.00	6517.87	82992.20	254510.06
6+400.00	0.00	187.02	0.00	15186.00	82992.20	269696.06
6+500.00	0.00	178.52	0.00	18277.06	82992.20	287973.12
6+600.00	0.00	122.50	0.00	15050.86	82992.20	303023.98

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
6+700.00	0.00	25.35	0.00	7392.66	82992.20	310416.64
6+800.00	0.00	64.94	0.00	4514.76	82992.20	314931.40
6+900.00	0.00	72.51	0.00	6872.63	82992.20	321804.02
7+000.00	0.00	137.09	0.00	10480.20	82992.20	332284.23
7+100.00	0.00	166.67	0.00	15188.34	82992.20	347472.56
7+200.00	0.00	309.45	0.00	23806.09	82992.20	371278.66
7+300.00	0.00	193.31	0.00	25138.20	82992.20	396416.86
7+400.00	0.00	178.98	0.00	18614.57	82992.20	415031.43
7+486.87	0.00	50.32	0.00	9959.91	82992.20	424991.34
7+500.00	0.00	41.78	0.00	604.46	82992.20	425595.80
7+550.00	0.18	4.70	4.56	1161.68	82996.76	426757.48
7+600.00	23.40	0.00	589.61	117.38	83586.37	426874.85
7+650.00	35.74	0.00	1479.00	0.01	85065.37	426874.86
7+700.00	25.96	0.00	1543.10	0.01	86608.47	426874.87
7+750.00	41.74	0.00	1693.05	0.00	88301.52	426874.87
7+800.00	14.47	0.00	1405.88	0.00	89707.40	426874.87
7+815.62	0.00	6.57	113.03	51.34	89820.42	426926.21
7+850.00	0.00	32.64	0.01	673.98	89820.44	427600.18
7+900.00	0.00	55.00	0.00	2191.36	89820.44	429791.55
7+950.00	0.00	56.69	0.00	2792.43	89820.44	432583.98

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
8+000.00	0.00	47.95	0.00	2615.86	89820.44	435199.84
8+050.00	0.00	36.97	0.00	2122.93	89820.44	437322.76
8+100.00	0.00	8.44	0.00	1135.33	89820.44	438458.09
8+144.37	12.46	0.00	276.32	187.38	90096.76	438645.47
8+200.00	66.46	0.00	2195.06	0.00	92291.82	438645.47
8+300.00	17.36	0.00	4190.90	0.00	96482.73	438645.47
8+400.00	19.11	0.00	1823.55	0.00	98306.28	438645.47
8+500.00	0.62	1.23	986.56	61.27	99292.83	438706.74
8+600.00	0.00	19.94	31.07	1058.30	99323.90	439765.04
8+700.00	0.00	6.23	0.00	1308.75	99323.90	441073.79
8+800.00	4.76	0.49	237.79	336.40	99561.69	441410.19
8+900.00	0.00	33.35	237.79	1692.07	99799.49	443102.26
8+935.82	0.00	61.14	0.00	1692.12	99799.49	444794.38
8+950.00	0.00	61.27	0.00	868.21	99799.49	445662.59
9+000.00	0.00	10.57	0.00	1795.54	99799.49	447458.13
9+050.00	20.58	0.00	514.47	264.10	100313.95	447722.23
9+067.82	22.07	0.00	379.72	0.01	100693.67	447722.24
9+100.00	28.75	0.00	817.29	0.00	101510.96	447722.24
9+150.00	20.11	0.00	1221.27	0.01	102732.24	447722.24
9+195.37	0.02	4.24	456.62	96.36	103188.85	447818.60

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
9+200.00	0.00	7.94	0.04	28.24	103188.89	447846.84
9+250.00	0.00	35.30	0.03	1082.26	103188.92	448929.09
9+300.00	0.00	28.05	0.03	1585.69	103188.94	450514.78
9+322.92	0.00	37.20	0.00	748.85	103188.94	451263.63
9+350.00	0.01	55.49	0.17	1257.84	103189.11	452521.47
9+400.00	0.00	66.55	0.32	3054.15	103189.43	455575.63
9+450.00	1.16	1.01	29.10	1689.04	103218.53	457264.66
9+454.92	6.28	0.18	18.29	2.91	103236.82	457267.58
9+500.00	1.36	0.78	172.07	21.61	103408.89	457289.19
9+600.00	1.51	0.76	143.61	76.96	103552.50	457366.15
9+700.00	36.35	0.00	1893.03	37.91	105445.52	457404.06
9+800.00	0.00	11.91	1817.31	595.25	107262.84	457999.31
9+900.00	0.00	113.43	0.00	6266.51	107262.84	464265.82
10+000.00	0.00	29.30	0.00	7136.36	107262.84	471402.18
10+100.00	21.89	0.00	1094.27	1465.11	108357.11	472867.29
10+200.00	0.00	16.95	1094.27	847.52	109451.38	473714.81
10+300.00	0.02	10.96	0.78	1395.35	109452.15	475110.16
10+400.00	0.00	23.84	0.78	1739.80	109452.93	476849.96
10+500.00	0.00	17.84	0.00	2083.99	109452.93	478933.95
10+600.00	22.53	0.00	1126.52	892.02	110579.45	479825.97

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
10+700.00	13.70	0.00	1811.57	0.00	112391.03	479825.97
10+800.00	0.00	90.70	685.05	4535.15	113076.08	484361.12
10+900.00	14.05	0.00	702.37	4535.15	113778.45	488896.27
11+000.00	37.37	0.00	2571.00	0.00	116349.44	488896.27
11+100.00	19.83	0.00	2859.95	0.00	119209.39	488896.27
11+200.00	0.00	15.62	991.33	781.06	120200.72	489677.33
11+300.00	0.00	37.83	0.00	2672.66	120200.72	492349.99
11+400.00	0.00	47.31	0.00	4257.10	120200.72	496607.09
11+500.00	0.00	17.34	0.00	3232.53	120200.72	499839.62
11+600.00	0.00	26.43	0.00	2188.65	120200.72	502028.27
11+700.00	12.27	0.00	613.61	1321.62	120814.33	503349.89
11+800.00	0.18	2.31	622.43	115.65	121436.76	503465.54
11+900.00	2.82	0.55	149.84	143.12	121586.60	503608.66
12+000.00	33.59	0.00	1820.49	27.47	123407.09	503636.13
12+100.00	45.08	0.00	3933.32	0.00	127340.41	503636.13
12+200.00	41.32	0.00	4319.79	0.00	131660.20	503636.13
12+300.00	7.54	0.15	2443.10	7.25	134103.30	503643.38
12+400.00	8.91	0.00	822.48	7.25	134925.78	503650.64
12+500.00	4.53	0.36	671.66	18.06	135597.44	503668.69
12+600.00	0.09	1.15	230.83	75.57	135828.28	503744.26

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
12+700.00	22.90	0.00	1149.48	57.51	136977.76	503801.77
12+800.00	34.93	0.00	2891.26	0.00	139869.02	503801.77
12+900.00	19.05	0.00	2698.93	0.00	142567.95	503801.77
13+000.00	12.74	0.00	1589.82	0.00	144157.76	503801.77
13+100.00	0.53	1.64	663.75	82.14	144821.51	503883.91
13+200.00	0.00	4.65	26.60	314.51	144848.11	504198.42
13+300.00	0.00	7.51	0.00	608.03	144848.11	504806.45
13+400.00	0.00	14.26	0.00	1088.62	144848.11	505895.07
13+500.00	0.00	40.92	0.00	2758.82	144848.11	508653.89
13+600.00	0.00	41.79	0.00	4135.60	144848.11	512789.49
13+700.00	0.00	86.39	0.00	6409.01	144848.11	519198.50
13+800.00	0.00	14.51	0.00	5044.63	144848.11	524243.13
13+881.16	0.00	9.93	0.00	991.73	144848.11	525234.86
13+900.00	0.00	18.09	0.00	264.00	144848.11	525498.86
13+950.00	0.00	5.99	0.01	602.21	144848.12	526101.06
14+000.00	8.44	0.02	210.98	150.41	145059.10	526251.47
14+013.16	8.48	0.01	111.33	0.20	145170.43	526251.67
14+050.00	0.13	1.76	158.62	32.53	145329.05	526284.20
14+100.00	0.00	22.97	3.20	618.30	145332.24	526902.50
14+150.00	0.00	19.93	0.00	1072.55	145332.24	527975.05

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
14+200.00	0.00	6.31	0.00	656.04	145332.24	528631.09
14+221.56	0.04	3.87	0.42	109.87	145332.66	528740.96
14+250.00	0.32	1.89	5.04	82.09	145337.70	528823.05
14+300.00	3.92	0.45	105.55	58.55	145443.25	528881.60
14+350.00	4.53	0.37	211.01	20.39	145654.26	528901.99
14+400.00	0.00	11.75	113.33	302.89	145767.59	529204.88
14+429.95	0.00	20.33	0.00	480.35	145767.59	529685.23
14+450.00	0.00	10.66	0.00	310.56	145767.59	529995.79
14+500.00	21.78	0.00	544.57	266.51	146312.16	530262.29
14+550.00	33.35	0.00	1378.53	0.04	147690.69	530262.33
14+561.95	27.59	0.00	364.25	0.01	148054.94	530262.34
14+600.00	24.41	0.00	989.12	0.00	149044.06	530262.34
14+700.00	8.94	0.03	1667.38	1.28	150711.44	530263.61
14+800.00	23.03	0.00	1598.77	1.28	152310.21	530264.89
14+900.00	6.61	0.12	1482.25	6.02	153792.46	530270.91
15+000.00	4.51	0.34	556.05	22.88	154348.51	530293.78
15+100.00	0.00	22.19	225.53	1126.47	154574.04	531420.25
15+200.00	0.00	18.94	0.00	2056.70	154574.04	533476.96
15+300.00	0.00	16.33	0.00	1763.71	154574.04	535240.67
15+400.00	0.84	1.33	41.92	883.21	154615.95	536123.88

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
15+500.00	0.00	29.10	41.92	1521.49	154657.87	537645.38
15+600.00	0.00	28.23	0.00	2866.51	154657.87	540511.88
15+700.00	0.00	11.19	0.00	1971.05	154657.87	542482.93
15+800.00	0.00	6.95	0.00	906.77	154657.87	543389.71
15+900.00	2.06	0.75	103.12	384.88	154760.98	543774.59
16+000.00	4.11	0.38	308.83	56.80	155069.81	543831.39
16+100.00	39.42	0.00	2176.51	19.24	157246.32	543850.63
16+200.00	19.71	0.00	2956.14	0.00	160202.46	543850.63
16+300.00	13.00	0.00	1635.25	0.00	161837.71	543850.63
16+400.00	0.23	3.05	661.63	152.45	162499.34	544003.08
16+500.00	0.00	26.98	11.73	1501.35	162511.07	545504.43
16+600.00	0.00	6.42	0.00	1669.99	162511.07	547174.42
16+700.00	0.00	29.04	0.00	1772.94	162511.07	548947.36
16+800.00	0.01	4.83	0.45	1693.19	162511.51	550640.55
16+900.00	0.00	29.10	0.45	1696.13	162511.96	552336.68
17+000.00	0.00	19.82	0.00	2445.95	162511.96	554782.63
17+100.00	0.00	11.19	0.00	1550.66	162511.96	556333.30
17+200.00	21.65	0.00	1082.34	559.50	163594.30	556892.79
17+300.00	22.18	0.00	2191.27	0.00	165785.56	556892.79
17+400.00	1.79	0.69	1198.32	34.38	166983.89	556927.17

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
17+500.00	0.00	10.26	89.40	547.18	167073.29	557474.35
17+600.00	0.00	34.69	0.00	2247.05	167073.29	559721.40
17+700.00	4.97	0.29	248.58	1748.69	167321.86	561470.09
17+800.00	0.00	6.31	248.58	329.78	167570.44	561799.87
17+900.00	0.00	26.66	0.00	1648.31	167570.44	563448.18
18+000.00	4.11	0.38	205.65	1352.21	167776.09	564800.39
18+100.00	0.00	14.59	205.65	748.98	167981.75	565549.36
18+200.00	0.14	2.22	6.76	840.71	167988.51	566390.07
18+300.00	0.00	13.00	6.76	761.01	167995.26	567151.09
18+400.00	0.00	7.43	0.00	1021.50	167995.26	568172.58
18+500.00	0.00	27.40	0.00	1741.26	167995.26	569913.84
18+600.00	0.00	14.71	0.00	2105.37	167995.26	572019.20
18+700.00	0.17	4.33	8.65	952.11	168003.92	572971.31
18+800.00	0.00	22.01	8.65	1317.13	168012.57	574288.44
18+900.00	0.00	72.48	0.00	4724.41	168012.57	579012.85
19+000.00	0.00	26.08	0.00	4927.89	168012.57	583940.74
19+100.00	0.06	2.14	2.92	1411.23	168015.49	585351.97
19+200.00	0.00	5.36	2.92	375.22	168018.41	585727.19
19+300.00	0.00	47.34	0.00	2635.22	168018.41	588362.41
19+400.00	0.00	25.86	0.00	3660.35	168018.41	592022.76

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
19+500.00	0.00	9.00	0.00	1743.13	168018.41	593765.89
19+600.00	0.00	7.16	0.04	807.72	168018.45	594573.61
19+700.00	0.00	25.75	0.04	1645.31	168018.49	596218.92
19+800.00	0.00	29.67	0.00	2771.06	168018.49	598989.98
19+900.00	0.00	6.17	0.00	1792.05	168018.49	600782.03
20+000.00	2.14	0.69	106.96	343.12	168125.45	601125.15
20+100.00	9.59	0.03	586.49	36.32	168711.94	601161.46
20+200.00	0.00	28.21	479.53	1412.15	169191.48	602573.61
20+300.00	0.00	17.86	0.00	2303.51	169191.48	604877.12
20+400.00	0.00	59.87	0.00	3886.35	169191.48	608763.48
20+500.00	0.00	50.46	0.00	5516.36	169191.48	614279.84
20+518.24	0.00	39.48	0.00	820.30	169191.48	615100.14
20+550.00	0.00	49.39	0.00	1411.35	169191.48	616511.49
20+600.00	0.00	39.10	0.00	2212.48	169191.48	618723.97
20+650.00	0.00	29.12	0.00	1706.05	169191.48	620430.02
20+650.24	0.00	29.13	0.00	6.98	169191.48	620437.01
20+700.00	0.00	50.29	0.00	1975.53	169191.48	622412.54
20+750.00	0.03	51.75	0.85	2549.60	169192.33	624962.14
20+800.00	0.00	33.08	0.85	2119.36	169193.18	627081.50
20+809.23	0.00	27.99	0.00	281.71	169193.18	627363.20

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
20+850.00	0.00	23.44	0.00	1048.90	169193.18	628412.10
20+900.00	0.00	5.81	0.00	731.49	169193.18	629143.59
20+950.00	0.00	25.72	0.00	787.52	169193.18	629931.11
20+968.21	0.00	21.53	0.00	429.92	169193.18	630361.03
21+000.00	0.00	13.08	0.00	549.76	169193.18	630910.79
21+050.00	0.00	11.05	0.00	603.29	169193.18	631514.09
21+100.00	0.00	48.94	0.00	1499.70	169193.18	633013.78
21+100.21	0.00	49.20	0.00	10.39	169193.18	633024.18
21+200.00	0.00	27.53	0.00	3828.51	169193.18	636852.68
21+300.00	0.00	50.88	0.00	3920.72	169193.18	640773.41
21+400.00	0.00	54.92	0.00	5290.07	169193.18	646063.47
21+500.00	0.00	11.94	0.00	3342.63	169193.18	649406.10
21+600.00	0.00	32.46	0.00	2219.89	169193.18	651625.99
21+700.00	0.00	8.33	0.00	2039.73	169193.18	653665.72
21+800.00	0.00	25.81	0.00	1707.23	169193.18	655372.95
21+900.00	0.00	51.90	0.00	3885.56	169193.18	659258.51
22+000.00	0.00	49.54	0.00	5071.92	169193.18	664330.43
22+100.00	0.00	25.73	0.00	3763.43	169193.18	668093.86
22+200.00	0.00	55.29	0.00	4050.85	169193.18	672144.71
22+300.00	0.00	52.55	0.00	5391.95	169193.18	677536.66

Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
22+400.00	0.00	16.25	0.00	3439.95	169193.18	680976.62
22+500.00	0.00	36.31	0.00	2628.02	169193.18	683604.64
22+600.00	0.00	52.00	0.00	4415.65	169193.18	688020.29
22+700.00	0.00	41.68	0.00	4684.27	169193.18	692704.56
22+800.00	0.00	69.07	0.00	5537.65	169193.18	698242.21
22+900.00	0.00	51.05	0.00	6005.74	169193.18	704247.95
23+000.00	0.00	51.02	0.00	5103.45	169193.18	709351.40
23+100.00	0.00	57.74	0.00	5437.87	169193.18	714789.26
23+200.00	0.00	111.11	0.00	8442.10	169193.18	723231.36
23+300.00	0.00	108.32	0.00	10971.18	169193.18	734202.55
23+400.00	0.00	111.76	0.00	11004.00	169193.18	745206.54
23+500.00	0.00	45.49	0.00	7862.78	169193.18	753069.32
23+600.00	0.00	19.42	0.00	3245.61	169193.18	756314.93
23+600.47	0.00	199.23	0.00	50.98	169193.18	756365.91

LAMPIRAN 5

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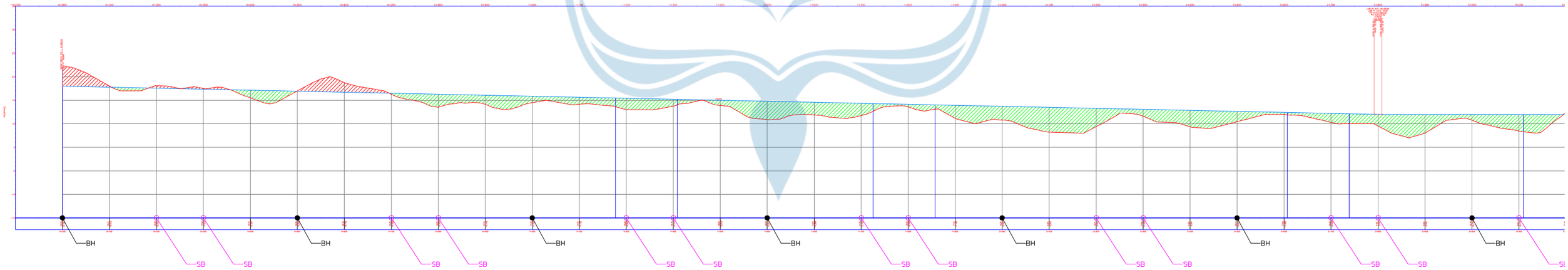

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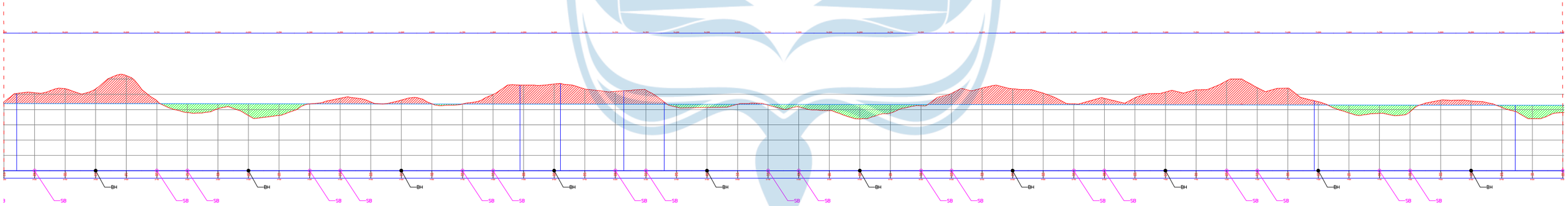

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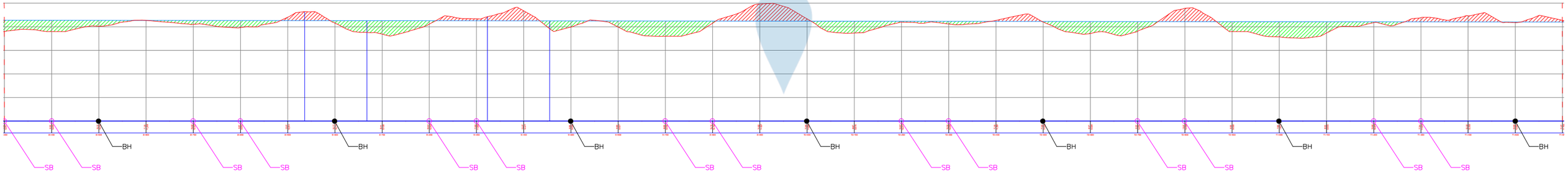

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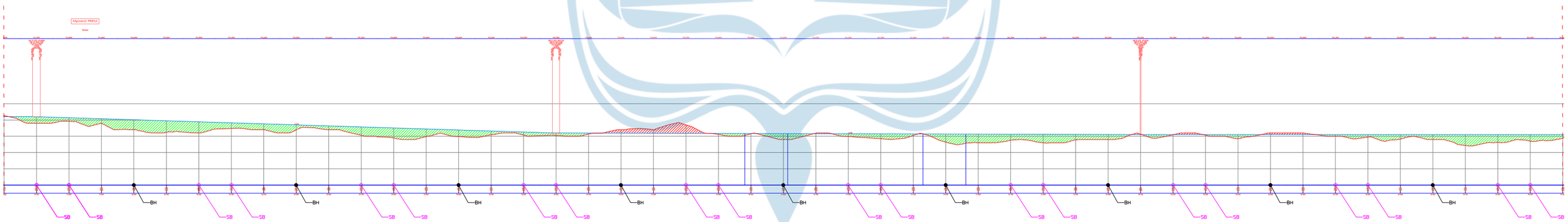

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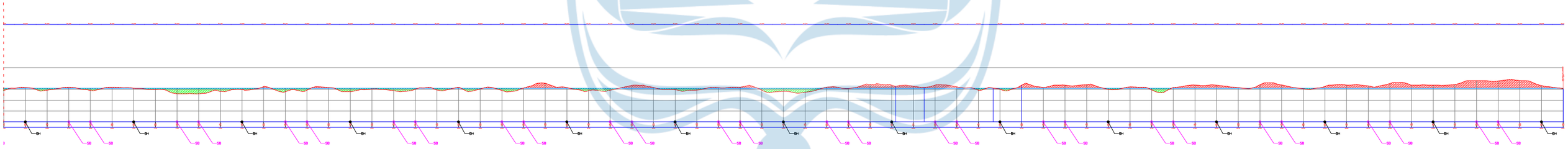


LAMPIRAN 6

Tabel Analisis Kelayakan Ekonomi Reaktivasi Jalur Kereta Api Kudus-Pati					
Tahun	Harga	Operasional	Perawatan	Arus Kas Keluar	Arus Kas Masuk	Cash Flow
0	Rp4.228.853.178.916					-Rp 4.228.853.178.915,72
1		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
2		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
3		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
4		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
5		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
6		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
7		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
8		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
9		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
10		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
11		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
12		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
13		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
14		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
15		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
16		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
17		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
18		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
19		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
20		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
21		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
22		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
23		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
24		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
25		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
26		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
27		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
28		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
29		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
30		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
31		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
32		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
33		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
34		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
35		Rp 5.423.179.072,00	Rp 7.563.448.000,00	-Rp 12.986.627.072,00	Rp 294.336.000.000,00	Rp 281.349.372.928,00
NPV						Rp 378.016.117.606,56

Tabel Analsis Financial Internal Rate of Return (%) (IRR)

Tahun	**Arus Kas**
0	- 4.228.853.178.916
1	281.349.372.928
2	281.349.372.928
3	281.349.372.928
4	281.349.372.928
5	281.349.372.928
6	281.349.372.928
7	281.349.372.928
8	281.349.372.928
9	281.349.372.928
10	281.349.372.928
11	281.349.372.928
12	281.349.372.928
13	281.349.372.928
14	281.349.372.928
15	281.349.372.928
16	281.349.372.928
17	281.349.372.928
18	281.349.372.928
19	281.349.372.928
20	281.349.372.928
21	281.349.372.928
22	281.349.372.928
23	281.349.372.928
24	281.349.372.928
25	281.349.372.928
26	281.349.372.928
27	281.349.372.928
28	281.349.372.928
29	281.349.372.928
30	281.349.372.928
31	281.349.372.928
32	281.349.372.928
33	281.349.372.928
34	281.349.372.928
35	281.349.372.928
IRR	6%

Tabel Payback Period

Payback Period				
Tahun	**Arus Kas**	**(P/F,5%,T)**	**PW**	**Kumulatif**
0	-Rp4.228.853.178.916	1,00000	-Rp 4.228.853.178.915,72000	-Rp 4.228.853.178.915,72000
1	Rp281.349.372.928	0,95238	Rp 267.951.783.740,95200	-Rp 3.960.901.395.174,77000
2	Rp281.349.372.928	0,90703	Rp 255.192.174.991,38300	-Rp 3.705.709.220.183,39000
3	Rp281.349.372.928	0,86384	Rp 243.040.166.658,46000	-Rp 3.462.669.053.524,92000
4	Rp281.349.372.928	0,82270	Rp 231.466.825.389,01000	-Rp 3.231.202.228.135,92000
5	Rp281.349.372.928	0,78353	Rp 220.444.595.608,58100	-Rp 3.010.757.632.527,33000
6	Rp281.349.372.928	0,74622	Rp 209.947.233.912,93400	-Rp 2.800.810.398.614,40000
7	Rp281.349.372.928	0,71068	Rp 199.949.746.583,74700	-Rp 2.600.860.652.030,65000
8	Rp281.349.372.928	0,67684	Rp 190.428.330.079,75900	-Rp 2.410.432.321.950,90000
9	Rp281.349.372.928	0,64461	Rp 181.360.314.361,67500	-Rp 2.229.072.007.589,22000
10	Rp281.349.372.928	0,61391	Rp 172.724.108.915,88100	-Rp 2.056.347.898.673,34000
11	Rp281.349.372.928	0,58468	Rp 164.499.151.348,45800	-Rp 1.891.848.747.324,88000
12	Rp281.349.372.928	0,55684	Rp 156.665.858.427,10300	-Rp 1.735.182.888.897,78000
13	Rp281.349.372.928	0,53032	Rp 149.205.579.454,38400	-Rp 1.585.977.309.443,40000
14	Rp281.349.372.928	0,50507	Rp 142.100.551.861,31800	-Rp 1.443.876.757.582,08000
15	Rp281.349.372.928	0,48102	Rp 135.333.858.915,54100	-Rp 1.308.542.898.666,54000
16	Rp281.349.372.928	0,45811	Rp 128.889.389.443,37200	-Rp 1.179.653.509.223,16000
17	Rp281.349.372.928	0,43630	Rp 122.751.799.469,87800	-Rp 1.056.901.709.753,29000
18	Rp281.349.372.928	0,41552	Rp 116.906.475.685,59800	-Rp 939.995.234.067,68800
19	Rp281.349.372.928	0,39573	Rp 111.339.500.652,95100	-Rp 828.655.733.414,73700
20	Rp281.349.372.928	0,37689	Rp 106.037.619.669,47700	-Rp 722.618.113.745,26000
21	Rp281.349.372.928	0,35894	Rp 100.988.209.209,02600	-Rp 621.629.904.536,23400
22	Rp281.349.372.928	0,34185	Rp 96.179.246.865,73870	-Rp 525.450.657.670,49600
23	Rp281.349.372.928	0,32557	Rp 91.599.282.729,27490	-Rp 433.851.374.941,22100
24	Rp281.349.372.928	0,31007	Rp 87.237.412.123,11900	-Rp 346.613.962.818,10200
25	Rp281.349.372.928	0,29530	Rp 83.083.249.641,06570	-Rp 263.530.713.177,03600
26	Rp281.349.372.928	0,28124	Rp 79.126.904.420,06260	-Rp 184.403.808.756,97400
27	Rp281.349.372.928	0,26785	Rp 75.358.956.590,53580	-Rp 109.044.852.166,43800
28	Rp281.349.372.928	0,25509	Rp 71.770.434.848,12930	-Rp 37.274.417.318,30840
29	Rp281.349.372.928	0,24295	Rp 68.352.795.093,45650	Rp 31.078.377.775,14810
30	Rp281.349.372.928	0,23138	Rp 65.097.900.089,00620	Rp 96.176.277.864,15430
31	Rp281.349.372.928	0,22036	Rp 61.998.147.818,41410	Rp 158.174.425.682,56800
32	Rp281.349.372.928	0,20987	Rp 59.046.792.896,39940	Rp 217.221.218.578,96800
33	Rp281.349.372.928	0,19987	Rp 56.233.299.167,11940	Rp 273.454.517.746,08700
34	Rp281.349.372.928	0,19035	Rp 53.554.853.136,84480	Rp 327.009.370.882,93200
35	Rp281.349.372.928	0,18129	Rp 51.005.827.818,11710	Rp 378.015.198.701,04900

Perhitungan CPT Metode Mayerhof

STA 0+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	50,25316456	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,058185351	kg/cm2	
	103,7725337	kN/m2	

STA 0+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	49,9375	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,051538374	kg/cm2	
	103,120688	kN/m2	

STA 0+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	53,48101	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,126154	kg/cm2	
	110,438	kN/m2	

STA 0+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	55,556962	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,16986789	kg/cm2	
	114,724849	kN/m2	

STA 1+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	29,975	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,631186238	kg/cm2	
	61,89822523	kN/m2	

STA 1+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,4761905	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,66279694	kg/cm2	
	64,9981761	kN/m2	

STA 1+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	28,15384615	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,59283804	kg/cm2	
	58,13755163	kN/m2	

STA 1+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	29,59259259	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,623133851	kg/cm2	
	61,10855584	kN/m2	

STA 2+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	28,88372093	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,608207078	kg/cm2	
	59,6447394	kN/m2	

STA 2+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	33,0952381	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,696889369	kg/cm2	
	68,3415013	kN/m2	

STA 2+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,47826087	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,662840536	kg/cm2	
	65,00245141	kN/m2	

STA 2+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	35,92682927	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,756514436	kg/cm2	
	74,18872293	kN/m2	

STA 3+100

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	9,247525	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,194726	kg/cm2	
	19,09609	kN/m2	

STA 3+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	6,910891	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,145523	kg/cm2	
	14,27096	kN/m2	

STA 3+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	5,633663	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,118629	kg/cm2	
	11,63349	kN/m2	

STA 3+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	10,60396	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,223289	kg/cm2	
	21,89713	kN/m2	

STA 4+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	45,95313	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,967639	kg/cm2	
	94,89297	kN/m2	

STA 4+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,31667	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,101637	kg/cm2	
	108,0337	kN/m2	

STA 4+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	50,4	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,061277	kg/cm2	
	104,0757	kN/m2	

STA 4+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	67,43243	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,419931	kg/cm2	
	139,2476	kN/m2	

STA 5+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,8108	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,11204	kg/cm2	
	109,054	kN/m2	

STA 5+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	54,76316	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,153153	kg/cm2	
	113,0856	kN/m2	

STA 5+700

kedalaman (pondasi)	0	m	
B	11,3	m	
tahanan conus	58,30233	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,228782	kg/cm2	
	120,5024	kN/m2	

STA 5+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,8	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,111814	kg/cm2	
	109,0317	kN/m2	

STA 6+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	56,60976	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,192037	kg/cm2	
	116,8989	kN/m2	

STA 6+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	70,37931	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,481983	kg/cm2	
	145,3329	kN/m2	

STA 6+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	56,2619	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,184712	kg/cm2	
	116,1806	kN/m2	

STA 6+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	61,2	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,288694	kg/cm2	
	126,3777	kN/m2	

STA 7+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	13,84158	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,291463	kg/cm2	
	28,5828	kN/m2	

STA 7+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	8,524752	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,179506	kg/cm2	
	17,60357	kN/m2	

STA 7+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	4,732673	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,099656	kg/cm2	
	9,772947	kN/m2	

STA 7+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	4,732673	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,099656	kg/cm2	
	9,772947	kN/m2	

STA 8+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	42,13793103	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,887302158	kg/cm2	
	87,01461704	kN/m2	

STA 8+400

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	46,11111	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,970966	kg/cm2	
	95,21921	kN/m2	

STA 8+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	44,48276	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,936677	kg/cm2	
	91,85667	kN/m2	

STA 8+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	50,25316456	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,058185351	kg/cm2	
	103,7725337	kN/m2	

STA 9+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	49,9375	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,051538374	kg/cm2	
	103,120688	kN/m2	

STA 9+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	53,48101	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,126154	kg/cm2	
	110,438	kN/m2	

STA 9+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	55,556962	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,16986789	kg/cm2	
	114,724849	kN/m2	

STA 9+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,4761905	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,66279694	kg/cm2	
	64,9981761	kN/m2	

STA 10+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,4761905	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,66279694	kg/cm2	
	64,9981761	kN/m2	

STA 10+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	28,15384615	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,59283804	kg/cm2	
	58,13755163	kN/m2	

STA 10+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	29,59259259	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,623133851	kg/cm2	
	61,10855584	kN/m2	

STA 10+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	28,88372093	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,608207078	kg/cm2	
	59,6447394	kN/m2	

STA 11+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,47826087	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,662840536	kg/cm2	
	65,00245141	kN/m2	

STA 11+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	35,92682927	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,756514436	kg/cm2	
	74,18872293	kN/m2	

STA 11+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	56,2619	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,184712	kg/cm2	
	116,1806	kN/m2	

STA 11+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	6,910891	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,145523	kg/cm2	
	14,27096	kN/m2	

STA 12+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	5,633663	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,118629	kg/cm2	
	11,63349	kN/m2	

STA 12+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	10,60396	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,223289	kg/cm2	
	21,89713	kN/m2	

STA 12+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	45,95313	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,967639	kg/cm2	
	94,89297	kN/m2	

STA 12+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,31667	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,101637	kg/cm2	
	108,0337	kN/m2	

STA 13+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	50,4	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,061277	kg/cm2	
	104,0757	kN/m2	

STA 13+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	67,43243	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,419931	kg/cm2	
	139,2476	kN/m2	

STA 13+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,8108	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,11204	kg/cm2	
	109,054	kN/m2	

STA 13+900

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	54,76316	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,153153	kg/cm2	
	113,0856	kN/m2	

STA 14+200

kedalaman (pondasi)	0	m	
B	11,3	m	
tahanan conus	58,30233	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,228782	kg/cm2	
	120,5024	kN/m2	

STA 14+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,8	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,111814	kg/cm2	
	109,0317	kN/m2	

STA 14+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	56,60976	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,192037	kg/cm2	
	116,8989	kN/m2	

STA 14+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	70,37931	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,481983	kg/cm2	
	145,3329	kN/m2	

STA 15+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	56,2619	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,184712	kg/cm2	
	116,1806	kN/m2	

STA 15+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	61,2	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,288694	kg/cm2	
	126,3777	kN/m2	

STA 15+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	13,84158	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,291463	kg/cm2	
	28,5828	kN/m2	

STA 15+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	8,524752	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,179506	kg/cm2	
	17,60357	kN/m2	

STA 16+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	4,732673	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,099656	kg/cm2	
	9,772947	kN/m2	

STA 16+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	4,732673	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,099656	kg/cm2	
	9,772947	kN/m2	

STA 16+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	42,13793103	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,887302158	kg/cm2	
	87,01461704	kN/m2	

STA 16+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	46,11111	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,970966	kg/cm2	
	95,21921	kN/m2	

STA 17+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	44,48276	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,936677	kg/cm2	
	91,85667	kN/m2	

STA 17+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	50,25316456	kg/cm2	
Q(ijinnet)	b	>	1.2m
Q(ijinnet)	1,058185351	kg/cm2	
	103,7725337	kN/m2	

STA 17+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	49,9375	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,051538374	kg/cm2	
	103,120688	kN/m2	

STA 17+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	53,48101	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,126154	kg/cm2	
	110,438	kN/m2	

STA 18+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	55,556962	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,16986789	kg/cm2	
	114,724849	kN/m2	

STA 18+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,4761905	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,66279694	kg/cm2	
	64,9981761	kN/m2	

STA 18+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,4761905	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,66279694	kg/cm2	
	64,9981761	kN/m2	

STA 18+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	28,15384615	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,59283804	kg/cm2	
	58,13755163	kN/m2	

STA 19+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	29,59259259	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,623133851	kg/cm2	
	61,10855584	kN/m2	

STA 19+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	28,88372093	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,608207078	kg/cm2	
	59,6447394	kN/m2	

STA 19+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	31,47826087	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,662840536	kg/cm2	
	65,00245141	kN/m2	

STA 19+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	35,92682927	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,756514436	kg/cm2	
	74,18872293	kN/m2	

STA 20+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	56,2619	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,184712	kg/cm2	
	116,1806	kN/m2	

STA 20+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	6,910891	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,145523	kg/cm2	
	14,27096	kN/m2	

STA 20+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	5,633663	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,118629	kg/cm2	
	11,63349	kN/m2	

STA 20+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	10,60396	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,223289	kg/cm2	
	21,89713	kN/m2	

STA 21+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	45,95313	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,967639	kg/cm2	
	94,89297	kN/m2	

STA 21+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	45,95313	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	0,967639	kg/cm2	
	94,89297	kN/m2	

STA 21+700

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	50,4	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,061277	kg/cm2	
	104,0757	kN/m2	

STA 21+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	67,43243	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,419931	kg/cm2	
	139,2476	kN/m2	

STA 22+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,8108	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,11204	kg/cm2	
	109,054	kN/m2	

STA 22+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	54,76316	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,153153	kg/cm2	
	113,0856	kN/m2	

STA 22+700

kedalaman (pondasi)	0	m	
B	11,3	m	
tahanan conus	58,30233	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,228782	kg/cm2	
	120,5024	kN/m2	

STA 22+800

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	52,8	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,111814	kg/cm2	
	109,0317	kN/m2	

STA 23+200

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	56,60976	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,192037	kg/cm2	
	116,8989	kN/m2	

STA 23+300

kedalaman (pondasi)	0	m	
B	11,5	m	
tahanan conus	70,37931	kg/cm2	
Q(ijinnet)	b	>	1,2m
Q(ijinnet)	1,481983	kg/cm2	
	145,3329	kN/m2	

Rekap Keseluruhan Hasil Perhitungan CPT

NAMA	STA	Mayerhof	Schmertmann
SEGMEN 1	0+200	103,77	517,1883168
	0+300	103,12	518,7734123
	0+700	110,44	575,7603474
	0+800	114,72	607,2835641
	1+200	61,90	282,3222923
	1+300	65,00	233,3520593
	1+700	58,14	251,6620996
	1+800	61,11	243,9773203
	2+200	59,64	469,415688
	2+300	68,34	522,2525938
	2+700	65,00	502,0152295
	2+800	74,19	557,5439665
	3+100	19,10	246,9057845
SEGMEN 2	3+300	14,27	201,9386392
	3+700	11,63	191,9916118
	3+800	21,90	205,0674319
	4+200	94,89	680,9820617
	4+300	108,03	758,0779802
	4+700	104,08	734,960071
	4+800	139,25	937,2402672
	5+200	109,05	764,0236472
	5+300	113,09	787,4566274
	5+700	120,50	829,6977786
	5+800	109,03	763,8936323
	6+200	116,90	809,5347022
	6+300	145,33	971,5068773
	6+700	116,18	805,3821448
	6+800	126,38	864,0531663
	7+200	28,58	307,5942152
	7+300	17,60	249,6501811
	7+700	9,77	179,2627057
	7+800	9,77	179,2627057
	8+300	87,01	634,2933107
SEGMEN 3	8+400	95,22	682,9079167
	8+700	91,86	663,0295544
	8+800	103,12	517,1883168
	9+200	110,44	518,7734123
	9+300	114,72	575,7603474
	9+700	61,90	607,2835641
	9+800	65,00	282,3222923
	10+200	58,14	233,3520593
	10+300	61,11	251,6620996
	10+700	59,64	243,9773203
	10+800	68,34	469,415688

NAMA	STA	Mayerhof	Schmertmann
	11+200	65,00	522,2525938
	11+300	74,19	502,0152295
SEGMEN 4	11+700	19,10	557,5439665
	11+800	14,27	246,9057845
	12+200	11,63	201,9386392
	12+300	21,90	191,9916118
	12+700	94,89	205,0674319
	12+800	108,03	680,9820617
	13+200	104,08	758,0779802
	13+300	139,25	734,960071
	13+800	109,05	937,2402672
	13+900	113,09	764,0236472
	14+200	120,50	787,4566274
	14+300	109,03	829,6977786
	14+700	116,90	763,8936323
	14+800	145,33	809,5347022
	15+200	116,18	971,5068773
	15+400	126,38	805,3821448
	15+700	28,58	864,0531663
	15+800	17,60	307,5942152
	16+200	9,77	249,6501811
	16+300	9,77	179,2627057
SEGMEN 5	16+700	87,01	179,2627057
	16+800	95,22	634,2933107
	17+200	91,86	682,9079167
	17+300	103,12	663,0295544
	17+700	110,44	517,1883168
	17+800	114,72	518,7734123
	18+200	61,90	575,7603474
	18+300	65,00	607,2835641
	18+700	58,14	282,3222923
	18+800	61,11	233,3520593
	19+200	59,64	251,6620996
	19+300	68,34	243,9773203
	19+700	65,00	469,415688
	19+800	74,19	522,2525938
	20+200	19,10	502,0152295
	20+300	14,27	557,5439665
	20+700	11,63	246,9057845
	20+800	21,90	201,9386392
	21+200	94,89	191,9916118
	21+300	108,03	205,0674319
	21+700	104,08	680,9820617
	21+800	139,25	758,0779802
	22+200	109,05	734,960071
	22+300	113,09	937,2402672

NAMA	STA	Mayerhof	Schmertmann
	22+700	120,50	764,0236472
	22+800	109,03	787,4566274
	23+200	116,90	829,6977786
	23+300	145,33	763,8936323

SEGMEN 1						
STA	PENURUNAN			DAYA DUKUNG TANAH		q Jalan Rel
	Si	Sc	Si + Sc	CPT	SPT	
				q (Meyerhof)	q TERZAGHI	
	m	m	m	kN/m2	kN/m2	kN/m2
1 + 500	0,049	0,843	0,892	58,087	35,28	34,65
2 + 500	0,151	0,649	0,801	64,945	62,40	34,65
3 + 000	0,101	0,499	0,599	64,946	45,67	34,65

SEGMEN 2						
STA	PENURUNAN			DAYA DUKUNG TANAH		q Jalan Rel
	Si	Sc	Si + Sc	CPT	SPT	
				q (Meyerhof)	q TERZAGHI	
	m	m	m	kN/m2	kN/m2	kN/m2
5 + 000	0,014	0,000	0,014	108,96	92,05	34,65
5+ 500	0,018	0,000	0,018	120,289	90,37	34,65
6 + 000	0,034	0,000	0,034	116,797	59,57	34,65

SEGMEN 3						
STA	PENURUNAN			DAYA DUKUNG TANAH		q Jalan Rel
	Si	Sc	Si + Sc	CPT	SPT	
				q (Meyerhof)	q TERZAGHI	
	m	m	m	kN/m2	kN/m2	kN/m2
9 + 000	0,090	0,458	0,548	110,342	62,40	34,65
10 + 500	0,019	0,478	0,497	59,592	35,59	34,65
11 + 000	0,101	0,499	0,599	64,946	45,67	34,65

SEGMEN 4						
STA	PENURUNAN			DAYA DUKUNG TANAH		q Jalan Rel
	Si	Sc	Si + Sc	CPT	SPT	
				q (Meyerhof)	q TERZAGHI	
	m	m	m	kN/m2	kN/m2	kN/m2
12 + 000	0,030	0,000	0,030	11,623	90,37	34,65
12 + 500	0,017	0,000	0,017	94,81	59,57	34,65
15 + 000	0,070	0,383	0,452	116,08	62,40	34,65

SEGMEN 5						
STA	PENURUNAN			DAYA DUKUNG TANAH		q Jalan Rel
	Si	Sc	Si + Sc	CPT	SPT	
				q (Meyerhof)	q TERZAGHI	
	m	m	m	kN/m2	kN/m2	kN/m2
17+ 000	0,019	0,478	0,497	91,777	35,59	34,65
20 + 000	0,141	0,627	0,768	59,592	35,15	34,65
22 + 000	0,070	0,383	0,452	108,96	62,40	34,65

Debit Air Pada Tiap Segmen

C			Periode	I	Q KIRI m3/detik				
					segmen 1	segmen 2	segmen 3	segmen 4	segmen 5
sekmen 1	pekotaan	0,7	2	12,21	0,05447	0,16413	0,03712	0,04596	0,09276
sekmen 2	perkotaan	0,7	5	14,71	0,06563	0,19777	0,04472	0,05538	0,11177
sekmen 3	persawahan	0,4	10	15,98	0,07128	0,21481	0,04857	0,06015	0,12140
sekmen 4	persawahan	0,4	25	17,27	0,07705	0,23217	0,05250	0,06501	0,13122
sekmen 5	persawahan	0,4	50	18,06	0,08058	0,24282	0,05491	0,06800	0,13723

C			Periode	I	Q KANAN m3/detik				
					segmen 1	segmen 2	segmen 3	segmen 4	segmen 5
sekmen 1	perkotaan	0,7	2	12,21	0,05368	0,16089	0,03698	0,04580	0,02530
sekmen 2	perkotaan	0,7	5	14,71	0,06468	0,19386	0,04456	0,05519	0,10964
sekmen 3	persawahan	0,4	10	15,98	0,07025	0,21056	0,04840	0,05994	0,11908
sekmen 4	persawahan	0,4	25	17,27	0,07593	0,22759	0,05231	0,06479	0,12871
sekmen 5	persawahan	0,4	50	18,06	0,07941	0,23802	0,05471	0,06776	0,13462

Dimensi Drainase Permukaan Pada Tiap Segmen

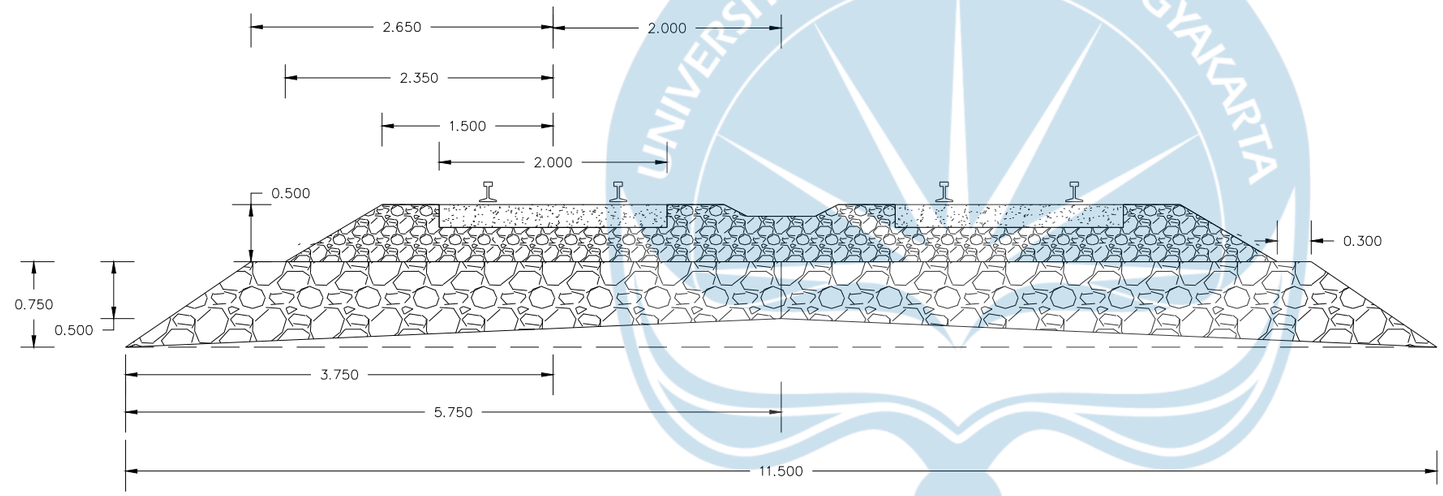
AREA		PANJANG SALURAN	DEBIT (Q10)	DIMENSI SALURAN							KAPASITAS SALURAN					TIPE SALURAN	Tinggi Jagaan		
				B	h	F	P	R	sloop	n	Vrencana	Vijin	Vren<Vijin	Qsaluran	Q10<Qsal				
		m	m3/detik	m	m	m2	m	m	m/m		m/detik	m/detik		m3/detik		mm	Jagaan	Syarat	Jagaan > Syarat
segmen 1	saluran area kiri	3200	0,07128	0,4	0,6	0,24	1,6	0,150	0,21%	0,014	0,92408	1,5	ok	0,221779	ok	40 x 40 x 120 x 6,5	0,407152404	0,2	ok
	saluran area kanan	3200	0,07025	0,4	0,6	0,24	1,6	0,150	0,21%	0,014	0,92408	1,5	ok	0,221779	ok	40 x 40 x 120 x 6,6	0,409953832	0,2	ok
segmen 2	saluran area kiri	5100	0,21481	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	50 x 70 x 120 x 10	0,294596759	0,2	ok
	saluran area kanan	5100	0,21056	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	51 x 70 x 120 x 10	0,302607556	0,2	ok
segmen 3	saluran area kiri	3300	0,04857	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	52 x 70 x 120 x 10	0,608326974	0,2	ok
	saluran area kanan	3300	0,04840	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	53 x 70 x 120 x 10	0,608662329	0,2	ok
segmen 4	saluran area kiri	4800	0,06015	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	54 x 70 x 120 x 10	0,586476908	0,2	ok
	saluran area kanan	4800	0,05994	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	55 x 70 x 120 x 10	0,586869273	0,2	ok
segmen 5	saluran area kiri	7200	0,12140	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	56 x 70 x 120 x 10	0,47088065	0,2	ok
	saluran area kanan	7200	0,11908	0,5	0,7	0,35	1,9	0,184	0,21%	0,014	1,05972	1,5	ok	0,370902	ok	57 x 70 x 120 x 10	0,475253682	0,2	ok

Jarak Drainase Dalam Pada Tiap Segmen

Nomor Segmen	DIAMETER	mat	Ka		Kb		q		s	ro	$de = \frac{\pi x S}{8 \ln(\frac{S}{\pi x ro})}$	h	H	$S^2 = \frac{4.Ka.h^2}{q} + \frac{8.Kb.de.h}{q}$	S
	(m)	(m)	m/detik	m/hari	m/detik	m/hari	mm/jam	m/hari	m	m					
1	0,2	4	0,00001	0,864	0,00001	0,864	29,913	0,717912	3,2	0,1	0,5414	1	1,75	10,027	3,2
2	0,2	3	0,00001	0,864	0,00001	0,864	29,913	0,717912	3,2	0,1	0,5414	1	1,75	10,027	3,2
3	0,2	6	0,00001	0,864	0,00001	0,864	29,913	0,717912	3,2	0,1	0,5414	1	1,75	10,027	3,2
4	0,2	3	0,00001	0,864	0,00001	0,864	29,913	0,717912	3,2	0,1	0,5414	1	1,75	10,027	3,2
5	0,2	3	0,00001	0,864	0,00001	0,864	29,913	0,717912	3,2	0,1	0,5414	1	1,75	10,027	3,2

METODE BISHOP																		
Fs	Irisan No	c	ϕ	b_i	tinggi rata-rata	Luas irisan	γ	W_i	θ_i (˚)	Sin θ_i	Cos θ_i	tan ϕ	W_i x Sin θ_i	W_i x tan $_\phi$	c x b_i	Fs	M	(c.bi + Wi.tan ϕ)*1/M
	1	11	11,91	0,286	0,21	0,0601	16,58	0,996	-55,92	-0,828	0,560	0,211	-0,825	0,210	3,146	1,78	0,4622	7,2609
	2	11	11,91	0,286	0,61	0,1745	16,58	2,893	-52,57	-0,794	0,608	0,211	-2,297	0,610	3,146	1,78	0,5137	7,3119
	3	11	11,91	0,286	0,96	0,2746	16,58	4,552	-49,46	-0,760	0,650	0,211	-3,459	0,960	3,146	1,78	0,5599	7,3333
	4	11	11,91	0,286	1,28	0,3661	16,58	6,070	-46,53	-0,726	0,688	0,211	-4,405	1,280	3,146	1,78	0,6020	7,3527
	5	11	11,91	0,286	1,57	0,4490	16,58	7,445	-43,76	-0,692	0,722	0,211	-5,149	1,570	3,146	1,78	0,6403	7,3657
	6	11	11,91	0,25	1,81	0,4525	16,58	7,502	-41,26	-0,659	0,752	0,211	-4,948	1,582	2,75	1,78	0,6736	6,4319
	7	11	11,91	0,25	2,02	0,5050	16,58	8,373	-39,02	-0,630	0,777	0,211	-5,272	1,766	2,75	1,78	0,7023	6,4300
	8	11	11,91	0,25	2,21	0,5525	16,58	9,160	-36,85	-0,600	0,800	0,211	-5,494	1,932	2,75	1,78	0,7291	6,4213
	9	11	11,91	0,25	2,4	0,6000	16,58	9,948	-34,74	-0,570	0,822	0,211	-5,669	2,098	2,75	1,78	0,7542	6,4280
	10	11	11,91	0,25	2,57	0,6425	16,58	10,653	-32,69	-0,540	0,842	0,211	-5,753	2,247	2,75	1,78	0,7776	6,4259
	11	11	11,91	0,25	2,72	0,6800	16,58	11,274	-30,67	-0,510	0,860	0,211	-5,751	2,378	2,75	1,78	0,7997	6,4125
	12	11	11,91	0,25	2,86	0,7150	16,58	11,855	-28,7	-0,480	0,877	0,211	-5,693	2,500	2,75	1,78	0,8202	6,4009
	13	11	11,91	0,25	3	0,7500	16,58	12,435	-26,77	-0,450	0,893	0,211	-5,601	2,623	2,75	1,78	0,8395	6,4003
	14	11	11,91	0,25	3,12	0,7800	16,58	12,932	-24,87	-0,421	0,907	0,211	-5,439	2,728	2,75	1,78	0,8574	6,3884
1,78	15	11	11,91	0,25	3,23	0,8075	16,58	13,388	-23	-0,391	0,921	0,211	-5,231	2,824	2,75	1,78	0,8742	6,3758
	16	11	11,91	0,256	3,2	0,8192	16,58	13,582	-21,12	-0,360	0,933	0,211	-4,894	2,865	2,816	1,78	0,8901	6,3819
	17	11	11,91	0,256	3,04	0,7782	16,58	12,903	-19,24	-0,330	0,944	0,211	-4,252	2,721	2,816	1,78	0,9051	6,1181
	18	11	11,91	0,256	2,87	0,7347	16,58	12,182	-17,38	-0,299	0,954	0,211	-3,639	2,569	2,816	1,78	0,9190	5,8603
	19	11	11,91	0,256	2,69	0,6886	16,58	11,418	-15,54	-0,268	0,963	0,211	-3,059	2,408	2,816	1,78	0,9317	5,6071
	20	11	11,91	0,256	2,49	0,6374	16,58	10,569	-13,73	-0,237	0,971	0,211	-2,508	2,229	2,816	1,78	0,9433	5,3484
	21	11	11,91	0,256	2,3	0,5888	16,58	9,762	-11,92	-0,207	0,978	0,211	-2,016	2,059	2,816	1,78	0,9540	5,1103
	22	11	11,91	0,256	2,09	0,5350	16,58	8,871	-10,12	-0,176	0,984	0,211	-1,559	1,871	2,816	1,78	0,9636	4,8640
	23	11	11,91	0,256	1,87	0,4787	16,58	7,937	-8,33	-0,145	0,989	0,211	-1,150	1,674	2,816	1,78	0,9723	4,6181
	24	11	11,91	0,256	1,65	0,4224	16,58	7,003	-6,56	-0,114	0,993	0,211	-0,800	1,477	2,816	1,78	0,9799	4,3811
	25	11	11,91	0,256	1,4	0,3584	16,58	5,942	-4,78	-0,083	0,997	0,211	-0,495	1,253	2,816	1,78	0,9866	4,1244
	26	11	11,91	0,256	1,18	0,3021	16,58	5,008	-3,02	-0,053	0,999	0,211	-0,264	1,056	2,816	1,78	0,9924	3,9021
	27	11	11,91	0,256	0,92	0,2355	16,58	3,905	-1,25	-0,022	1,000	0,211	-0,085	0,824	2,816	1,78	0,9972	3,6499
	28	11	11,91	0,256	0,67	0,1715	16,58	2,844	0,51	0,009	1,000	0,211	0,025	0,600	2,816	1,78	1,0010	3,4123
	29	11	11,91	0,256	0,41	0,1050	16,58	1,740	2,27	0,040	0,999	0,211	0,069	0,367	2,816	1,78	1,0039	3,1706
	30	11	11,91	0,256	0,14	0,0358	16,58	0,594	4,04	0,070	0,998	0,211	0,042	0,125	2,816	1,78	1,0059	2,9242
	total												-95,571					170,2124

LAMPIRAN 7



TUGAS AKHIR PERANCANGAN
INFRASTRUKTUR JALAN REL
TAHUN AJARAN 2022/2023

Digambar & Disusun oleh:

FILIPUS ELVANUS PURNAMA GEGERIUS (200218321)
VALERIANUS SAMBA SEPTYADI (200218355)

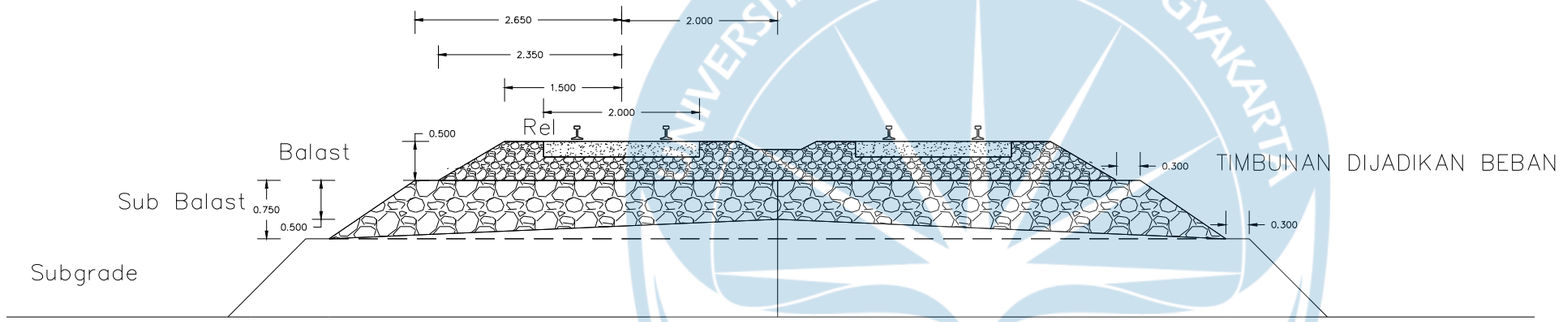
Diperiksa Oleh :

William Wijaya, S.T., M. Eng.

Disetujui Oleh :

William Wijaya, S.T., M. Eng.

GAMBAR DESAIN JALAN REL



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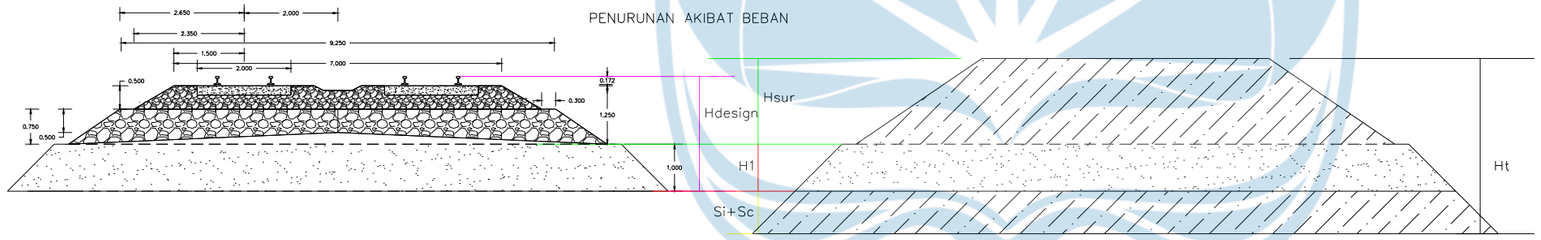
GAMBAR DESAIN JALAN REL + TIMBUNAN



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Disetujui Oleh :

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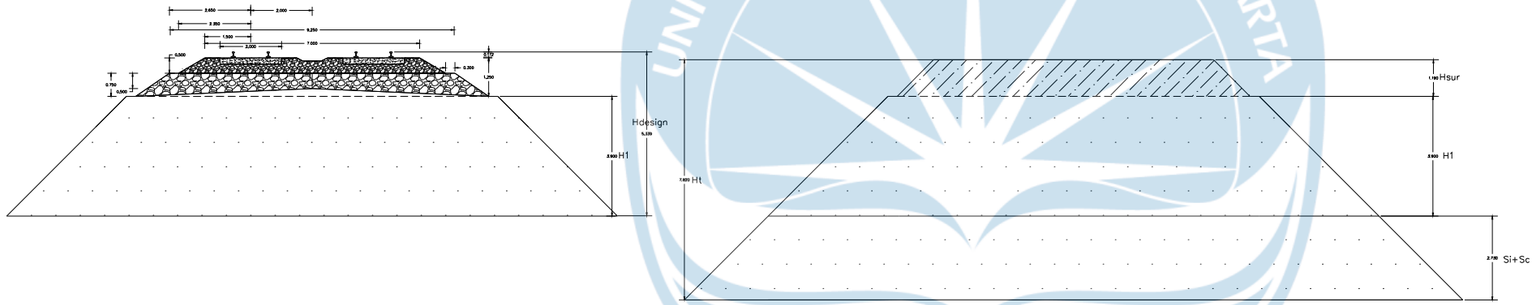
DETAIL PENURUNAN
YANG AKAN TERJADI



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Disetujui Oleh :

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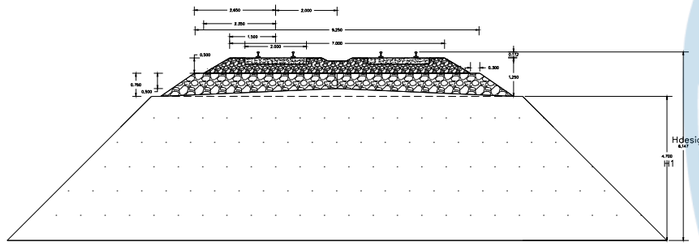
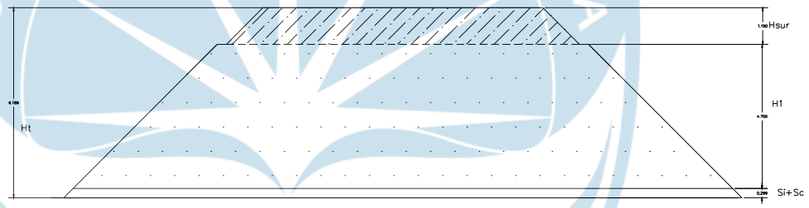
SEGMEN 1
PENURUNAN 1+500





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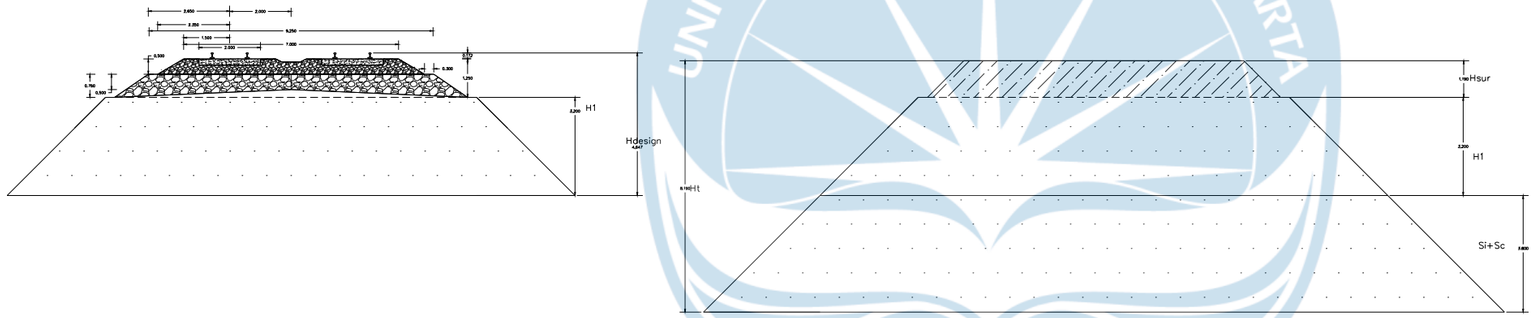
SEGMEN 2
PENURUNAN 6+000



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INFRASTRUKTUR JALAN REL
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Disetujui Oleh :

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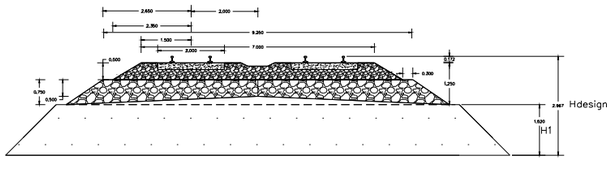
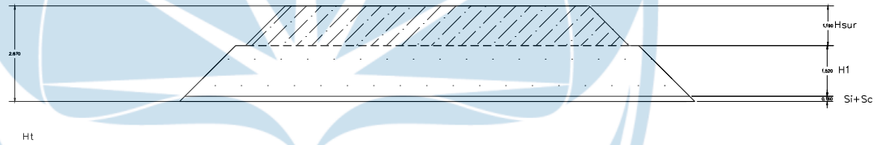
SEGMEN 3
PENURUNAN 11+000





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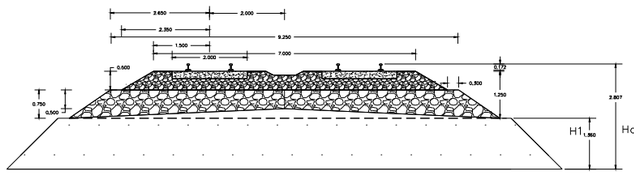
Disetujui Oleh :

William Wijaya, S.T., M. Eng.

SEGMEN 4
PENURUNAN 15+500



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Disetujui Oleh :

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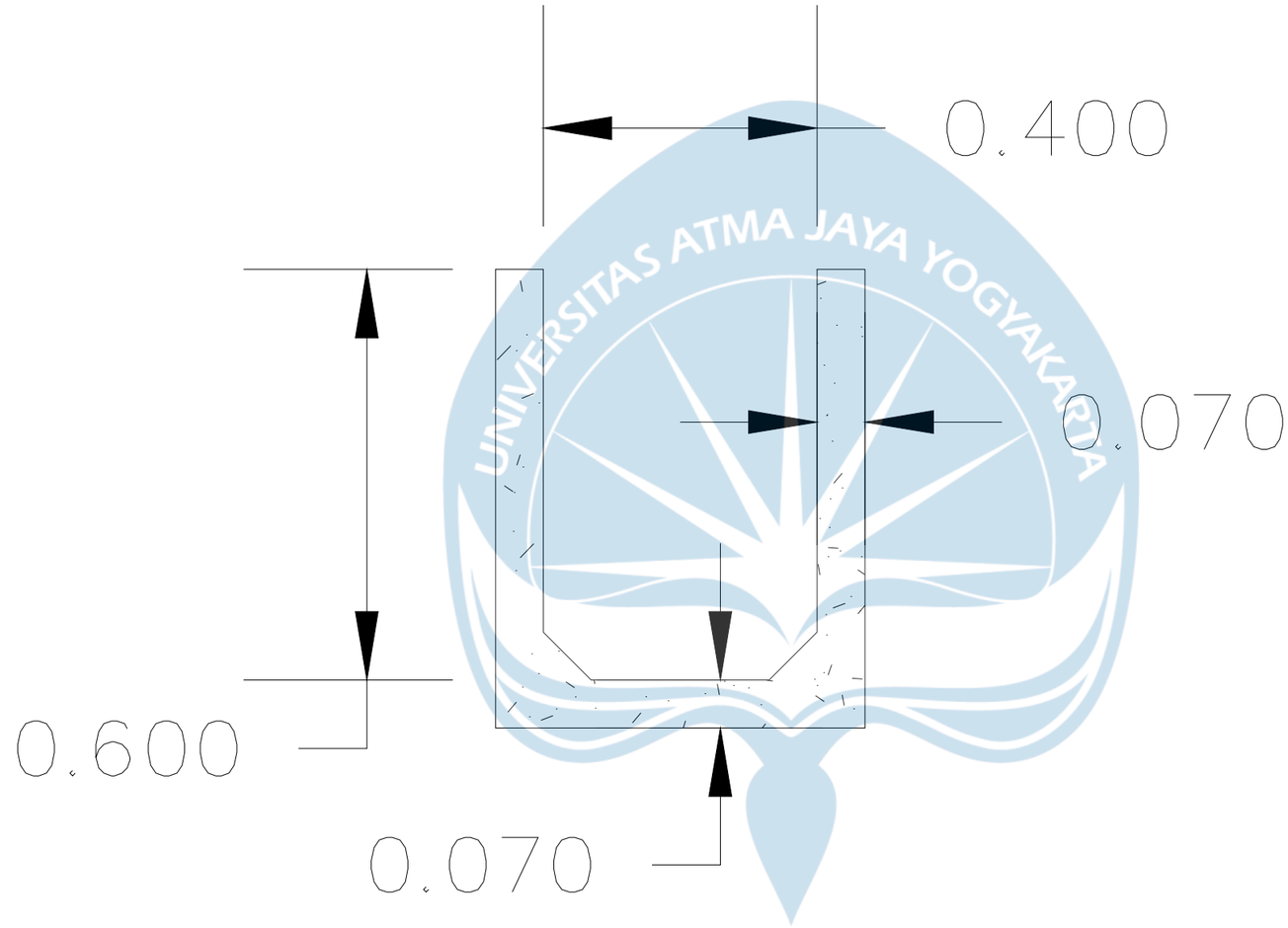
SEGMEN 5
PENURUNAN 20+000



TUGAS AKHIR PERANCANGAN
INFRASTRUKTUR JALAN REL
SEMESTER GENAP
TAHUN AJARAN 2022/2023

Digambar & Disusun oleh:

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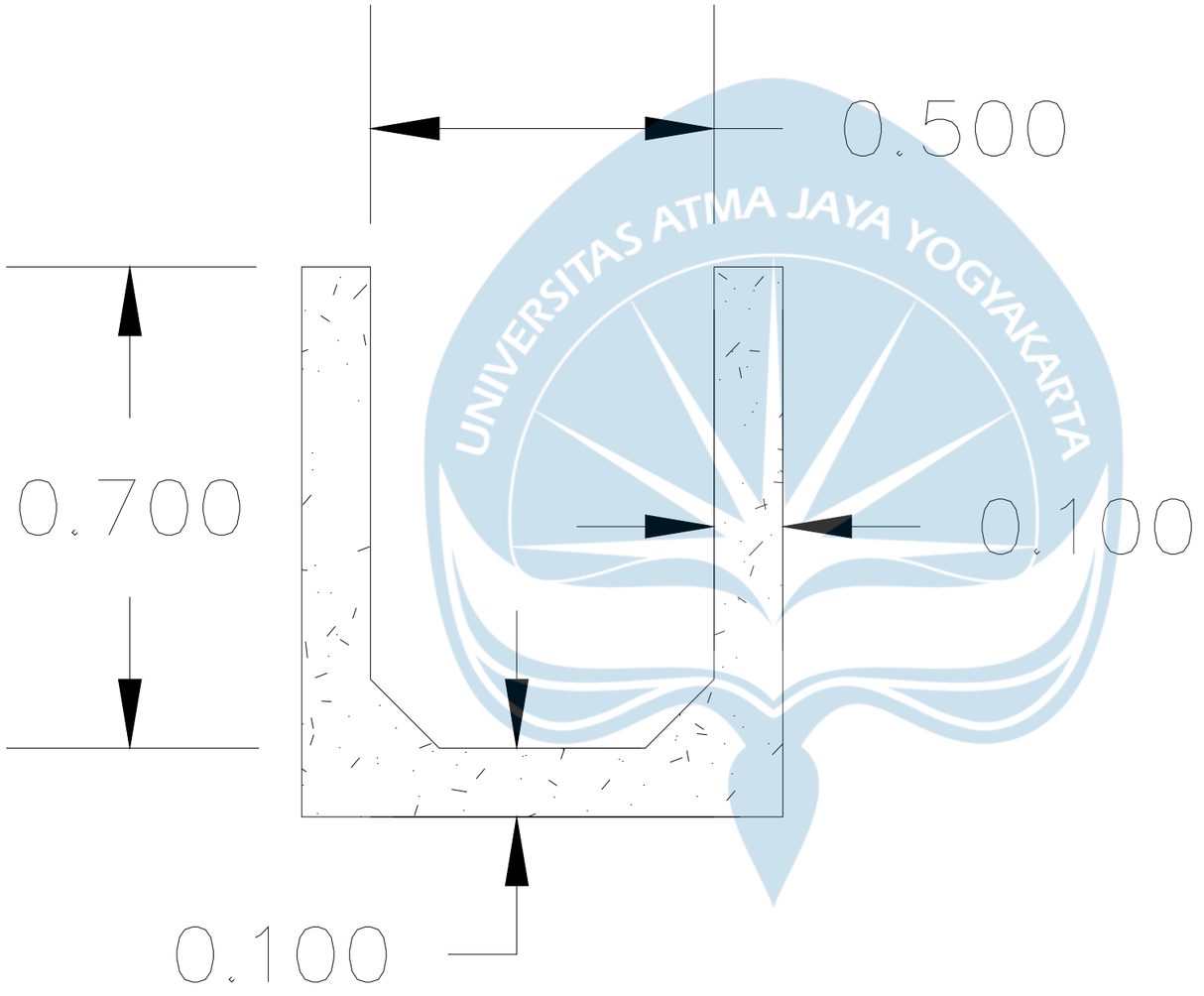
Disetujui Oleh :

Dr.–Ing. Agustina Kiky Anggraini, S.T., M.Eng.

GAMBAR DESAIN DRAINASE PERMUKAAN 40x60cm



TUGAS AKHIR PERANCANGAN
INFRASTRUKTUR JALAN REL
SEMESTER GENAP
TAHUN AJARAN 2022/2023

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Disetujui Oleh :

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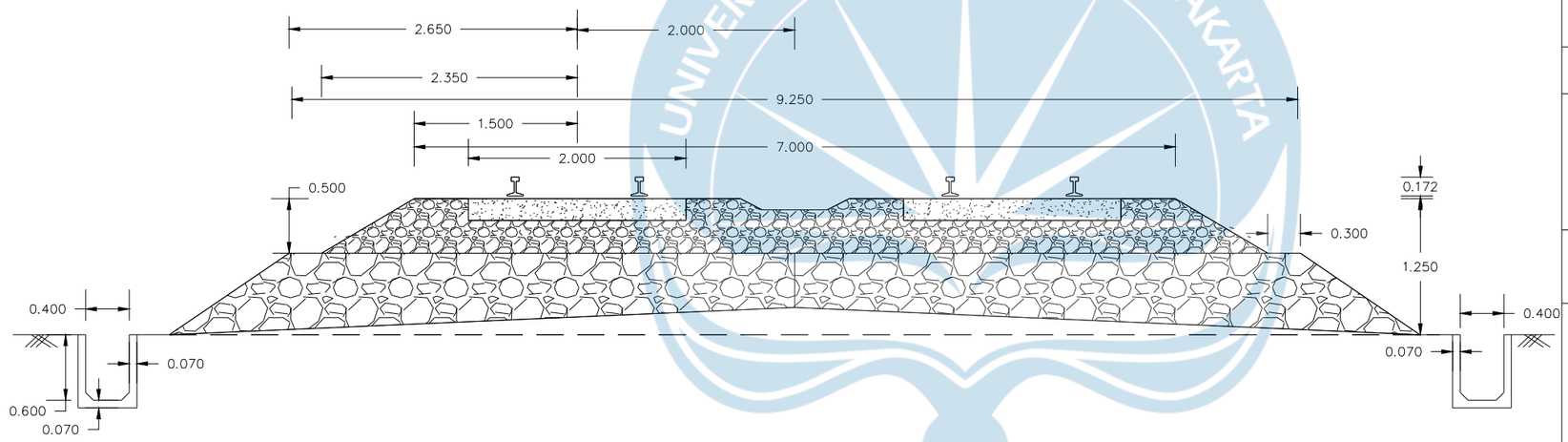
GAMBAR DESAIN DRAINASE PERMUKAAN 50x70cm



TUGAS AKHIR PERANCANGAN
INFRASTRUKTUR JALAN REL
SEMESTER GENAP
TAHUN AJARAN 2022/2023

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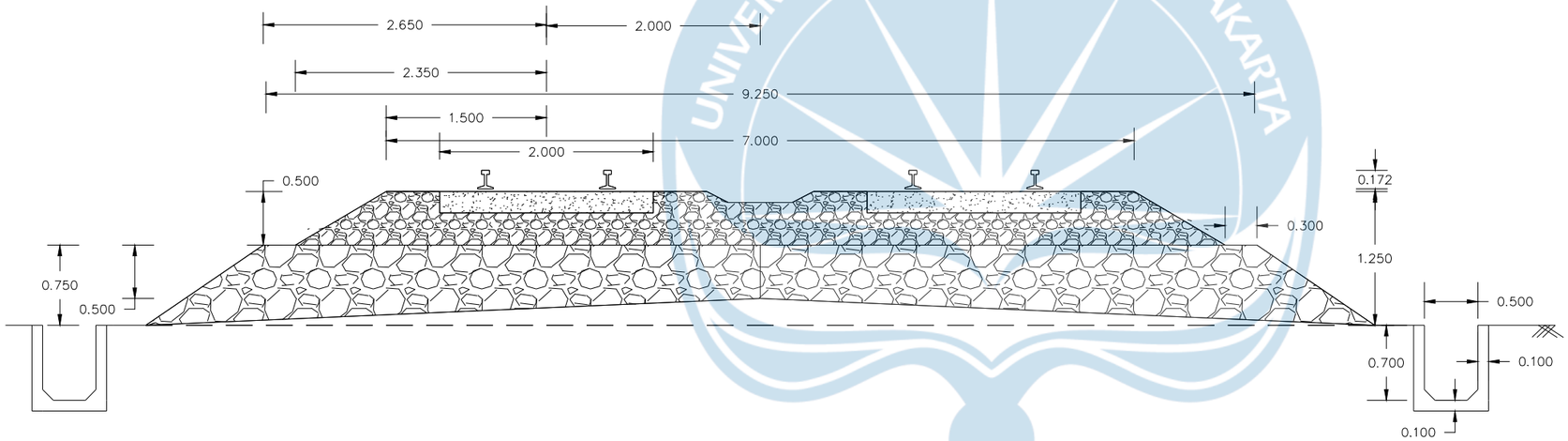
Disetujui Oleh :

Dr.–Ing. Agustina Kiky Anggraini, S.T., M.Eng.

GAMBAR DESAIN JALAN REL + DRAINASE PERMUKAAN 40x60cm



TUGAS AKHIR PERANCANGAN
INFRASTRUKTUR JALAN REL
SEMESTER GENAP
TAHUN AJARAN 2022/2023

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Disetujui Oleh :

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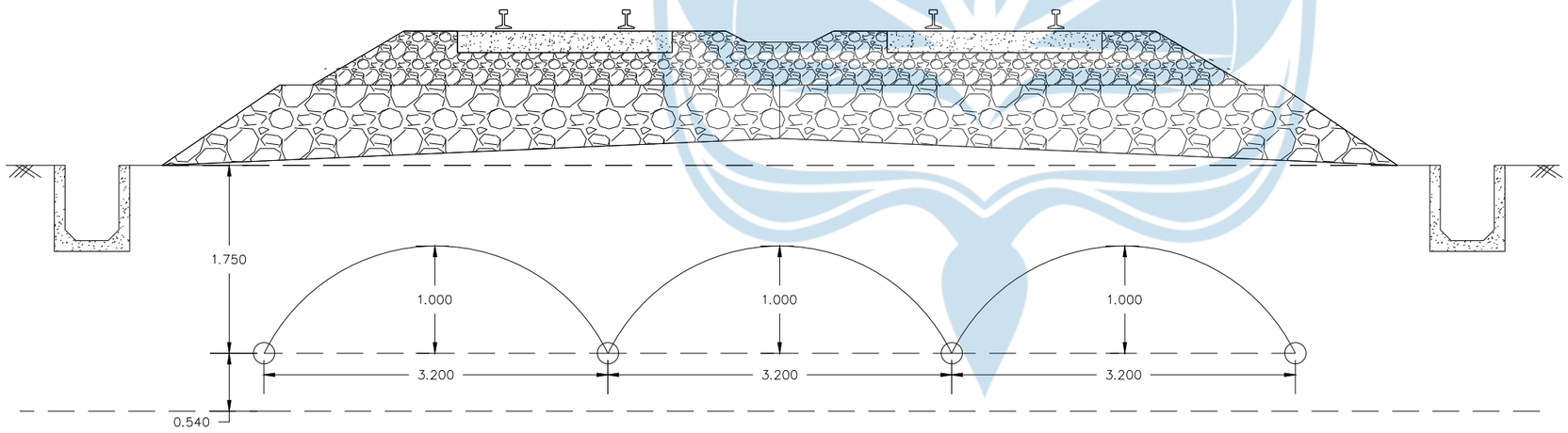
GAMBAR DESAIN JALAN REL + DRAINASE PERMUKAAN 50x70cm



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SEMESTER GENAP
TAHUN AJARAN 2022/2023

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Disetujui Oleh :

Dr.–Ing. Agustina Kiky Anggraini, S.T., M.Eng.

GAMBAR DESAIN JALAN REL + DRAINASE DALAM

LAMPIRAN 8

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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 1
ELEVATION : -1,00 m dari muka jalan
G.WATER DEPTH : -3,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	2	4	0,20	4	4	10,20	28	31	0,30	6	264
0,40	5	7	0,20	4	8	10,40	33	36	0,30	6	270
0,60	8	10	0,20	4	12	10,60	30	33	0,30	6	276
0,80	11	14	0,30	6	18	10,80	34	37	0,30	6	282
1,00	28	31	0,30	6	24	11,00	32	35	0,30	6	288
1,20	43	46	0,30	6	30	11,20	46	49	0,30	6	294
1,40	15	18	0,30	6	36	11,40	51	54	0,30	6	300
1,60	19	21	0,20	4	40	11,60	74	77	0,30	6	306
1,80	8	10	0,20	4	44	11,80	68	71	0,30	6	312
2,00	6	8	0,20	4	48	12,00	76	79	0,30	6	318
2,20	3	5	0,20	4	52	12,20	89	92	0,30	6	324
2,40	4	6	0,20	4	56	12,40	93	96	0,30	6	330
2,60	7	9	0,20	4	60	12,60	104	107	0,30	6	336
2,80	5	7	0,20	4	64	12,80	115	118	0,30	6	342
3,00	2	4	0,20	4	68	13,00	108	111	0,30	6	348
3,20	6	8	0,20	4	72	13,20	125	128	0,30	6	354
3,40	9	11	0,20	4	76	13,40	141	143	0,20	4	358
3,60	10	13	0,30	6	82	13,60	133	136	0,30	6	364
3,80	7	9	0,20	4	86	13,80	138	141	0,30	6	370
4,00	5	7	0,20	4	90	14,00	146	149	0,30	6	376
4,20	11	14	0,30	6	96	14,20	162	165	0,30	6	382
4,40	13	16	0,30	6	102	14,40	179	182	0,30	6	388
4,60	12	15	0,30	6	108	14,60	184	187	0,30	6	394
4,80	14	17	0,30	6	114	14,80	196	199	0,30	6	400
5,00	11	14	0,30	6	120	15,00	208	211	0,30	6	406
5,20	8	10	0,20	4	124	15,20	224	227	0,30	6	412
5,40	13	16	0,30	6	130	15,40	246	250	0,40	8	420
5,60	21	24	0,30	6	136	15,60	250	250	0,00	0	420
5,80	19	22	0,30	6	142	15,80					
6,00	14	17	0,30	6	148	16,00					
6,20	10	13	0,30	6	154	16,20					
6,40	7	9	0,20	4	158	16,40					
6,60	16	19	0,30	6	164	16,60					
6,80	12	15	0,30	6	170	16,80					
7,00	11	14	0,30	6	176	17,00					
7,20	8	10	0,20	4	180	17,20					
7,40	6	8	0,20	4	184	17,40					
7,60	5	7	0,20	4	188	17,60					
7,80	3	5	0,20	4	192	17,80					
8,00	9	12	0,30	6	198	18,00					
8,20	11	14	0,30	6	204	18,20					
8,40	13	16	0,30	6	210	18,40					
8,60	17	20	0,30	6	216	18,60					
8,80	22	25	0,30	6	222	18,80					
9,00	26	29	0,30	6	228	19,00					
9,20	31	34	0,30	6	234	19,20					
9,40	35	38	0,30	6	240	19,40					
9,60	29	32	0,30	6	246	19,60					
9,80	24	27	0,30	6	252	19,80					
10,00	23	26	0,30	6	258	20,00					

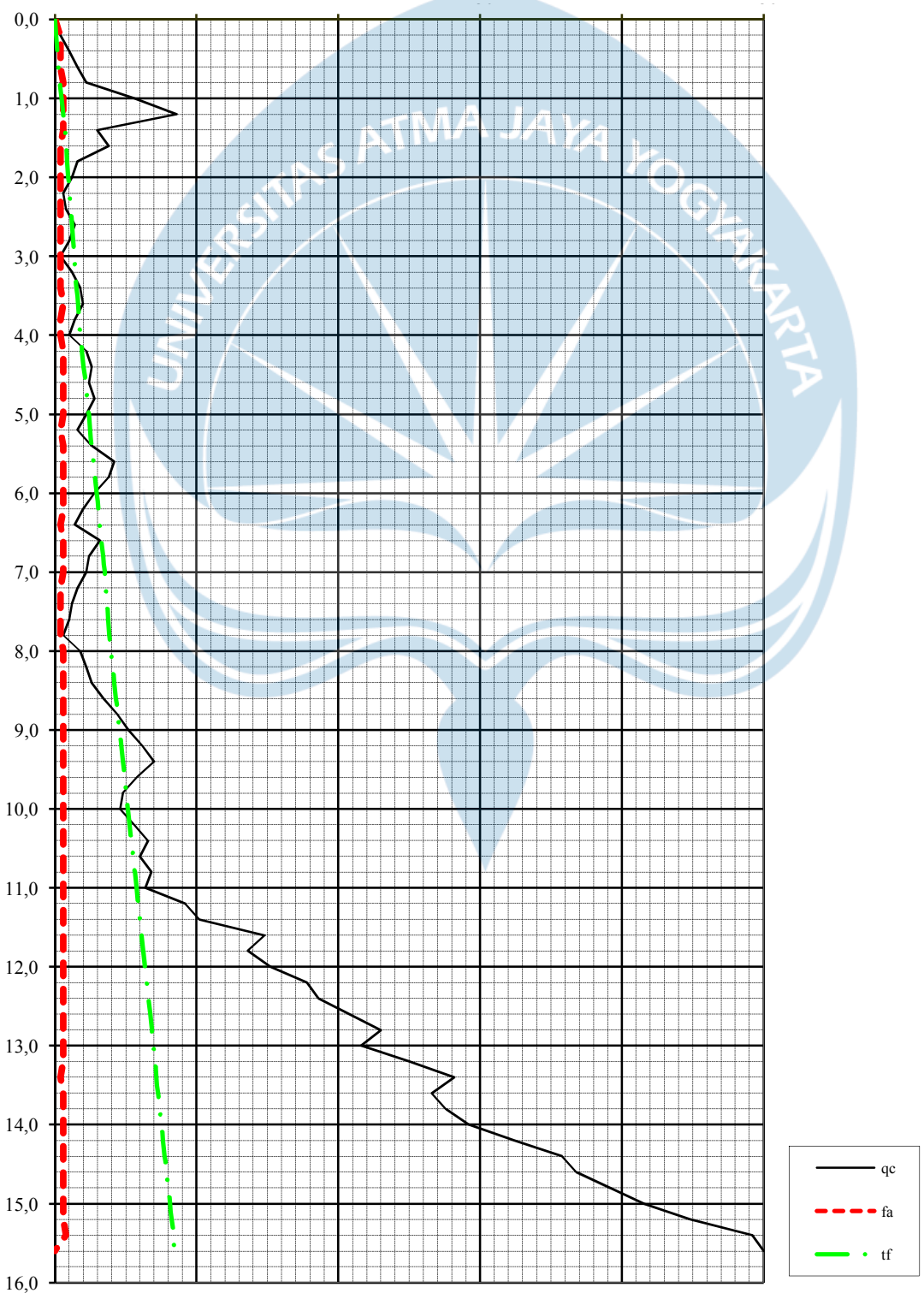
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : -1,00 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 2	**WEATHER**	: Cerah
ELEVATION	: -1,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	3	5	0,20	4	4	10,20	44	47	0,30	6	282
0,40	6	8	0,20	4	8	10,40	48	51	0,30	6	288
0,60	11	14	0,30	6	14	10,60	42	45	0,30	6	294
0,80	18	21	0,30	6	20	10,80	49	52	0,30	6	300
1,00	16	18	0,20	4	24	11,00	54	57	0,30	6	306
1,20	22	24	0,20	4	28	11,20	43	46	0,30	6	312
1,40	26	29	0,30	6	34	11,40	35	38	0,30	6	318
1,60	18	21	0,30	6	40	11,60	31	34	0,30	6	324
1,80	11	14	0,30	6	46	11,80	46	49	0,30	6	330
2,00	6	8	0,20	4	50	12,00	52	55	0,30	6	336
2,20	8	10	0,20	4	54	12,20	64	67	0,30	6	342
2,40	11	14	0,30	6	60	12,40	73	76	0,30	6	348
2,60	13	16	0,30	6	66	12,60	68	71	0,30	6	354
2,80	9	12	0,30	6	72	12,80	84	87	0,30	6	360
3,00	6	8	0,20	4	76	13,00	96	99	0,30	6	366
3,20	8	10	0,20	4	80	13,20	87	90	0,30	6	372
3,40	7	9	0,20	4	84	13,40	94	97	0,30	6	378
3,60	11	14	0,30	6	90	13,60	116	119	0,30	6	384
3,80	13	16	0,30	6	96	13,80	123	126	0,30	6	390
4,00	10	13	0,30	6	102	14,00	148	151	0,30	6	396
4,20	6	8	0,20	4	106	14,20	142	145	0,30	6	402
4,40	11	14	0,30	6	112	14,40	131	134	0,30	6	408
4,60	20	23	0,30	6	118	14,60	146	149	0,30	6	414
4,80	16	19	0,30	6	124	14,80	160	163	0,30	6	420
5,00	11	14	0,30	6	130	15,00	185	188	0,30	6	426
5,20	13	16	0,30	6	136	15,20	199	202	0,30	6	432
5,40	20	23	0,30	6	142	15,40	206	209	0,30	6	438
5,60	24	27	0,30	6	148	15,60	246	250	0,40	8	446
5,80	23	26	0,30	6	154	15,80	250	250	0,00	0	446
6,00	26	29	0,30	6	160	16,00					
6,20	28	31	0,30	6	166	16,20					
6,40	24	27	0,30	6	172	16,40					
6,60	19	21	0,20	4	176	16,60					
6,80	13	16	0,30	6	182	16,80					
7,00	21	24	0,30	6	188	17,00					
7,20	20	23	0,30	6	194	17,20					
7,40	24	27	0,30	6	200	17,40					
7,60	28	31	0,30	6	206	17,60					
7,80	26	29	0,30	6	212	17,80					
8,00	24	27	0,30	6	218	18,00					
8,20	31	34	0,30	6	224	18,20					
8,40	33	36	0,30	6	230	18,40					
8,60	29	32	0,30	6	236	18,60					
8,80	24	27	0,30	6	242	18,80					
9,00	18	21	0,30	6	248	19,00					
9,20	23	26	0,30	6	254	19,20					
9,40	31	34	0,30	6	260	19,40					
9,60	35	38	0,30	6	266	19,60					
9,80	37	40	0,30	6	272	19,80					
10,00	42	44	0,20	4	276	20,00					

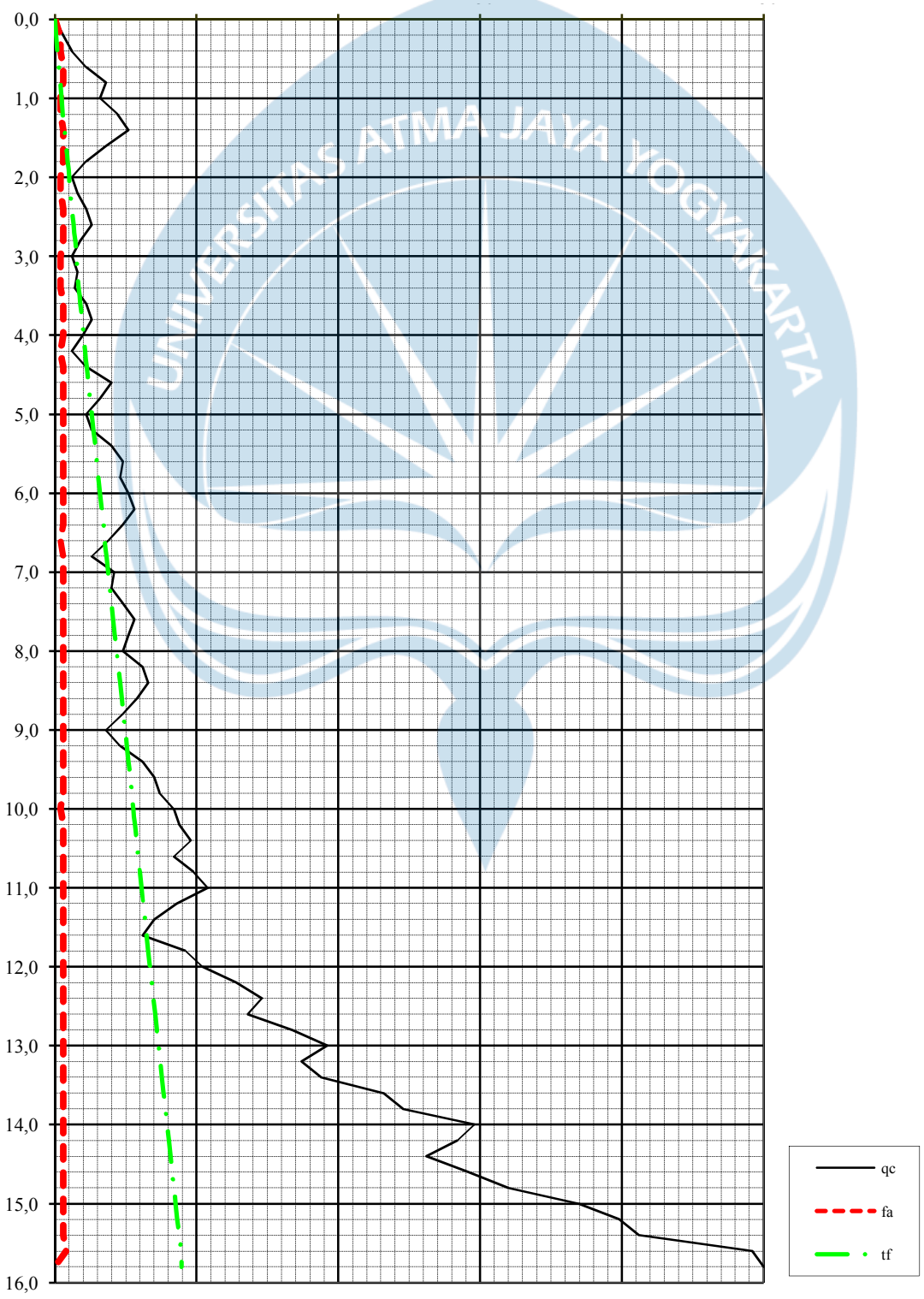
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : -1,00 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 3	**WEATHER**	: Cerah
ELEVATION	: -1,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	2	4	0,20	4	4	10,20	39	42	0,30	6	280
0,40	4	6	0,20	4	8	10,40	34	37	0,30	6	286
0,60	7	9	0,20	4	12	10,60	41	44	0,30	6	292
0,80	12	15	0,30	6	18	10,80	46	49	0,30	6	298
1,00	16	19	0,30	6	24	11,00	63	66	0,30	6	304
1,20	24	27	0,30	6	30	11,20	58	61	0,30	6	310
1,40	18	21	0,30	6	36	11,40	64	67	0,30	6	316
1,60	14	17	0,30	6	42	11,60	72	75	0,30	6	322
1,80	10	13	0,30	6	48	11,80	74	77	0,30	6	328
2,00	7	9	0,20	4	52	12,00	86	89	0,30	6	334
2,20	4	6	0,20	4	56	12,20	78	81	0,30	6	340
2,40	5	7	0,20	4	60	12,40	84	87	0,30	6	346
2,60	8	10	0,20	4	64	12,60	92	95	0,30	6	352
2,80	11	14	0,30	6	70	12,80	103	106	0,30	6	358
3,00	9	11	0,20	4	74	13,00	115	118	0,30	6	364
3,20	6	8	0,20	4	78	13,20	124	127	0,30	6	370
3,40	8	10	0,20	4	82	13,40	120	123	0,30	6	376
3,60	12	15	0,30	6	88	13,60	126	129	0,30	6	382
3,80	11	14	0,30	6	94	13,80	135	138	0,30	6	388
4,00	6	8	0,20	4	98	14,00	141	144	0,30	6	394
4,20	13	16	0,30	6	104	14,20	169	172	0,30	6	400
4,40	15	18	0,30	6	110	14,40	153	156	0,30	6	406
4,60	14	17	0,30	6	116	14,60	164	167	0,30	6	412
4,80	11	14	0,30	6	122	14,80	178	181	0,30	6	418
5,00	8	10	0,20	4	126	15,00	196	199	0,30	6	424
5,20	10	13	0,30	6	132	15,20	214	217	0,30	6	430
5,40	14	17	0,30	6	138	15,40	246	250	0,40	8	438
5,60	18	21	0,30	6	144	15,60	250	250	0,00	0	438
5,80	16	18	0,20	4	148	15,80					
6,00	24	27	0,30	6	154	16,00					
6,20	26	29	0,30	6	160	16,20					
6,40	32	35	0,30	6	166	16,40					
6,60	25	28	0,30	6	172	16,60					
6,80	23	26	0,30	6	178	16,80					
7,00	18	21	0,30	6	184	17,00					
7,20	20	23	0,30	6	190	17,20					
7,40	16	19	0,30	6	196	17,40					
7,60	22	25	0,30	6	202	17,60					
7,80	26	29	0,30	6	208	17,80					
8,00	31	34	0,30	6	214	18,00					
8,20	35	38	0,30	6	220	18,20					
8,40	39	42	0,30	6	226	18,40					
8,60	40	43	0,30	6	232	18,60					
8,80	36	39	0,30	6	238	18,80					
9,00	34	37	0,30	6	244	19,00					
9,20	32	35	0,30	6	250	19,20					
9,40	33	36	0,30	6	256	19,40					
9,60	41	44	0,30	6	262	19,60					
9,80	46	49	0,30	6	268	19,80					
10,00	48	51	0,30	6	274	20,00					

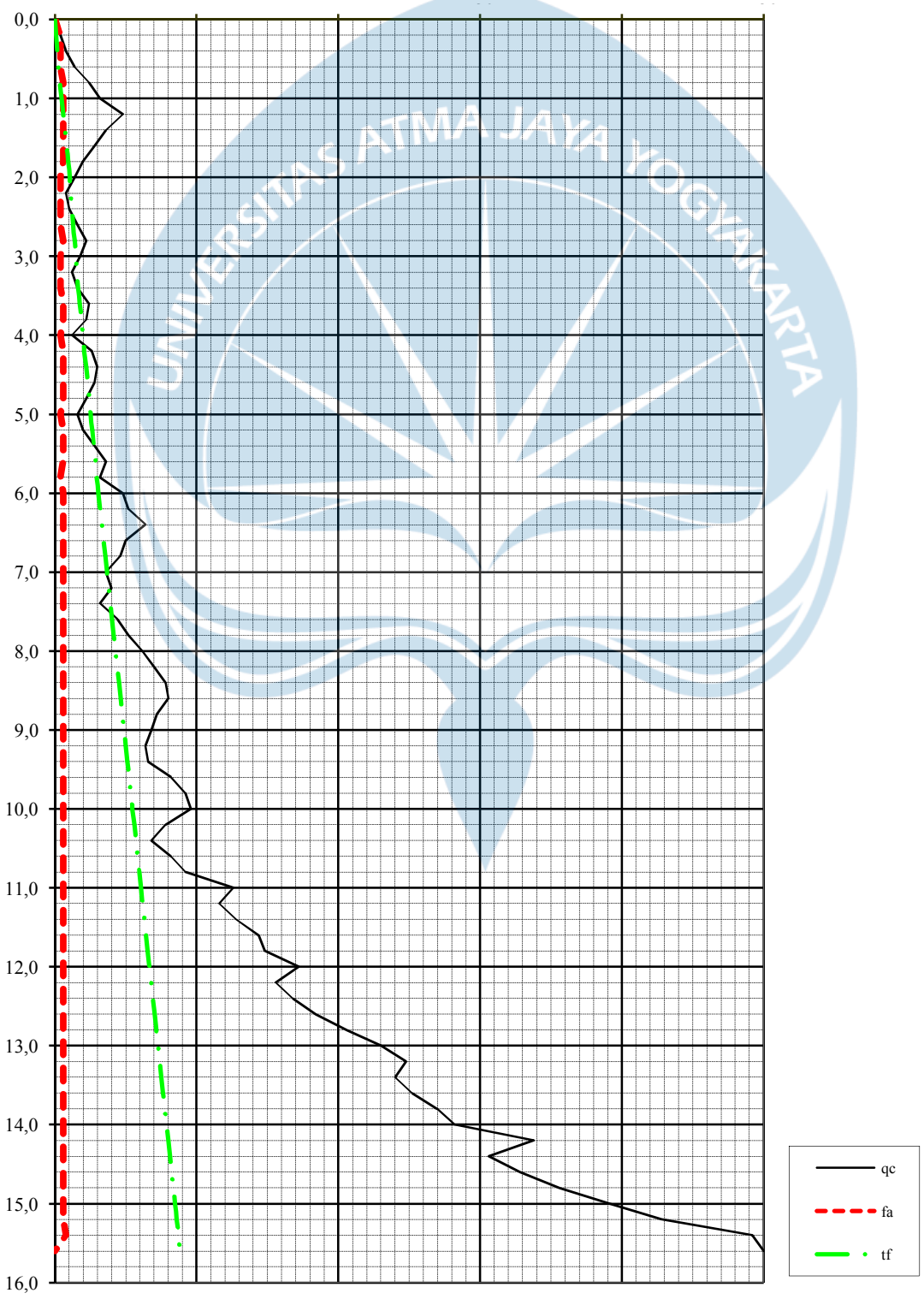
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 3
Date :

Elevation : -1,00 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 4	**WEATHER**	: Cerah
ELEVATION	: -1,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	3	4	0,10	2	2	10,20	46	49	0,30	6	286
0,40	4	6	0,20	4	6	10,40	52	55	0,30	6	292
0,60	6	8	0,20	4	10	10,60	61	64	0,30	6	298
0,80	11	14	0,30	6	16	10,80	68	71	0,30	6	304
1,00	18	21	0,30	6	22	11,00	63	65	0,20	4	308
1,20	23	26	0,30	6	28	11,20	59	62	0,30	6	314
1,40	29	32	0,30	6	34	11,40	54	57	0,30	6	320
1,60	25	28	0,30	6	40	11,60	61	64	0,30	6	326
1,80	14	17	0,30	6	46	11,80	68	71	0,30	6	332
2,00	9	12	0,30	6	52	12,00	89	92	0,30	6	338
2,20	6	8	0,20	4	56	12,20	102	105	0,30	6	344
2,40	7	9	0,20	4	60	12,40	116	119	0,30	6	350
2,60	14	17	0,30	6	66	12,60	108	111	0,30	6	356
2,80	16	19	0,30	6	72	12,80	101	104	0,30	6	362
3,00	12	15	0,30	6	78	13,00	92	95	0,30	6	368
3,20	8	10	0,20	4	82	13,20	105	108	0,30	6	374
3,40	11	14	0,30	6	88	13,40	119	122	0,30	6	380
3,60	16	19	0,30	6	94	13,60	136	139	0,30	6	386
3,80	18	21	0,30	6	100	13,80	145	148	0,30	6	392
4,00	14	17	0,30	6	106	14,00	138	141	0,30	6	398
4,20	11	14	0,30	6	112	14,20	143	146	0,30	6	404
4,40	13	16	0,30	6	118	14,40	156	159	0,30	6	410
4,60	10	13	0,30	6	124	14,60	163	165	0,20	4	414
4,80	8	10	0,20	4	128	14,80	179	182	0,30	6	420
5,00	6	8	0,20	4	132	15,00	191	194	0,30	6	426
5,20	7	9	0,20	4	136	15,20	225	228	0,30	6	432
5,40	10	13	0,30	6	142	15,40	246	250	0,40	8	440
5,60	14	17	0,30	6	148	15,60	250	250	0,00	0	440
5,80	19	22	0,30	6	154	15,80					
6,00	21	24	0,30	6	160	16,00					
6,20	26	29	0,30	6	166	16,20					
6,40	23	26	0,30	6	172	16,40					
6,60	21	24	0,30	6	178	16,60					
6,80	24	27	0,30	6	184	16,80					
7,00	16	19	0,30	6	190	17,00					
7,20	14	17	0,30	6	196	17,20					
7,40	12	15	0,30	6	202	17,40					
7,60	17	20	0,30	6	208	17,60					
7,80	24	27	0,30	6	214	17,80					
8,00	28	31	0,30	6	220	18,00					
8,20	36	39	0,30	6	226	18,20					
8,40	43	46	0,30	6	232	18,40					
8,60	48	51	0,30	6	238	18,60					
8,80	44	47	0,30	6	244	18,80					
9,00	35	38	0,30	6	250	19,00					
9,20	41	44	0,30	6	256	19,20					
9,40	49	52	0,30	6	262	19,40					
9,60	63	66	0,30	6	268	19,60					
9,80	54	57	0,30	6	274	19,80					
10,00	52	55	0,30	6	280	20,00					

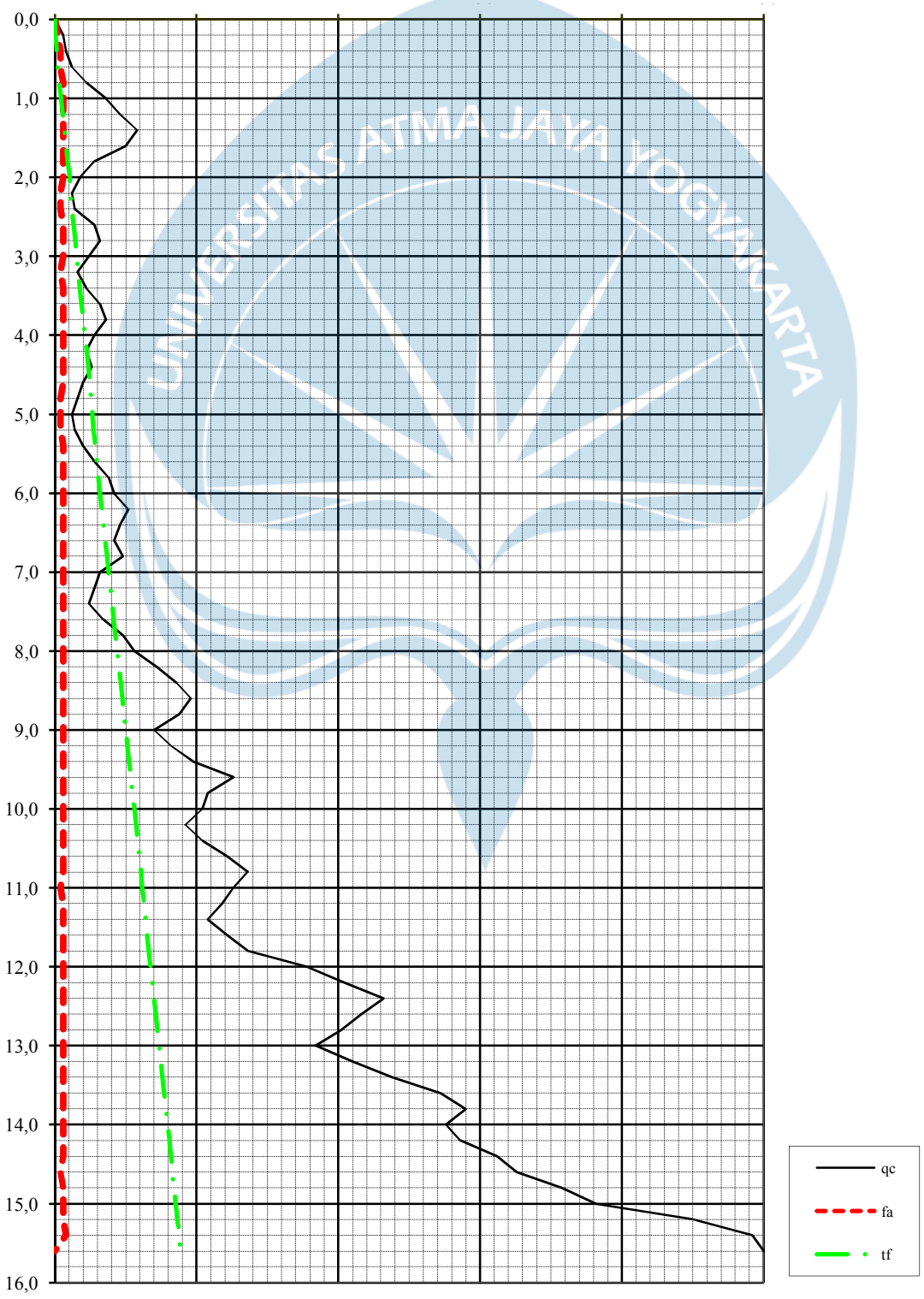
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 4
Date :

Elevation : -1,00 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-1

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR: SOIL MECH. LAB. UAJY

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY: MUKAROB, CS.

CHECKED BY: SOIL MECH. LAB, UAJY

GROUND ELEVATION : -1,00 m from road level

HOLE SIZE : 7.295cm

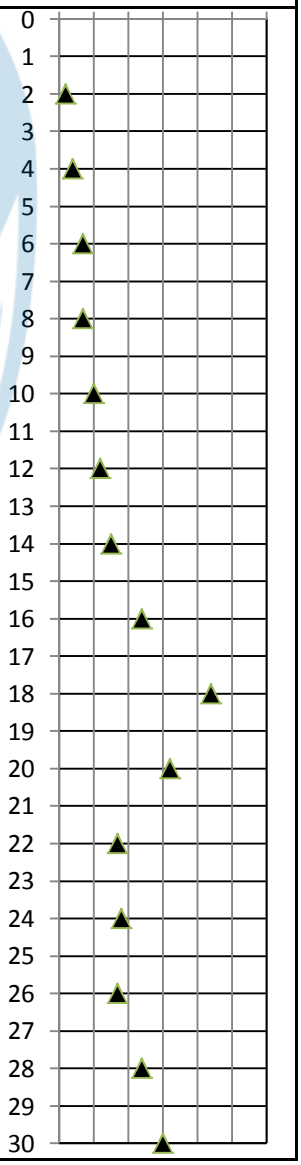
GROUND WATER LEVEL : - 3,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	NV	Water Level Elevation (m)
1									
2					1	1	1	2	
3		Lanau (hitam)	6						-3.00
4					1	1	3	4	
5				I					
6					2	2	5	7	
7									
8					2	4	3	7	
9									
10		Lanau (hijau)	8	II	2	4	6	10	
11									
12					3	6	6	12	
13									
14					3	7	8	15	
15									
16		Pasir halus (coklat, abu-abu)	5		6	9	15	24	
17									
18					6	11	33	44	
19									
20					7	11	21	32	
21									
22					6	8	9	17	
23									
24					7	6	12	18	
25		Pasir (coklat, abu-abu)	11						
26					6	7	10	17	
27									
28					6	12	12	24	
29									
30					8	12	18	30	

SPT Value



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

Laboratorium Mekanika Tanah
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Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ˚
BH 1	5,00	48,77	2,37	1,52	1,02	0,00	12,61
	10,00	48,54	2,38	1,51	1,02	0,00	12,40

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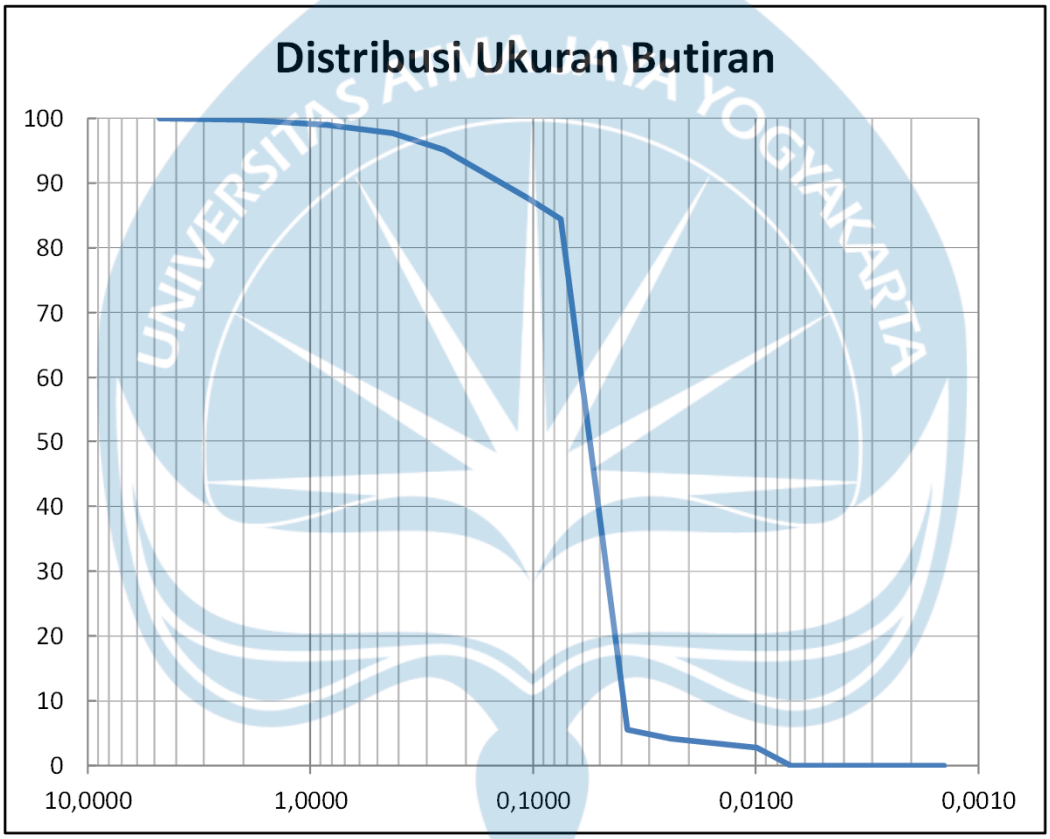
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 5



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,00	100,00	100,00
10	2,000	0,17	99,83	99,83
20	0,850	0,85	98,98	98,98
40	0,425	1,28	97,70	97,70
60	0,250	2,54	95,16	95,16
140	0,106	7,44	87,72	87,72
200	0,075	3,27	84,45	84,45
Pan		84,45		

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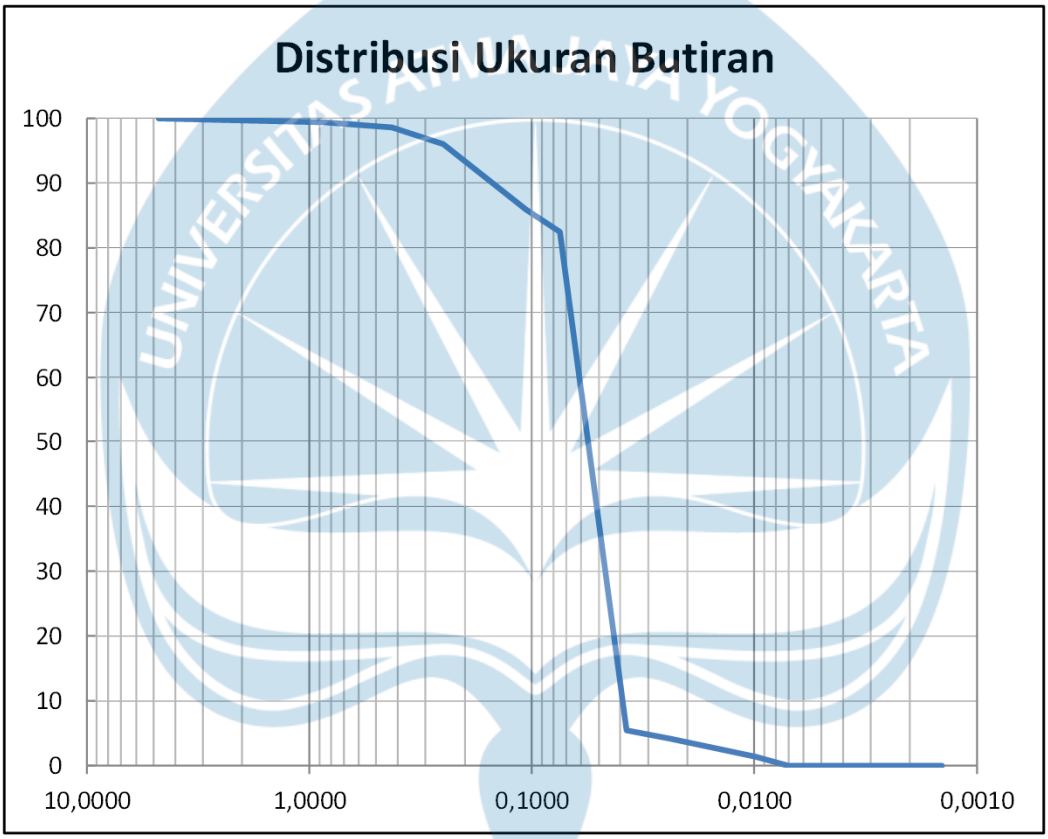
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 10



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,00	100,00	100,00
10	2,000	0,27	99,73	99,73
20	0,850	0,36	99,37	99,37
40	0,425	0,79	98,58	98,58
60	0,250	2,51	96,07	96,07
140	0,106	10,13	85,94	85,94
200	0,075	3,49	82,45	82,45
Pan		82,45		

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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 1
ELEVATION : +0,40 m dari muka jalan
G.WATER DEPTH : -7,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	5	10	0.50	10	10	10.20	8	17	0.90	18	882
0.40	11	16	0.50	10	20	10.40	13	22	0.90	18	900
0.60	19	29	1.00	20	40	10.60	15	26	1.10	22	922
0.80	50	59	0.90	18	58	10.80	17	28	1.10	22	944
1.00	21	32	1.10	22	80	11.00	14	23	0.90	18	962
1.20	16	24	0.80	16	96	11.20	10	18	0.80	16	978
1.40	18	25	0.70	14	110	11.40	12	21	0.90	18	996
1.60	15	23	0.80	16	126	11.60	6	14	0.80	16	1012
1.80	13	29	1.60	32	158	11.80	16	27	1.10	22	1034
2.00	20	33	1.30	26	184	12.00	11	22	1.10	22	1056
2.20	22	35	1.30	26	210	12.20	15	24	0.90	18	1074
2.40	13	24	1.10	22	232	12.40	20	32	1.20	24	1098
2.60	19	32	1.30	26	258	12.60	22	33	1.10	22	1120
2.80	11	21	1.00	20	278	12.80	19	28	0.90	18	1138
3.00	8	18	1.00	20	298	13.00	26	38	1.20	24	1162
3.20	12	21	0.90	18	316	13.20	34	47	1.30	26	1188
3.40	15	24	0.90	18	334	13.40	30	39	0.90	18	1206
3.60	14	25	1.10	22	356	13.60	26	33	0.70	14	1220
3.80	7	16	0.90	18	374	13.80	21	30	0.90	18	1238
4.00	9	18	0.90	18	392	14.00	18	28	1.00	20	1258
4.20	16	24	0.80	16	408	14.20	43	51	0.80	16	1274
4.40	12	19	0.70	14	422	14.40	64	73	0.90	18	1292
4.60	8	15	0.70	14	436	14.60	92	101	0.90	18	1310
4.80	6	13	0.70	14	450	14.80	117	128	1.10	22	1332
5.00	10	19	0.90	18	468	15.00	168	176	0.80	16	1348
5.20	18	29	1.10	22	490	15.20	193	203	1.00	20	1368
5.40	14	22	0.80	16	506	15.40	219	228	0.90	18	1386
5.60	9	16	0.70	14	520	15.60	242	250	0.80	16	1402
5.80	7	14	0.70	14	534	15.80	250	250	0.00	0	1402
6.00	8	16	0.80	16	550	16.00					
6.20	11	20	0.90	18	568	16.20					
6.40	6	14	0.80	16	584	16.40					
6.60	9	18	0.90	18	602	16.60					
6.80	12	21	0.90	18	620	16.80					
7.00	18	27	0.90	18	638	17.00					
7.20	16	23	0.70	14	652	17.20					
7.40	12	21	0.90	18	670	17.40					
7.60	17	25	0.80	16	686	17.60					
7.80	19	27	0.80	16	702	17.80					
8.00	25	34	0.90	18	720	18.00					
8.20	7	16	0.90	18	738	18.20					
8.40	11	19	0.80	16	754	18.40					
8.60	8	15	0.70	14	768	18.60					
8.80	6	11	0.50	10	778	18.80					
9.00	5	9	0.40	8	786	19.00					
9.20	7	14	0.70	14	800	19.20					
9.40	13	21	0.80	16	816	19.40					
9.60	18	26	0.80	16	832	19.60					
9.80	15	22	0.70	14	846	19.80					
10.00	10	19	0.90	18	864	20.00					

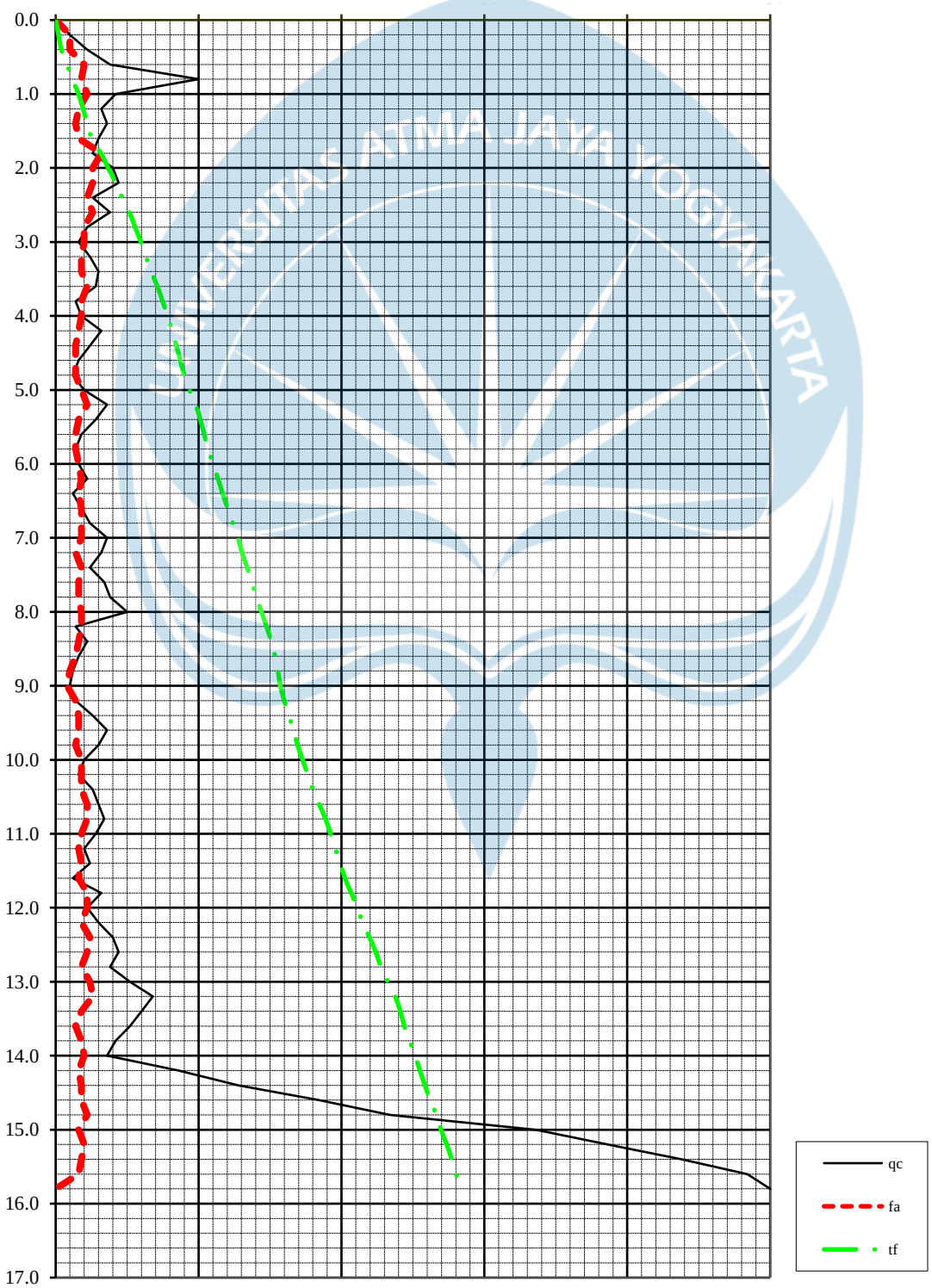
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : +0,40 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 2	**WEATHER**	: Cerah
ELEVATION	: +0,40 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -7,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	6	13	0.70	14	14	10.20	9	16	0.70	14	452
0.40	8	16	0.80	16	30	10.40	16	27	1.10	22	474
0.60	15	23	0.80	16	46	10.60	27	38	1.10	22	496
0.80	26	36	1.00	20	66	10.80	19	28	0.90	18	514
1.00	24	35	1.10	22	88	11.00	22	31	0.90	18	532
1.20	16	24	0.80	16	104	11.20	16	24	0.80	16	548
1.40	19	28	0.90	18	122	11.40	12	20	0.80	16	564
1.60	24	32	0.80	16	138	11.60	8	15	0.70	14	578
1.80	20	29	0.90	18	156	11.80	6	12	0.60	12	590
2.00	18	27	0.90	18	174	12.00	1	2	0.10	2	592
2.20	14	23	0.90	18	192	12.20	1	2	0.10	2	594
2.40	9	14	0.50	10	202	12.40	1	2	0.10	2	596
2.60	6	12	0.60	12	214	12.60	1	2	0.10	2	598
2.80	1	2	0.10	2	216	12.80	1	2	0.10	2	600
3.00	1	2	0.10	2	218	13.00	7	13	0.60	12	612
3.20	1	2	0.10	2	220	13.20	11	18	0.70	14	626
3.40	1	2	0.10	2	222	13.40	23	30	0.70	14	640
3.60	1	2	0.10	2	224	13.60	29	38	0.90	18	658
3.80	1	2	0.10	2	226	13.80	38	48	1.00	20	678
4.00	1	2	0.10	2	228	14.00	64	73	0.90	18	696
4.20	1	2	0.10	2	230	14.20	88	96	0.80	16	712
4.40	1	2	0.10	2	232	14.40	72	81	0.90	18	730
4.60	1	2	0.10	2	234	14.60	66	72	0.60	12	742
4.80	1	2	0.10	2	236	14.80	83	92	0.90	18	760
5.00	1	2	0.10	2	238	15.00	97	108	1.10	22	782
5.20	1	2	0.10	2	240	15.20	124	134	1.00	20	802
5.40	1	2	0.10	2	242	15.40	158	170	1.20	24	826
5.60	1	2	0.10	2	244	15.60	146	155	0.90	18	844
5.80	1	2	0.10	2	246	15.80	167	178	1.10	22	866
6.00	1	2	0.10	2	248	16.00	192	201	0.90	18	884
6.20	1	2	0.10	2	250	16.20	214	223	0.90	18	902
6.40	1	2	0.10	2	252	16.40	245	250	0.50	10	912
6.60	10	18	0.80	16	268	16.60	250	250	0.00	0	912
6.80	14	22	0.80	16	284	16.80					
7.00	19	27	0.80	16	300	17.00					
7.20	17	25	0.80	16	316	17.20					
7.40	21	31	1.00	20	336	17.40					
7.60	29	37	0.80	16	352	17.60					
7.80	34	42	0.80	16	368	17.80					
8.00	22	30	0.80	16	384	18.00					
8.20	14	21	0.70	14	398	18.20					
8.40	11	17	0.60	12	410	18.40					
8.60	8	15	0.70	14	424	18.60					
8.80	1	2	0.10	2	426	18.80					
9.00	1	2	0.10	2	428	19.00					
9.20	1	2	0.10	2	430	19.20					
9.40	1	2	0.10	2	432	19.40					
9.60	1	2	0.10	2	434	19.60					
9.80	1	2	0.10	2	436	19.80					
10.00	1	2	0.10	2	438	20.00					

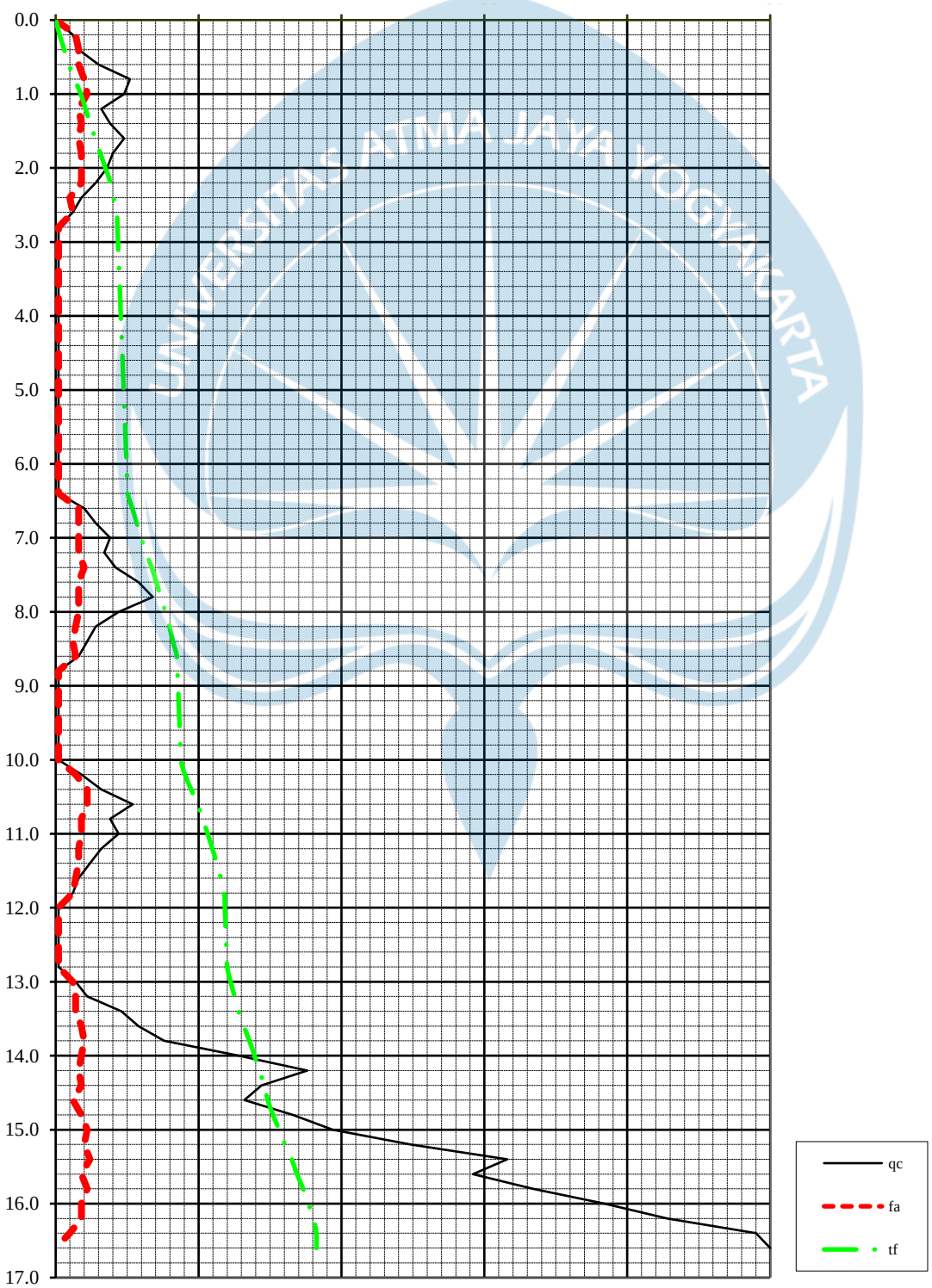
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : +0,40 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 3	**WEATHER**	: Cerah
ELEVATION	: +0,20 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -7,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	7	13	0.60	12	12	10.20	1	2	0.10	2	348
0.40	9	15	0.60	12	24	10.40	1	2	0.10	2	350
0.60	12	17	0.50	10	34	10.60	12	21	0.90	18	368
0.80	14	19	0.50	10	44	10.80	18	27	0.90	18	386
1.00	26	34	0.80	16	60	11.00	26	34	0.80	16	402
1.20	18	24	0.60	12	72	11.20	37	45	0.80	16	418
1.40	16	22	0.60	12	84	11.40	29	36	0.70	14	432
1.60	23	30	0.70	14	98	11.60	33	41	0.80	16	448
1.80	17	23	0.60	12	110	11.80	17	24	0.70	14	462
2.00	24	32	0.80	16	126	12.00	10	16	0.60	12	474
2.20	15	23	0.80	16	142	12.20	7	12	0.50	10	484
2.40	13	20	0.70	14	156	12.40	1	2	0.10	2	486
2.60	11	19	0.80	16	172	12.60	1	2	0.10	2	488
2.80	6	12	0.60	12	184	12.80	1	2	0.10	2	490
3.00	1	2	0.10	2	186	13.00	1	2	0.10	2	492
3.20	1	2	0.10	2	188	13.20	1	2	0.10	2	494
3.40	1	2	0.10	2	190	13.40	26	33	0.70	14	508
3.60	1	2	0.10	2	192	13.60	58	67	0.90	18	526
3.80	1	2	0.10	2	194	13.80	89	95	0.60	12	538
4.00	1	2	0.10	2	196	14.00	118	126	0.80	16	554
4.20	1	2	0.10	2	198	14.20	149	157	0.80	16	570
4.40	6	11	0.50	10	208	14.40	131	138	0.70	14	584
4.60	10	17	0.70	14	222	14.60	155	167	1.20	24	608
4.80	8	14	0.60	12	234	14.80	190	199	0.90	18	626
5.00	1	2	0.10	2	236	15.00	234	242	0.80	16	642
5.20	1	2	0.10	2	238	15.20	245	250	0.50	10	652
5.40	24	35	1.10	22	260	15.40	250	250	0.00	0	652
5.60	36	43	0.70	14	274	15.60					
5.80	18	25	0.70	14	288	15.80					
6.00	9	14	0.50	10	298	16.00					
6.20	5	10	0.50	10	308	16.20					
6.40	1	2	0.10	2	310	16.40					
6.60	1	2	0.10	2	312	16.60					
6.80	1	2	0.10	2	314	16.80					
7.00	1	2	0.10	2	316	17.00					
7.20	1	2	0.10	2	318	17.20					
7.40	1	2	0.10	2	320	17.40					
7.60	1	2	0.10	2	322	17.60					
7.80	1	2	0.10	2	324	17.80					
8.00	1	2	0.10	2	326	18.00					
8.20	1	2	0.10	2	328	18.20					
8.40	1	2	0.10	2	330	18.40					
8.60	1	2	0.10	2	332	18.60					
8.80	1	2	0.10	2	334	18.80					
9.00	1	2	0.10	2	336	19.00					
9.20	1	2	0.10	2	338	19.20					
9.40	1	2	0.10	2	340	19.40					
9.60	1	2	0.10	2	342	19.60					
9.80	1	2	0.10	2	344	19.80					
10.00	1	2	0.10	2	346	20.00					

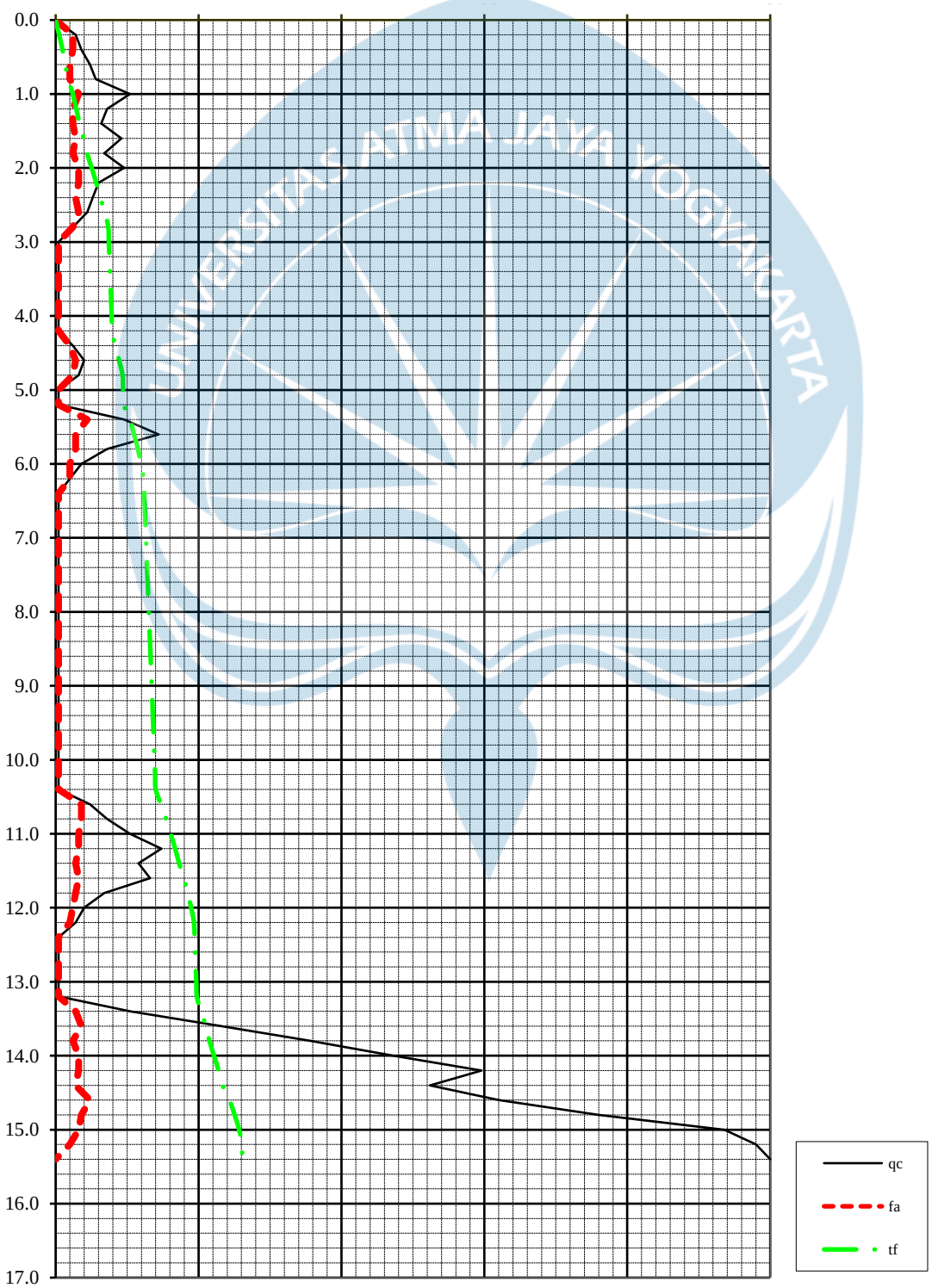
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 3
Date :

Elevation : +0,20 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 4
ELEVATION : +0,20 m dari muka jalan
G.WATER DEPTH : -7,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	5	9	0.40	8	8	10.20	1	2	0.10	2	384
0.40	6	11	0.50	10	18	10.40	1	2	0.10	2	386
0.60	9	15	0.60	12	30	10.60	1	2	0.10	2	388
0.80	14	20	0.60	12	42	10.80	1	2	0.10	2	390
1.00	18	24	0.60	12	54	11.00	1	2	0.10	2	392
1.20	12	18	0.60	12	66	11.20	1	2	0.10	2	394
1.40	8	14	0.60	12	78	11.40	16	25	0.90	18	412
1.60	15	24	0.90	18	96	11.60	21	30	0.90	18	430
1.80	21	29	0.80	16	112	11.80	26	34	0.80	16	446
2.00	26	34	0.80	16	128	12.00	35	46	1.10	22	468
2.20	14	22	0.80	16	144	12.20	27	38	1.10	22	490
2.40	11	18	0.70	14	158	12.40	32	43	1.10	22	512
2.60	7	12	0.50	10	168	12.60	41	52	1.10	22	534
2.80	1	2	0.10	2	170	12.80	24	35	1.10	22	556
3.00	1	2	0.10	2	172	13.00	16	24	0.80	16	572
3.20	1	2	0.10	2	174	13.20	12	20	0.80	16	588
3.40	1	2	0.10	2	176	13.40	8	15	0.70	14	602
3.60	1	2	0.10	2	178	13.60	15	26	1.10	22	624
3.80	1	2	0.10	2	180	13.80	47	59	1.20	24	648
4.00	1	2	0.10	2	182	14.00	73	84	1.10	22	670
4.20	1	2	0.10	2	184	14.20	64	73	0.90	18	688
4.40	1	2	0.10	2	186	14.40	58	66	0.80	16	704
4.60	1	2	0.10	2	188	14.60	97	106	0.90	18	722
4.80	8	15	0.70	14	202	14.80	139	147	0.80	16	738
5.00	13	21	0.80	16	218	15.00	153	163	1.00	20	758
5.20	19	28	0.90	18	236	15.20	176	186	1.00	20	778
5.40	24	33	0.90	18	254	15.40	199	212	1.30	26	804
5.60	36	45	0.90	18	272	15.60	223	231	0.80	16	820
5.80	43	52	0.90	18	290	15.80	244	250	0.60	12	832
6.00	38	47	0.90	18	308	16.00	250	250	0.00	0	832
6.20	14	22	0.80	16	324	16.20					
6.40	8	14	0.60	12	336	16.40					
6.60	5	11	0.60	12	348	16.60					
6.80	1	2	0.10	2	350	16.80					
7.00	1	2	0.10	2	352	17.00					
7.20	1	2	0.10	2	354	17.20					
7.40	1	2	0.10	2	356	17.40					
7.60	1	2	0.10	2	358	17.60					
7.80	1	2	0.10	2	360	17.80					
8.00	1	2	0.10	2	362	18.00					
8.20	1	2	0.10	2	364	18.20					
8.40	1	2	0.10	2	366	18.40					
8.60	1	2	0.10	2	368	18.60					
8.80	1	2	0.10	2	370	18.80					
9.00	1	2	0.10	2	372	19.00					
9.20	1	2	0.10	2	374	19.20					
9.40	1	2	0.10	2	376	19.40					
9.60	1	2	0.10	2	378	19.60					
9.80	1	2	0.10	2	380	19.80					
10.00	1	2	0.10	2	382	20.00					

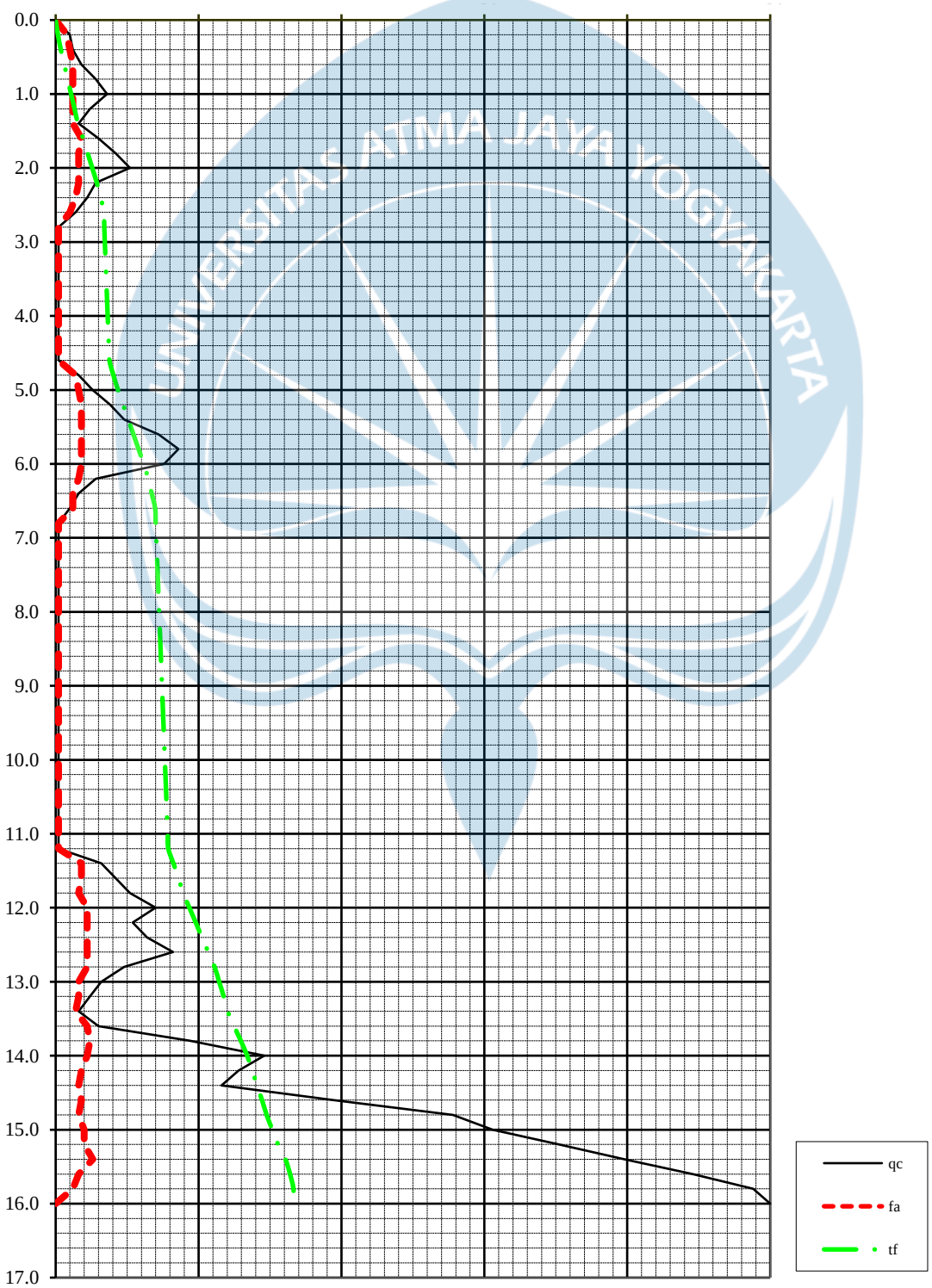
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 4
Date :

Elevation : +0,20 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 2052
Fax: +62-274-487748

Boring Number:

BH-2

BOR LOG

CLIENT:

PROJECT TITLE :

PROJECT CONTRACT NUMBER:

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR: SOIL MECH. LAB. UAJY

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY: .

CHECKED BY:

GROUND ELEVATION : + 0,20 m from road level

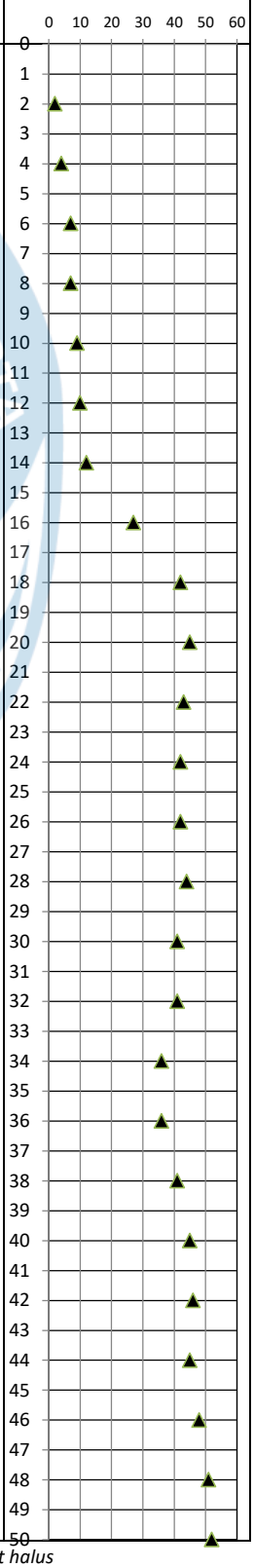
HOLE SIZE : 7.295cm P

GROUND WATER LEVEL : -7,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	Nv	Water Level Elevation (m)
1									
2					1	1	1	2	
3									
4					1	1	3	4	
5									
6		Lanau pasir berlempung (coklat)	12		2	2	5	7	
7									
8					2	3	4	7	
9									
10				I	2	4	5	9	
11									
12					2	4	6	10	
13									
14		Lanau lempung (coklat, abu-abu)	9		3	6	6	12	
15									
16					3	9	18	27	
17									
18					12	15	27	42	
19									
20				II	11	12	33	45	
21									
22					14	16	27	43	
23									
24					14	19	23	42	
25									
26		Lanau lempung (abu-abu)	11		14	18	24	42	
27									
28					16	19	25	44	
29									
30				III	16	20	21	41	
31									
32					14	16	25	41	
33									
34					9	12	24	36	
35									
36					9	11	25	36	
37									
38					9	14	27	41	
39									
40					14	21	24	45	
41		Pasir berlempung (abu-abu)	18						
42					14	16	30	46	
43									
44					16	19	26	45	
45									
46					16	21	27	48	
47									
48					16	21	30	51	
49									
50					18	22	30	52	



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

Laboratorium Mekanika Tanah
UNIVERSITAS ATMA JAYA YOGYAKARTA
Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 2	10.00	39.34	2.46	1.56	1.12	0.09	13.11
	20.00	58.60	2.39	1.48	0.93	0.09	20.31
	30.00	31.05	2.50	1.58	1.21	0.1	20.24

Laboratorium Mekanika Tanah
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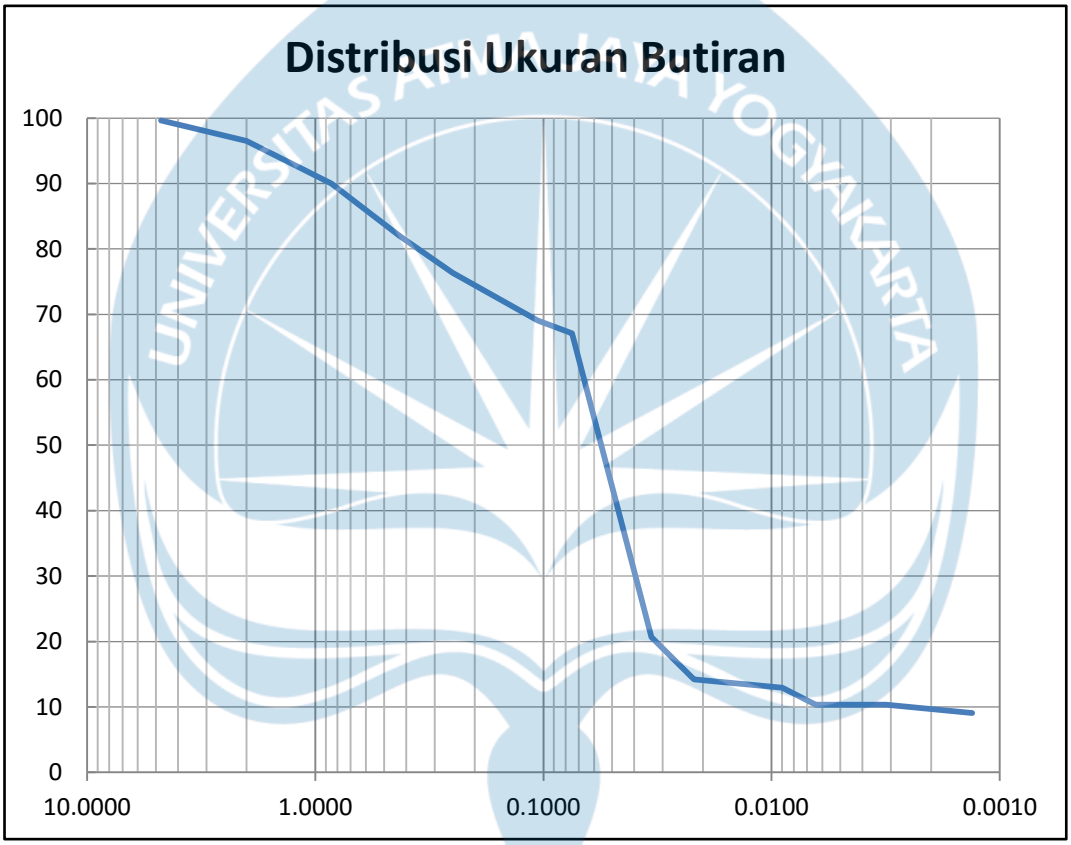
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman : 10.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.4	99.6	99.62
10	2.000	3.1	96.5	96.50
20	0.850	6.5	90.01	90.01
40	0.425	8.1	81.94	81.94
60	0.250	5.6	76.33	76.33
140	0.106	7.3	69.08	69.08
200	0.075	2.0	67.09	67.09
Pan		47.39		

Laboratorium Mekanika Tanah
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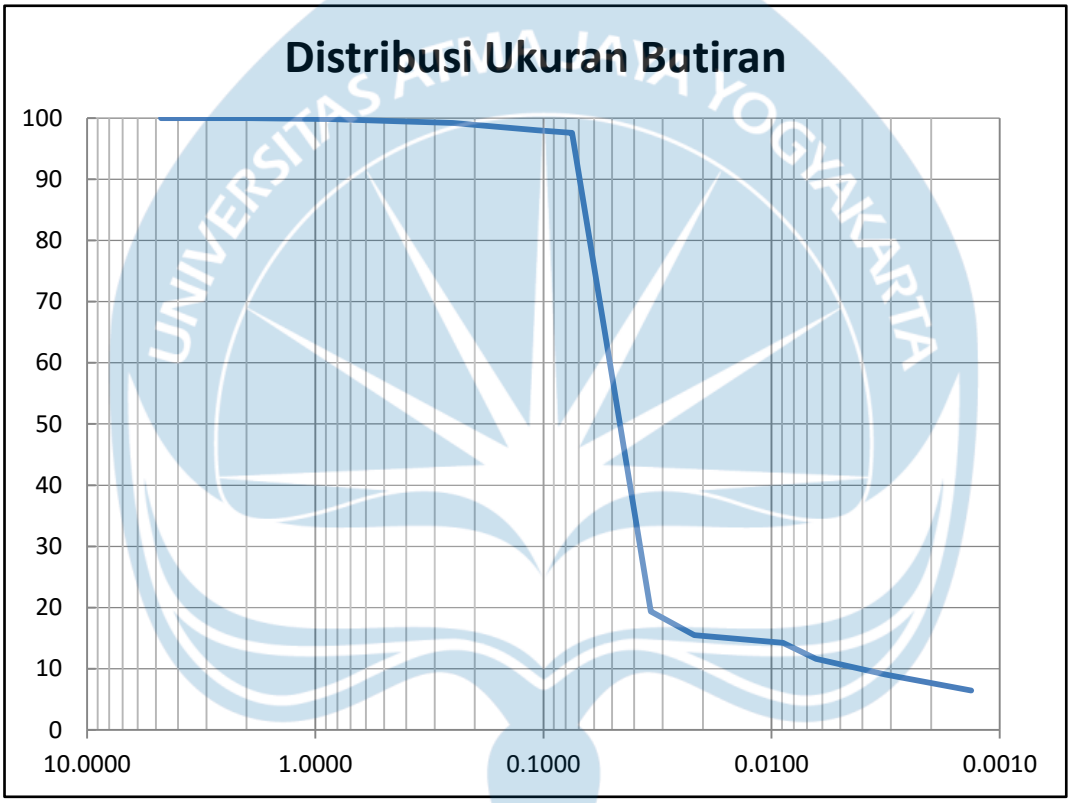
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman : 20.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.0	100.0	100.00
10	2.000	0.0	100.0	100.00
20	0.850	0.2	99.82	99.82
40	0.425	0.4	99.44	99.44
60	0.250	0.2	99.21	99.21
140	0.106	1.2	97.98	97.98
200	0.075	0.4	97.6	97.60
Pan		77.90		

Laboratorium Mekanika Tanah
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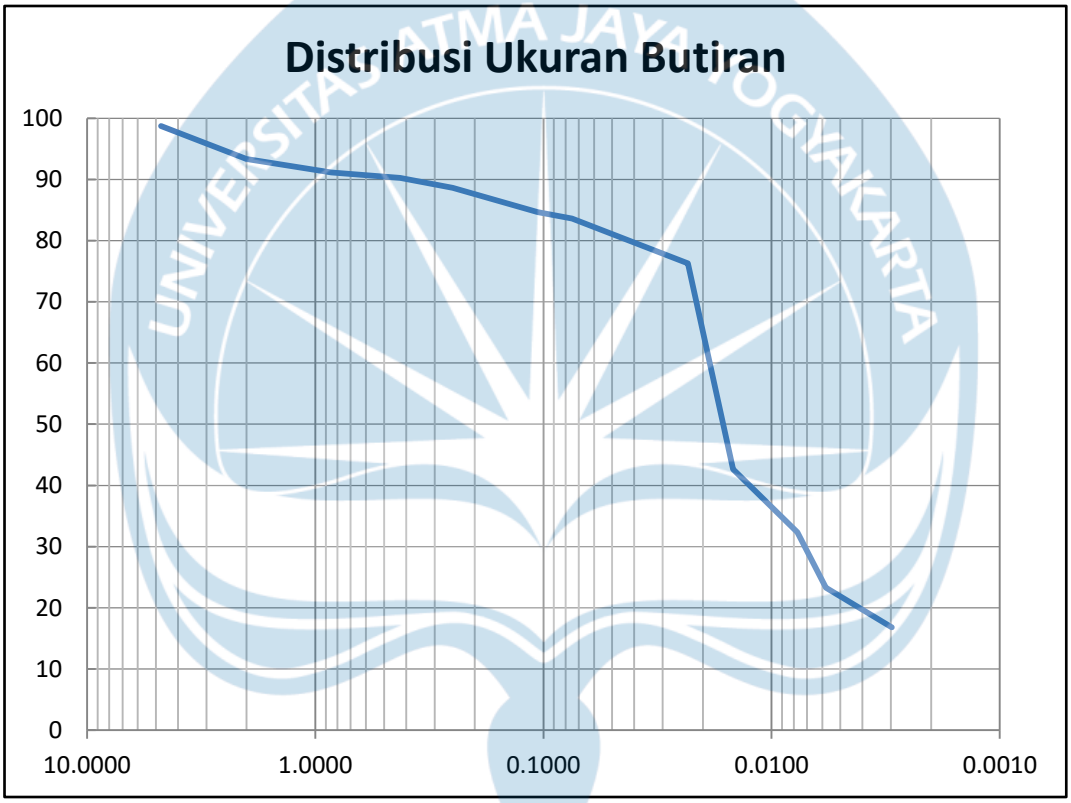
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman : 30.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	1.3	98.7	98.72
10	2.000	5.4	93.3	93.33
20	0.850	2.2	91.15	91.15
40	0.425	0.9	90.26	90.26
60	0.250	1.6	88.62	88.62
140	0.106	4.0	84.66	84.66
200	0.075	1.1	83.61	83.61
Pan		63.91		

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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 1
ELEVATION : ±0,00 m dari muka jalan
G.WATER DEPTH : -7,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	3	5	0,20	4	4	10,20					
0,40	8	10	0,20	4	8	10,40					
0,60	10	13	0,30	6	14	10,60					
0,80	19	22	0,30	6	20	10,80					
1,00	12	15	0,30	6	26	11,00					
1,20	11	14	0,30	6	32	11,20					
1,40	14	17	0,30	6	38	11,40					
1,60	9	11	0,20	4	42	11,60					
1,80	6	8	0,20	4	46	11,80					
2,00	13	16	0,30	6	52	12,00					
2,20	17	20	0,30	6	58	12,20					
2,40	9	11	0,20	4	62	12,40					
2,60	23	26	0,30	6	68	12,60					
2,80	18	21	0,30	6	74	12,80					
3,00	16	19	0,30	6	80	13,00					
3,20	12	15	0,30	6	86	13,20					
3,40	10	13	0,30	6	92	13,40					
3,60	7	9	0,20	4	96	13,60					
3,80	14	17	0,30	6	102	13,80					
4,00	13	16	0,30	6	108	14,00					
4,20	8	10	0,20	4	112	14,20					
4,40	11	14	0,30	6	118	14,40					
4,60	9	11	0,20	4	122	14,60					
4,80	6	8	0,20	4	126	14,80					
5,00	12	15	0,30	6	132	15,00					
5,20	19	22	0,30	6	138	15,20					
5,40	17	20	0,30	6	144	15,40					
5,60	14	17	0,30	6	150	15,60					
5,80	12	15	0,30	6	156	15,80					
6,00	26	29	0,30	6	162	16,00					
6,20	13	16	0,30	6	168	16,20					
6,40	8	10	0,20	4	172	16,40					
6,60	5	7	0,20	4	176	16,60					
6,80	9	11	0,20	4	180	16,80					
7,00	12	15	0,30	6	186	17,00					
7,20	18	21	0,30	6	192	17,20					
7,40	24	27	0,30	6	198	17,40					
7,60	32	35	0,30	6	204	17,60					
7,80	78	81	0,30	6	210	17,80					
8,00	169	172	0,30	6	216	18,00					
8,20	246	250	0,40	8	224	18,20					
8,40	250	250	0,00	0	224	18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

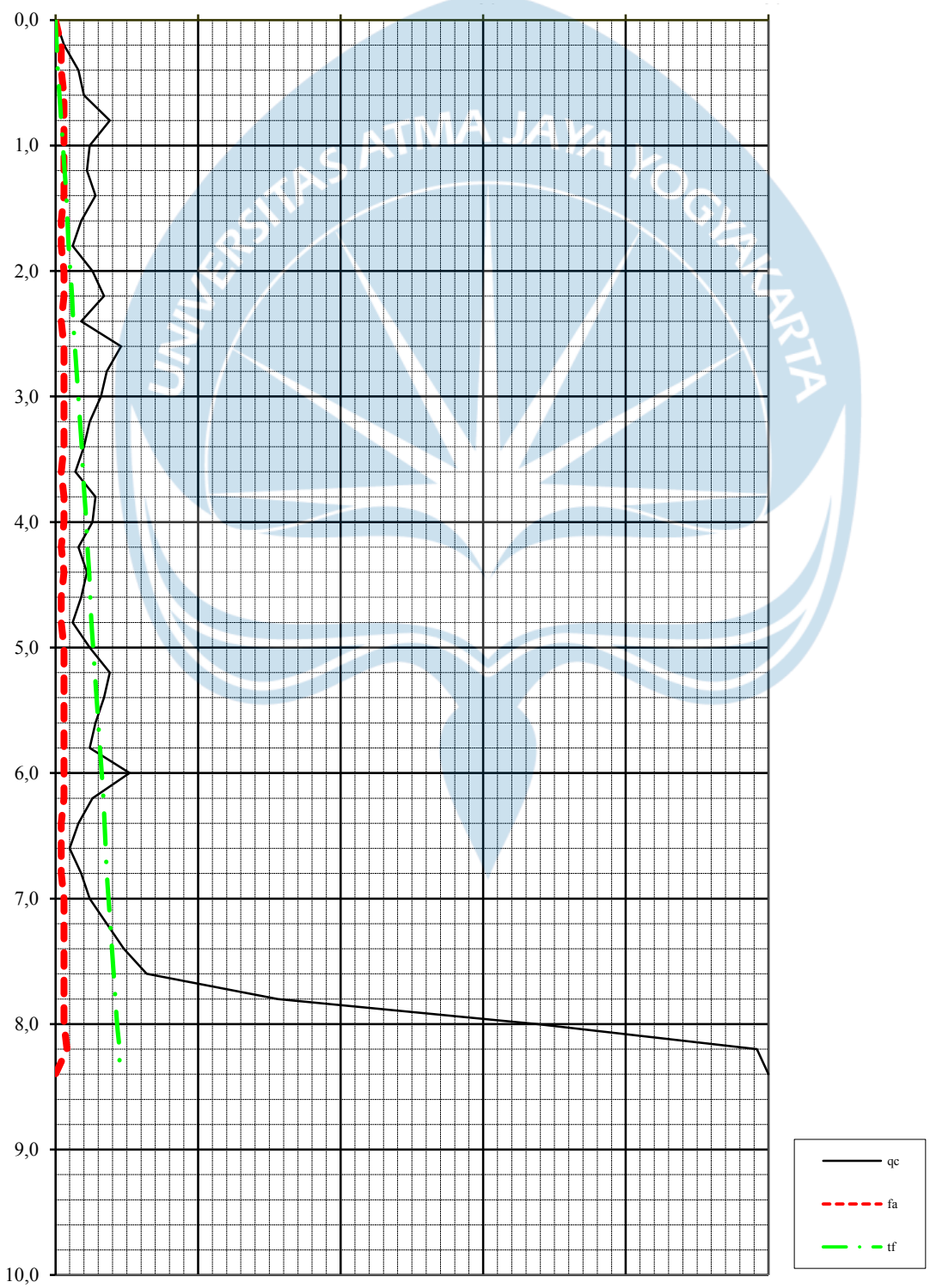
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 2
ELEVATION : ±0,00 m dari muka jalan
G.WATER DEPTH : -7,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	7	9	0,20	4	4	10,20					
0,40	15	18	0,30	6	10	10,40					
0,60	8	10	0,20	4	14	10,60					
0,80	12	15	0,30	6	20	10,80					
1,00	13	16	0,30	6	26	11,00					
1,20	16	19	0,30	6	32	11,20					
1,40	21	24	0,30	6	38	11,40					
1,60	18	21	0,30	6	44	11,60					
1,80	26	29	0,30	6	50	11,80					
2,00	17	20	0,30	6	56	12,00					
2,20	15	18	0,30	6	62	12,20					
2,40	8	10	0,20	4	66	12,40					
2,60	13	16	0,30	6	72	12,60					
2,80	18	21	0,30	6	78	12,80					
3,00	10	13	0,30	6	84	13,00					
3,20	11	14	0,30	6	90	13,20					
3,40	13	16	0,30	6	96	13,40					
3,60	15	18	0,30	6	102	13,60					
3,80	11	14	0,30	6	108	13,80					
4,00	9	11	0,20	4	112	14,00					
4,20	8	10	0,20	4	116	14,20					
4,40	16	19	0,30	6	122	14,40					
4,60	19	22	0,30	6	128	14,60					
4,80	12	15	0,30	6	134	14,80					
5,00	11	14	0,30	6	140	15,00					
5,20	18	21	0,30	6	146	15,20					
5,40	24	27	0,30	6	152	15,40					
5,60	22	25	0,30	6	158	15,60					
5,80	16	19	0,30	6	164	15,80					
6,00	9	11	0,20	4	168	16,00					
6,20	4	6	0,20	4	172	16,20					
6,40	12	15	0,30	6	178	16,40					
6,60	18	21	0,30	6	184	16,60					
6,80	23	26	0,30	6	190	16,80					
7,00	29	32	0,30	6	196	17,00					
7,20	24	27	0,30	6	202	17,20					
7,40	52	55	0,30	6	208	17,40					
7,60	103	105	0,20	4	212	17,60					
7,80	198	201	0,30	6	218	17,80					
8,00	246	250	0,40	8	226	18,00					
8,20	250	250	0,00	0	226	18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

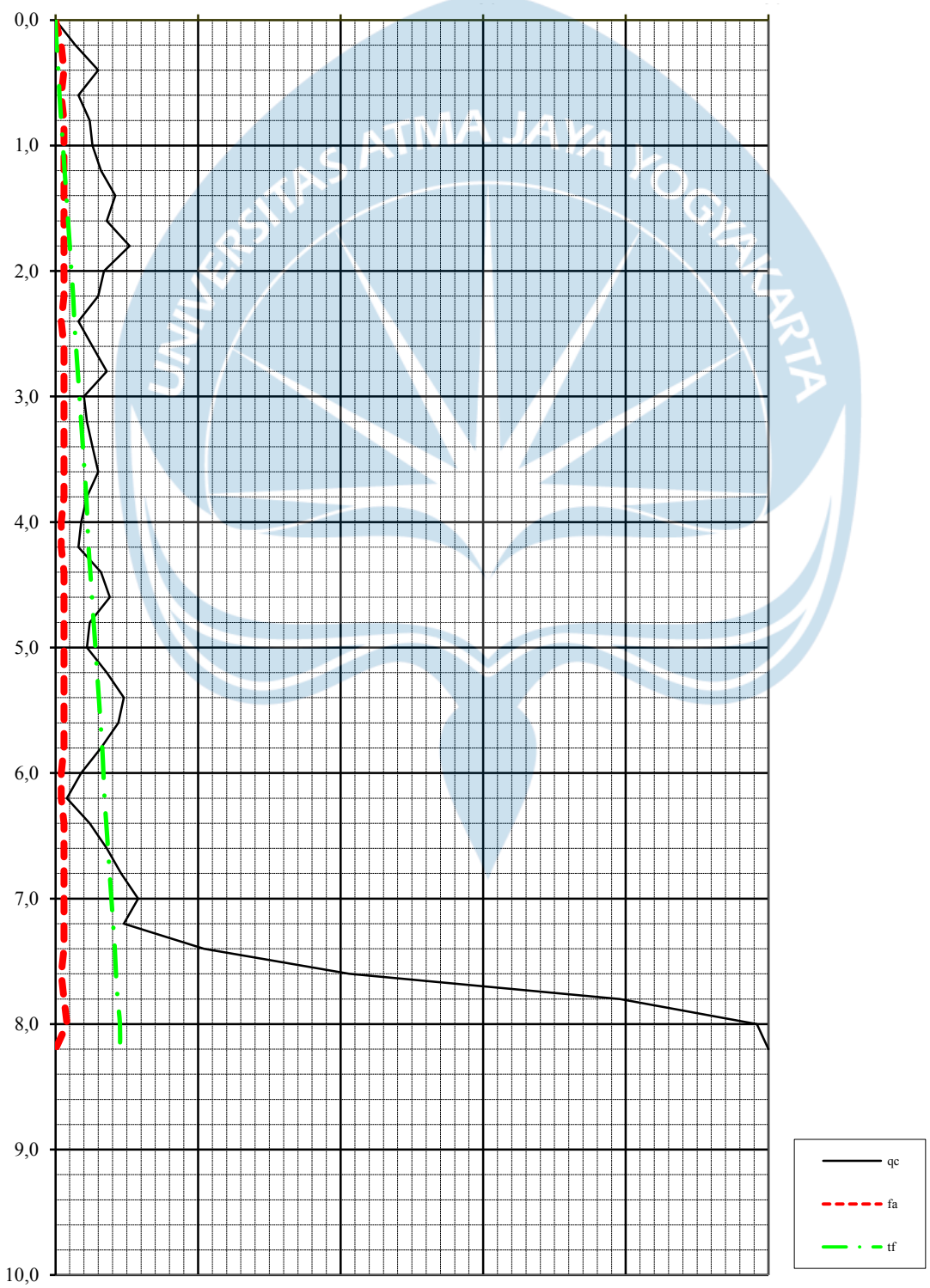
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 3
ELEVATION : ±0,00 m dari muka jalan
G.WATER DEPTH : -7,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	6	8	0,20	4	4	10,20					
0,40	14	17	0,30	6	10	10,40					
0,60	11	14	0,30	6	16	10,60					
0,80	16	19	0,30	6	22	10,80					
1,00	8	10	0,20	4	26	11,00					
1,20	12	15	0,30	6	32	11,20					
1,40	14	17	0,30	6	38	11,40					
1,60	15	18	0,30	6	44	11,60					
1,80	18	21	0,30	6	50	11,80					
2,00	29	32	0,30	6	56	12,00					
2,20	20	23	0,30	6	62	12,20					
2,40	16	19	0,30	6	68	12,40					
2,60	21	24	0,30	6	74	12,60					
2,80	17	20	0,30	6	80	12,80					
3,00	13	16	0,30	6	86	13,00					
3,20	11	14	0,30	6	92	13,20					
3,40	16	19	0,30	6	98	13,40					
3,60	18	21	0,30	6	104	13,60					
3,80	22	25	0,30	6	110	13,80					
4,00	15	18	0,30	6	116	14,00					
4,20	13	16	0,30	6	122	14,20					
4,40	22	25	0,30	6	128	14,40					
4,60	9	11	0,20	4	132	14,60					
4,80	5	7	0,20	4	136	14,80					
5,00	6	8	0,20	4	140	15,00					
5,20	12	15	0,30	6	146	15,20					
5,40	14	17	0,30	6	152	15,40					
5,60	10	13	0,30	6	158	15,60					
5,80	7	9	0,20	4	162	15,80					
6,00	8	10	0,20	4	166	16,00					
6,20	11	14	0,30	6	172	16,20					
6,40	5	7	0,20	4	176	16,40					
6,60	1	2	0,10	2	178	16,60					
6,80	1	2	0,10	2	180	16,80					
7,00	13	16	0,30	6	186	17,00					
7,20	17	20	0,30	6	192	17,20					
7,40	18	21	0,30	6	198	17,40					
7,60	24	27	0,30	6	204	17,60					
7,80	33	36	0,30	6	210	17,80					
8,00	41	44	0,30	6	216	18,00					
8,20	73	76	0,30	6	222	18,20					
8,40	119	122	0,30	6	228	18,40					
8,60	178	181	0,30	6	234	18,60					
8,80	246	250	0,40	8	242	18,80					
9,00	250	250	0,00	0	242	19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

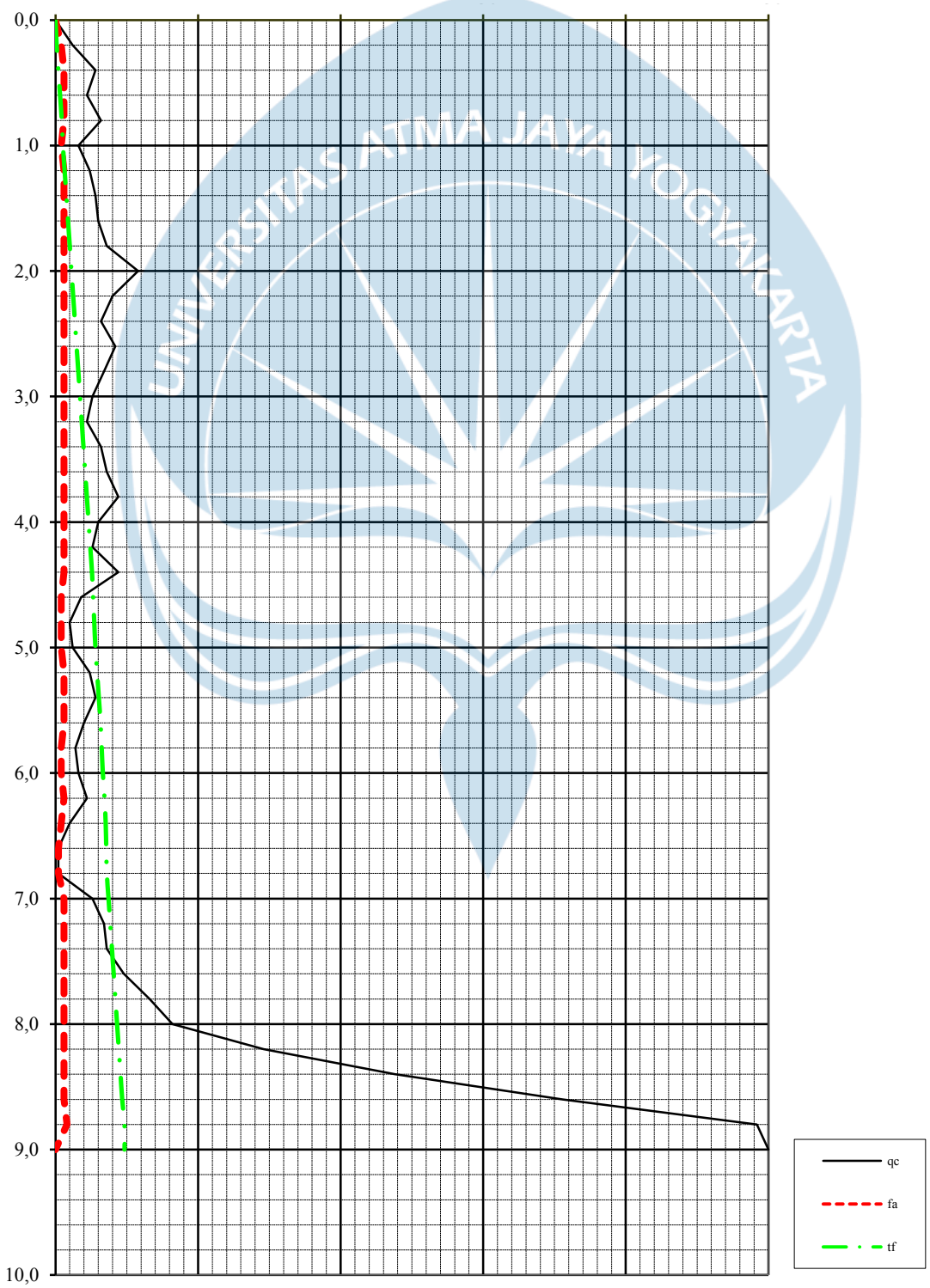
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 3
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 4
ELEVATION : ±0,00 m dari muka jalan
G.WATER DEPTH : -7,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	9	11	0,20	4	4	10,20					
0,40	28	31	0,30	6	10	10,40					
0,60	12	15	0,30	6	16	10,60					
0,80	14	17	0,30	6	22	10,80					
1,00	17	20	0,30	6	28	11,00					
1,20	11	14	0,30	6	34	11,20					
1,40	8	10	0,20	4	38	11,40					
1,60	5	7	0,20	4	42	11,60					
1,80	12	15	0,30	6	48	11,80					
2,00	19	22	0,30	6	54	12,00					
2,20	28	31	0,30	6	60	12,20					
2,40	22	25	0,30	6	66	12,40					
2,60	13	16	0,30	6	72	12,60					
2,80	15	18	0,30	6	78	12,80					
3,00	11	14	0,30	6	84	13,00					
3,20	13	16	0,30	6	90	13,20					
3,40	24	27	0,30	6	96	13,40					
3,60	26	29	0,30	6	102	13,60					
3,80	20	23	0,30	6	108	13,80					
4,00	9	11	0,20	4	112	14,00					
4,20	8	10	0,20	4	116	14,20					
4,40	12	15	0,30	6	122	14,40					
4,60	23	26	0,30	6	128	14,60					
4,80	24	27	0,30	6	134	14,80					
5,00	19	22	0,30	6	140	15,00					
5,20	12	15	0,30	6	146	15,20					
5,40	16	19	0,30	6	152	15,40					
5,60	8	10	0,20	4	156	15,60					
5,80	5	7	0,20	4	160	15,80					
6,00	10	13	0,30	6	166	16,00					
6,20	14	17	0,30	6	172	16,20					
6,40	28	31	0,30	6	178	16,40					
6,60	21	24	0,30	6	184	16,60					
6,80	19	22	0,30	6	190	16,80					
7,00	32	35	0,30	6	196	17,00					
7,20	49	52	0,30	6	202	17,20					
7,40	160	163	0,30	6	208	17,40					
7,60	201	204	0,30	6	214	17,60					
7,80	246	250	0,40	8	222	17,80					
8,00	250	250	0,00	0	222	18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

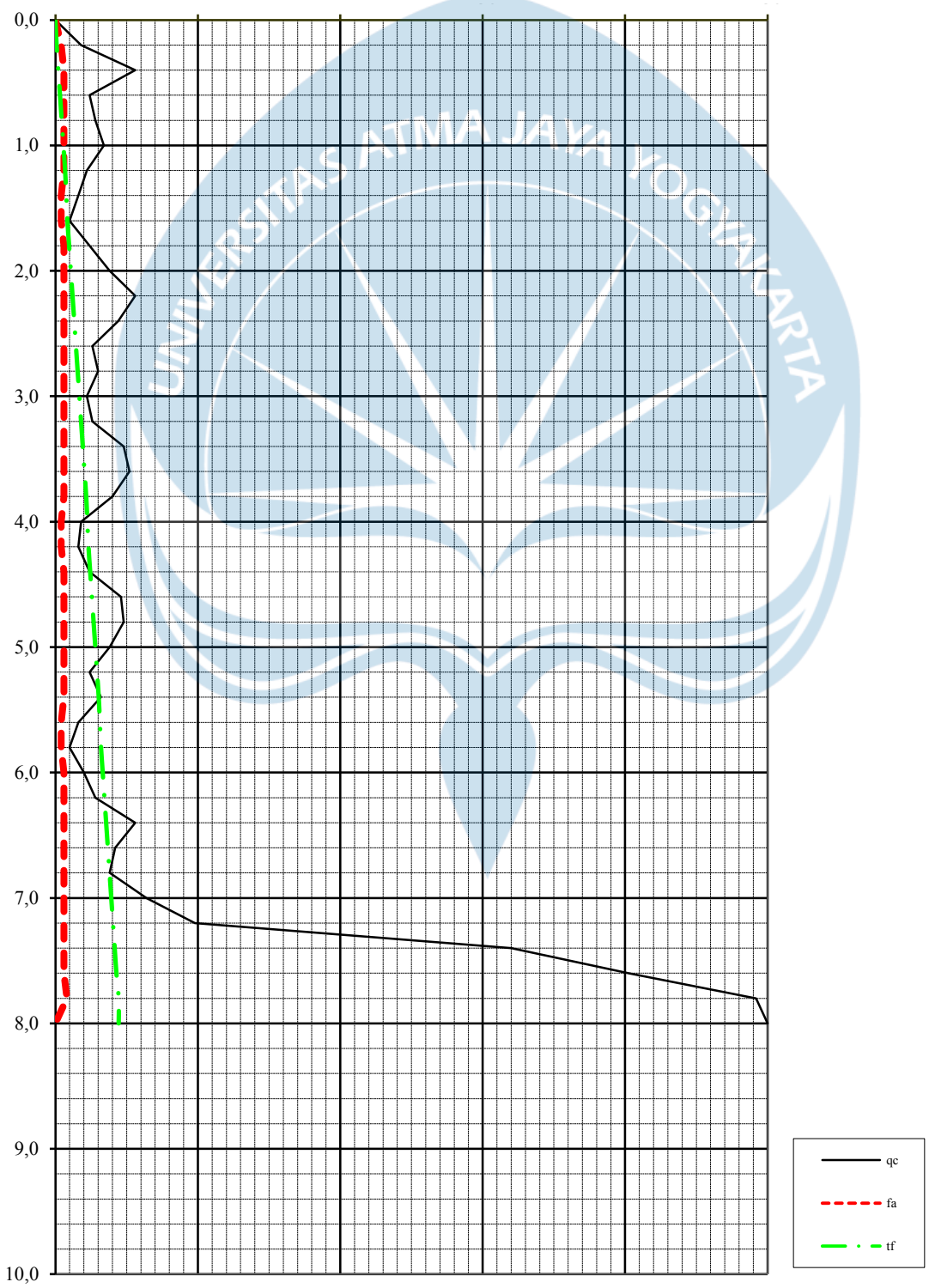
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 4
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -7,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-3

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : ± 0,00 m from road level

HOLE SIZE : 7.295cm

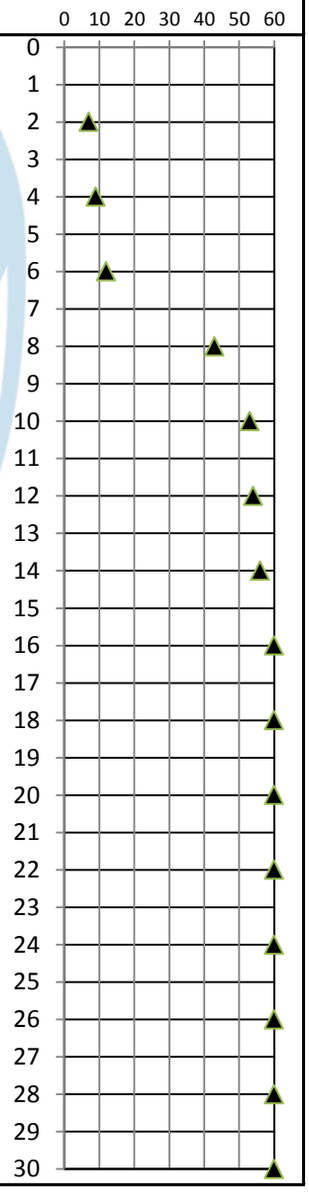
GROUND WATER LEVEL : - 7,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	NV	Water Level Elevation (m)
1									
2					2	2	5	7	
3		Lanau sedikit lempung (coklat, merah)	7						
4					2	3	6	9	
5				I					
6					3	5	7	12	
7									-7.00
8					13	15	28	43	
9									
10					13	21	32	53	
11		Pasir halus padat (abu-abu)	8						
12					15	22	32	54	
13									
14					15	23	33	56	
15									
16					17	23	37	60	
17									
18					17	24	36	60	
19									
20					19	25	35	60	
21									
22					19	24	36	60	
23		Pasir kerikil padat (abu-abu)	15						
24					19	26	34	60	
25									
26					20	23	37	60	
27									
28					21	23	37	60	
29									
30					21	25	35	60	

SPT Value



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

Laboratorium Mekanika Tanah
UNIVERSITAS ATMA JAYA YOGYAKARTA
Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 3	5	54,90	2,39	1,62	1,05	0,01	11,13

Laboratorium Mekanika Tanah
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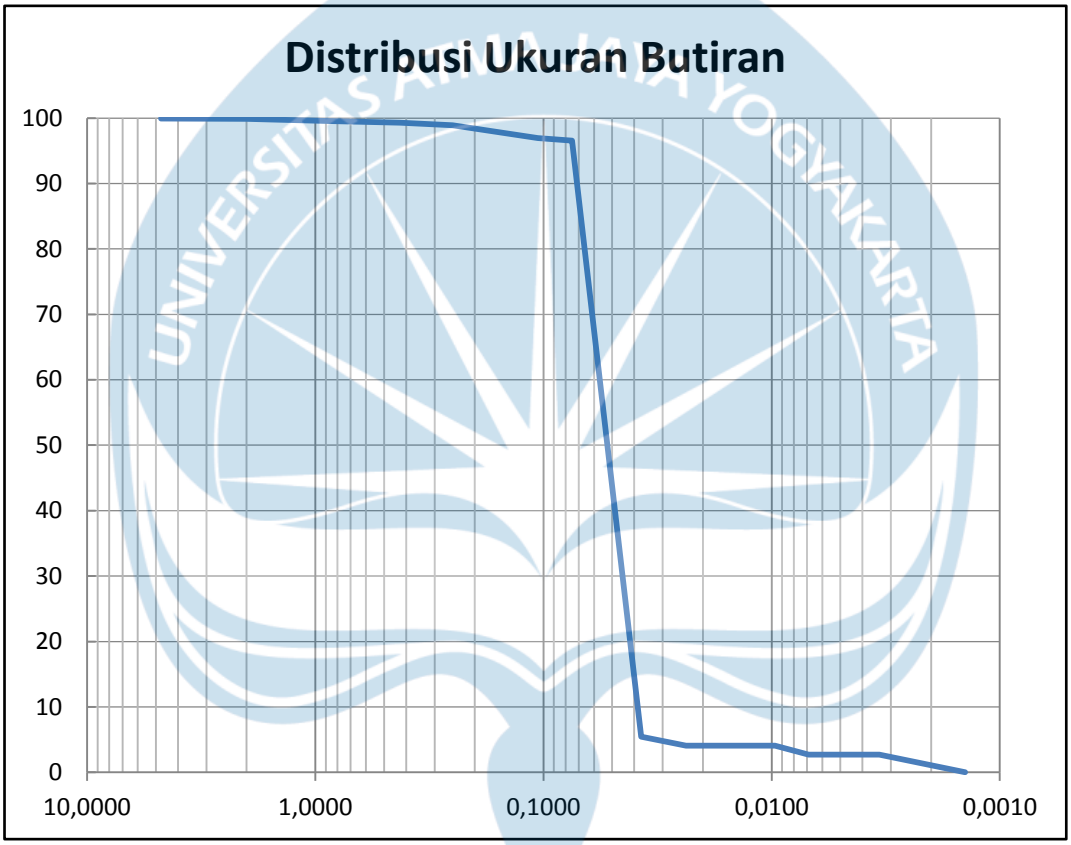
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 5



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,05	99,95	99,95
10	2,000	0,06	99,89	99,89
20	0,850	0,33	99,56	99,56
40	0,425	0,27	99,29	99,29
60	0,250	0,37	98,92	98,92
140	0,106	1,99	96,93	96,93
200	0,075	0,37	96,56	96,56
Pan		96,56		

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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 1	**WEATHER**	: Cerah
ELEVATION	: ±0,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -4,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	7	10	0.30	6	6	10.20	1	2	0.10	2	836
0.40	16	21	0.50	10	16	10.40	1	2	0.10	2	838
0.60	61	69	0.80	16	32	10.60	1	2	0.10	2	840
0.80	115	123	0.80	16	48	10.80	1	2	0.10	2	842
1.00	69	77	0.80	16	64	11.00	1	2	0.10	2	844
1.20	35	46	1.10	22	86	11.20	1	2	0.10	2	846
1.40	19	28	0.90	18	104	11.40	1	2	0.10	2	848
1.60	8	15	0.70	14	118	11.60	1	2	0.10	2	850
1.80	7	14	0.70	14	132	11.80	1	2	0.10	2	852
2.00	11	19	0.80	16	148	12.00	1	2	0.10	2	854
2.20	13	21	0.80	16	164	12.20	1	2	0.10	2	856
2.40	9	18	0.90	18	182	12.40	1	2	0.10	2	858
2.60	6	15	0.90	18	200	12.60	9	17	0.80	16	874
2.80	5	13	0.80	16	216	12.80	18	29	1.10	22	896
3.00	8	17	0.90	18	234	13.00	23	35	1.20	24	920
3.20	11	19	0.80	16	250	13.20	14	23	0.90	18	938
3.40	10	21	1.10	22	272	13.40	8	19	1.10	22	960
3.60	7	16	0.90	18	290	13.60	6	15	0.90	18	978
3.80	5	14	0.90	18	308	13.80	1	2	0.10	2	980
4.00	8	16	0.80	16	324	14.00	1	2	0.10	2	982
4.20	12	20	0.80	16	340	14.20	1	2	0.10	2	984
4.40	14	23	0.90	18	358	14.40	1	2	0.10	2	986
4.60	13	22	0.90	18	376	14.60	1	2	0.10	2	988
4.80	15	24	0.90	18	394	14.80	1	2	0.10	2	990
5.00	17	28	1.10	22	416	15.00	1	2	0.10	2	992
5.20	13	24	1.10	22	438	15.20	1	2	0.10	2	994
5.40	10	19	0.90	18	456	15.40	1	2	0.10	2	996
5.60	8	18	1.00	20	476	15.60	1	2	0.10	2	998
5.80	5	16	1.10	22	498	15.80	1	2	0.10	2	1000
6.00	7	19	1.20	24	522	16.00	1	2	0.10	2	1002
6.20	8	17	0.90	18	540	16.20	1	2	0.10	2	1004
6.40	11	21	1.00	20	560	16.40	7	16	0.90	18	1022
6.60	9	18	0.90	18	578	16.60	15	22	0.70	14	1036
6.80	21	32	1.10	22	600	16.80	24	35	1.10	22	1058
7.00	19	27	0.80	16	616	17.00	21	32	1.10	22	1080
7.20	14	25	1.10	22	638	17.20	14	25	1.10	22	1102
7.40	12	21	0.90	18	656	17.40	9	18	0.90	18	1120
7.60	15	24	0.90	18	674	17.60	5	13	0.80	16	1136
7.80	9	19	1.00	20	694	17.80	1	2	0.10	2	1138
8.00	7	18	1.10	22	716	18.00	1	2	0.10	2	1140
8.20	8	19	1.10	22	738	18.20	1	2	0.10	2	1142
8.40	11	22	1.10	22	760	18.40	1	2	0.10	2	1144
8.60	13	24	1.10	22	782	18.60	1	2	0.10	2	1146
8.80	12	21	0.90	18	800	18.80	1	2	0.10	2	1148
9.00	6	18	1.20	24	824	19.00	1	2	0.10	2	1150
9.20	1	2	0.10	2	826	19.20	1	2	0.10	2	1152
9.40	1	2	0.10	2	828	19.40	1	2	0.10	2	1154
9.60	1	2	0.10	2	830	19.60	1	2	0.10	2	1156
9.80	1	2	0.10	2	832	19.80	1	2	0.10	2	1158
10.00	1	2	0.10	2	834	20.00	1	2	0.10	2	1160

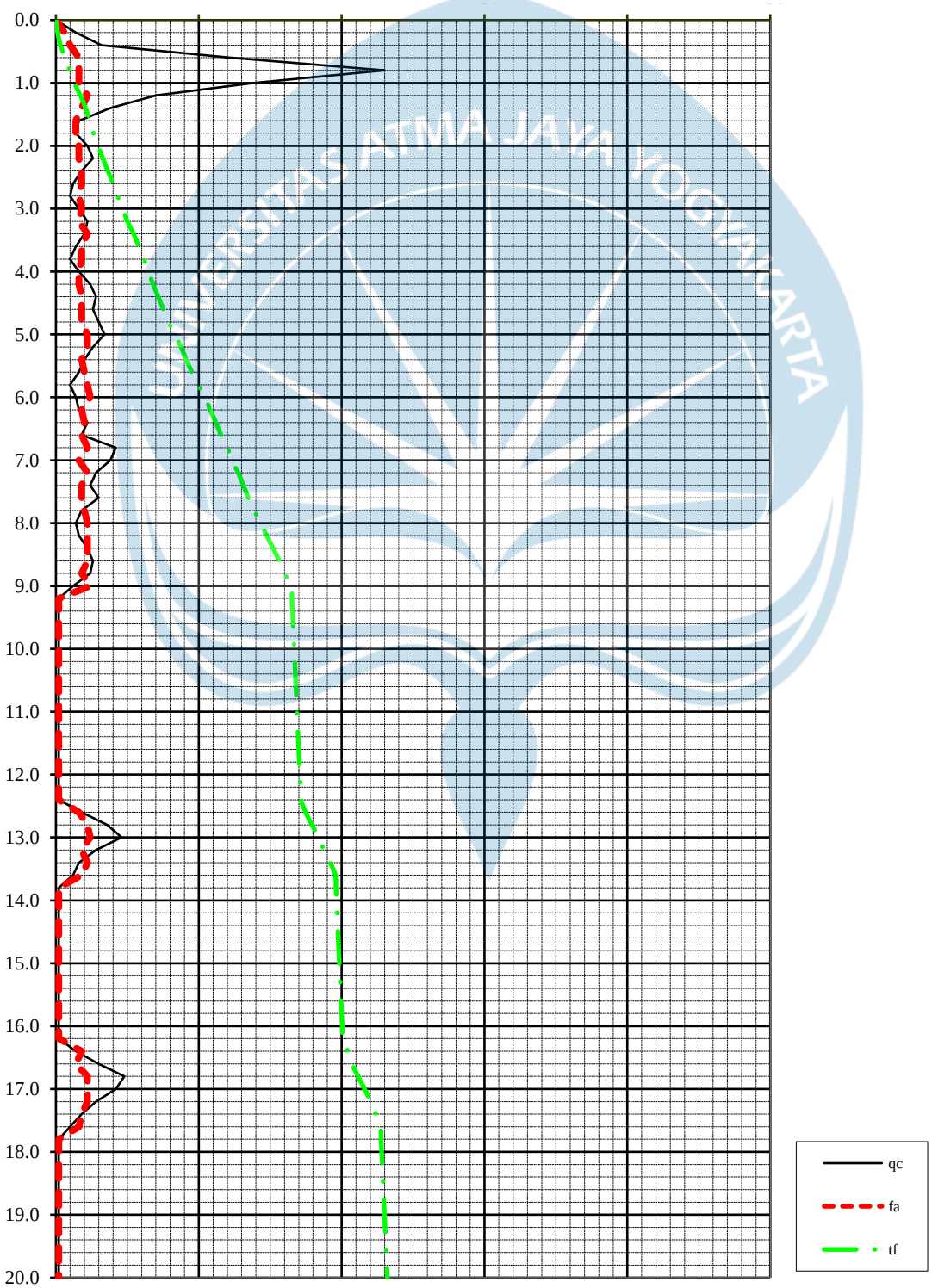
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -4,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 2	**WEATHER**	: Cerah
ELEVATION	: ±0,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -4,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	5	9	0.40	8	8	10.20	18	29	1.10	22	694
0.40	12	18	0.60	12	20	10.40	11	23	1.20	24	718
0.60	16	25	0.90	18	38	10.60	8	19	1.10	22	740
0.80	14	19	0.50	10	48	10.80	6	14	0.80	16	756
1.00	17	28	1.10	22	70	11.00	5	13	0.80	16	772
1.20	22	34	1.20	24	94	11.20	1	2	0.10	2	774
1.40	18	29	1.10	22	116	11.40	1	2	0.10	2	776
1.60	14	23	0.90	18	134	11.60	1	2	0.10	2	778
1.80	39	48	0.90	18	152	11.80	1	2	0.10	2	780
2.00	28	37	0.90	18	170	12.00	1	2	0.10	2	782
2.20	11	19	0.80	16	186	12.20	1	2	0.10	2	784
2.40	15	24	0.90	18	204	12.40	1	2	0.10	2	786
2.60	9	18	0.90	18	222	12.60	1	2	0.10	2	788
2.80	1	2	0.10	2	224	12.80	1	2	0.10	2	790
3.00	1	2	0.10	2	226	13.00	1	2	0.10	2	792
3.20	1	2	0.10	2	228	13.20	26	35	0.90	18	810
3.40	1	2	0.10	2	230	13.40	19	29	1.00	20	830
3.60	1	2	0.10	2	232	13.60	8	16	0.80	16	846
3.80	1	2	0.10	2	234	13.80	1	2	0.10	2	848
4.00	1	2	0.10	2	236	14.00	1	2	0.10	2	850
4.20	1	2	0.10	2	238	14.20	1	2	0.10	2	852
4.40	1	2	0.10	2	240	14.40	1	2	0.10	2	854
4.60	12	21	0.90	18	258	14.60	1	2	0.10	2	856
4.80	8	19	1.10	22	280	14.80	1	2	0.10	2	858
5.00	5	12	0.70	14	294	15.00	1	2	0.10	2	860
5.20	11	21	1.00	20	314	15.20	1	2	0.10	2	862
5.40	13	24	1.10	22	336	15.40	1	2	0.10	2	864
5.60	10	19	0.90	18	354	15.60	1	2	0.10	2	866
5.80	7	16	0.90	18	372	15.80	1	2	0.10	2	868
6.00	6	15	0.90	18	390	16.00	1	2	0.10	2	870
6.20	1	2	0.10	2	392	16.20	1	2	0.10	2	872
6.40	1	2	0.10	2	394	16.40	1	2	0.10	2	874
6.60	7	13	0.60	12	406	16.60	1	2	0.10	2	876
6.80	16	27	1.10	22	428	16.80	1	2	0.10	2	878
7.00	13	25	1.20	24	452	17.00	1	2	0.10	2	880
7.20	15	26	1.10	22	474	17.20	1	2	0.10	2	882
7.40	9	18	0.90	18	492	17.40	1	2	0.10	2	884
7.60	6	15	0.90	18	510	17.60	1	2	0.10	2	886
7.80	14	26	1.20	24	534	17.80	1	2	0.10	2	888
8.00	18	31	1.30	26	560	18.00	13	24	1.10	22	910
8.20	12	23	1.10	22	582	18.20	24	36	1.20	24	934
8.40	7	16	0.90	18	600	18.40	33	45	1.20	24	958
8.60	5	13	0.80	16	616	18.60	19	30	1.10	22	980
8.80	1	2	0.10	2	618	18.80	8	15	0.70	14	994
9.00	1	2	0.10	2	620	19.00	6	13	0.70	14	1008
9.20	1	2	0.10	2	622	19.20	1	2	0.10	2	1010
9.40	1	2	0.10	2	624	19.40	1	2	0.10	2	1012
9.60	1	2	0.10	2	626	19.60	1	2	0.10	2	1014
9.80	13	24	1.10	22	648	19.80	1	2	0.10	2	1016
10.00	15	27	1.20	24	672	20.00	1	2	0.10	2	1018

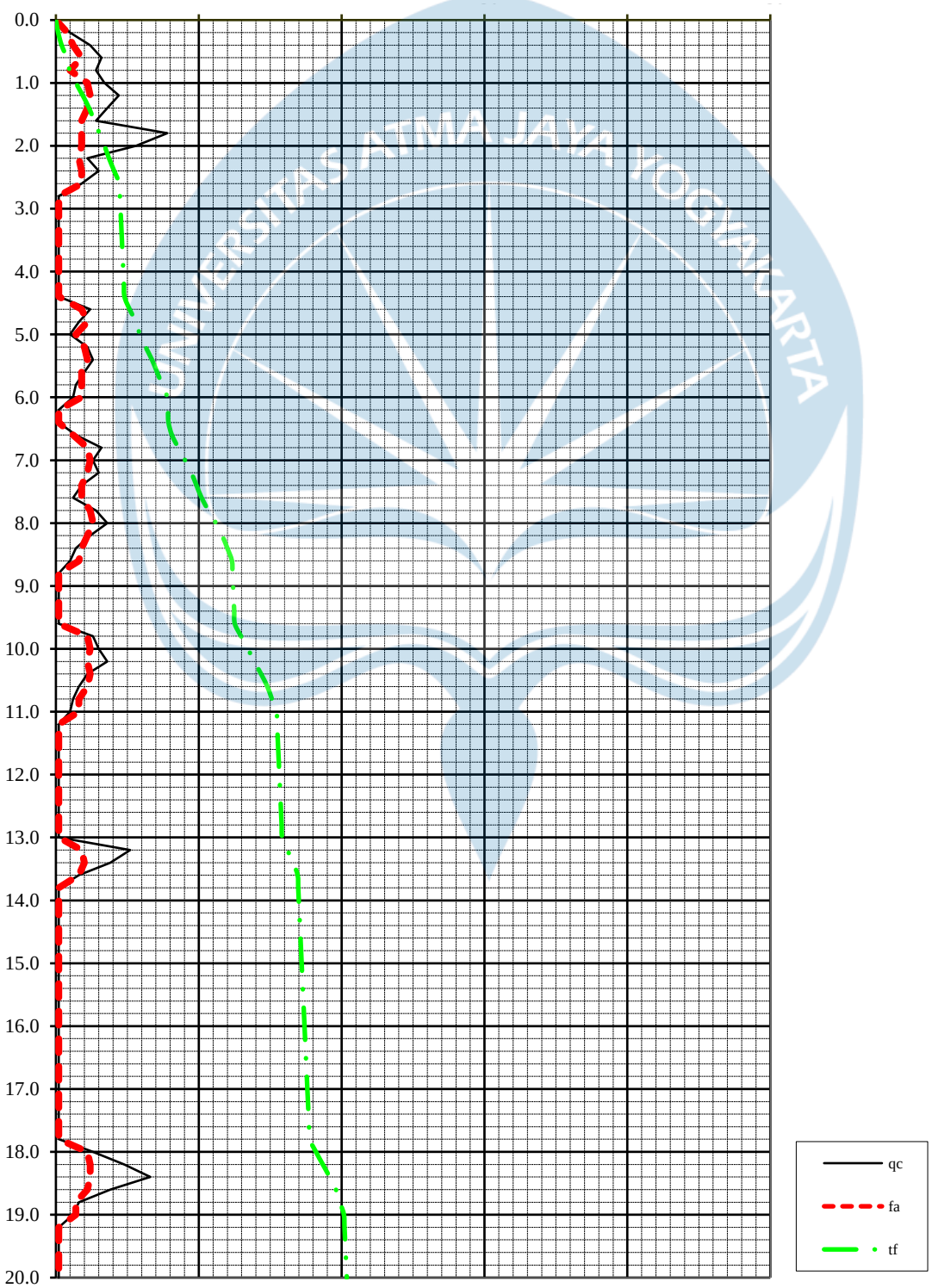
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -4,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 3	**WEATHER**	: Cerah
ELEVATION	: ±0,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -4,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	5	11	0.60	12	12	10.20	1	2	0.10	2	532
0.40	9	14	0.50	10	22	10.40	1	2	0.10	2	534
0.60	16	27	1.10	22	44	10.60	1	2	0.10	2	536
0.80	12	21	0.90	18	62	10.80	1	2	0.10	2	538
1.00	20	31	1.10	22	84	11.00	1	2	0.10	2	540
1.20	18	29	1.10	22	106	11.20	1	2	0.10	2	542
1.40	7	15	0.80	16	122	11.40	6	14	0.80	16	558
1.60	5	12	0.70	14	136	11.60	14	25	1.10	22	580
1.80	29	38	0.90	18	154	11.80	29	40	1.10	22	602
2.00	37	47	1.00	20	174	12.00	32	41	0.90	18	620
2.20	24	33	0.90	18	192	12.20	21	32	1.10	22	642
2.40	9	18	0.90	18	210	12.40	17	29	1.20	24	666
2.60	6	14	0.80	16	226	12.60	12	24	1.20	24	690
2.80	5	12	0.70	14	240	12.80	8	16	0.80	16	706
3.00	1	2	0.10	2	242	13.00	5	12	0.70	14	720
3.20	1	2	0.10	2	244	13.20	1	2	0.10	2	722
3.40	1	2	0.10	2	246	13.40	1	2	0.10	2	724
3.60	1	2	0.10	2	248	13.60	1	2	0.10	2	726
3.80	1	2	0.10	2	250	13.80	1	2	0.10	2	728
4.00	1	2	0.10	2	252	14.00	1	2	0.10	2	730
4.20	1	2	0.10	2	254	14.20	1	2	0.10	2	732
4.40	7	15	0.80	16	270	14.40	1	2	0.10	2	734
4.60	12	21	0.90	18	288	14.60	1	2	0.10	2	736
4.80	9	19	1.00	20	308	14.80	1	2	0.10	2	738
5.00	11	20	0.90	18	326	15.00	1	2	0.10	2	740
5.20	8	19	1.10	22	348	15.20	1	2	0.10	2	742
5.40	14	23	0.90	18	366	15.40	1	2	0.10	2	744
5.60	9	18	0.90	18	384	15.60	1	2	0.10	2	746
5.80	6	14	0.80	16	400	15.80	1	2	0.10	2	748
6.00	1	2	0.10	2	402	16.00	1	2	0.10	2	750
6.20	1	2	0.10	2	404	16.20	1	2	0.10	2	752
6.40	1	2	0.10	2	406	16.40	1	2	0.10	2	754
6.60	1	2	0.10	2	408	16.60	1	2	0.10	2	756
6.80	1	2	0.10	2	410	16.80	1	2	0.10	2	758
7.00	1	2	0.10	2	412	17.00	1	2	0.10	2	760
7.20	1	2	0.10	2	414	17.20	1	2	0.10	2	762
7.40	8	18	1.00	20	434	17.40	1	2	0.10	2	764
7.60	19	29	1.00	20	454	17.60	1	2	0.10	2	766
7.80	16	27	1.10	22	476	17.80	1	2	0.10	2	768
8.00	11	20	0.90	18	494	18.00	1	2	0.10	2	770
8.20	7	16	0.90	18	512	18.20	1	2	0.10	2	772
8.40	1	2	0.10	2	514	18.40	1	2	0.10	2	774
8.60	1	2	0.10	2	516	18.60	1	2	0.10	2	776
8.80	1	2	0.10	2	518	18.80	6	18	1.20	24	800
9.00	1	2	0.10	2	520	19.00	11	22	1.10	22	822
9.20	1	2	0.10	2	522	19.20	8	19	1.10	22	844
9.40	1	2	0.10	2	524	19.40	1	2	0.10	2	846
9.60	1	2	0.10	2	526	19.60	1	2	0.10	2	848
9.80	1	2	0.10	2	528	19.80	1	2	0.10	2	850
10.00	1	2	0.10	2	530	20.00	1	2	0.10	2	852

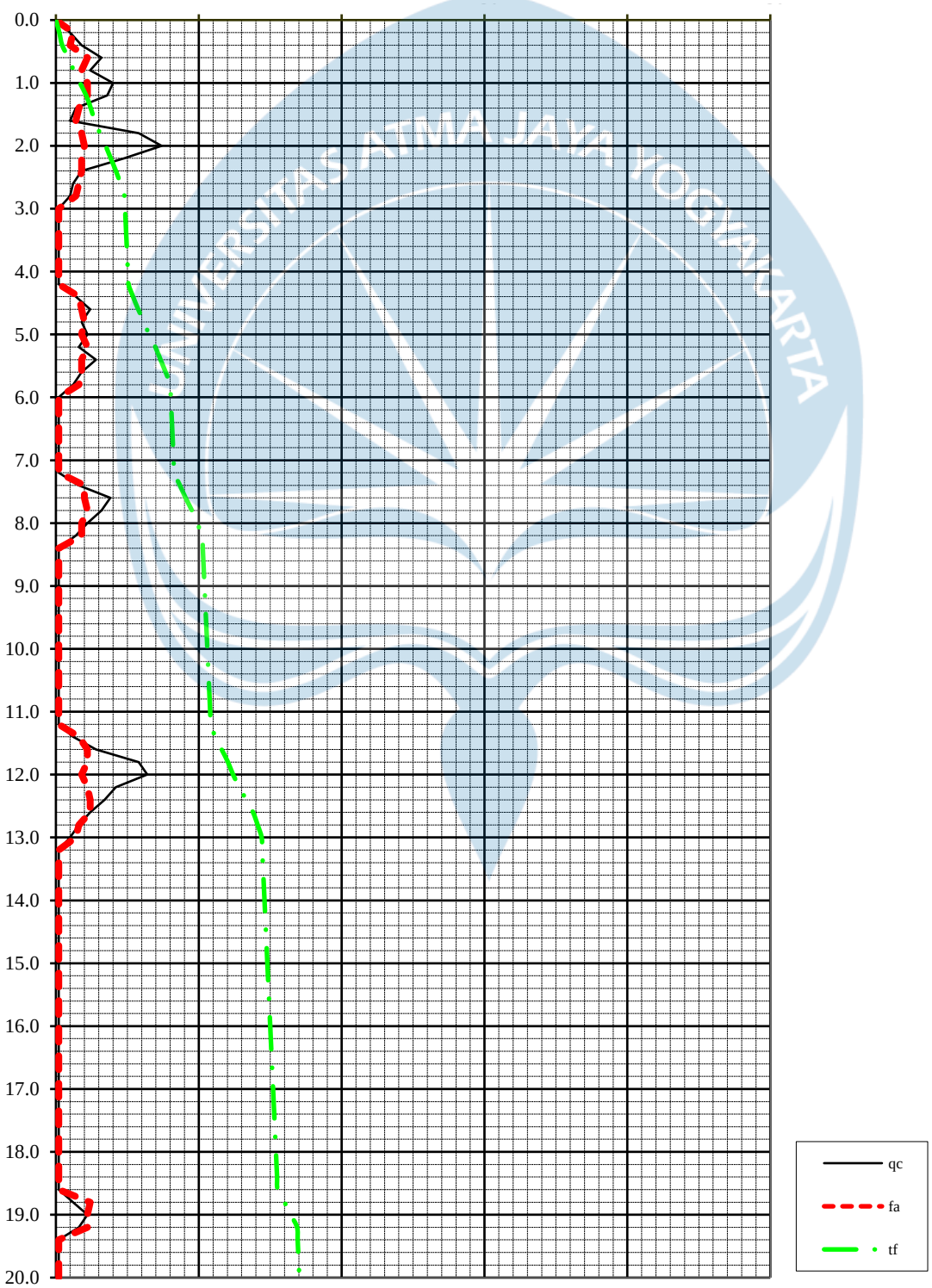
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 3
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -4,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 4	**WEATHER**	: Cerah
ELEVATION	: -0,20 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -4,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	6	15	0.90	18	18	10.20	1	2	0.10	2	624
0.40	15	24	0.90	18	36	10.40	1	2	0.10	2	626
0.60	24	33	0.90	18	54	10.60	1	2	0.10	2	628
0.80	13	24	1.10	22	76	10.80	1	2	0.10	2	630
1.00	18	29	1.10	22	98	11.00	1	2	0.10	2	632
1.20	22	31	0.90	18	116	11.20	1	2	0.10	2	634
1.40	14	23	0.90	18	134	11.40	1	2	0.10	2	636
1.60	11	21	1.00	20	154	11.60	1	2	0.10	2	638
1.80	9	18	0.90	18	172	11.80	1	2	0.10	2	640
2.00	6	15	0.90	18	190	12.00	1	2	0.10	2	642
2.20	12	21	0.90	18	208	12.20	1	2	0.10	2	644
2.40	14	23	0.90	18	226	12.40	1	2	0.10	2	646
2.60	10	20	1.00	20	246	12.60	8	16	0.80	16	662
2.80	13	21	0.80	16	262	12.80	12	24	1.20	24	686
3.00	19	30	1.10	22	284	13.00	19	32	1.30	26	712
3.20	12	21	0.90	18	302	13.20	16	28	1.20	24	736
3.40	7	15	0.80	16	318	13.40	24	36	1.20	24	760
3.60	5	13	0.80	16	334	13.60	27	39	1.20	24	784
3.80	1	2	0.10	2	336	13.80	23	32	0.90	18	802
4.00	1	2	0.10	2	338	14.00	18	31	1.30	26	828
4.20	1	2	0.10	2	340	14.20	14	26	1.20	24	852
4.40	1	2	0.10	2	342	14.40	11	23	1.20	24	876
4.60	1	2	0.10	2	344	14.60	9	20	1.10	22	898
4.80	1	2	0.10	2	346	14.80	12	21	0.90	18	916
5.00	1	2	0.10	2	348	15.00	8	17	0.90	18	934
5.20	1	2	0.10	2	350	15.20	5	14	0.90	18	952
5.40	1	2	0.10	2	352	15.40	1	2	0.10	2	954
5.60	12	21	0.90	18	370	15.60	1	2	0.10	2	956
5.80	16	27	1.10	22	392	15.80	1	2	0.10	2	958
6.00	28	39	1.10	22	414	16.00	1	2	0.10	2	960
6.20	19	31	1.20	24	438	16.20	1	2	0.10	2	962
6.40	17	28	1.10	22	460	16.40	1	2	0.10	2	964
6.60	23	32	0.90	18	478	16.60	1	2	0.10	2	966
6.80	18	28	1.00	20	498	16.80	1	2	0.10	2	968
7.00	9	19	1.00	20	518	17.00	1	2	0.10	2	970
7.20	7	14	0.70	14	532	17.20	1	2	0.10	2	972
7.40	1	2	0.10	2	534	17.40	11	22	1.10	22	994
7.60	1	2	0.10	2	536	17.60	26	37	1.10	22	1016
7.80	1	2	0.10	2	538	17.80	39	51	1.20	24	1040
8.00	1	2	0.10	2	540	18.00	42	53	1.10	22	1062
8.20	1	2	0.10	2	542	18.20	28	39	1.10	22	1084
8.40	1	2	0.10	2	544	18.40	19	30	1.10	22	1106
8.60	1	2	0.10	2	546	18.60	24	35	1.10	22	1128
8.80	1	2	0.10	2	548	18.80	27	38	1.10	22	1150
9.00	1	2	0.10	2	550	19.00	32	43	1.10	22	1172
9.20	1	2	0.10	2	552	19.20	36	49	1.30	26	1198
9.40	6	13	0.70	14	566	19.40	43	54	1.10	22	1220
9.60	13	22	0.90	18	584	19.60	38	47	0.90	18	1238
9.80	7	17	1.00	20	604	19.80	26	37	1.10	22	1260
10.00	5	14	0.90	18	622	20.00	23	33	1.00	20	1280

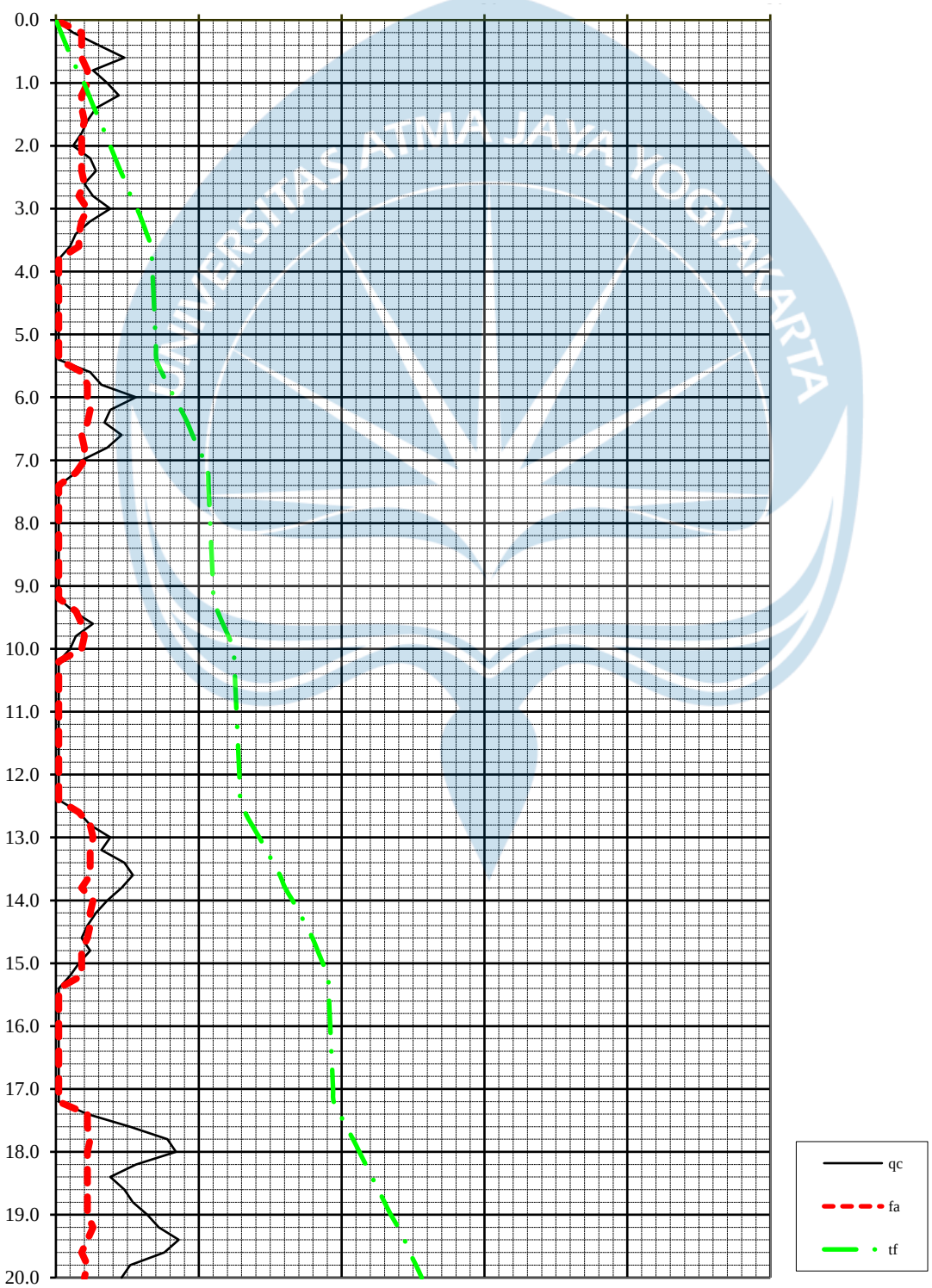
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 4
Date :

Elevation : -0,20 m dari muka jalan
G.Water Depth : -4,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 2052
Fax: +62-274-487748

Boring Number:

BH-4

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : - 0,20 m from road level

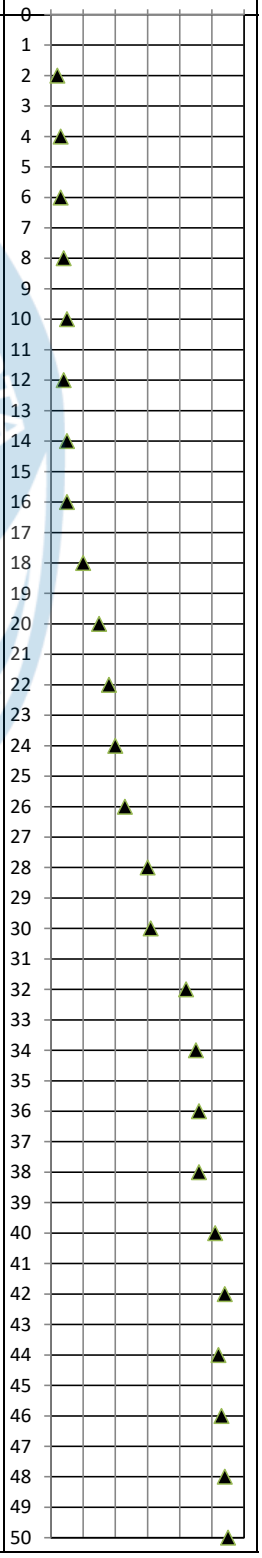
HOLE SIZE : 7.295cm

GROUND WATER LEVEL : -4,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	Nv	Water Level Elevation (m)
1									
2					1	1	1	2	
3									
4					1	1	2	3	
5									
6					1	1	2	3	
7									
8					2	2	2	4	
9									
10				I	2	2	3	5	
11									
12					1	2	2	4	
13									
14					1	2	3	5	
15		Lanau berpasir sedikit							
16		lempung (abu-abu)	30		2	2	3	5	
17									
18					2	4	6	10	
19									
20				II	4	6	9	15	
21									
22					4	8	10	18	
23									
24					5	8	12	20	
25									
26					7	9	14	23	
27									
28					9	14	16	30	
29									
30					9	14	17	31	
31									
32					12	15	27	42	
33									
34					12	15	30	45	
35									
36					12	16	30	46	
37									
38					13	15	31	46	
39									
40		Pasir lanau (abu-abu)	20		14	21	30	51	
41									
42					14	24	30	54	
43									
44					12	20	32	52	
45									
46					15	23	30	53	
47									
48					16	22	32	54	
49									
50					16	24	31	55	



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

Laboratorium Mekanika Tanah
UNIVERSITAS ATMA JAYA YOGYAKARTA
Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 4	10.00	40.52	2.53	1.58	1.12	0.11	11.91
	20.00	48.92	2.51	1.56	1.05	0.11	17.01

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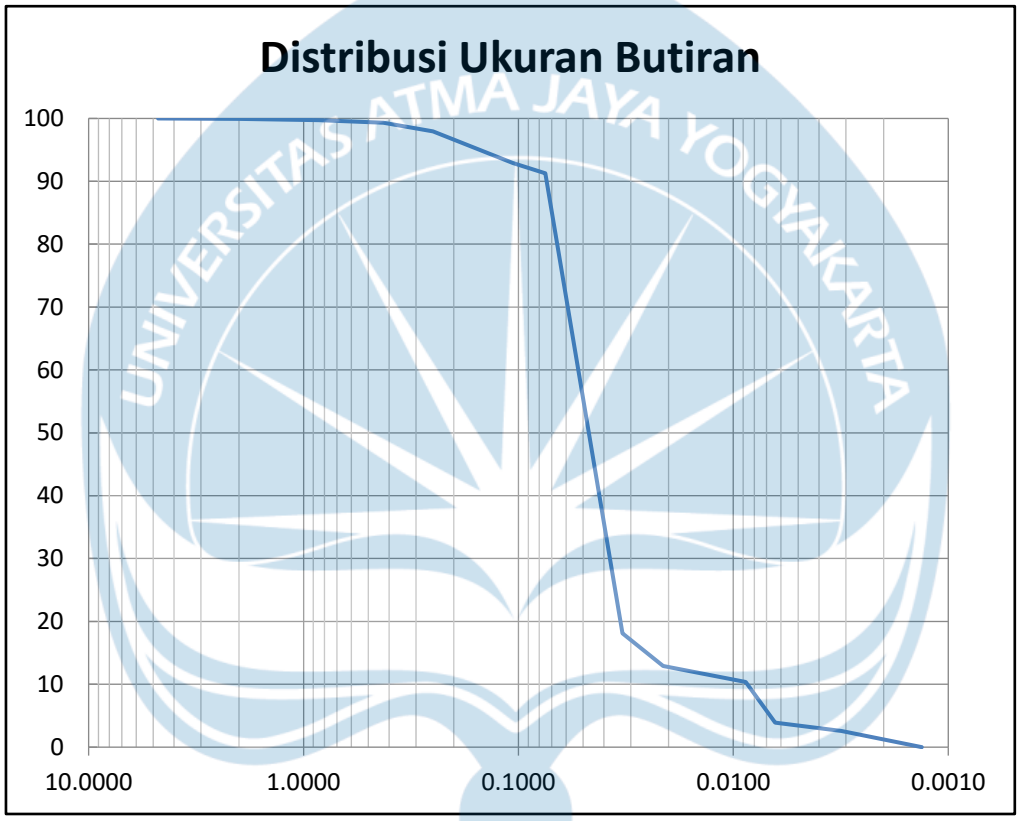
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 10.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.00	100.00	100.00
10	2.000	0.07	99.93	99.93
20	0.850	0.21	99.72	99.72
40	0.425	0.38	99.34	99.34
60	0.250	1.38	97.96	97.96
140	0.106	5.07	92.89	92.89
200	0.075	1.64	91.25	91.25
Pan		91.25		

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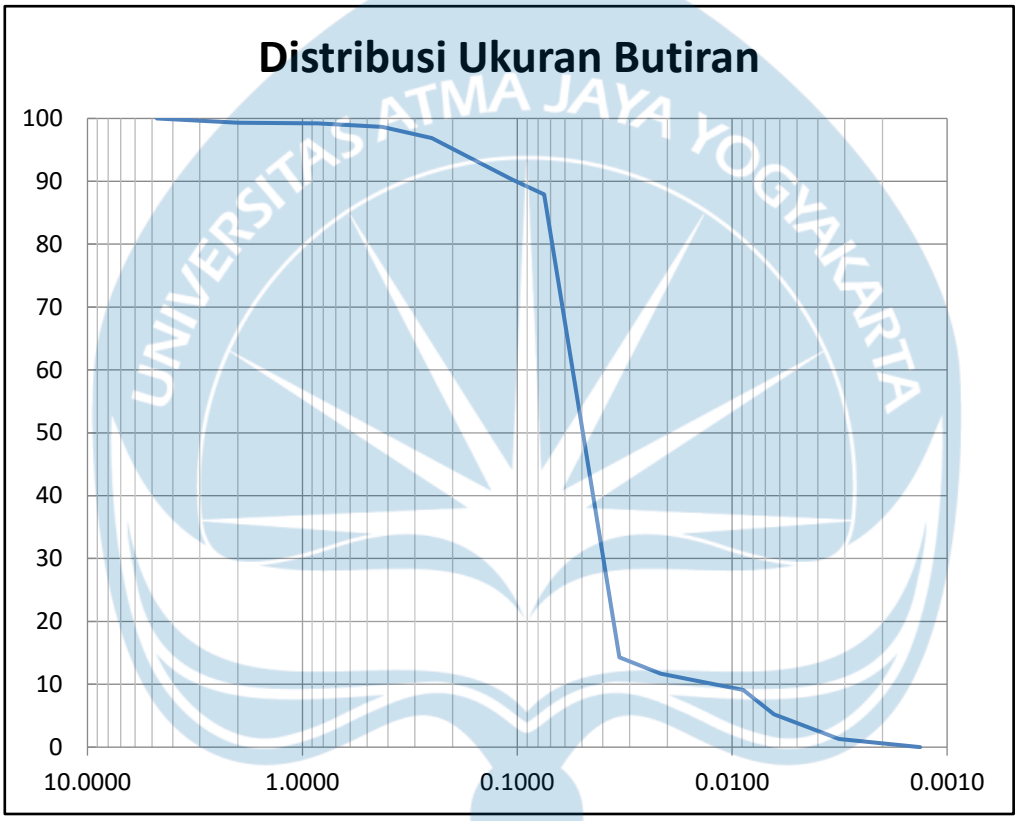
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 20.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.00	100.00	100.00
10	2.000	0.66	99.34	99.34
20	0.850	0.12	99.22	99.22
40	0.425	0.58	98.64	98.64
60	0.250	1.78	96.86	96.86
140	0.106	6.53	90.33	90.33
200	0.075	2.44	87.89	87.89
Pan		87.89		

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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 1
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	2	3	0,10	2	2	10,20	30	33	0,30	6	286
0,40	4	5	0,10	2	4	10,40	39	42	0,30	6	292
0,60	3	5	0,20	4	8	10,60	43	56	1,30	26	318
0,80	6	8	0,20	4	12	10,80	78	82	0,40	8	326
1,00	5	7	0,20	4	16	11,00	124	127	0,30	6	332
1,20	6	8	0,20	4	20	11,20	136	139	0,30	6	338
1,40	7	9	0,20	4	24	11,40	151	154	0,30	6	344
1,60	9	11	0,20	4	28	11,60	143	146	0,30	6	350
1,80	10	13	0,30	6	34	11,80	168	171	0,30	6	356
2,00	14	17	0,30	6	40	12,00	184	187	0,30	6	362
2,20	23	26	0,30	6	46	12,20	195	198	0,30	6	368
2,40	19	22	0,30	6	52	12,40	246	250	0,40	8	376
2,60	21	24	0,30	6	58	12,60	250	250	0,00	0	376
2,80	14	17	0,30	6	64	12,80					
3,00	42	45	0,30	6	70	13,00					
3,20	29	32	0,30	6	76	13,20					
3,40	26	29	0,30	6	82	13,40					
3,60	24	27	0,30	6	88	13,60					
3,80	28	31	0,30	6	94	13,80					
4,00	32	35	0,30	6	100	14,00					
4,20	30	33	0,30	6	106	14,20					
4,40	26	29	0,30	6	112	14,40					
4,60	14	17	0,30	6	118	14,60					
4,80	25	28	0,30	6	124	14,80					
5,00	27	30	0,30	6	130	15,00					
5,20	22	25	0,30	6	136	15,20					
5,40	21	24	0,30	6	142	15,40					
5,60	26	29	0,30	6	148	15,60					
5,80	53	56	0,30	6	154	15,80					
6,00	37	40	0,30	6	160	16,00					
6,20	32	35	0,30	6	166	16,20					
6,40	24	27	0,30	6	172	16,40					
6,60	33	36	0,30	6	178	16,60					
6,80	19	22	0,30	6	184	16,80					
7,00	23	26	0,30	6	190	17,00					
7,20	29	32	0,30	6	196	17,20					
7,40	17	20	0,30	6	202	17,40					
7,60	15	18	0,30	6	208	17,60					
7,80	26	29	0,30	6	214	17,80					
8,00	34	37	0,30	6	220	18,00					
8,20	28	31	0,30	6	226	18,20					
8,40	24	27	0,30	6	232	18,40					
8,60	39	42	0,30	6	238	18,60					
8,80	33	36	0,30	6	244	18,80					
9,00	35	38	0,30	6	250	19,00					
9,20	38	41	0,30	6	256	19,20					
9,40	17	20	0,30	6	262	19,40					
9,60	23	26	0,30	6	268	19,60					
9,80	34	37	0,30	6	274	19,80					
10,00	26	29	0,30	6	280	20,00					

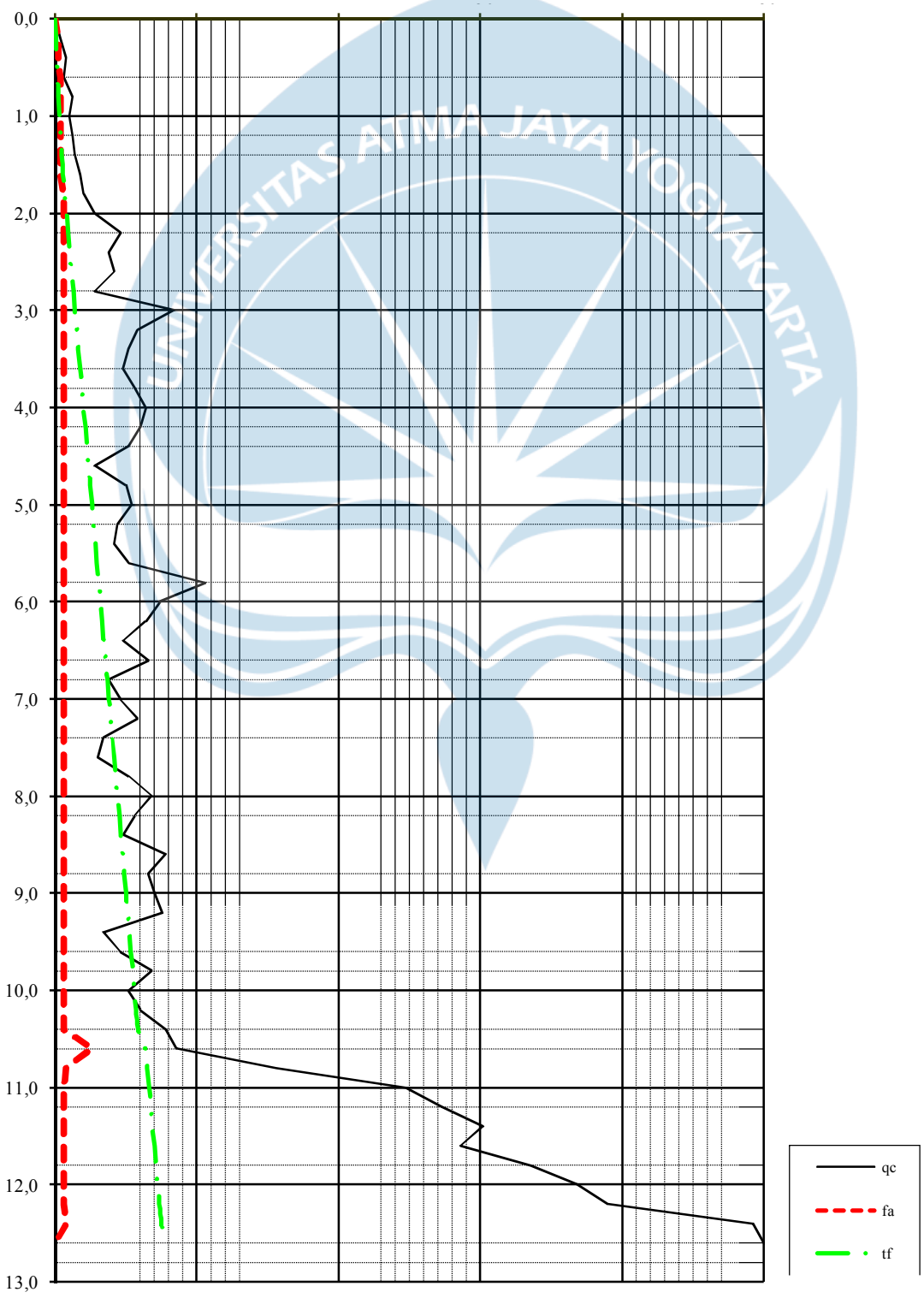
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 2
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	2	3	0,10	2	2	10,20	102	105	0,30	6	292
0,40	4	6	0,20	4	6	10,40	118	121	0,30	6	298
0,60	5	7	0,20	4	10	10,60	114	117	0,30	6	304
0,80	4	6	0,20	4	14	10,80	146	149	0,30	6	310
1,00	6	8	0,20	4	18	11,00	161	164	0,30	6	316
1,20	7	9	0,20	4	22	11,20	192	195	0,30	6	322
1,40	11	14	0,30	6	28	11,40	208	211	0,30	6	328
1,60	13	16	0,30	6	34	11,60	246	250	0,40	8	336
1,80	15	18	0,30	6	40	11,80	250	250	0,00	0	336
2,00	11	14	0,30	6	46	12,00					
2,20	16	19	0,30	6	52	12,20					
2,40	15	18	0,30	6	58	12,40					
2,60	10	13	0,30	6	64	12,60					
2,80	51	54	0,30	6	70	12,80					
3,00	65	68	0,30	6	76	13,00					
3,20	79	82	0,30	6	82	13,20					
3,40	103	106	0,30	6	88	13,40					
3,60	71	74	0,30	6	94	13,60					
3,80	36	39	0,30	6	100	13,80					
4,00	31	34	0,30	6	106	14,00					
4,20	29	32	0,30	6	112	14,20					
4,40	40	43	0,30	6	118	14,40					
4,60	36	39	0,30	6	124	14,60					
4,80	27	30	0,30	6	130	14,80					
5,00	23	26	0,30	6	136	15,00					
5,20	20	23	0,30	6	142	15,20					
5,40	19	22	0,30	6	148	15,40					
5,60	24	27	0,30	6	154	15,60					
5,80	38	41	0,30	6	160	15,80					
6,00	33	36	0,30	6	166	16,00					
6,20	35	38	0,30	6	172	16,20					
6,40	28	31	0,30	6	178	16,40					
6,60	21	24	0,30	6	184	16,60					
6,80	25	28	0,30	6	190	16,80					
7,00	27	30	0,30	6	196	17,00					
7,20	31	34	0,30	6	202	17,20					
7,40	26	29	0,30	6	208	17,40					
7,60	18	21	0,30	6	214	17,60					
7,80	23	26	0,30	6	220	17,80					
8,00	31	34	0,30	6	226	18,00					
8,20	32	35	0,30	6	232	18,20					
8,40	26	29	0,30	6	238	18,40					
8,60	35	38	0,30	6	244	18,60					
8,80	31	34	0,30	6	250	18,80					
9,00	42	45	0,30	6	256	19,00					
9,20	34	37	0,30	6	262	19,20					
9,40	58	61	0,30	6	268	19,40					
9,60	80	83	0,30	6	274	19,60					
9,80	73	76	0,30	6	280	19,80					
10,00	82	85	0,30	6	286	20,00					

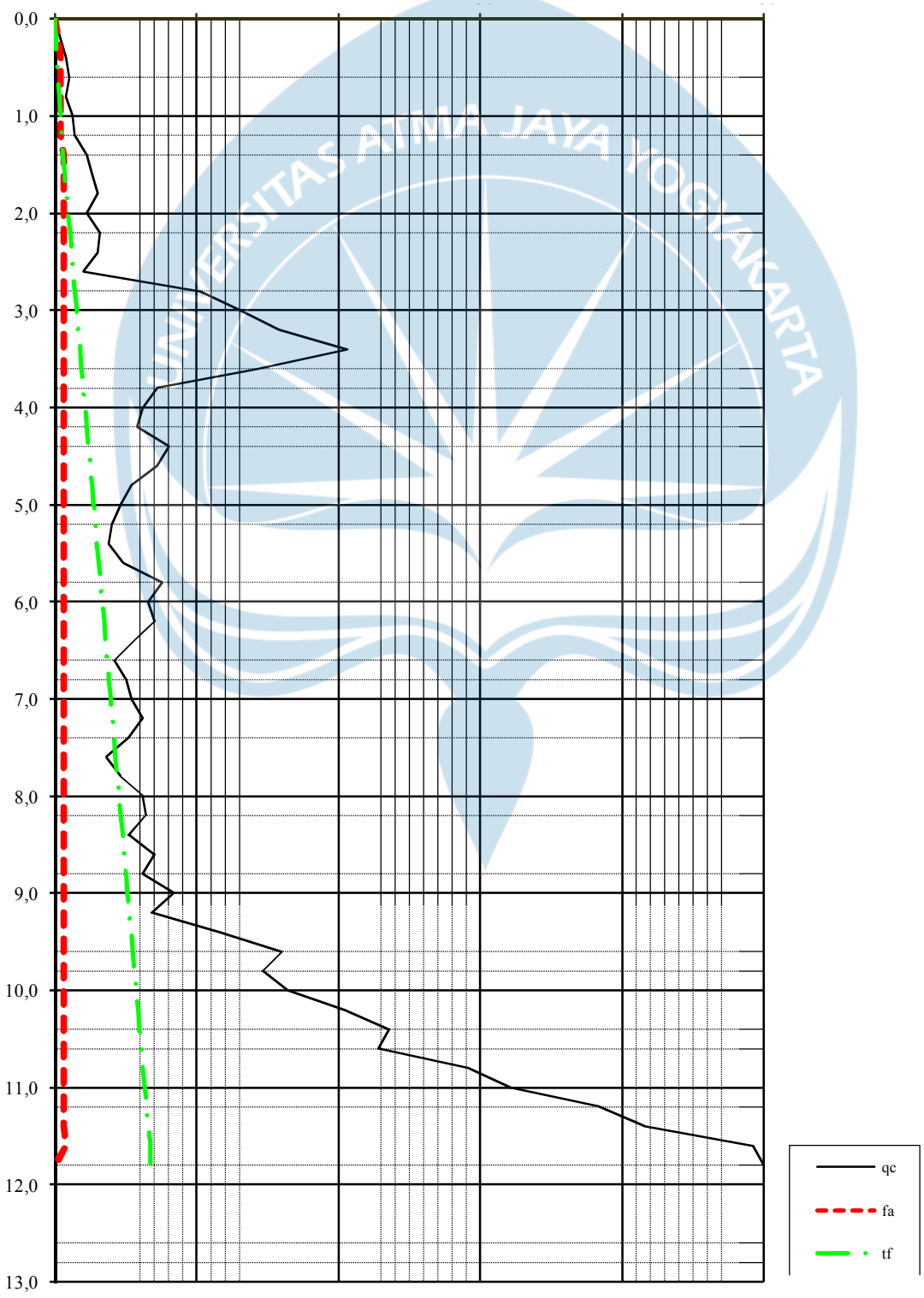
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 3
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	3	5	0,20	4	4	10,20					
0,40	6	8	0,20	4	8	10,40					
0,60	5	7	0,20	4	12	10,60					
0,80	3	5	0,20	4	16	10,80					
1,00	4	6	0,20	4	20	11,00					
1,20	8	11	0,30	6	26	11,20					
1,40	10	13	0,30	6	32	11,40					
1,60	6	8	0,20	4	36	11,60					
1,80	3	5	0,20	4	40	11,80					
2,00	1	2	0,10	2	42	12,00					
2,20	1	2	0,10	2	44	12,20					
2,40	14	17	0,30	6	50	12,40					
2,60	28	31	0,30	6	56	12,60					
2,80	24	27	0,30	6	62	12,80					
3,00	61	64	0,30	6	68	13,00					
3,20	53	56	0,30	6	74	13,20					
3,40	24	27	0,30	6	80	13,40					
3,60	16	19	0,30	6	86	13,60					
3,80	18	21	0,30	6	92	13,80					
4,00	49	52	0,30	6	98	14,00					
4,20	26	29	0,30	6	104	14,20					
4,40	14	17	0,30	6	110	14,40					
4,60	18	21	0,30	6	116	14,60					
4,80	20	23	0,30	6	122	14,80					
5,00	16	19	0,30	6	128	15,00					
5,20	18	21	0,30	6	134	15,20					
5,40	14	17	0,30	6	140	15,40					
5,60	17	20	0,30	6	146	15,60					
5,80	26	29	0,30	6	152	15,80					
6,00	51	54	0,30	6	158	16,00					
6,20	78	81	0,30	6	164	16,20					
6,40	94	97	0,30	6	170	16,40					
6,60	120	123	0,30	6	176	16,60					
6,80	146	149	0,30	6	182	16,80					
7,00	152	155	0,30	6	188	17,00					
7,20	179	182	0,30	6	194	17,20					
7,40	193	196	0,30	6	200	17,40					
7,60	246	250	0,40	8	208	17,60					
7,80	250	250	0,00	0	208	17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

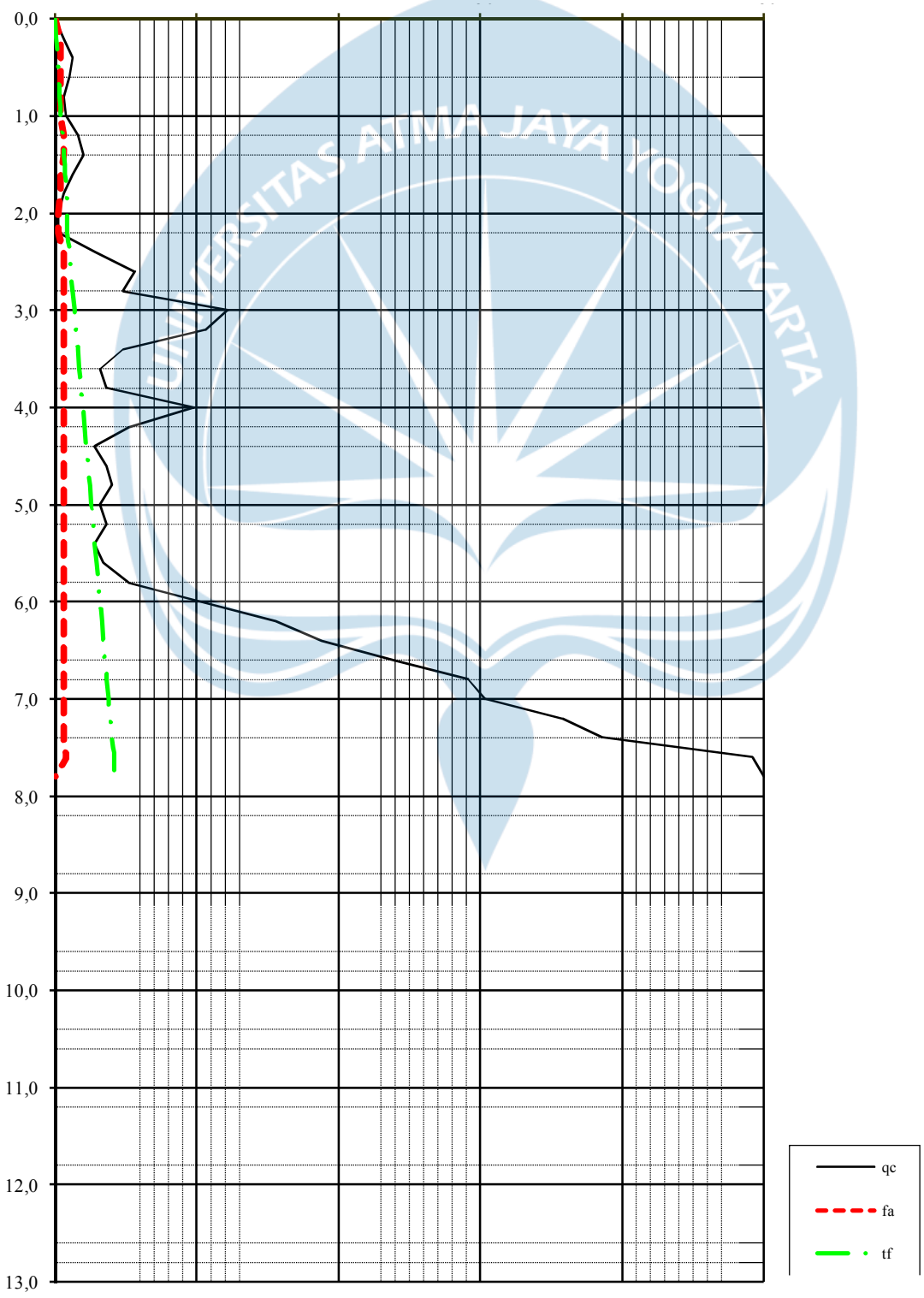
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 3
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 4
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	2	3	0,10	2	2	10,20					
0,40	4	6	0,20	4	6	10,40					
0,60	5	7	0,20	4	10	10,60					
0,80	8	10	0,20	4	14	10,80					
1,00	4	6	0,20	4	18	11,00					
1,20	6	8	0,20	4	22	11,20					
1,40	5	7	0,20	4	26	11,40					
1,60	8	10	0,20	4	30	11,60					
1,80	12	15	0,30	6	36	11,80					
2,00	14	17	0,30	6	42	12,00					
2,20	11	14	0,30	6	48	12,20					
2,40	21	24	0,30	6	54	12,40					
2,60	19	22	0,30	6	60	12,60					
2,80	23	26	0,30	6	66	12,80					
3,00	22	25	0,30	6	72	13,00					
3,20	19	22	0,30	6	78	13,20					
3,40	26	29	0,30	6	84	13,40					
3,60	32	35	0,30	6	90	13,60					
3,80	56	59	0,30	6	96	13,80					
4,00	87	90	0,30	6	102	14,00					
4,20	121	124	0,30	6	108	14,20					
4,40	68	71	0,30	6	114	14,40					
4,60	56	59	0,30	6	120	14,60					
4,80	64	67	0,30	6	126	14,80					
5,00	70	73	0,30	6	132	15,00					
5,20	59	62	0,30	6	138	15,20					
5,40	84	87	0,30	6	144	15,40					
5,60	108	111	0,30	6	150	15,60					
5,80	133	136	0,30	6	156	15,80					
6,00	159	162	0,30	6	162	16,00					
6,20	148	151	0,30	6	168	16,20					
6,40	164	167	0,30	6	174	16,40					
6,60	182	185	0,30	6	180	16,60					
6,80	199	202	0,30	6	186	16,80					
7,00	246	250	0,40	8	194	17,00					
7,20	250	250	0,00	0	194	17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

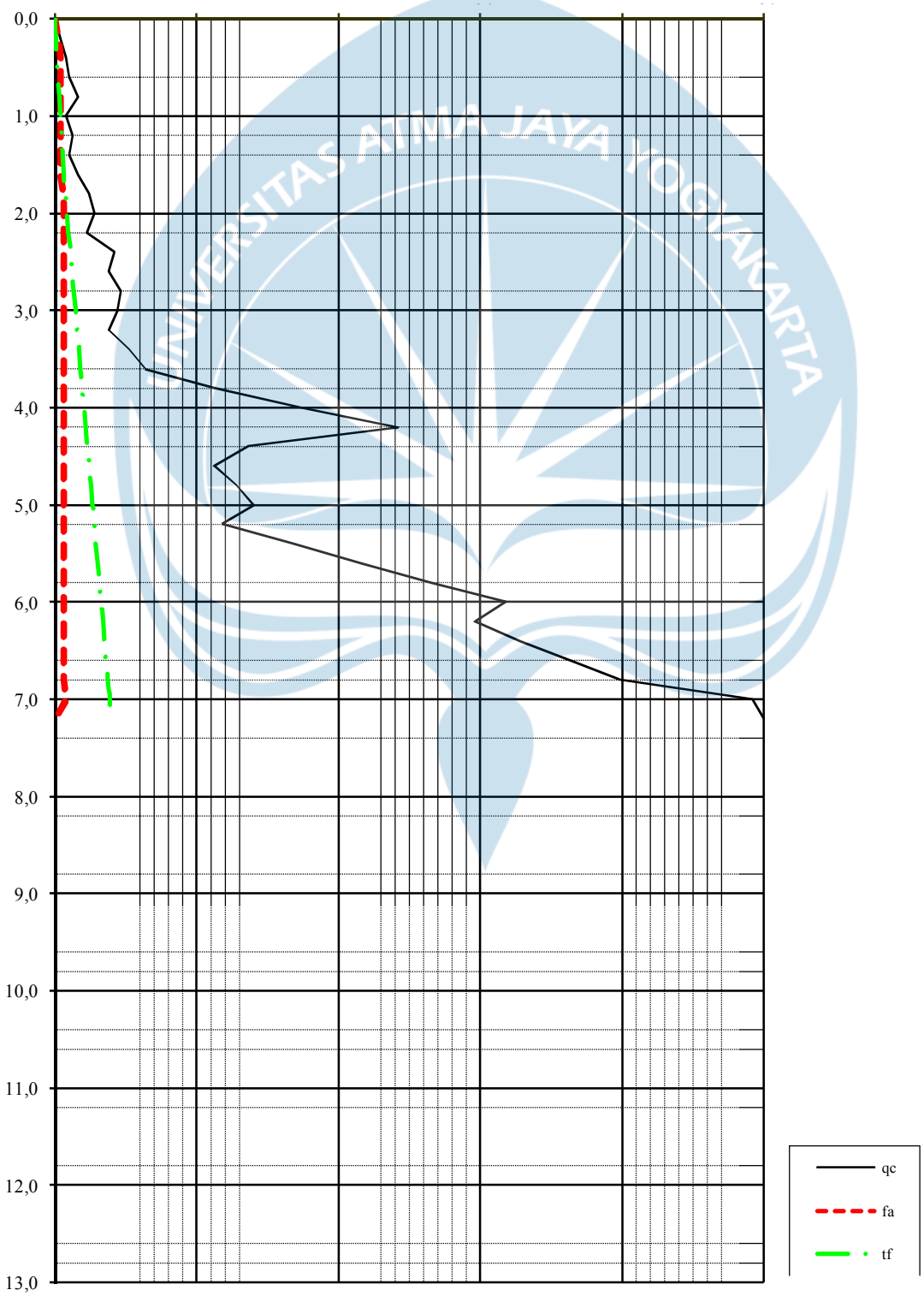
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 4
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 5
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	2	3	0,10	2	2	10,20					
0,40	5	7	0,20	4	6	10,40					
0,60	4	6	0,20	4	10	10,60					
0,80	6	8	0,20	4	14	10,80					
1,00	5	7	0,20	4	18	11,00					
1,20	8	10	0,20	4	22	11,20					
1,40	11	14	0,30	6	28	11,40					
1,60	9	11	0,20	4	32	11,60					
1,80	12	15	0,30	6	38	11,80					
2,00	14	17	0,30	6	44	12,00					
2,20	16	19	0,30	6	50	12,20					
2,40	22	25	0,30	6	56	12,40					
2,60	20	23	0,30	6	62	12,60					
2,80	16	19	0,30	6	68	12,80					
3,00	21	24	0,30	6	74	13,00					
3,20	37	40	0,30	6	80	13,20					
3,40	26	29	0,30	6	86	13,40					
3,60	39	42	0,30	6	92	13,60					
3,80	34	37	0,30	6	98	13,80					
4,00	49	52	0,30	6	104	14,00					
4,20	53	57	0,40	8	112	14,20					
4,40	26	29	0,30	6	118	14,40					
4,60	14	17	0,30	6	124	14,60					
4,80	19	22	0,30	6	130	14,80					
5,00	22	25	0,30	6	136	15,00					
5,20	24	27	0,30	6	142	15,20					
5,40	23	26	0,30	6	148	15,40					
5,60	48	51	0,30	6	154	15,60					
5,80	101	104	0,30	6	160	15,80					
6,00	134	137	0,30	6	166	16,00					
6,20	128	131	0,30	6	172	16,20					
6,40	140	143	0,30	6	178	16,40					
6,60	174	177	0,30	6	184	16,60					
6,80	196	199	0,30	6	190	16,80					
7,00	246	250	0,40	8	198	17,00					
7,20	250	250	0,00	0	198	17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

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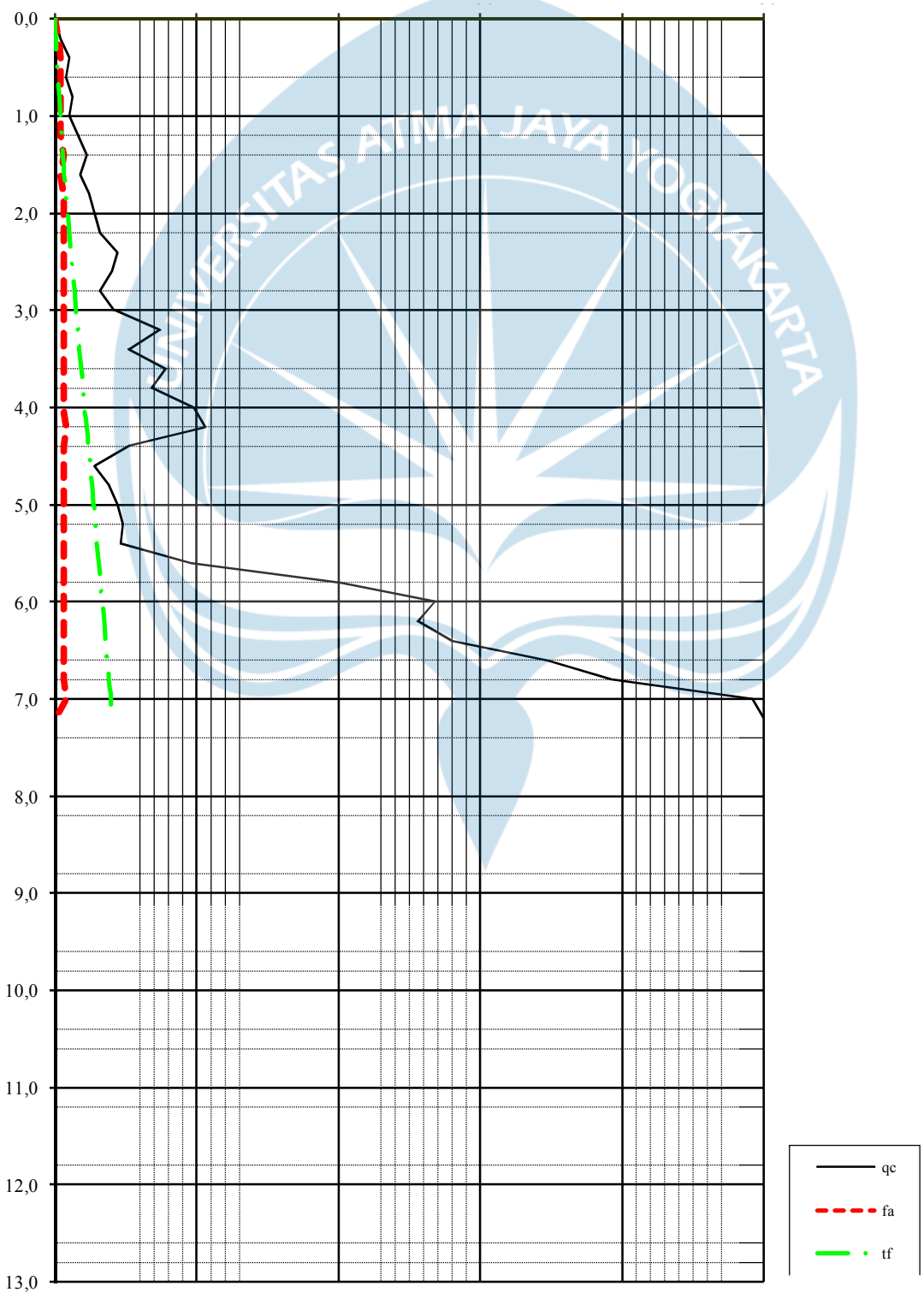
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 5
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 6
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	3	4	0,10	2	2	10,20					
0,40	5	7	0,20	4	6	10,40					
0,60	8	10	0,20	4	10	10,60					
0,80	4	6	0,20	4	14	10,80					
1,00	7	9	0,20	4	18	11,00					
1,20	9	11	0,20	4	22	11,20					
1,40	13	16	0,30	6	28	11,40					
1,60	10	13	0,30	6	34	11,60					
1,80	8	10	0,20	4	38	11,80					
2,00	11	14	0,30	6	44	12,00					
2,20	18	21	0,30	6	50	12,20					
2,40	20	23	0,30	6	56	12,40					
2,60	22	25	0,30	6	62	12,60					
2,80	19	22	0,30	6	68	12,80					
3,00	23	26	0,30	6	74	13,00					
3,20	28	31	0,30	6	80	13,20					
3,40	24	27	0,30	6	86	13,40					
3,60	26	29	0,30	6	92	13,60					
3,80	16	19	0,30	6	98	13,80					
4,00	24	27	0,30	6	104	14,00					
4,20	27	30	0,30	6	110	14,20					
4,40	21	24	0,30	6	116	14,40					
4,60	16	19	0,30	6	122	14,60					
4,80	25	28	0,30	6	128	14,80					
5,00	21	24	0,30	6	134	15,00					
5,20	24	27	0,30	6	140	15,20					
5,40	26	29	0,30	6	146	15,40					
5,60	51	54	0,30	6	152	15,60					
5,80	86	89	0,30	6	158	15,80					
6,00	132	135	0,30	6	164	16,00					
6,20	154	157	0,30	6	170	16,20					
6,40	143	146	0,30	6	176	16,40					
6,60	167	170	0,30	6	182	16,60					
6,80	188	191	0,30	6	188	16,80					
7,00	206	209	0,30	6	194	17,00					
7,20	246	250	0,40	8	202	17,20					
7,40	250	250	0,00	0	202	17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

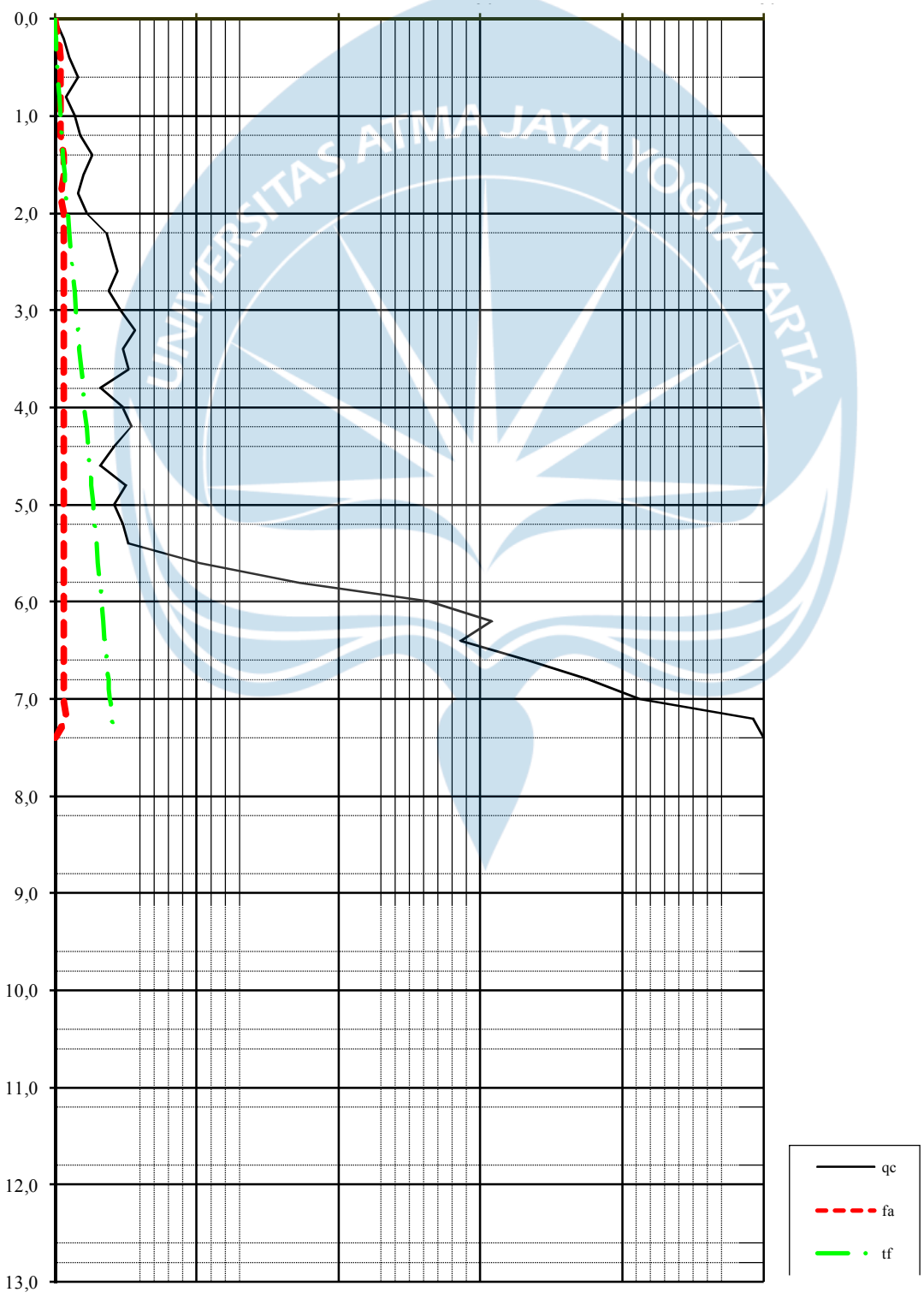
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 6
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 7
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	2	3	0,10	2	2	10,20					
0,40	4	6	0,20	4	6	10,40					
0,60	5	7	0,20	4	10	10,60					
0,80	8	10	0,20	4	14	10,80					
1,00	11	14	0,30	6	20	11,00					
1,20	8	10	0,20	4	24	11,20					
1,40	15	18	0,30	6	30	11,40					
1,60	16	19	0,30	6	36	11,60					
1,80	12	15	0,30	6	42	11,80					
2,00	10	13	0,30	6	48	12,00					
2,20	8	10	0,20	4	52	12,20					
2,40	14	17	0,30	6	58	12,40					
2,60	16	19	0,30	6	64	12,60					
2,80	18	21	0,30	6	70	12,80					
3,00	20	23	0,30	6	76	13,00					
3,20	28	31	0,30	6	82	13,20					
3,40	33	36	0,30	6	88	13,40					
3,60	24	27	0,30	6	94	13,60					
3,80	22	25	0,30	6	100	13,80					
4,00	20	23	0,30	6	106	14,00					
4,20	23	26	0,30	6	112	14,20					
4,40	27	30	0,30	6	118	14,40					
4,60	31	34	0,30	6	124	14,60					
4,80	46	49	0,30	6	130	14,80					
5,00	35	38	0,30	6	136	15,00					
5,20	31	34	0,30	6	142	15,20					
5,40	46	49	0,30	6	148	15,40					
5,60	61	64	0,30	6	154	15,60					
5,80	73	76	0,30	6	160	15,80					
6,00	69	72	0,30	6	166	16,00					
6,20	75	78	0,30	6	172	16,20					
6,40	84	87	0,30	6	178	16,40					
6,60	99	102	0,30	6	184	16,60					
6,80	114	117	0,30	6	190	16,80					
7,00	125	128	0,30	6	196	17,00					
7,20	121	124	0,30	6	202	17,20					
7,40	132	135	0,30	6	208	17,40					
7,60	158	161	0,30	6	214	17,60					
7,80	174	177	0,30	6	220	17,80					
8,00	193	196	0,30	6	226	18,00					
8,20	246	250	0,40	8	234	18,20					
8,40	250	250	0,00	0	234	18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

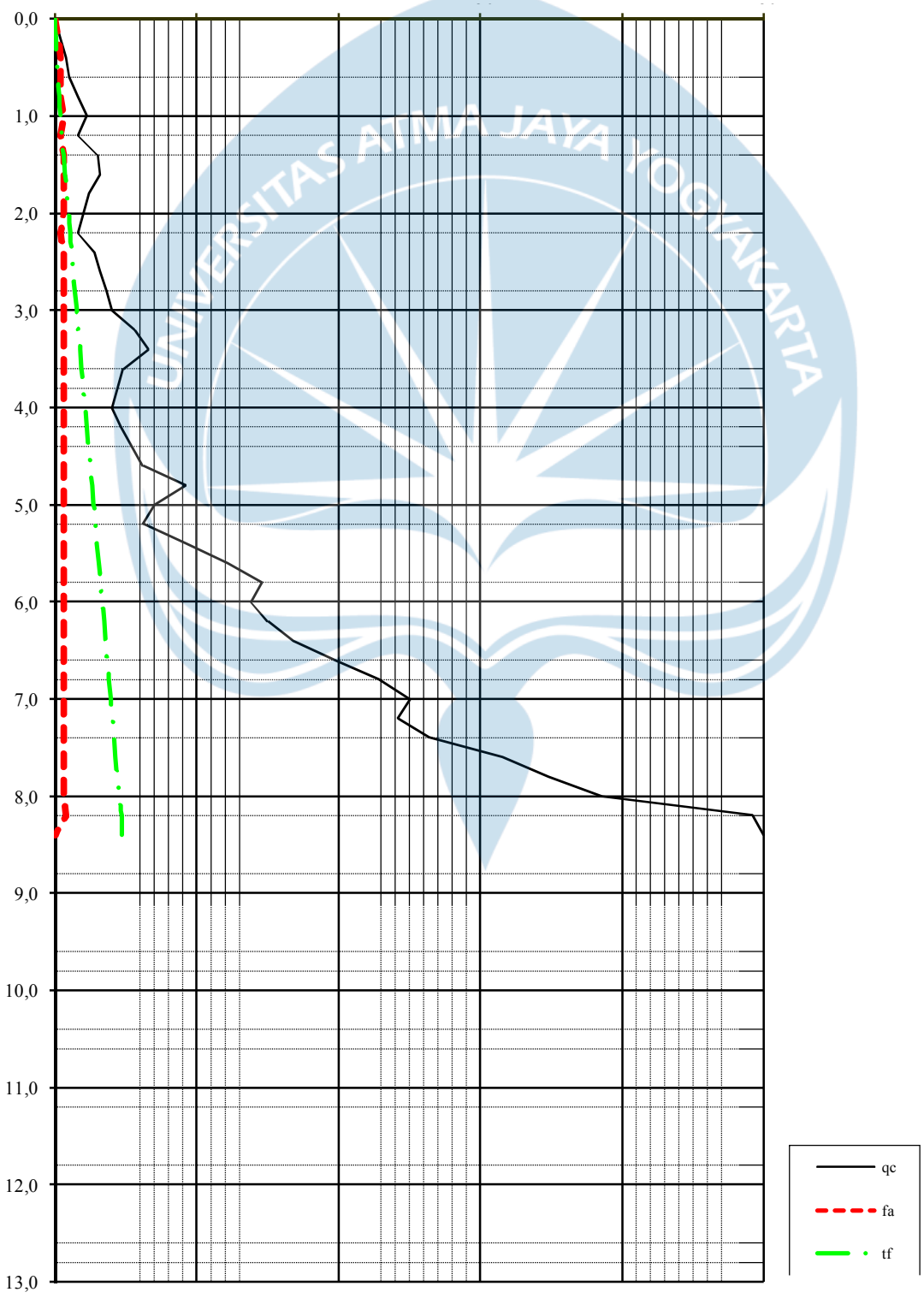
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 7
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 8
ELEVATION : -0,50 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	3	5	0,20	4	4	10,20					
0,40	6	8	0,20	4	8	10,40					
0,60	7	9	0,20	4	12	10,60					
0,80	11	14	0,30	6	18	10,80					
1,00	8	10	0,20	4	22	11,00					
1,20	6	8	0,20	4	26	11,20					
1,40	10	13	0,30	6	32	11,40					
1,60	11	14	0,30	6	38	11,60					
1,80	15	18	0,30	6	44	11,80					
2,00	19	22	0,30	6	50	12,00					
2,20	21	24	0,30	6	56	12,20					
2,40	18	21	0,30	6	62	12,40					
2,60	14	17	0,30	6	68	12,60					
2,80	16	19	0,30	6	74	12,80					
3,00	20	23	0,30	6	80	13,00					
3,20	31	34	0,30	6	86	13,20					
3,40	22	25	0,30	6	92	13,40					
3,60	26	29	0,30	6	98	13,60					
3,80	28	31	0,30	6	104	13,80					
4,00	35	38	0,30	6	110	14,00					
4,20	46	49	0,30	6	116	14,20					
4,40	34	37	0,30	6	122	14,40					
4,60	21	24	0,30	6	128	14,60					
4,80	23	26	0,30	6	134	14,80					
5,00	25	28	0,30	6	140	15,00					
5,20	22	25	0,30	6	146	15,20					
5,40	20	23	0,30	6	152	15,40					
5,60	16	19	0,30	6	158	15,60					
5,80	27	30	0,30	6	164	15,80					
6,00	34	37	0,30	6	170	16,00					
6,20	29	32	0,30	6	176	16,20					
6,40	46	49	0,30	6	182	16,40					
6,60	58	61	0,30	6	188	16,60					
6,80	80	83	0,30	6	194	16,80					
7,00	72	75	0,30	6	200	17,00					
7,20	89	92	0,30	6	206	17,20					
7,40	103	106	0,30	6	212	17,40					
7,60	124	127	0,30	6	218	17,60					
7,80	158	161	0,30	6	224	17,80					
8,00	142	145	0,30	6	230	18,00					
8,20	179	182	0,30	6	236	18,20					
8,40	205	208	0,30	6	242	18,40					
8,60	246	250	0,40	8	250	18,60					
8,80	250	250	0,00	0	250	18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

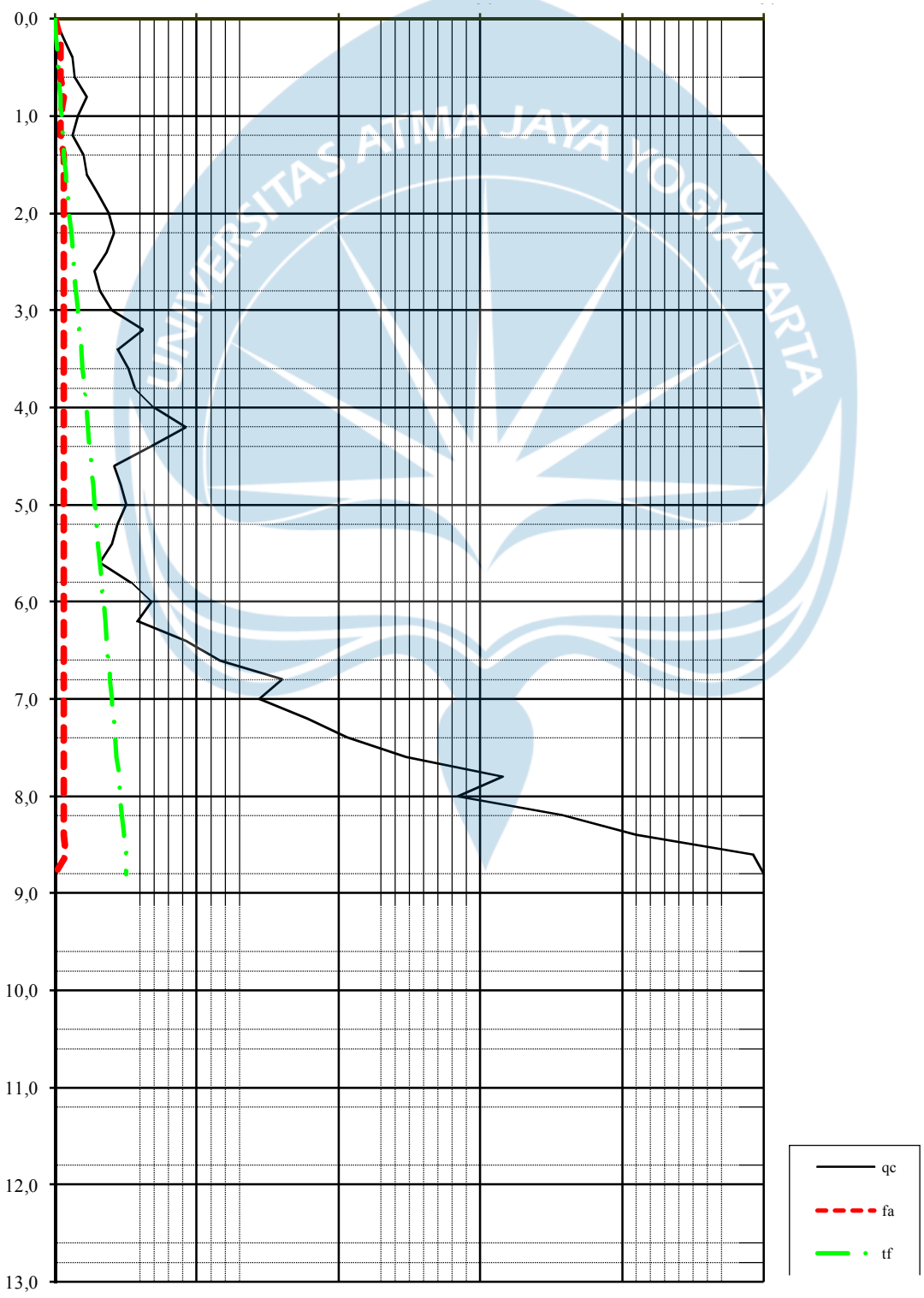
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 8
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-5

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : -0,50 m from road level

HOLE SIZE : 7.295cm

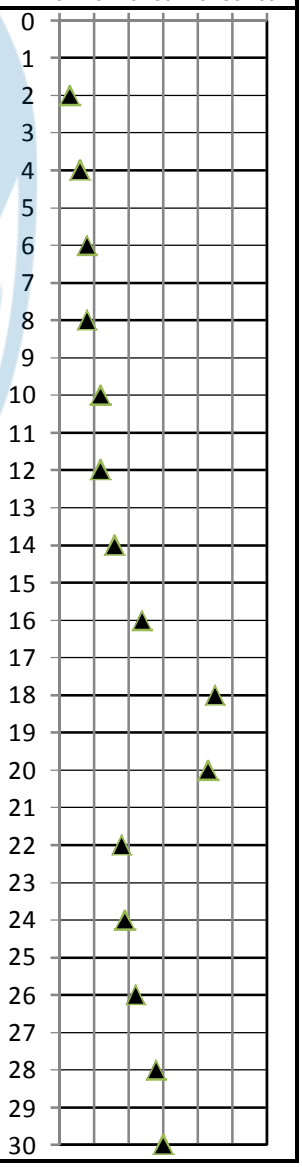
GROUND WATER LEVEL : - 6,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	NV	Water Level Elevation (m)
1									
2		Lanau lempung (coklat, abu-abu)	4		1	1	2	3	
3									
4					1	2	4	6	
5		Pasir berlempung (coklat, abu-abu)	2						
6					2	3	5	8	-6.00
7									
8		Pasir berlempung (hitam,abu-abu)	5		3	4	4	8	
9									
10				I	3	5	7	12	
11									
12		Lanau lempung (hitam, abu-abu)	5		4	6	6	12	
13									
14					4	7	9	16	
15				II					
16					6	8	16	24	
17									
18		Pasir berlempung (hitam, abu-abu)	6		8	13	32	45	
19									
20					16	12	31	43	
21									
22					6	9	9	18	
23									
24		Lempung (coklat, abu-abu)	8		6	9	10	19	
25									
26					8	10	12	22	
27									
28					8	12	16	28	
29									
30					9	12	18	30	

SPT Value



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

Laboratorium Mekanika Tanah
UNIVERSITAS ATMA JAYA YOGYAKARTA
Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 5	10,00	41,08	2,35	1,56	1,11	0,09	10,65
	15,00	58,39	2,29	1,50	0,95	0,14	7,98

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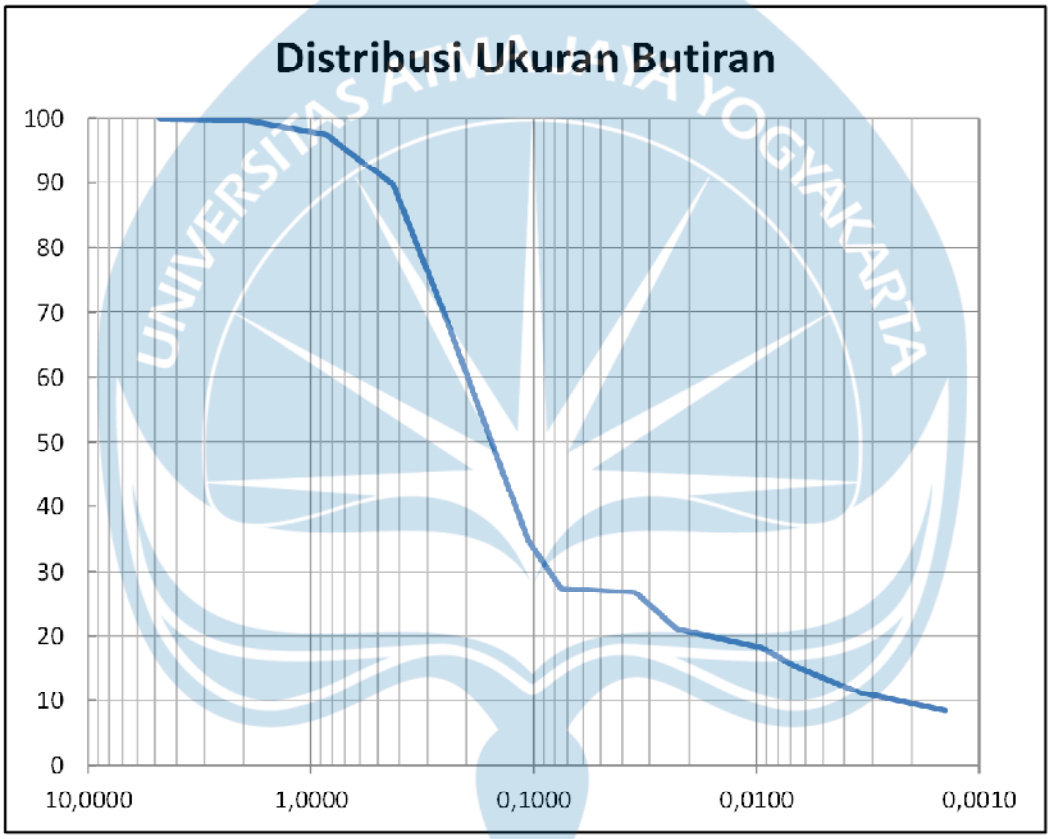
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 2
Kedalaman: 10



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,00	100,00	100,00
10	2,000	0,19	99,81	99,81
20	0,850	2,29	97,52	97,52
40	0,425	7,79	89,73	89,73
60	0,250	20,01	69,72	69,72
140	0,106	34,82	34,90	34,90
200	0,075	7,45	27,45	27,45
Pan		27,45		

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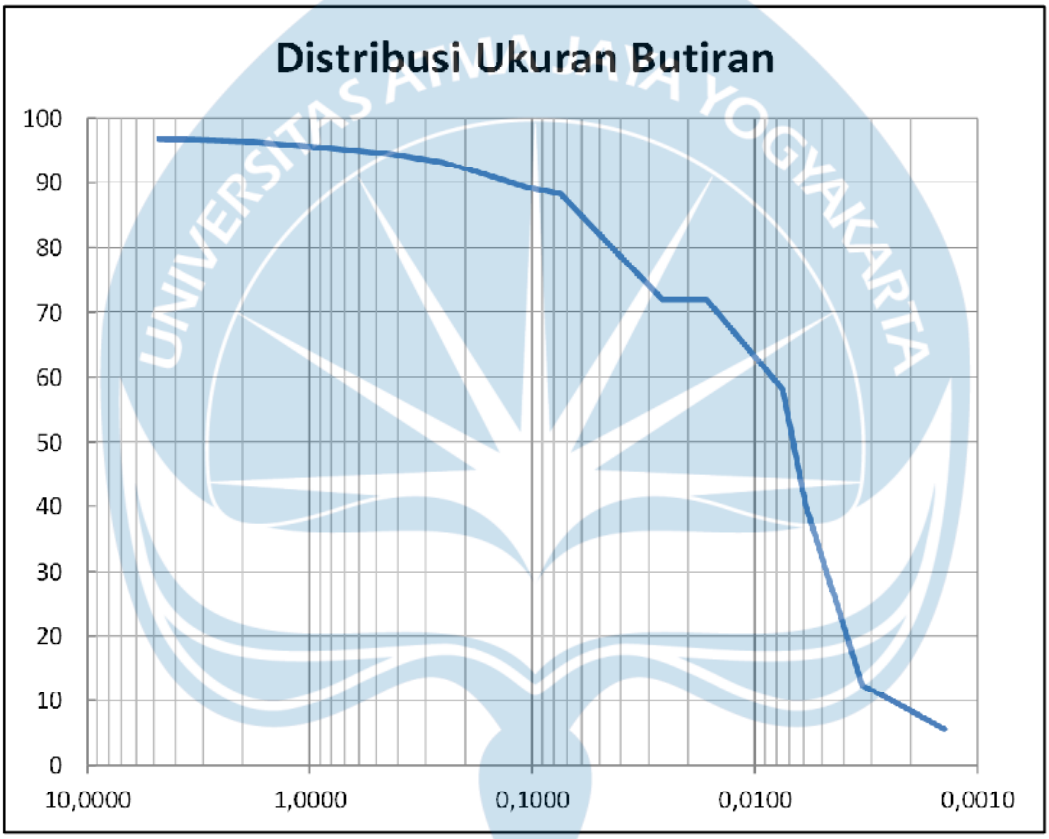
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 2
Kedalaman: 15



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	3,06	96,94	96,94
10	2,000	0,46	96,48	96,48
20	0,850	0,99	95,49	95,49
40	0,425	0,99	94,50	94,50
60	0,250	1,29	93,21	93,21
140	0,106	3,93	89,28	89,28
200	0,075	0,94	88,34	88,34
Pan		88,34		

SOIL MECHANIC LABORATORY
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FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-6

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : -0,50 m from road level

HOLE SIZE : 7.295cm

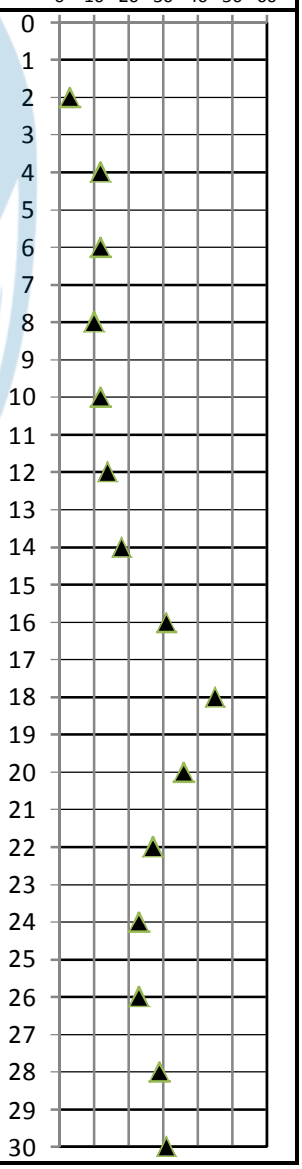
GROUND WATER LEVEL : - 6,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	Nv	Water Level Elevation (m)
1									
2		Lanau (coklat, abu-abu)	4		1	1	2	3	
3									
4					3	5	7	12	
5		Pasir berlempung (coklat, abu-abu)	2						
6					3	6	6	12	-6.00
7									
8					3	5	5	10	
9									
10				I	3	5	7	12	
11									
12		Lanau (hitam, abu-abu)	10		4	7	7	14	
13									
14					4	7	11	18	
15									
16					6	12	19	31	
17									
18		Pasir berlempung (coklat, abu-abu)	5		11	16	29	45	
19									
20				II	10	14	22	36	
21									
22		Lempung (coklat, abu-abu)	9		8	12	15	27	
23									
24					7	10	13	23	
25									
26					7	11	12	23	
27									
28					9	12	17	29	
29									
30					9	12	19	31	

SPT Value



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

Laboratorium Mekanika Tanah
UNIVERSITAS ATMA JAYA YOGYAKARTA
Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 6	10,00	51,47	2,32	1,53	1,01	0,18	10,44
	20,00	50,40	2,52	1,63	1,08	0,11	15,50

Laboratorium Mekanika Tanah
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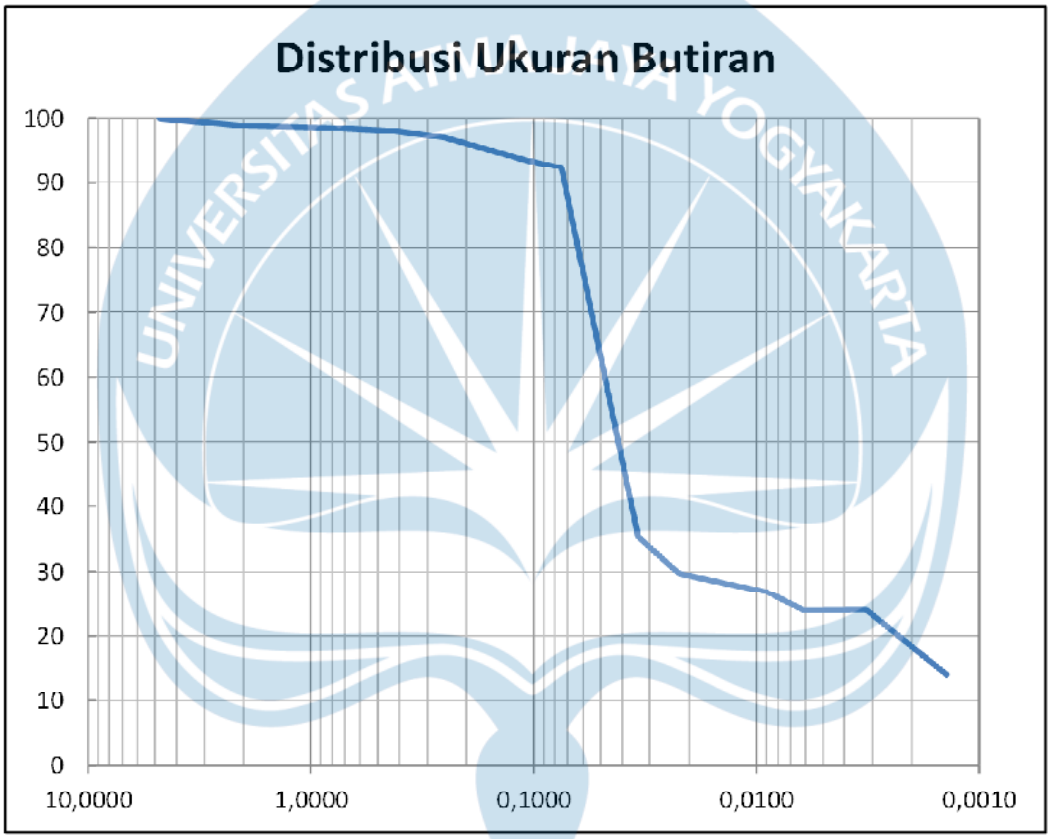
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH3
Kedalaman: 10



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,00	100,00	100,00
10	2,000	1,06	98,94	98,94
20	0,850	0,32	98,62	98,62
40	0,425	0,49	98,13	98,13
60	0,250	1,00	97,13	97,13
140	0,106	3,61	93,52	93,52
200	0,075	1,02	92,50	92,50
Pan		92,50		

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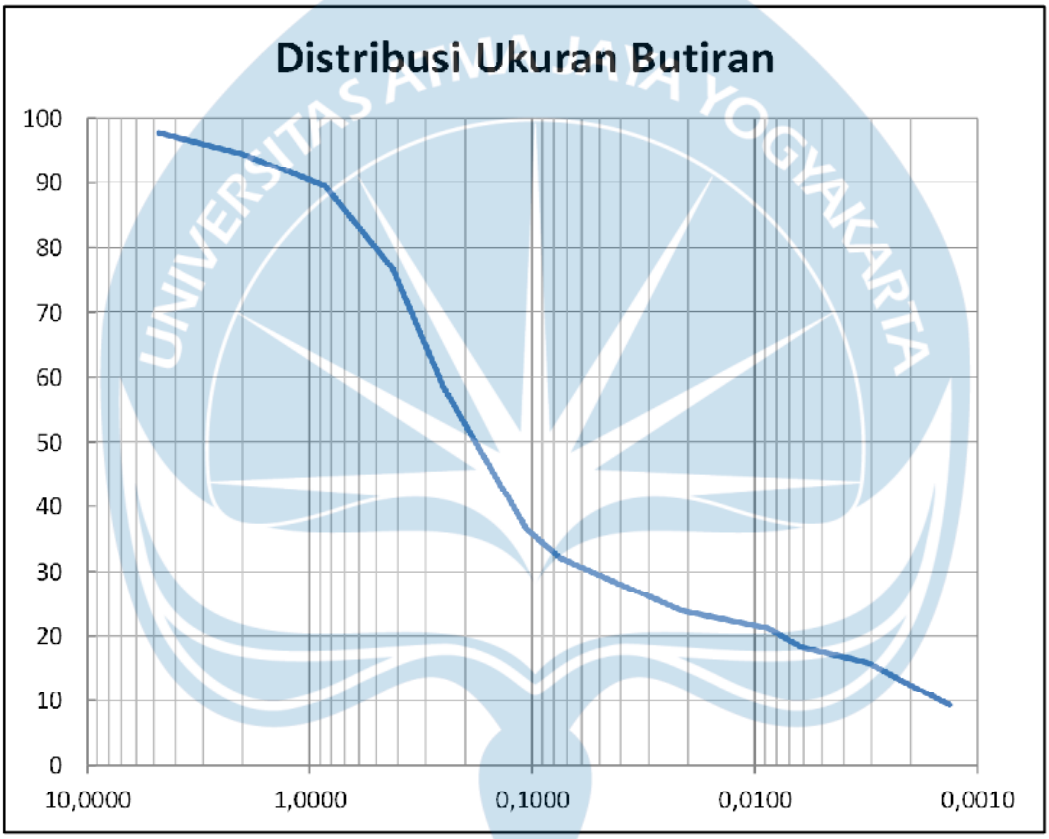
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH3
Kedalaman: 20



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	2,20	97,80	97,80
10	2,000	3,27	94,53	94,53
20	0,850	5,08	89,45	89,45
40	0,425	12,62	76,83	76,83
60	0,250	18,38	58,45	58,45
140	0,106	21,92	36,53	36,53
200	0,075	4,44	32,09	32,09
Pan		32,09		

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FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-7

BOR LOG

CLIENT:

PROJECT TITLE :

PROJECT CONTRACT NUMBER:

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : -0,50 m from road level

HOLE SIZE : 7.295cm

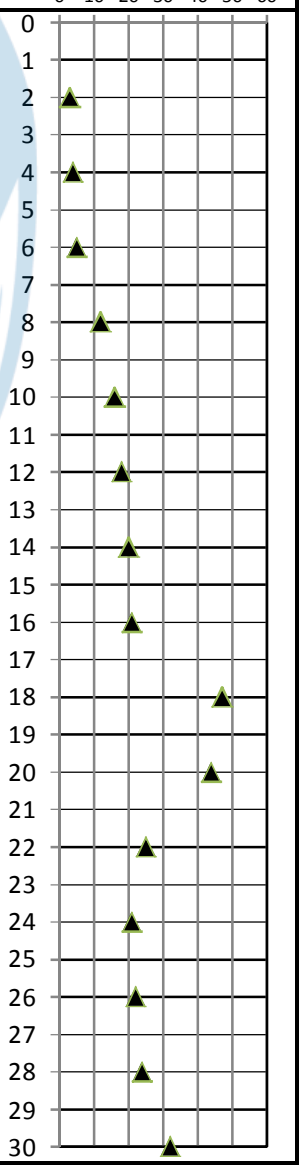
GROUND WATER LEVEL : - 6,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	NV	Water Level Elevation (m)
1									
2		Lanau (coklat, abu-abu)	4		1	1	2	3	
3									
4					1	2	2	4	
5		Pasir berlempung (coklat, abu-abu)	2	I					
6					2	2	3	5	-6.00
7		Lanau pasir berlempung (hitam)	6						
8					3	5	7	12	
9									
10				II	4	7	9	16	
11									
12					5	8	10	18	
13		Lanau (hitam, abu-abu)	4						
14					5	8	12	20	
15									
16					5	8	13	21	
17		Pasir berlempung (coklat, hitam)	5						
18					10	16	31	47	
19									
20					12	15	29	44	
21									
22		Lempung (coklat, hitam)	9		8	10	15	25	
23									
24					6	8	13	21	
25									
26					6	9	13	22	
27									
28					7	9	15	24	
29									
30					8	11	21	32	

SPT Value



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

Laboratorium Mekanika Tanah
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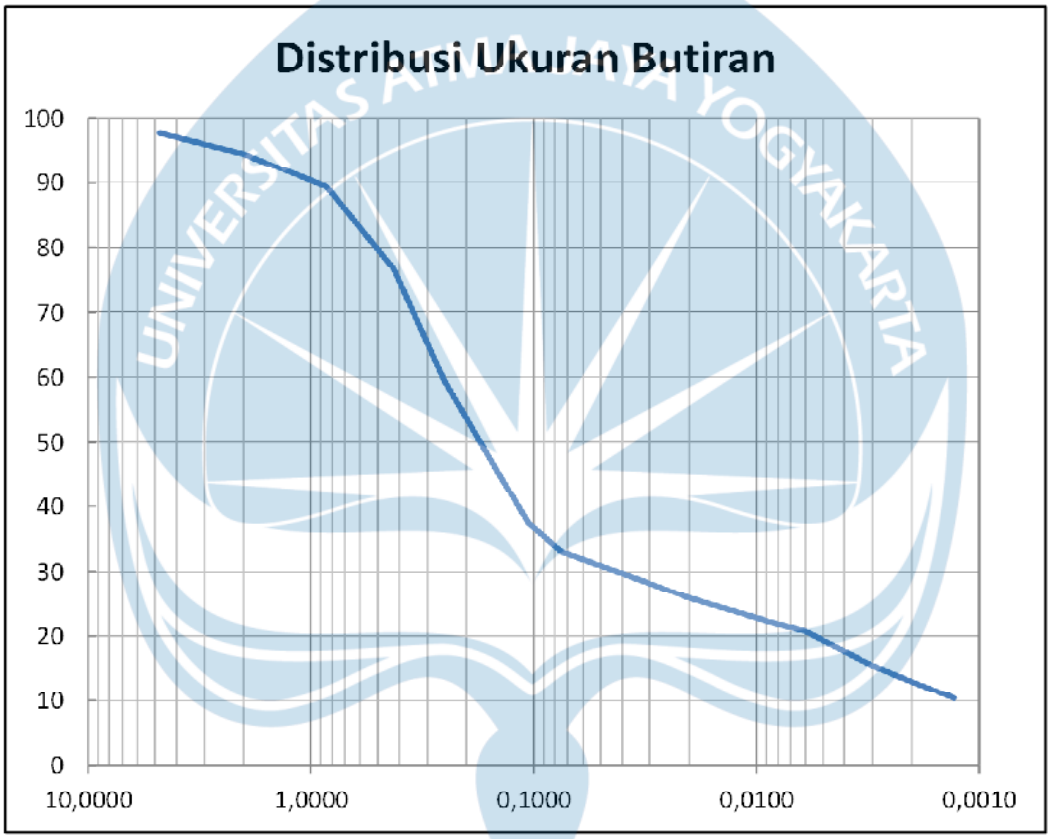
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 4
Kedalaman: 5



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	2,2	97,8	98
10	2,000	3,3	94,5	95
20	0,850	5,1	89,43	89
40	0,425	12,6	76,81	77
60	0,250	17,4	59,43	59
140	0,106	21,9	37,51	38
200	0,075	4,4	33,07	33
Pan		33,07		

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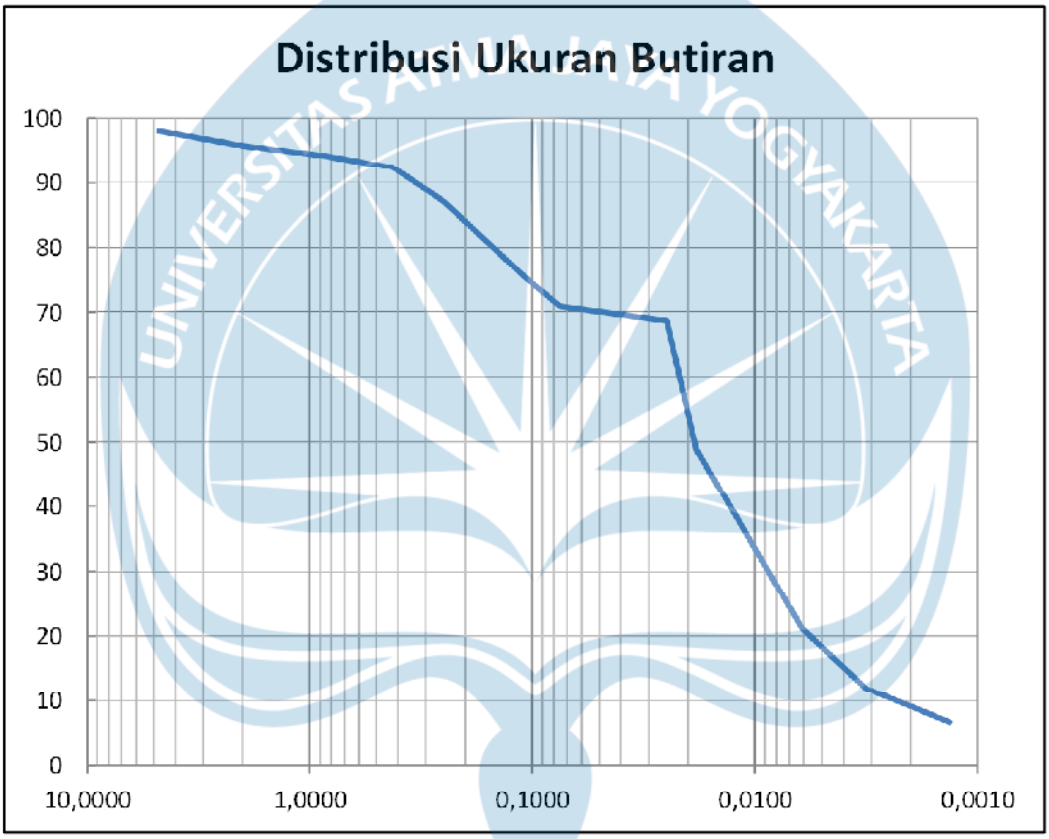
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 4
Kedalaman: 10



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	1,9	98,1	98
10	2,000	2,3	95,8	96
20	0,850	1,6	94,2	94
40	0,425	1,8	92,5	92
60	0,250	5,4	87,1	87
140	0,106	11,9	75,25	75
200	0,075	4,4	70,8	71
Pan		70,8		

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REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 7	5,00	38,92	2,58	1,56	1,12	0,13	11,68
	10,00	54,26	2,53	1,58	1,02	0,11	11,84

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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 1
ELEVATION : ±0,00 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	4	6	0,20	4	4	10,20					
0,40	8	10	0,20	4	8	10,40					
0,60	11	14	0,30	6	14	10,60					
0,80	9	12	0,30	6	20	10,80					
1,00	11	14	0,30	6	26	11,00					
1,20	18	21	0,30	6	32	11,20					
1,40	22	25	0,30	6	38	11,40					
1,60	16	19	0,30	6	44	11,60					
1,80	14	17	0,30	6	50	11,80					
2,00	19	22	0,30	6	56	12,00					
2,20	24	27	0,30	6	62	12,20					
2,40	22	25	0,30	6	68	12,40					
2,60	36	39	0,30	6	74	12,60					
2,80	61	64	0,30	6	80	12,80					
3,00	23	26	0,30	6	86	13,00					
3,20	32	35	0,30	6	92	13,20					
3,40	39	42	0,30	6	98	13,40					
3,60	121	124	0,30	6	104	13,60					
3,80	126	129	0,30	6	110	13,80					
4,00	110	113	0,30	6	116	14,00					
4,20	101	104	0,30	6	122	14,20					
4,40	62	65	0,30	6	128	14,40					
4,60	36	39	0,30	6	134	14,60					
4,80	34	37	0,30	6	140	14,80					
5,00	30	33	0,30	6	146	15,00					
5,20	23	26	0,30	6	152	15,20					
5,40	18	21	0,30	6	158	15,40					
5,60	14	17	0,30	6	164	15,60					
5,80	25	28	0,30	6	170	15,80					
6,00	13	16	0,30	6	176	16,00					
6,20	16	19	0,30	6	182	16,20					
6,40	24	27	0,30	6	188	16,40					
6,60	72	75	0,30	6	194	16,60					
6,80	59	62	0,30	6	200	16,80					
7,00	84	87	0,30	6	206	17,00					
7,20	126	129	0,30	6	212	17,20					
7,40	164	167	0,30	6	218	17,40					
7,60	198	201	0,30	6	224	17,60					
7,80	246	250	0,40	8	232	17,80					
8,00	250	250	0,00	0	232	18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

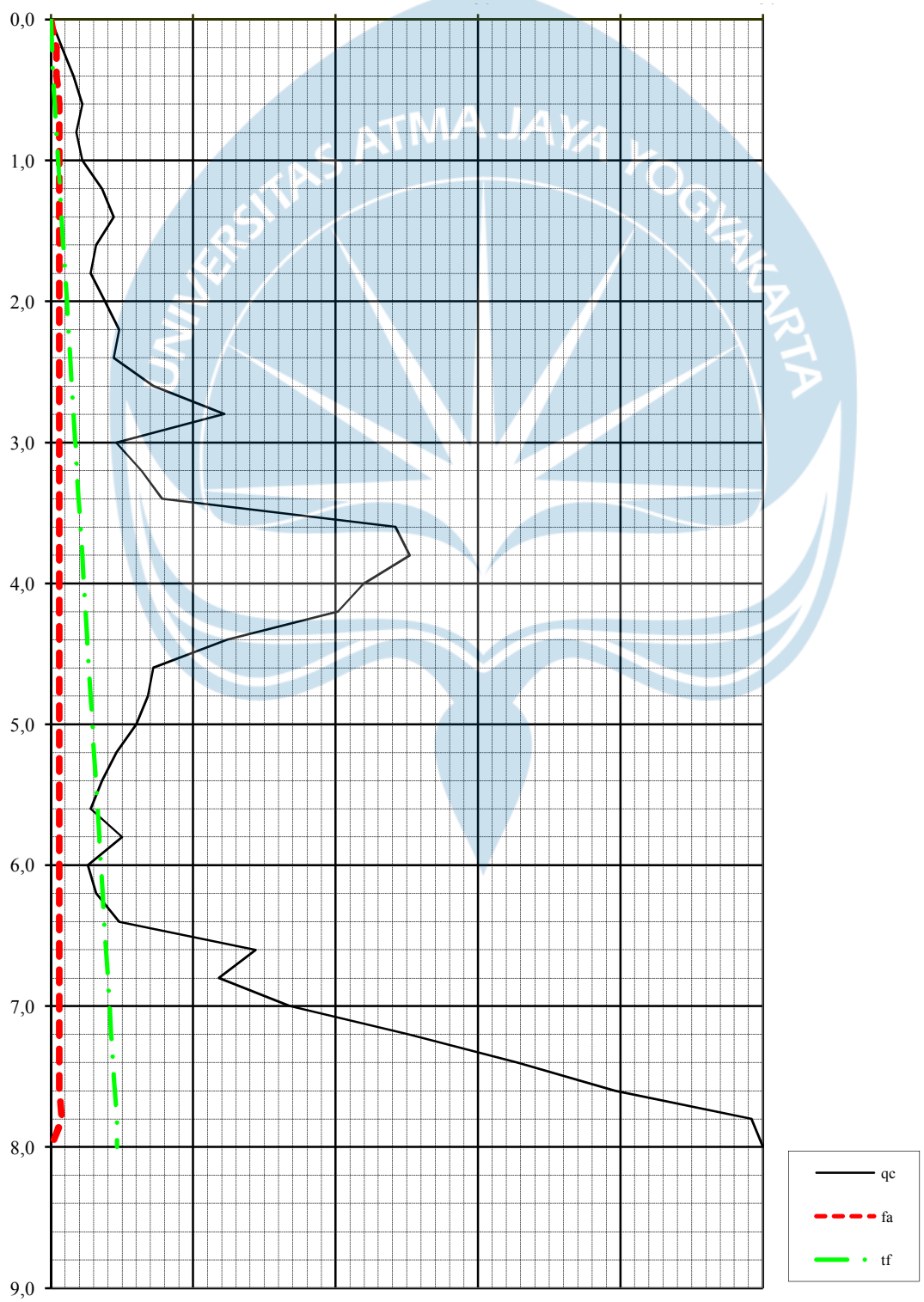
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 2
ELEVATION : +0,40 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	5	7	0,20	4	4	10,20					
0,40	13	16	0,30	6	10	10,40					
0,60	21	24	0,30	6	16	10,60					
0,80	15	18	0,30	6	22	10,80					
1,00	11	14	0,30	6	28	11,00					
1,20	18	21	0,30	6	34	11,20					
1,40	40	43	0,30	6	40	11,40					
1,60	34	37	0,30	6	46	11,60					
1,80	26	29	0,30	6	52	11,80					
2,00	31	34	0,30	6	58	12,00					
2,20	30	33	0,30	6	64	12,20					
2,40	44	47	0,30	6	70	12,40					
2,60	39	42	0,30	6	76	12,60					
2,80	86	89	0,30	6	82	12,80					
3,00	28	31	0,30	6	88	13,00					
3,20	51	54	0,30	6	94	13,20					
3,40	36	39	0,30	6	100	13,40					
3,60	32	35	0,30	6	106	13,60					
3,80	58	61	0,30	6	112	13,80					
4,00	90	93	0,30	6	118	14,00					
4,20	87	90	0,30	6	124	14,20					
4,40	109	112	0,30	6	130	14,40					
4,60	134	137	0,30	6	136	14,60					
4,80	143	146	0,30	6	142	14,80					
5,00	175	178	0,30	6	148	15,00					
5,20	189	192	0,30	6	154	15,20					
5,40	246	250	0,40	8	162	15,40					
5,60	250	250	0,00	0	162	15,60					
5,80						15,80					
6,00						16,00					
6,20						16,20					
6,40						16,40					
6,60						16,60					
6,80						16,80					
7,00						17,00					
7,20						17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

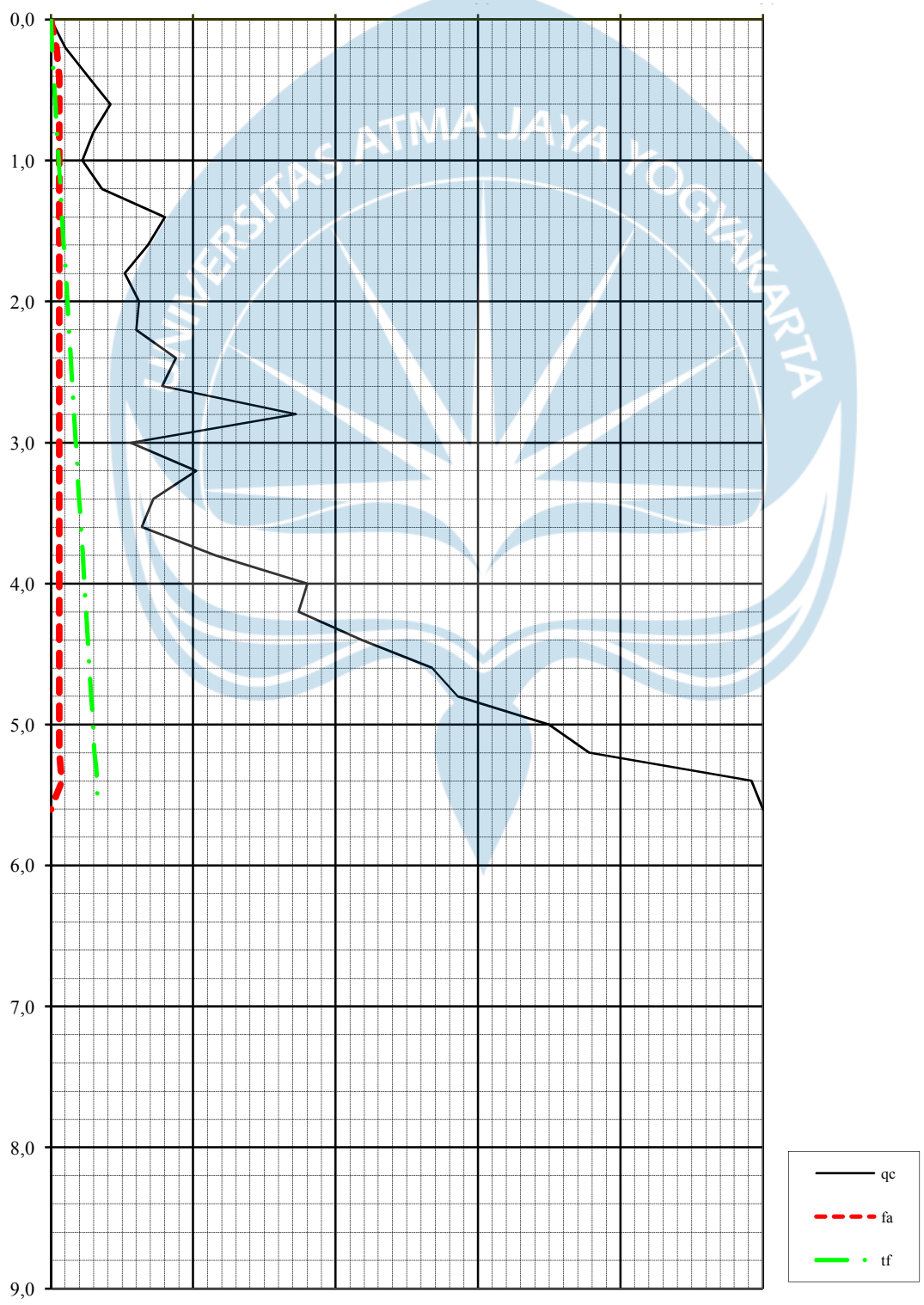
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : +0,40 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 3
ELEVATION : +0,40 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	7	9	0,20	4	4	10,20					
0,40	12	15	0,30	6	10	10,40					
0,60	28	31	0,30	6	16	10,60					
0,80	11	15	0,40	8	24	10,80					
1,00	9	12	0,30	6	30	11,00					
1,20	16	19	0,30	6	36	11,20					
1,40	20	23	0,30	6	42	11,40					
1,60	12	15	0,30	6	48	11,60					
1,80	14	17	0,30	6	54	11,80					
2,00	13	16	0,30	6	60	12,00					
2,20	21	24	0,30	6	66	12,20					
2,40	19	22	0,30	6	72	12,40					
2,60	12	15	0,30	6	78	12,60					
2,80	18	21	0,30	6	84	12,80					
3,00	23	26	0,30	6	90	13,00					
3,20	31	34	0,30	6	96	13,20					
3,40	29	32	0,30	6	102	13,40					
3,60	11	14	0,30	6	108	13,60					
3,80	54	57	0,30	6	114	13,80					
4,00	113	116	0,30	6	120	14,00					
4,20	149	152	0,30	6	126	14,20					
4,40	126	129	0,30	6	132	14,40					
4,60	89	92	0,30	6	138	14,60					
4,80	44	47	0,30	6	144	14,80					
5,00	56	59	0,30	6	150	15,00					
5,20	32	35	0,30	6	156	15,20					
5,40	34	37	0,30	6	162	15,40					
5,60	38	41	0,30	6	168	15,60					
5,80	51	54	0,30	6	174	15,80					
6,00	18	21	0,30	6	180	16,00					
6,20	24	27	0,30	6	186	16,20					
6,40	23	26	0,30	6	192	16,40					
6,60	26	29	0,30	6	198	16,60					
6,80	119	122	0,30	6	204	16,80					
7,00	86	89	0,30	6	210	17,00					
7,20	56	59	0,30	6	216	17,20					
7,40	91	94	0,30	6	222	17,40					
7,60	143	146	0,30	6	228	17,60					
7,80	189	192	0,30	6	234	17,80					
8,00	246	250	0,40	8	242	18,00					
8,20	250	250	0,00	0	242	18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

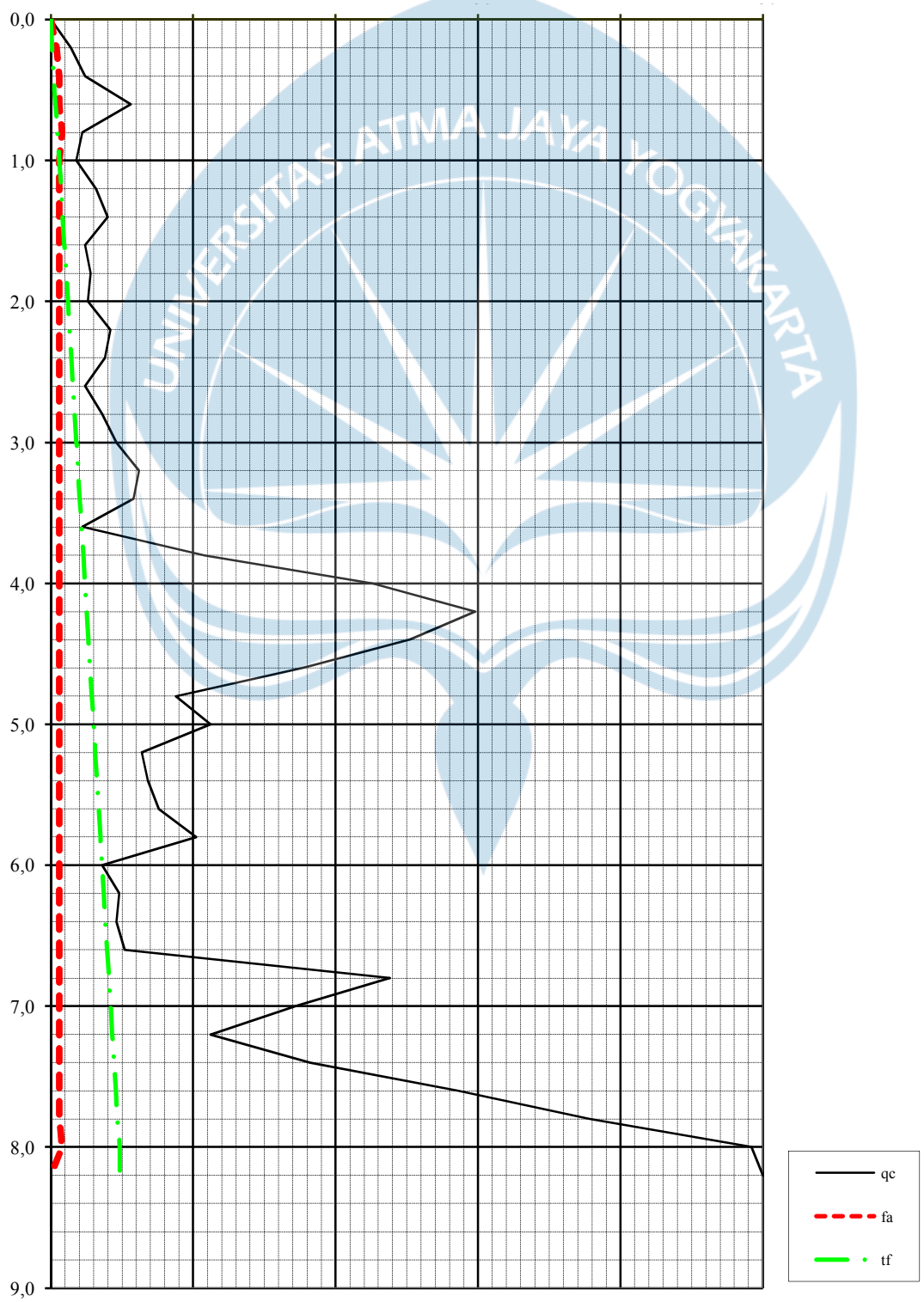
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 3
Date :

Elevation : +0,40 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 4
ELEVATION : +0,40 m dari muka jalan
G.WATER DEPTH : -6,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	6	8	0,20	4	4	10,20					
0,40	13	16	0,30	6	10	10,40					
0,60	17	20	0,30	6	16	10,60					
0,80	21	24	0,30	6	22	10,80					
1,00	14	17	0,30	6	28	11,00					
1,20	12	15	0,30	6	34	11,20					
1,40	14	17	0,30	6	40	11,40					
1,60	16	19	0,30	6	46	11,60					
1,80	23	26	0,30	6	52	11,80					
2,00	28	31	0,30	6	58	12,00					
2,20	25	28	0,30	6	64	12,20					
2,40	41	44	0,30	6	70	12,40					
2,60	34	37	0,30	6	76	12,60					
2,80	29	32	0,30	6	82	12,80					
3,00	76	79	0,30	6	88	13,00					
3,20	87	90	0,30	6	94	13,20					
3,40	61	64	0,30	6	100	13,40					
3,60	19	22	0,30	6	106	13,60					
3,80	36	39	0,30	6	112	13,80					
4,00	95	98	0,30	6	118	14,00					
4,20	71	74	0,30	6	124	14,20					
4,40	93	96	0,30	6	130	14,40					
4,60	116	119	0,30	6	136	14,60					
4,80	84	87	0,30	6	142	14,80					
5,00	45	48	0,30	6	148	15,00					
5,20	37	40	0,30	6	154	15,20					
5,40	59	62	0,30	6	160	15,40					
5,60	50	53	0,30	6	166	15,60					
5,80	44	47	0,30	6	172	15,80					
6,00	20	23	0,30	6	178	16,00					
6,20	24	27	0,30	6	184	16,20					
6,40	36	39	0,30	6	190	16,40					
6,60	38	41	0,30	6	196	16,60					
6,80	91	94	0,30	6	202	16,80					
7,00	116	119	0,30	6	208	17,00					
7,20	163	166	0,30	6	214	17,20					
7,40	198	201	0,30	6	220	17,40					
7,60	246	250	0,40	8	228	17,60					
7,80	250	250	0,00	0	228	17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

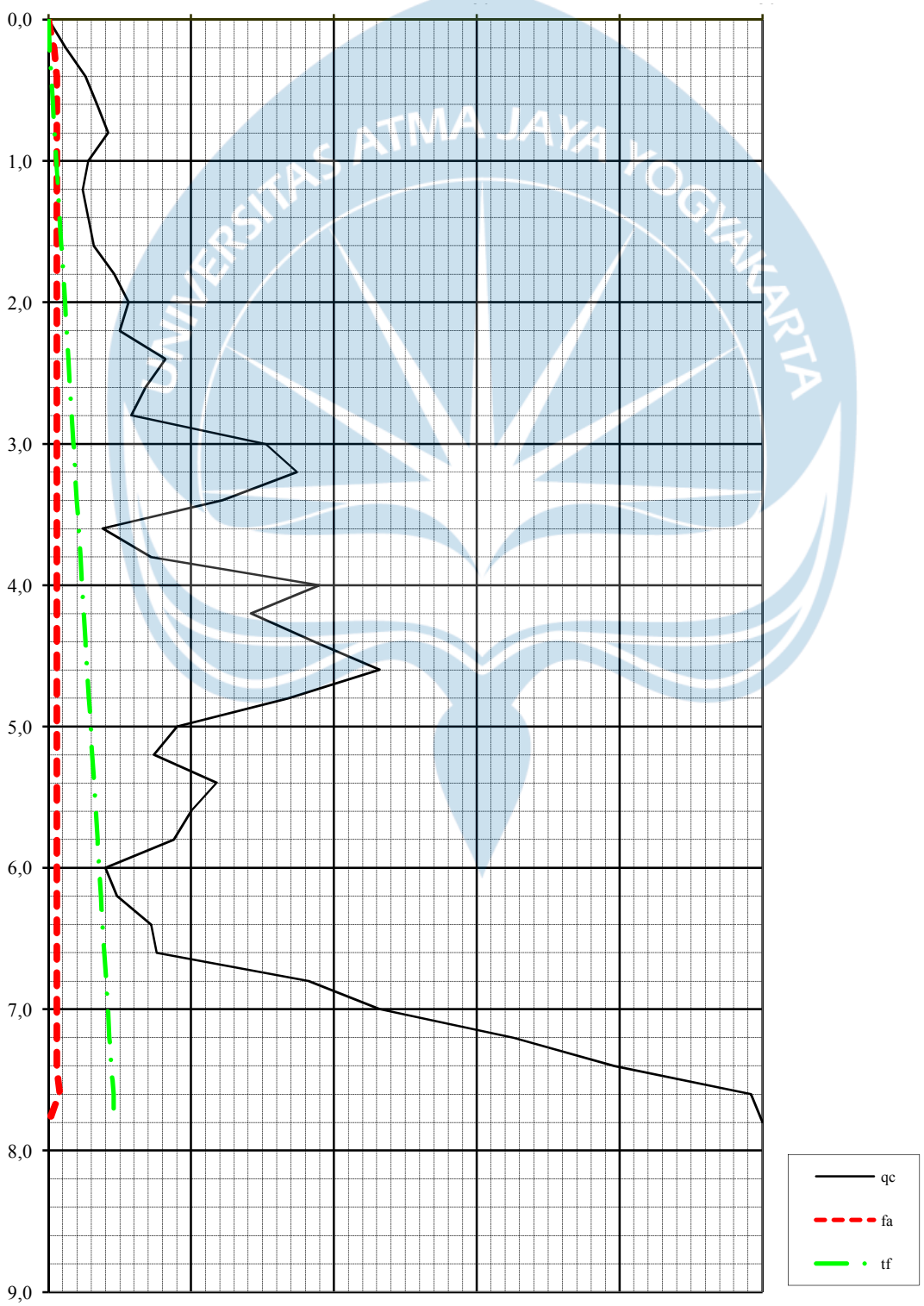
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 4
Date :

Elevation : +0,40 m dari muka jalan
G.Water Depth : -6,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

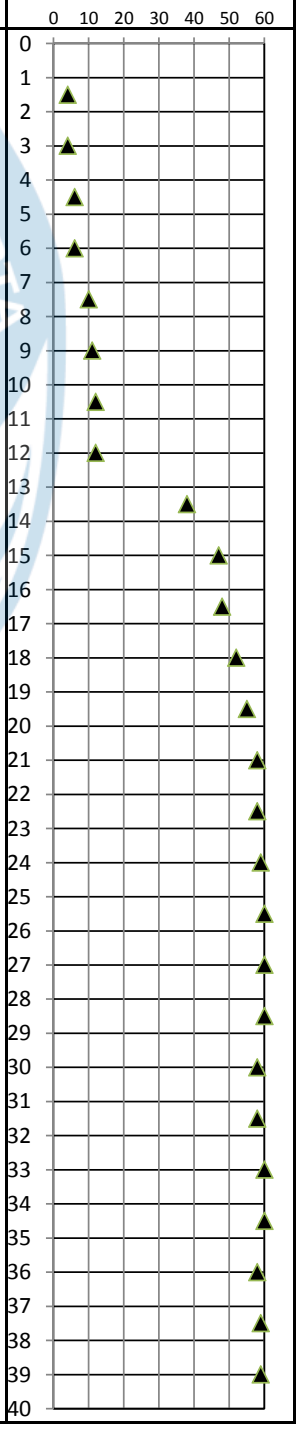
BH-8

BOR LOG

CLIENT:
PROJECT CONTRACT NUMBER:
DATE STARTED:
DATE COMPLETED :
DRILLING CONTRACTOR:
DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE
LOGGED BY:
CHECKED BY:

PROJECT TITLE :
PROJECT LOCATION :
GROUND ELEVATION : - 0,50 m from road level
HOLE SIZE : 7.295cm
GROUND WATER LEVEL : - 6,00 m from ground level
WEATHER CONDITION : FINE
ESTIMATED SEASONAL HIGH : -

Depth (m)	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	Nv	Water Level Elevation (m)
1	Lanau berpasir (coklat)	2						
2			I	1	2	2	4	
3	Lanau sedikit lempung (coklat, abu-abu)	3		1	2	2	4	
4								
5				2	3	3	6	
6	Lanau sedikit lempung (coklat)	3		2	3	3	6	6.00
7			II					
8				3	5	5	10	
9	Lempung lanau berpasir (coklat, abu-abu)	5		3	5	6	11	
10								
11				4	6	6	12	
12				4	6	6	12	
13								
14	Lempung lanau berpasir (coklat, hitam)	5		7	17	21	38	
15			III	9	19	28	47	
16								
17				9	19	29	48	
18				12	19	33	52	
19	Pasir (coklat, hitam)	7						
20			IV	16	22	33	55	
21				17	24	34	58	
22								
23				17	26	32	58	
24				17	25	34	59	
25			V					
26	Lanau sedikit lempung (coklat, abu-abu)	7		19	25	35	60	
27				19	24	36	60	
28								
29				19	26	34	60	
30			VI	19	22	36	58	
31								
32				19	22	36	58	
33	Lanau sedikit lempung (coklat)	8		18	24	36	60	
34								
35				18	25	35	60	
36				17	22	36	58	
37								
38				17	22	37	59	
39				18	24	35	59	
40								



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

Laboratorium Mekanika Tanah
UNIVERSITAS ATMA JAYA YOGYAKARTA
Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ˚
BH 8	1,50	57,21	2,46	1,41	0,90	0,02	15,55
	7,00	60,49	2,45	1,59	0,99	0,11	7,72
	10,00	51,03	2,46	1,63	1,08	0,18	13,05
	20,00	41,11	2,63	1,96	1,39	0,02	26,02
	25,00	22,67	2,63	1,76	1,44	0,01	25,85
	30,00	42,76	2,42	1,64	1,15	0,10	23,10

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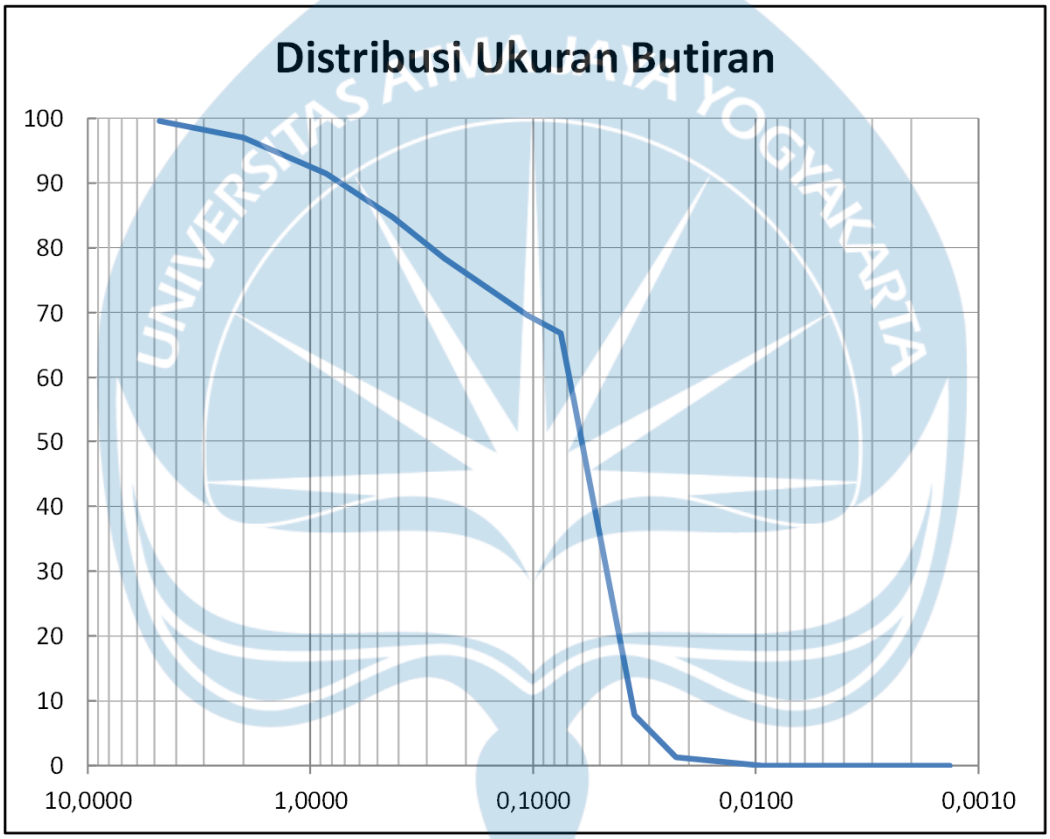
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 1,5 m



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,4	99,6	99,60
10	2,000	2,6	97,0	97,01
20	0,850	5,5	91,51	91,51
40	0,425	6,8	84,72	84,72
60	0,250	6,3	78,38	78,38
140	0,106	8,8	69,62	69,62
200	0,075	2,8	66,86	66,86
Pan		66,86		

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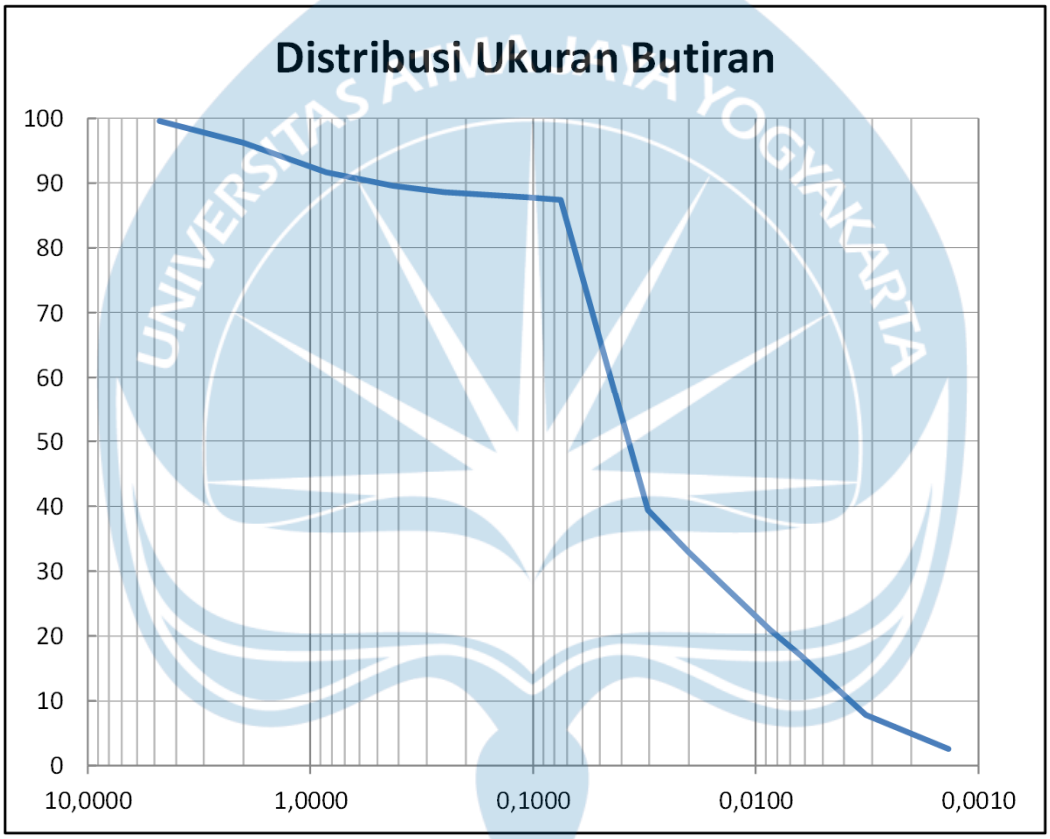
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 7 m



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,4	99,6	99,59
10	2,000	3,4	96,2	96,20
20	0,850	4,6	91,62	91,62
40	0,425	2,0	89,61	89,61
60	0,250	1,0	88,6	88,60
140	0,106	0,8	87,76	87,76
200	0,075	0,4	87,4	87,40
Pan		87,40		

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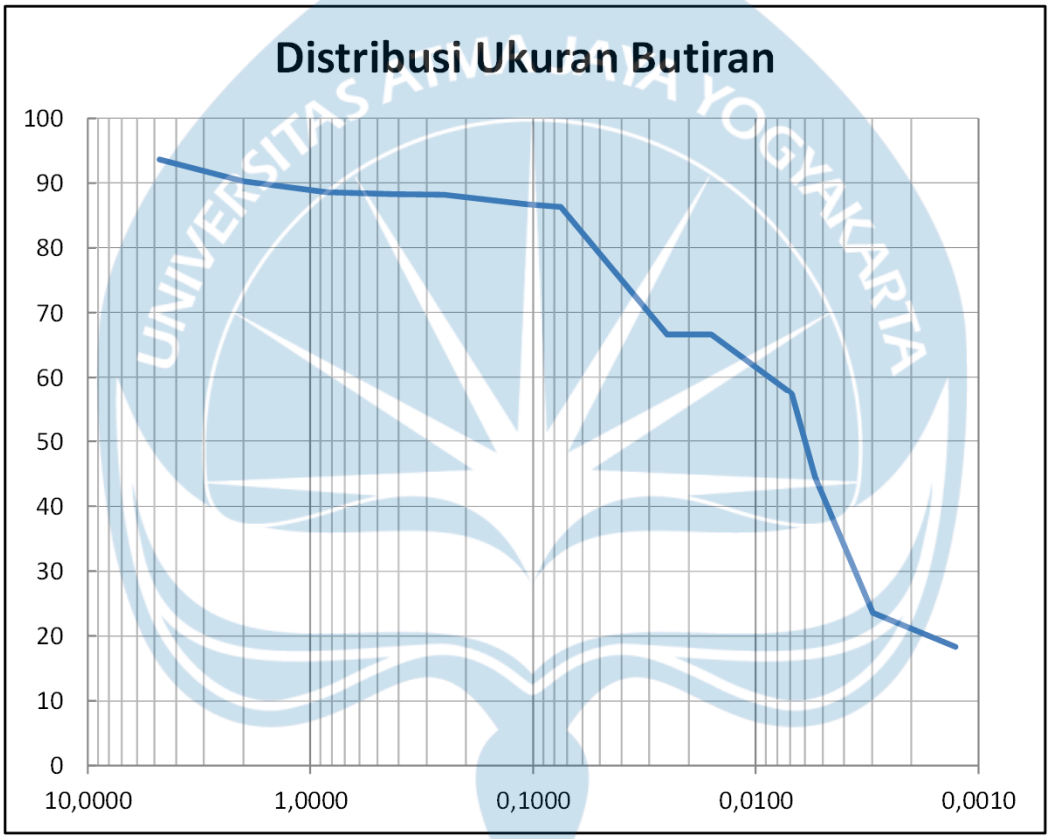
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 10 m



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	6,3	93,7	93,68
10	2,000	3,4	90,2	90,24
20	0,850	1,6	88,64	88,64
40	0,425	0,3	88,31	88,31
60	0,250	0,1	88,22	88,22
140	0,106	1,5	86,76	86,76
200	0,075	0,4	86,32	86,32
Pan		86,32		

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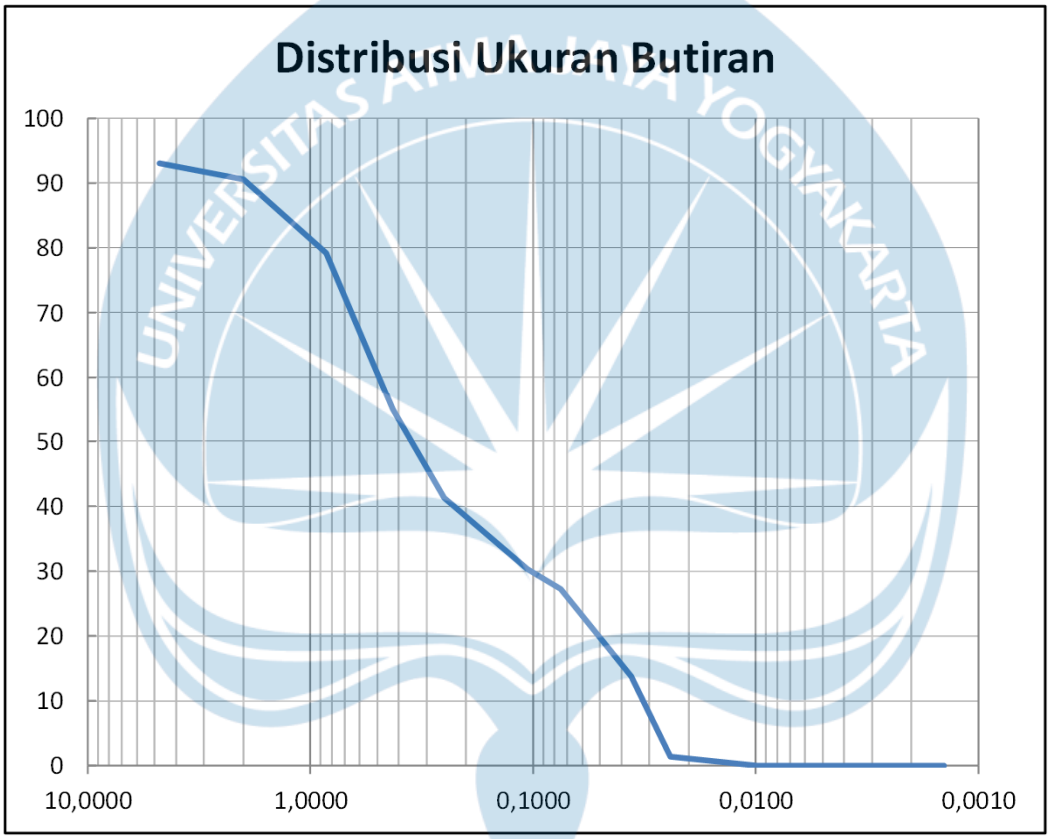
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 20 m



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	7,0	93,0	93,04
10	2,000	2,5	90,5	90,53
20	0,850	11,4	79,16	79,16
40	0,425	24,2	54,92	54,92
60	0,250	13,6	41,29	41,29
140	0,106	11,0	30,28	30,28
200	0,075	3,0	27,27	27,27
Pan		27,27		

Laboratorium Mekanika Tanah
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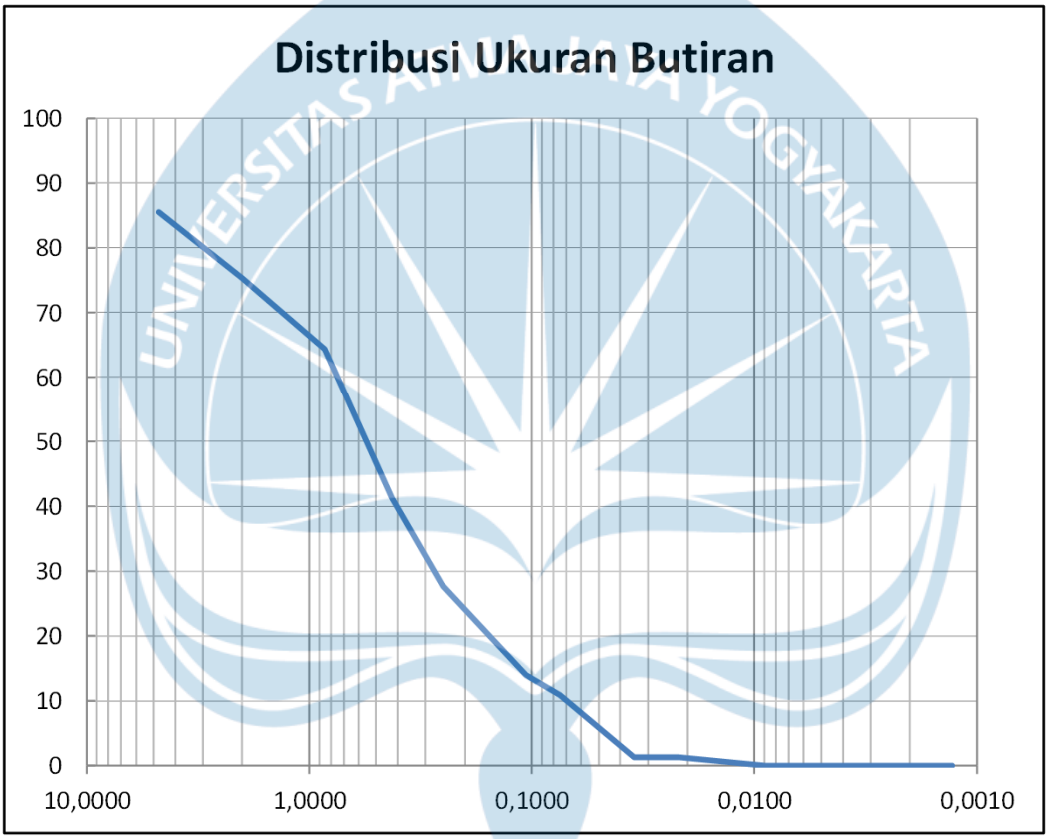
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 25 m



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	14,5	85,5	85,51
10	2,000	10,2	75,4	75,35
20	0,850	11,1	64,3	64,30
40	0,425	23,0	41,3	41,31
60	0,250	13,7	27,6	27,62
140	0,106	13,7	13,92	13,92
200	0,075	3,0	10,9	10,91
Pan		10,9		

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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 1	**WEATHER**	: Cerah
ELEVATION	: ±0,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	3	5	0.20	4	4	10.20	18	21	0.30	6	280
0.40	4	6	0.20	4	8	10.40	26	29	0.30	6	286
0.60	7	9	0.20	4	12	10.60	24	27	0.30	6	292
0.80	10	12	0.20	4	16	10.80	20	23	0.30	6	298
1.00	11	14	0.30	6	22	11.00	28	31	0.30	6	304
1.20	15	18	0.30	6	28	11.20	32	35	0.30	6	310
1.40	20	23	0.30	6	34	11.40	41	44	0.30	6	316
1.60	16	19	0.30	6	40	11.60	36	39	0.30	6	322
1.80	23	26	0.30	6	46	11.80	29	32	0.30	6	328
2.00	18	21	0.30	6	52	12.00	18	21	0.30	6	334
2.20	17	20	0.30	6	58	12.20	24	27	0.30	6	340
2.40	13	16	0.30	6	64	12.40	16	19	0.30	6	346
2.60	11	14	0.30	6	70	12.60	13	16	0.30	6	352
2.80	10	13	0.30	6	76	12.80	28	31	0.30	6	358
3.00	9	11	0.20	4	80	13.00	22	25	0.30	6	364
3.20	11	14	0.30	6	86	13.20	16	19	0.30	6	370
3.40	8	10	0.20	4	90	13.40	11	14	0.30	6	376
3.60	7	9	0.20	4	94	13.60	7	9	0.20	4	380
3.80	9	11	0.20	4	98	13.80	6	8	0.20	4	384
4.00	6	8	0.20	4	102	14.00	18	21	0.30	6	390
4.20	14	17	0.30	6	108	14.20	25	28	0.30	6	396
4.40	20	23	0.30	6	114	14.40	36	39	0.30	6	402
4.60	38	41	0.30	6	120	14.60	11	14	0.30	6	408
4.80	29	32	0.30	6	126	14.80	6	8	0.20	4	412
5.00	21	24	0.30	6	132	15.00	1	2	0.10	2	414
5.20	12	15	0.30	6	138	15.20	1	2	0.10	2	416
5.40	8	10	0.20	4	142	15.40	1	2	0.10	2	418
5.60	13	16	0.30	6	148	15.60	1	2	0.10	2	420
5.80	19	22	0.30	6	154	15.80	1	2	0.10	2	422
6.00	17	20	0.30	6	160	16.00	1	2	0.10	2	424
6.20	12	15	0.30	6	166	16.20	1	2	0.10	2	426
6.40	14	17	0.30	6	172	16.40	1	2	0.10	2	428
6.60	21	24	0.30	6	178	16.60	1	2	0.10	2	430
6.80	22	25	0.30	6	184	16.80	1	2	0.10	2	432
7.00	18	21	0.30	6	190	17.00	1	2	0.10	2	434
7.20	16	19	0.30	6	196	17.20	1	2	0.10	2	436
7.40	11	14	0.30	6	202	17.40	1	2	0.10	2	438
7.60	15	18	0.30	6	208	17.60	11	14	0.30	6	444
7.80	14	17	0.30	6	214	17.80	26	29	0.30	6	450
8.00	8	10	0.20	4	218	18.00	39	42	0.30	6	456
8.20	9	11	0.20	4	222	18.20	9	12	0.30	6	462
8.40	13	16	0.30	6	228	18.40	1	2	0.10	2	464
8.60	18	21	0.30	6	234	18.60	1	2	0.10	2	466
8.80	24	27	0.30	6	240	18.80	1	2	0.10	2	468
9.00	19	22	0.30	6	246	19.00	1	2	0.10	2	470
9.20	12	15	0.30	6	252	19.20	1	2	0.10	2	472
9.40	14	17	0.30	6	258	19.40	19	22	0.30	6	478
9.60	9	11	0.20	4	262	19.60	24	27	0.30	6	484
9.80	13	16	0.30	6	268	19.80	16	19	0.30	6	490
10.00	15	18	0.30	6	274	20.00	9	11	0.20	4	494

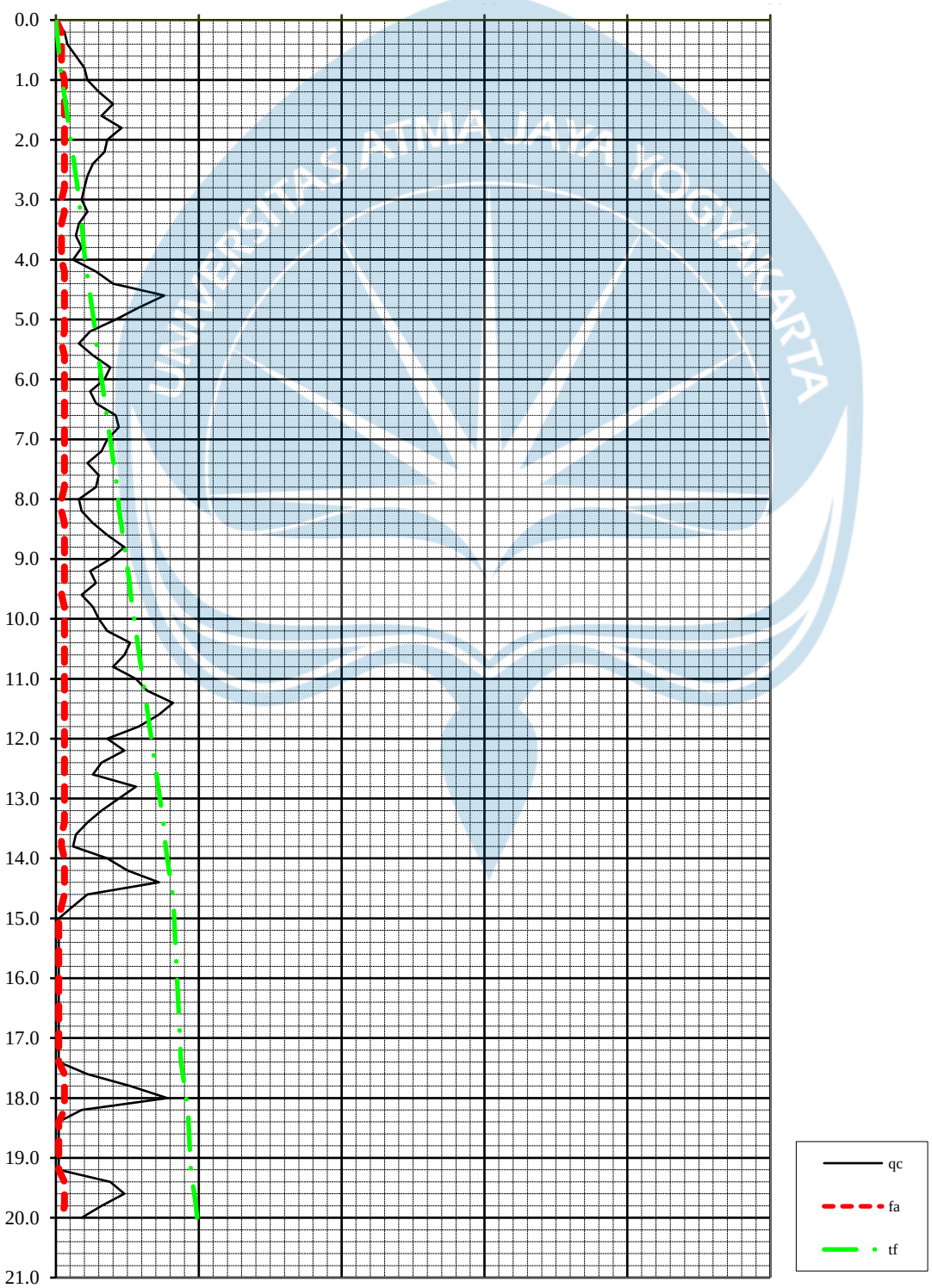
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 2	**WEATHER**	: Cerah
ELEVATION	: ±0,00 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	4	6	0.20	4	4	10.20	1	2	0.10	2	246
0.40	5	7	0.20	4	8	10.40	1	2	0.10	2	248
0.60	8	10	0.20	4	12	10.60	1	2	0.10	2	250
0.80	12	15	0.30	6	18	10.80	1	2	0.10	2	252
1.00	10	13	0.30	6	24	11.00	1	2	0.10	2	254
1.20	11	14	0.30	6	30	11.20	1	2	0.10	2	256
1.40	15	18	0.30	6	36	11.40	11	14	0.30	6	262
1.60	25	28	0.30	6	42	11.60	13	16	0.30	6	268
1.80	28	31	0.30	6	48	11.80	22	25	0.30	6	274
2.00	19	22	0.30	6	54	12.00	18	21	0.30	6	280
2.20	12	15	0.30	6	60	12.20	12	15	0.30	6	286
2.40	8	10	0.20	4	64	12.40	8	10	0.20	4	290
2.60	13	16	0.30	6	70	12.60	16	19	0.30	6	296
2.80	14	17	0.30	6	76	12.80	15	18	0.30	6	302
3.00	10	13	0.30	6	82	13.00	7	9	0.20	4	306
3.20	26	29	0.30	6	88	13.20	1	2	0.10	2	308
3.40	38	41	0.30	6	94	13.40	1	2	0.10	2	310
3.60	45	48	0.30	6	100	13.60	1	2	0.10	2	312
3.80	34	37	0.30	6	106	13.80	1	2	0.10	2	314
4.00	27	30	0.30	6	112	14.00	1	2	0.10	2	316
4.20	22	25	0.30	6	118	14.20	1	2	0.10	2	318
4.40	16	19	0.30	6	124	14.40	1	2	0.10	2	320
4.60	28	31	0.30	6	130	14.60	1	2	0.10	2	322
4.80	19	22	0.30	6	136	14.80	1	2	0.10	2	324
5.00	15	18	0.30	6	142	15.00	1	2	0.10	2	326
5.20	11	14	0.30	6	148	15.20	1	2	0.10	2	328
5.40	6	8	0.20	4	152	15.40	1	2	0.10	2	330
5.60	9	11	0.20	4	156	15.60	1	2	0.10	2	332
5.80	15	18	0.30	6	162	15.80	1	2	0.10	2	334
6.00	19	22	0.30	6	168	16.00	1	2	0.10	2	336
6.20	26	29	0.30	6	174	16.20	1	2	0.10	2	338
6.40	28	31	0.30	6	180	16.40	1	2	0.10	2	340
6.60	19	22	0.30	6	186	16.60	1	2	0.10	2	342
6.80	20	23	0.30	6	192	16.80	1	2	0.10	2	344
7.00	14	17	0.30	6	198	17.00	1	2	0.10	2	346
7.20	12	15	0.30	6	204	17.20	1	2	0.10	2	348
7.40	18	21	0.30	6	210	17.40	1	2	0.10	2	350
7.60	13	16	0.30	6	216	17.60	1	2	0.10	2	352
7.80	9	11	0.20	4	220	17.80	1	2	0.10	2	354
8.00	5	7	0.20	4	224	18.00	1	2	0.10	2	356
8.20	1	2	0.10	2	226	18.20	1	2	0.10	2	358
8.40	1	2	0.10	2	228	18.40	1	2	0.10	2	360
8.60	1	2	0.10	2	230	18.60	1	2	0.10	2	362
8.80	1	2	0.10	2	232	18.80	1	2	0.10	2	364
9.00	1	2	0.10	2	234	19.00	1	2	0.10	2	366
9.20	1	2	0.10	2	236	19.20	1	2	0.10	2	368
9.40	1	2	0.10	2	238	19.40	1	2	0.10	2	370
9.60	1	2	0.10	2	240	19.60	1	2	0.10	2	372
9.80	1	2	0.10	2	242	19.80	1	2	0.10	2	374
10.00	1	2	0.10	2	244	20.00	1	2	0.10	2	376

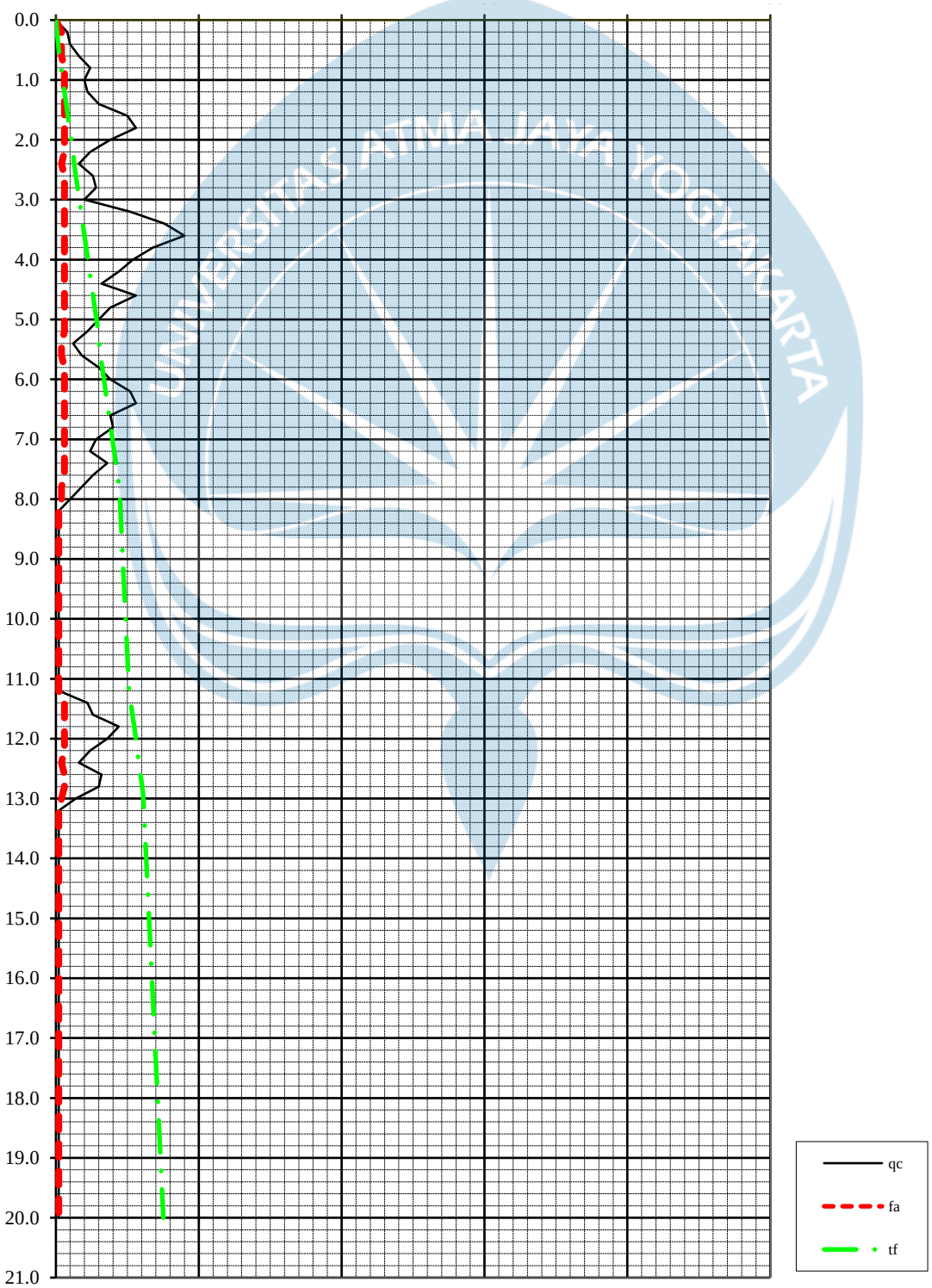
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : ±0,00 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-9

BOR LOG

CLIENT:

PROJECT TITLE :

PROJECT CONTRACT NUMBER:

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : ± 0,00 m from road level

HOLE SIZE : 7.295cm

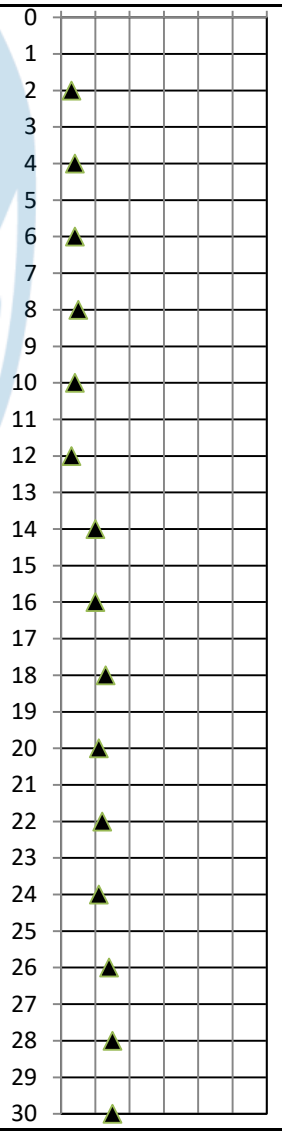
GROUND WATER LEVEL : - 3,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	Nv	Water Level Elevation (m)
1									
2					1	1	2	3	
3		Lanau berpasir (abu-abu)	6						- 3.00
4					1	2	2	4	
5									
6					2	2	2	4	
7									
8					2	2	3	5	
9									
10				I	1	1	3	4	
11									
12		Lempung sedikit pasir (abu-abu)	12		1	1	2	3	
13									
14					2	4	6	10	
15									
16					3	3	7	10	
17									
18					3	6	7	13	
19									
20				II	3	5	6	11	
21									
22					4	5	7	12	
23									
24		Lempung sedikit pasir (abu-abu)	12		3	4	7	11	
25									
26					4	7	7	14	
27									
28					4	7	8	15	
29									
30					4	6	9	15	

SPT Value



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

Laboratorium Mekanika Tanah
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Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 9	10.00	67.74	2.32	1.56	0.93	0.14	11.22
	20.00	72.13	2.45	1.59	0.92	0.13	12.49

Laboratorium Mekanika Tanah
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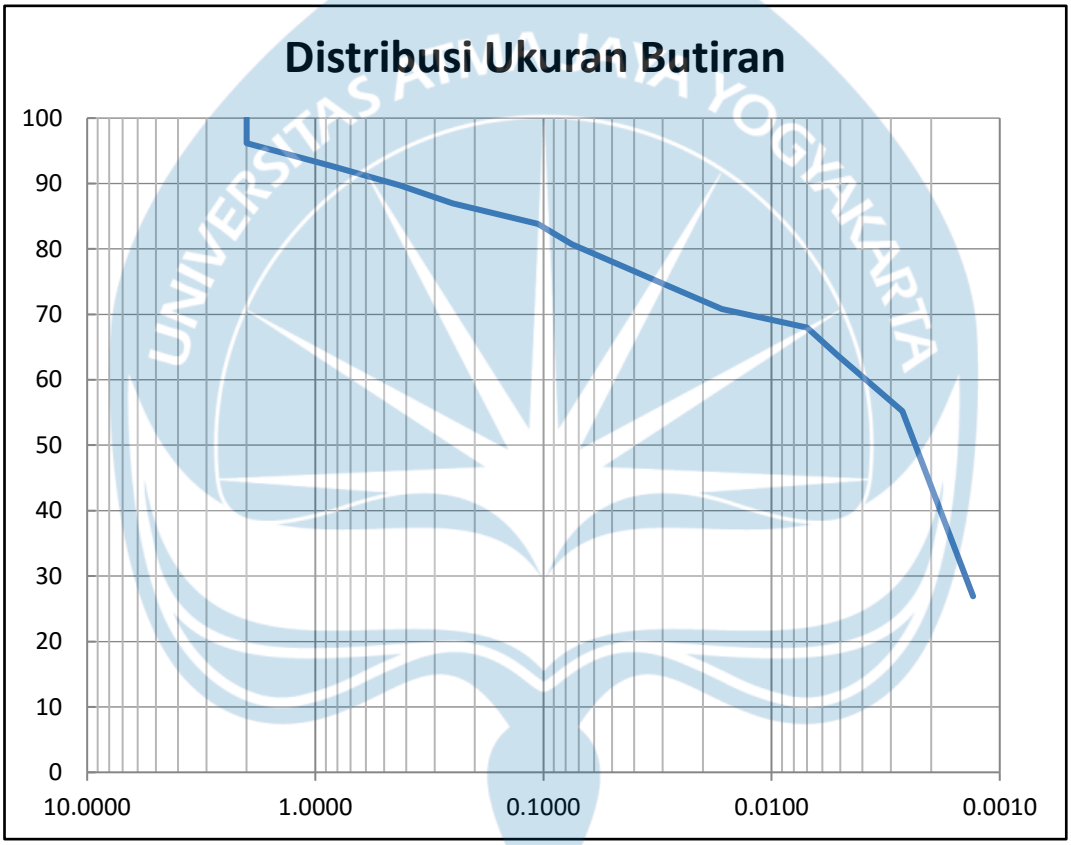
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 10.00



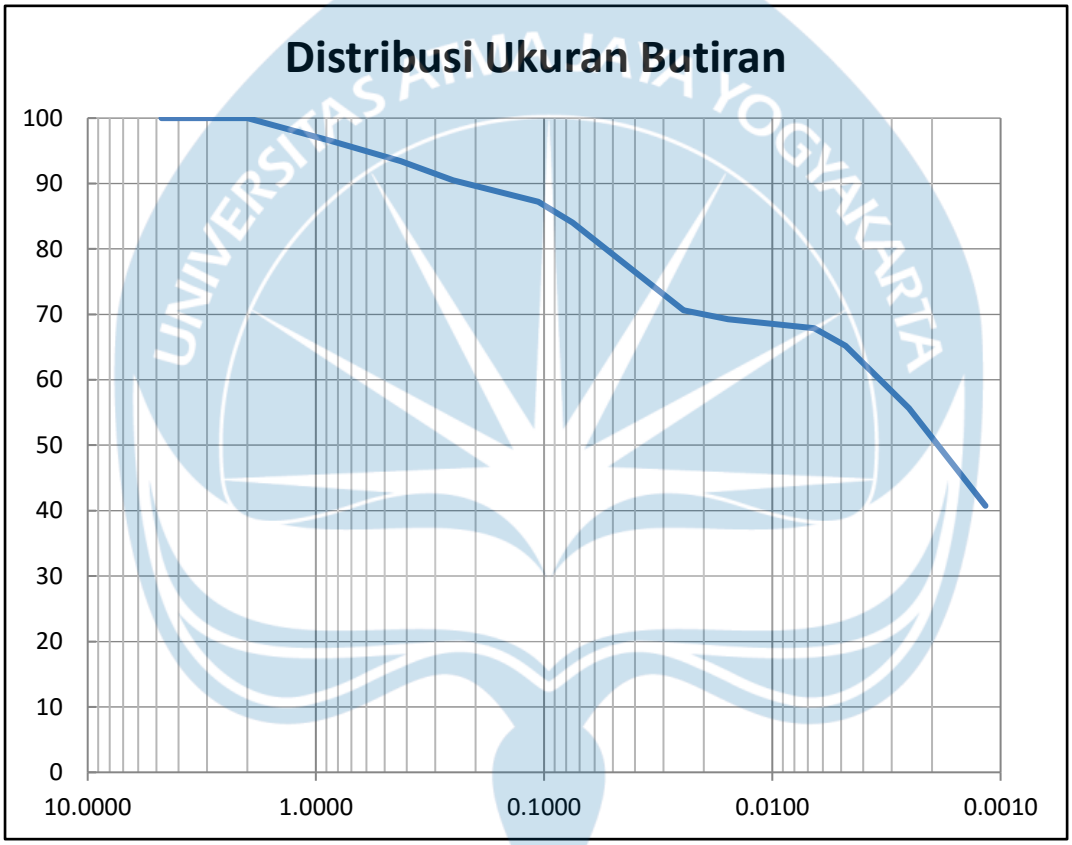
No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.00	100.00	100.00
10	2.000	3.84	96.16	96.16
20	0.850	3.49	92.67	92.67
40	0.425	2.97	89.70	89.70
60	0.250	2.75	86.95	86.95
140	0.106	3.12	83.83	83.83
200	0.075	3.11	80.72	80.72
Pan		80.72		

Laboratorium Mekanika Tanah
UNIVERSITAS ATMA JAYA YOGYAKARTA
Fakultas Teknik - Program Studi Teknik Sipil
Jl. Babarsari No. 44 Yogyakarta 55281 Indonesia
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1
Kedalaman: 20.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.00	100.00	100.00
10	2.000	0.00	100.00	100.00
20	0.850	3.52	96.48	96.48
40	0.425	3.07	93.41	93.41
60	0.250	2.92	90.49	90.49
140	0.106	3.28	87.21	87.21
200	0.075	3.17	84.04	84.04
Pan		84.04		

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

2,5 TON CONE PENETRATION TEST

LOCATION :
NUMBER OF CPT. : 1
ELEVATION : +0,20 m dari muka jalan
G.WATER DEPTH : -4,00 meter dari muka tanah

DATE :
WEATHER : Cerah
SURVEYOR :
PROJECT :

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	3	5	0.20	4	4	10.20	12	15	0.30	6	214
0.40	4	6	0.20	4	8	10.40	18	21	0.30	6	220
0.60	7	9	0.20	4	12	10.60	10	13	0.30	6	226
0.80	9	11	0.20	4	16	10.80	7	9	0.20	4	230
1.00	11	14	0.30	6	22	11.00	1	2	0.10	2	232
1.20	14	17	0.30	6	28	11.20	1	2	0.10	2	234
1.40	21	24	0.30	6	34	11.40	1	2	0.10	2	236
1.60	16	19	0.30	6	40	11.60	1	2	0.10	2	238
1.80	12	15	0.30	6	46	11.80	1	2	0.10	2	240
2.00	9	11	0.20	4	50	12.00	1	2	0.10	2	242
2.20	7	9	0.20	4	54	12.20	1	2	0.10	2	244
2.40	6	8	0.20	4	58	12.40	1	2	0.10	2	246
2.60	14	17	0.30	6	64	12.60	1	2	0.10	2	248
2.80	15	18	0.30	6	70	12.80	1	2	0.10	2	250
3.00	9	11	0.20	4	74	13.00	1	2	0.10	2	252
3.20	13	16	0.30	6	80	13.20	1	2	0.10	2	254
3.40	28	31	0.30	6	86	13.40	1	2	0.10	2	256
3.60	19	22	0.30	6	92	13.60	1	2	0.10	2	258
3.80	11	14	0.30	6	98	13.80	1	2	0.10	2	260
4.00	8	10	0.20	4	102	14.00	1	2	0.10	2	262
4.20	6	8	0.20	4	106	14.20	1	2	0.10	2	264
4.40	3	5	0.20	4	110	14.40	1	2	0.10	2	266
4.60	10	13	0.30	6	116	14.60	1	2	0.10	2	268
4.80	9	11	0.20	4	120	14.80	1	2	0.10	2	270
5.00	6	8	0.20	4	124	15.00	1	2	0.10	2	272
5.20	5	7	0.20	4	128	15.20	1	2	0.10	2	274
5.40	8	10	0.20	4	132	15.40	1	2	0.10	2	276
5.60	14	17	0.30	6	138	15.60	1	2	0.10	2	278
5.80	10	13	0.30	6	144	15.80	1	2	0.10	2	280
6.00	3	5	0.20	4	148	16.00	1	2	0.10	2	282
6.20	5	7	0.20	4	152	16.20	1	2	0.10	2	284
6.40	9	11	0.20	4	156	16.40	1	2	0.10	2	286
6.60	12	15	0.30	6	162	16.60	1	2	0.10	2	288
6.80	8	10	0.20	4	166	16.80	1	2	0.10	2	290
7.00	6	8	0.20	4	170	17.00	1	2	0.10	2	292
7.20	12	15	0.30	6	176	17.20	1	2	0.10	2	294
7.40	7	9	0.20	4	180	17.40	1	2	0.10	2	296
7.60	4	6	0.20	4	184	17.60	1	2	0.10	2	298
7.80	1	2	0.10	2	186	17.80	1	2	0.10	2	300
8.00	1	2	0.10	2	188	18.00	1	2	0.10	2	302
8.20	1	2	0.10	2	190	18.20	1	2	0.10	2	304
8.40	1	2	0.10	2	192	18.40	1	2	0.10	2	306
8.60	1	2	0.10	2	194	18.60	1	2	0.10	2	308
8.80	1	2	0.10	2	196	18.80	1	2	0.10	2	310
9.00	1	2	0.10	2	198	19.00	1	2	0.10	2	312
9.20	1	2	0.10	2	200	19.20	1	2	0.10	2	314
9.40	1	2	0.10	2	202	19.40	1	2	0.10	2	316
9.60	1	2	0.10	2	204	19.60	1	2	0.10	2	318
9.80	1	2	0.10	2	206	19.80	1	2	0.10	2	320
10.00	1	2	0.10	2	208	20.00	1	2	0.10	2	322

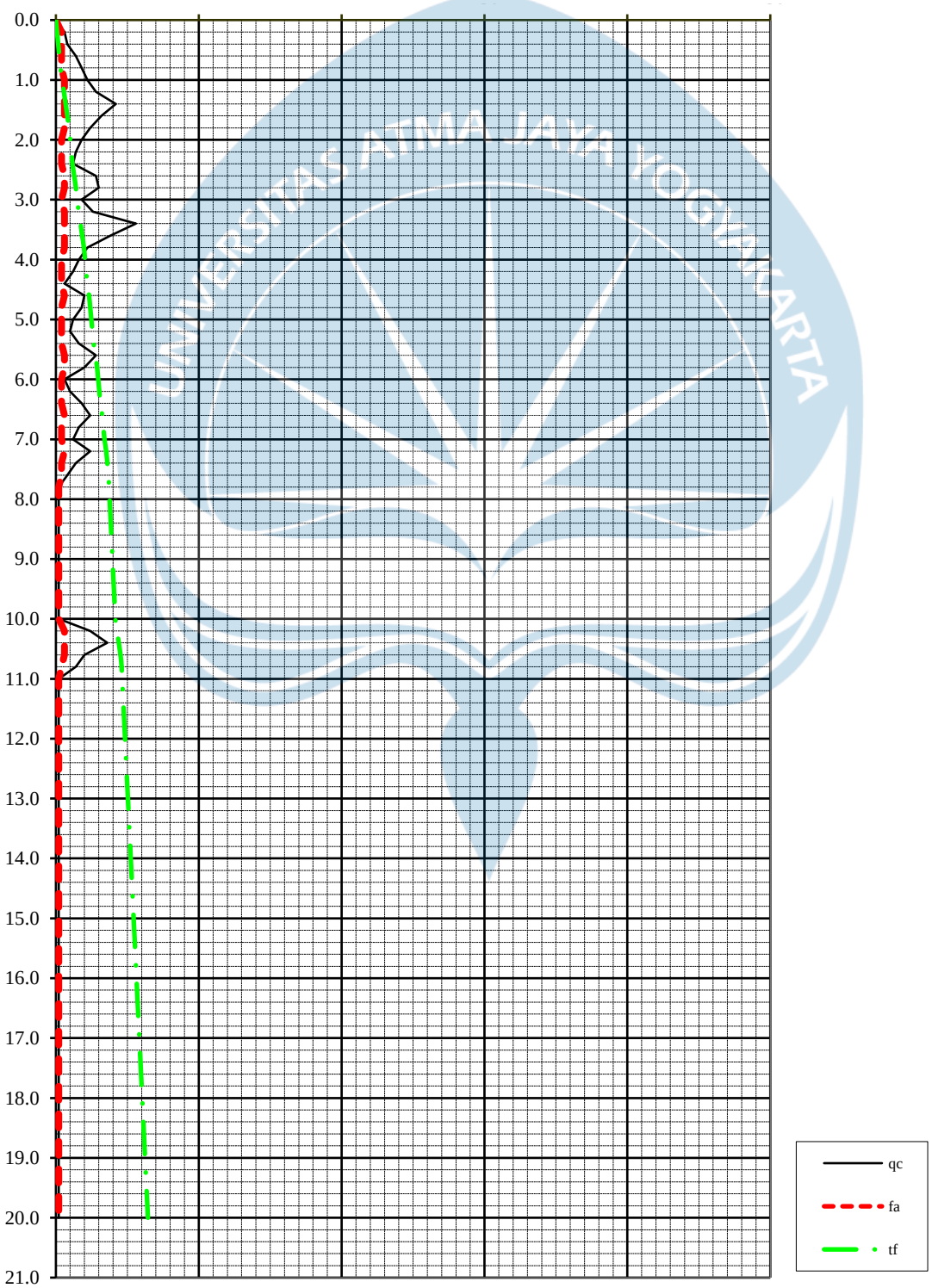
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : +0,20 m dari muka jalan
G.Water Depth : -4,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 2	**WEATHER**	: Cerah
ELEVATION	: +0,20 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -4,00 meter dari muka tanah	**PROJECT**	:

Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0.00	0	0	0.00								
0.20	3	5	0.20	4	4	10.20	1	2	0.10	2	218
0.40	5	7	0.20	4	8	10.40	1	2	0.10	2	220
0.60	9	11	0.20	4	12	10.60	1	2	0.10	2	222
0.80	14	17	0.30	6	18	10.80	1	2	0.10	2	224
1.00	15	18	0.30	6	24	11.00	1	2	0.10	2	226
1.20	17	20	0.30	6	30	11.20	1	2	0.10	2	228
1.40	13	16	0.30	6	36	11.40	1	2	0.10	2	230
1.60	8	10	0.20	4	40	11.60	1	2	0.10	2	232
1.80	5	7	0.20	4	44	11.80	1	2	0.10	2	234
2.00	10	13	0.30	6	50	12.00	1	2	0.10	2	236
2.20	12	15	0.30	6	56	12.20	1	2	0.10	2	238
2.40	26	29	0.30	6	62	12.40	1	2	0.10	2	240
2.60	21	24	0.30	6	68	12.60	1	2	0.10	2	242
2.80	19	22	0.30	6	74	12.80	1	2	0.10	2	244
3.00	24	27	0.30	6	80	13.00	7	9	0.20	4	248
3.20	33	36	0.30	6	86	13.20	8	10	0.20	4	252
3.40	17	20	0.30	6	92	13.40	12	15	0.30	6	258
3.60	13	16	0.30	6	98	13.60	6	8	0.20	4	262
3.80	9	11	0.20	4	102	13.80	3	5	0.20	4	266
4.00	14	17	0.30	6	108	14.00	1	2	0.10	2	268
4.20	18	21	0.30	6	114	14.20	1	2	0.10	2	270
4.40	29	32	0.30	6	120	14.40	1	2	0.10	2	272
4.60	27	30	0.30	6	126	14.60	1	2	0.10	2	274
4.80	16	19	0.30	6	132	14.80	1	2	0.10	2	276
5.00	10	13	0.30	6	138	15.00	1	2	0.10	2	278
5.20	7	9	0.20	4	142	15.20	1	2	0.10	2	280
5.40	15	18	0.30	6	148	15.40	1	2	0.10	2	282
5.60	19	22	0.30	6	154	15.60	1	2	0.10	2	284
5.80	16	19	0.30	6	160	15.80	1	2	0.10	2	286
6.00	8	10	0.20	4	164	16.00	1	2	0.10	2	288
6.20	3	5	0.20	4	168	16.20	1	2	0.10	2	290
6.40	6	8	0.20	4	172	16.40	1	2	0.10	2	292
6.60	11	14	0.30	6	178	16.60	1	2	0.10	2	294
6.80	7	9	0.20	4	182	16.80	1	2	0.10	2	296
7.00	5	7	0.20	4	186	17.00	1	2	0.10	2	298
7.20	1	2	0.10	2	188	17.20	1	2	0.10	2	300
7.40	1	2	0.10	2	190	17.40	1	2	0.10	2	302
7.60	1	2	0.10	2	192	17.60	1	2	0.10	2	304
7.80	1	2	0.10	2	194	17.80	1	2	0.10	2	306
8.00	1	2	0.10	2	196	18.00	1	2	0.10	2	308
8.20	1	2	0.10	2	198	18.20	1	2	0.10	2	310
8.40	1	2	0.10	2	200	18.40	1	2	0.10	2	312
8.60	1	2	0.10	2	202	18.60	1	2	0.10	2	314
8.80	1	2	0.10	2	204	18.80	1	2	0.10	2	316
9.00	1	2	0.10	2	206	19.00	1	2	0.10	2	318
9.20	1	2	0.10	2	208	19.20	1	2	0.10	2	320
9.40	1	2	0.10	2	210	19.40	1	2	0.10	2	322
9.60	1	2	0.10	2	212	19.60	1	2	0.10	2	324
9.80	1	2	0.10	2	214	19.80	1	2	0.10	2	326
10.00	1	2	0.10	2	216	20.00	1	2	0.10	2	328

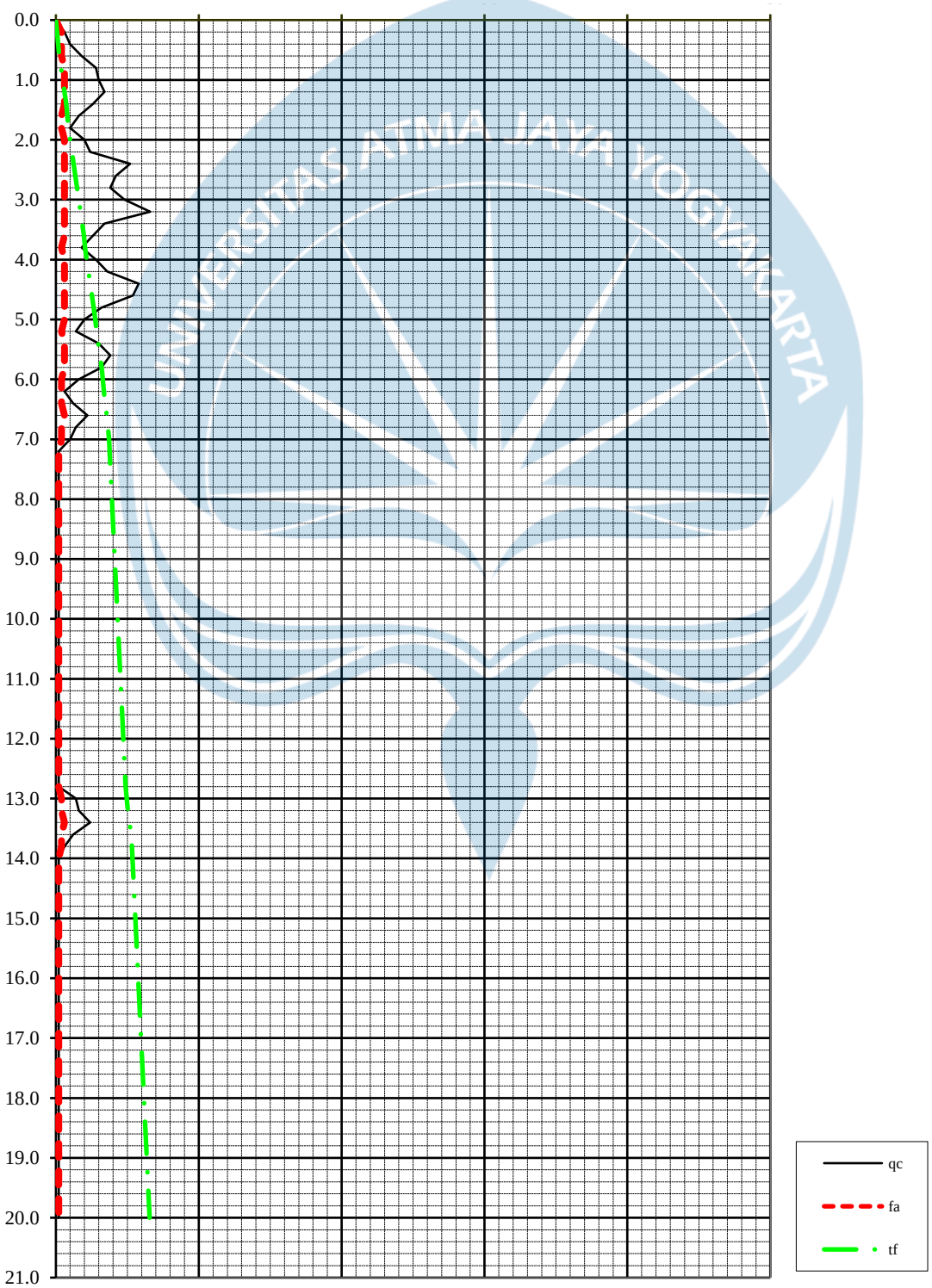
SOIL MECHANICS LABORATORY
DEPARTMENT OF CIVIL ENGINEERING
FACULTY OF ENGINEERING - ATMA JAYA YOGYAKARTA UNIVERSITY

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : +0,20 m dari muka jalan
G.Water Depth : -4,00 meter dari muka tanah

fa	5	10	15	20	25	*Kg/cm²*
qc	50	100	150	200	250	*Kg/cm²*
tf	500	1000	1500	2000	2500	*Kg/cm¹*



SOIL MECHANIC LABORATORY
CIVIL ENGINEERING PROGRAM
FACULTY OF ENGINEERING, UAJY
44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-10

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : + 0,20 m from road level

HOLE SIZE : 7.295cm

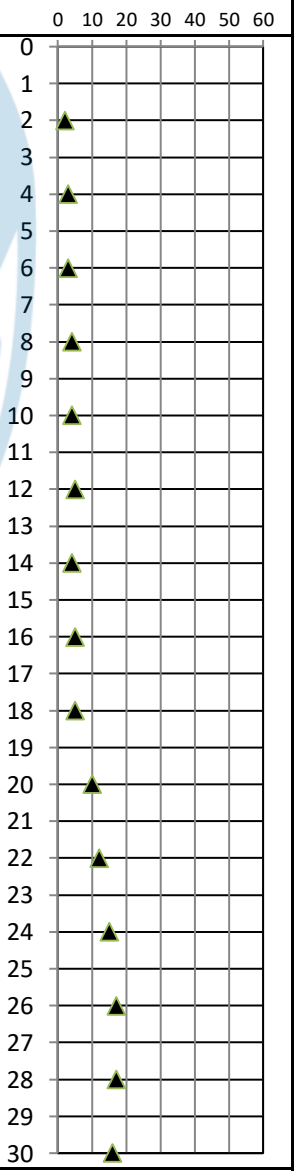
GROUND WATER LEVEL : - 4,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	Nv	Water Level Elevation (m)
1									
2					1	1	1	2	
3		Lanau berlempung (abu-abu)	6						
4					1	1	2	3	- 4.00
5									
6					1	1	2	3	
7									
8					1	2	2	4	
9									
10				I	2	2	2	4	
11									
12					2	2	3	5	
13									
14					1	1	3	4	
15									
16					1	2	3	5	
17									
18		Lempung sedikit pasir (abu-abu)	24		2	2	3	5	
19									
20				II	2	4	6	10	
21									
22					3	4	8	12	
23									
24					4	6	9	15	
25									
26					4	6	11	17	
27									
28					4	7	10	17	
29									
30					4	6	10	16	

SPT Value



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

Laboratorium Mekanika Tanah
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Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 10	10.00	84.18	2.57	1.66	0.90	0.08	10.84
	20.00	77.46	2.30	1.56	0.88	0.07	12.46

Laboratorium Mekanika Tanah
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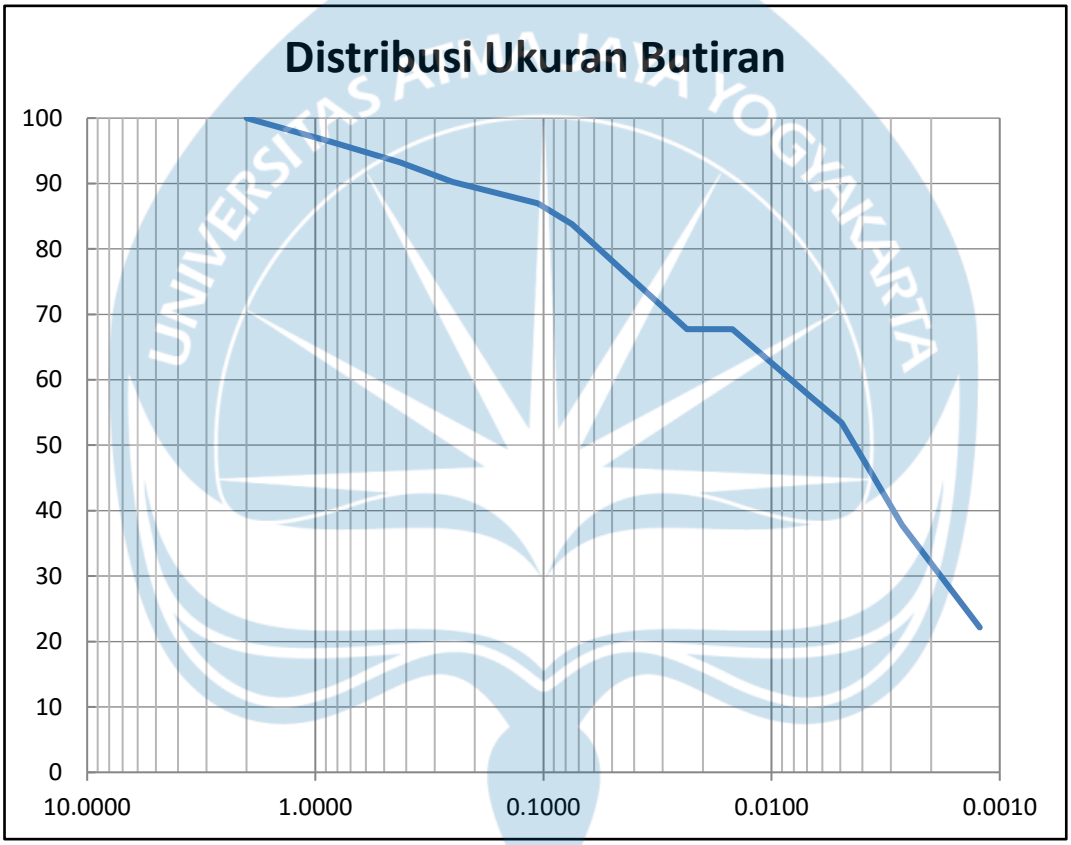
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 2
Kedalaman: 10.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.00	100.00	100.00
10	2.000	0.00	100.00	100.00
20	0.850	3.64	96.36	96.36
40	0.425	3.12	93.24	93.24
60	0.250	2.98	90.26	90.26
140	0.106	3.29	86.97	86.97
200	0.075	3.18	83.79	83.79
Pan		83.79		

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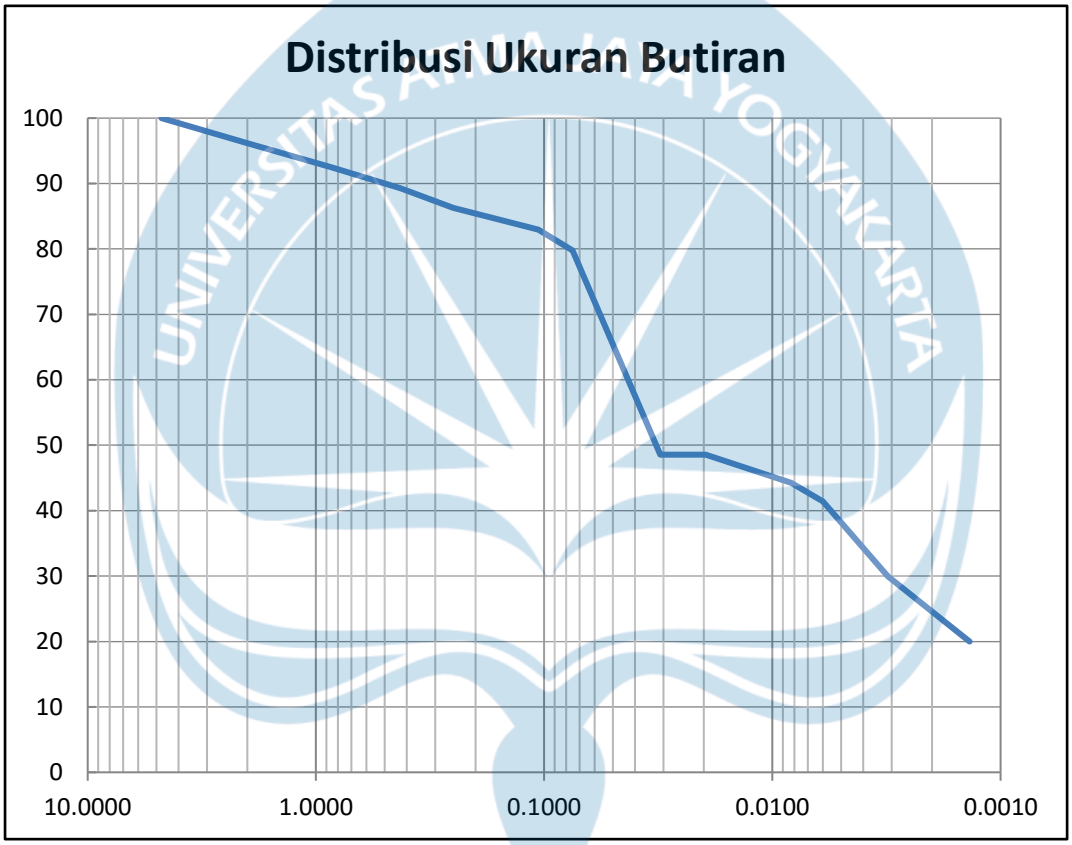
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 2
Kedalaman: 20.00



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4.750	0.00	100.00	100.00
10	2.000	3.83	96.17	96.17
20	0.850	3.73	92.44	92.44
40	0.425	3.18	89.26	89.26
60	0.250	2.96	86.30	86.30
140	0.106	3.33	82.97	82.97
200	0.075	3.20	79.77	79.77
Pan		79.77		

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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 1	**WEATHER**	: Cerah
ELEVATION	: -0,50 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

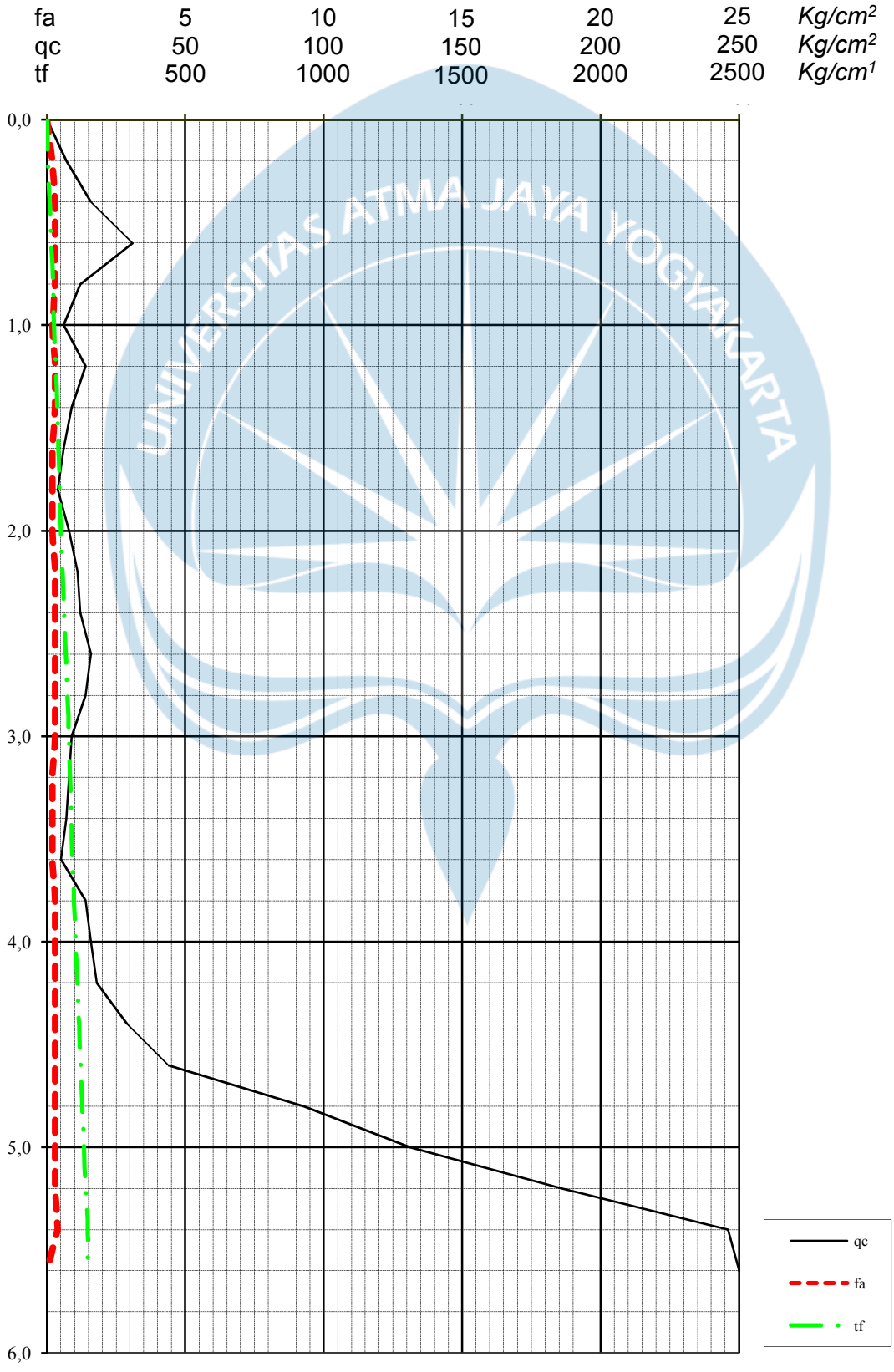
Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	7	9	0,20	4	4	10,20					
0,40	16	19	0,30	6	10	10,40					
0,60	31	34	0,30	6	16	10,60					
0,80	12	15	0,30	6	22	10,80					
1,00	6	8	0,20	4	26	11,00					
1,20	14	17	0,30	6	32	11,20					
1,40	9	12	0,30	6	38	11,40					
1,60	6	8	0,20	4	42	11,60					
1,80	4	6	0,20	4	46	11,80					
2,00	8	10	0,20	4	50	12,00					
2,20	11	14	0,30	6	56	12,20					
2,40	12	15	0,30	6	62	12,40					
2,60	16	19	0,30	6	68	12,60					
2,80	14	17	0,30	6	74	12,80					
3,00	9	12	0,30	6	80	13,00					
3,20	8	10	0,20	4	84	13,20					
3,40	7	9	0,20	4	88	13,40					
3,60	5	7	0,20	4	92	13,60					
3,80	14	17	0,30	6	98	13,80					
4,00	16	19	0,30	6	104	14,00					
4,20	18	21	0,30	6	110	14,20					
4,40	29	32	0,30	6	116	14,40					
4,60	44	47	0,30	6	122	14,60					
4,80	93	96	0,30	6	128	14,80					
5,00	131	134	0,30	6	134	15,00					
5,20	186	189	0,30	6	140	15,20					
5,40	246	250	0,40	8	148	15,40					
5,60	250	250	0,00	0	148	15,60					
5,80						15,80					
6,00						16,00					
6,20						16,20					
6,40						16,40					
6,60						16,60					
6,80						16,80					
7,00						17,00					
7,20						17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

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

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 1
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah



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

2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 2	**WEATHER**	: Cerah
ELEVATION	: -0,50 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

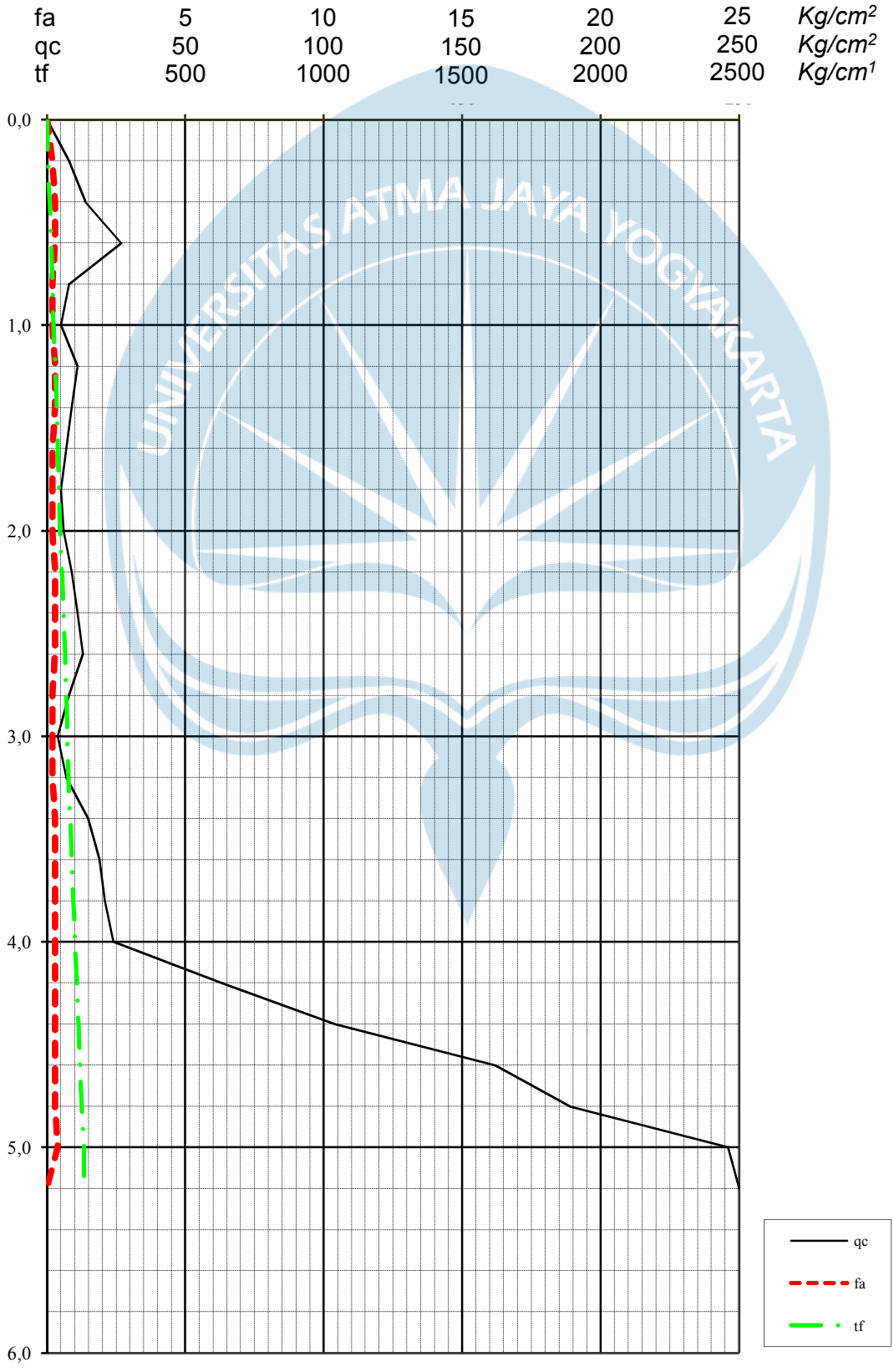
Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	8	10	0,20	4	4	10,20					
0,40	14	17	0,30	6	10	10,40					
0,60	27	30	0,30	6	16	10,60					
0,80	8	10	0,20	4	20	10,80					
1,00	5	7	0,20	4	24	11,00					
1,20	11	14	0,30	6	30	11,20					
1,40	9	12	0,30	6	36	11,40					
1,60	7	9	0,20	4	40	11,60					
1,80	5	7	0,20	4	44	11,80					
2,00	6	8	0,20	4	48	12,00					
2,20	9	12	0,30	6	54	12,20					
2,40	11	14	0,30	6	60	12,40					
2,60	13	16	0,30	6	66	12,60					
2,80	8	10	0,20	4	70	12,80					
3,00	4	6	0,20	4	74	13,00					
3,20	7	9	0,20	4	78	13,20					
3,40	15	18	0,30	6	84	13,40					
3,60	19	22	0,30	6	90	13,60					
3,80	21	24	0,30	6	96	13,80					
4,00	24	27	0,30	6	102	14,00					
4,20	63	66	0,30	6	108	14,20					
4,40	104	107	0,30	6	114	14,40					
4,60	162	165	0,30	6	120	14,60					
4,80	189	192	0,30	6	126	14,80					
5,00	246	250	0,40	8	134	15,00					
5,20	250	250	0,00	0	134	15,20					
5,40						15,40					
5,60						15,60					
5,80						15,80					
6,00						16,00					
6,20						16,20					
6,40						16,40					
6,60						16,60					
6,80						16,80					
7,00						17,00					
7,20						17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

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

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 2
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah



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2,5 TON CONE PENETRATION TEST

LOCATION	:	**DATE**	:
NUMBER OF CPT.	: 3	**WEATHER**	: Cerah
ELEVATION	: -0,50 m dari muka jalan	**SURVEYOR**	:
G.WATER DEPTH	: -3,00 meter dari muka tanah	**PROJECT**	:

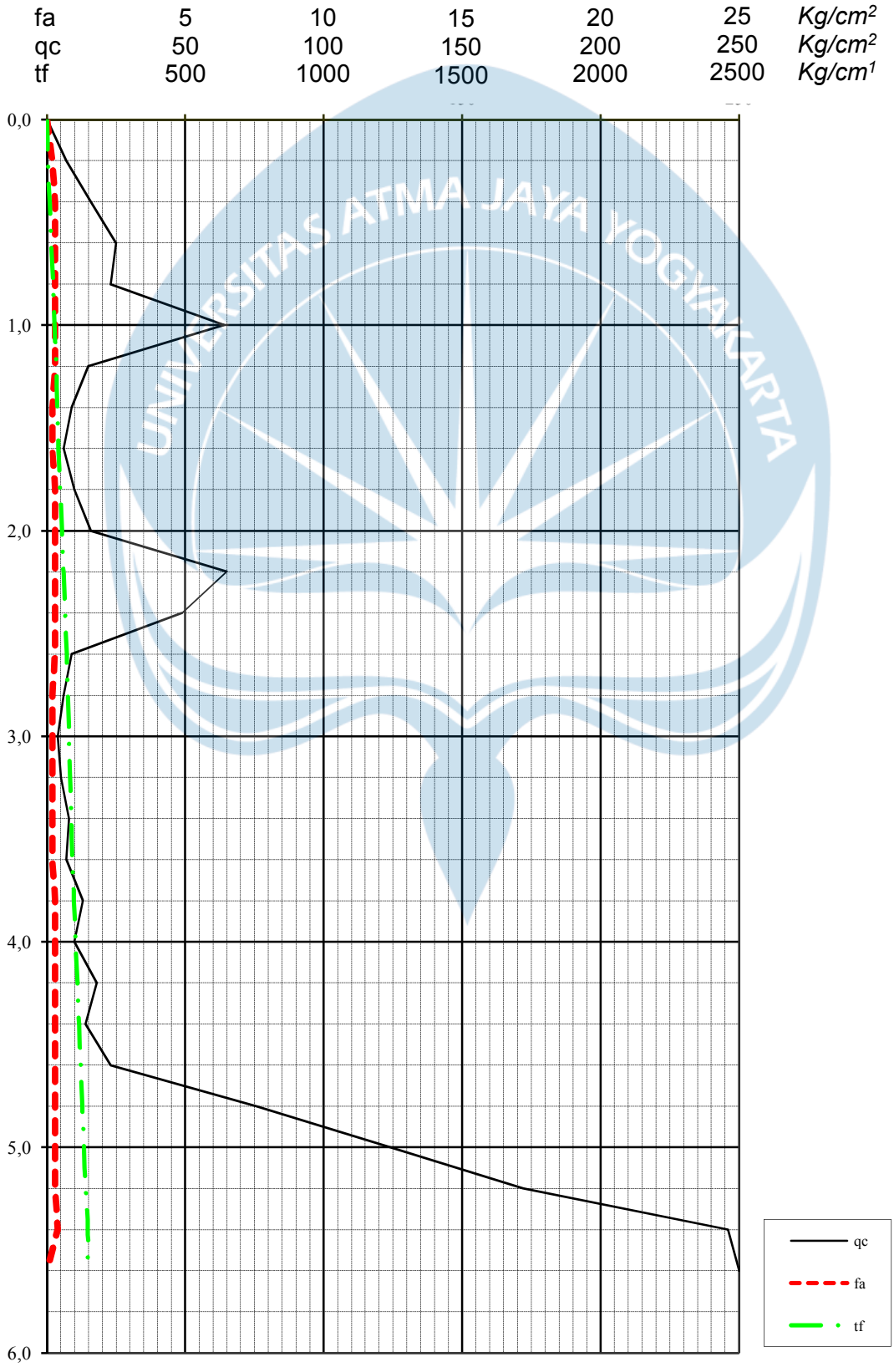
Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'	Depth meters	C kg/cm^2	C + F kg/cm^2	L F kg/cm^2	T F kg/cm'	Σ T F kg/cm'
0,00	0	0	0,00								
0,20	7	9	0,20	4	4	10,20					
0,40	16	19	0,30	6	10	10,40					
0,60	25	28	0,30	6	16	10,60					
0,80	23	26	0,30	6	22	10,80					
1,00	64	67	0,30	6	28	11,00					
1,20	15	18	0,30	6	34	11,20					
1,40	9	11	0,20	4	38	11,40					
1,60	6	8	0,20	4	42	11,60					
1,80	10	13	0,30	6	48	11,80					
2,00	16	19	0,30	6	54	12,00					
2,20	65	68	0,30	6	60	12,20					
2,40	49	52	0,30	6	66	12,40					
2,60	9	12	0,30	6	72	12,60					
2,80	6	8	0,20	4	76	12,80					
3,00	4	6	0,20	4	80	13,00					
3,20	5	7	0,20	4	84	13,20					
3,40	8	10	0,20	4	88	13,40					
3,60	7	9	0,20	4	92	13,60					
3,80	13	16	0,30	6	98	13,80					
4,00	10	13	0,30	6	104	14,00					
4,20	18	21	0,30	6	110	14,20					
4,40	14	17	0,30	6	116	14,40					
4,60	23	26	0,30	6	122	14,60					
4,80	76	79	0,30	6	128	14,80					
5,00	124	127	0,30	6	134	15,00					
5,20	172	175	0,30	6	140	15,20					
5,40	246	250	0,40	8	148	15,40					
5,60	250	250	0,00	0	148	15,60					
5,80						15,80					
6,00						16,00					
6,20						16,20					
6,40						16,40					
6,60						16,60					
6,80						16,80					
7,00						17,00					
7,20						17,20					
7,40						17,40					
7,60						17,60					
7,80						17,80					
8,00						18,00					
8,20						18,20					
8,40						18,40					
8,60						18,60					
8,80						18,80					
9,00						19,00					
9,20						19,20					
9,40						19,40					
9,60						19,60					
9,80						19,80					
10,00						20,00					

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

2,5 TON CONE PENETRATION TEST

Project :
Number of cpt. : 3
Date :

Elevation : -0,50 m dari muka jalan
G.Water Depth : -3,00 meter dari muka tanah



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44 BABARSARI STREET, YOGYAKARTA 55281
Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-11

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : - 0,50 m from road level

HOLE SIZE : 7.295cm

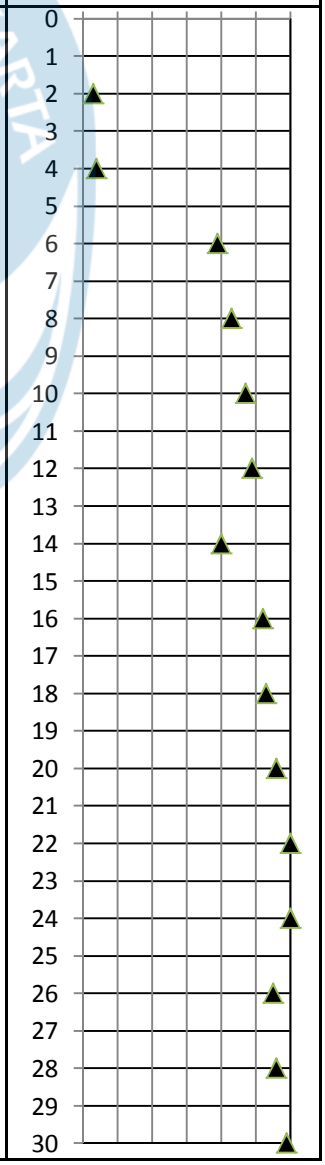
GROUND WATER LEVEL : - 3,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	NV	Water Level Elevation (m)
1									
2		Pasir halus berlempung (coklat, abu-abu)	5		1	1	2	3	
3									-3.00
4					1	2	2	4	
5									
6		Pasir kerikil (coklat, abu-abu)	2	I	7	16	23	39	
7									
8		Pasir halus berlempung (coklat, abu-abu)	3		7	18	25	43	
9									
10					12	19	28	47	
11		Pasir (coklat, hitam)	4						
12					12	21	28	49	
13									
14					11	19	21	40	
15		Pasir kasar (coklat, hitam)	3	II					
16					13	24	28	52	
17									
18		Pasir (coklat, hitam)	7		13	24	29	53	
19									
20					16	25	31	56	
21									
22					16	27	33	60	
23									
24					17	25	35	60	
25		Pasir berlempung (coklat, abu-abu)	6						
26					17	23	32	55	
27									
28					18	23	33	56	
29									
30					18	25	34	59	

SPT Value



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

Laboratorium Mekanika Tanah
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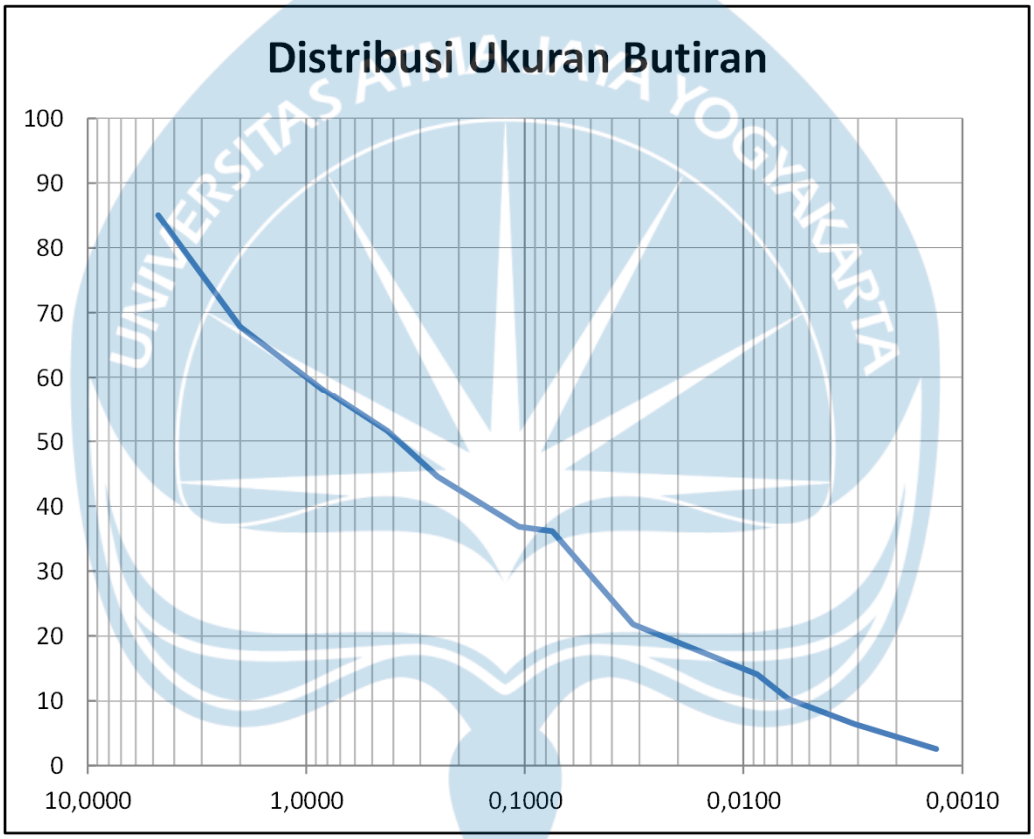
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH 1 15



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	15,0	85,1	85,05
10	2,000	17,2	67,8	67,82
20	0,850	9,6	58,22	58,22
40	0,425	6,7	51,56	51,56
60	0,250	7,0	44,58	44,58
140	0,106	7,7	36,84	36,84
200	0,075	0,7	36,14	36,14
Pan		36,14		

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Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH 11	15	56,32	2,48	1,56	1,00	0,17	22,85

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Fax: +62-274-487748

Boring Number:

BH-12

BOR LOG

CLIENT:

PROJECT CONTRACT NUMBER:

PROJECT TITLE :

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : - 0,50 m from road level

HOLE SIZE : 7.295cm

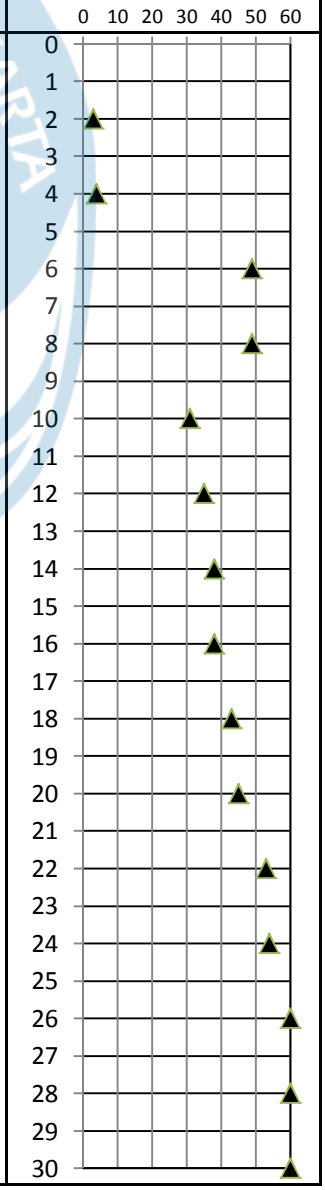
GROUND WATER LEVEL : - 3,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	NV	Water Level Elevation (m)
1									
2		Pasir halus berlempung (coklat)	5		1	1	2	3	
3									-3.00
4					1	2	2	4	
5									
6		Pasir kerikil (coklat, hitam)	1	I	11	18	31	49	
7		Pasir sedang (coklat, hitam)	3						
8					11	18	31	49	
9									
10		Pasir kasar kasar (coklat, hitam)	11	II	9	13	18	31	
11									
12					9	15	20	35	
13									
14					10	17	21	38	
15									
16					12	17	21	38	
17									
18					13	19	24	43	
19									
20					14	19	26	45	
21		Pasir (coklat, hitam)	5						
22					17	21	32	53	
23									
24					17	21	33	54	
25									
26		Pasir berlempung (coklat, abu-abu)	5		19	23	37	60	
27									
28					19	24	36	60	
29									
30					19	24	36	60	

SPT Value



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

Laboratorium Mekanika Tanah
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Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ°
BH12	10	27,57	2,74	1,89	1,48	0,03	25,70

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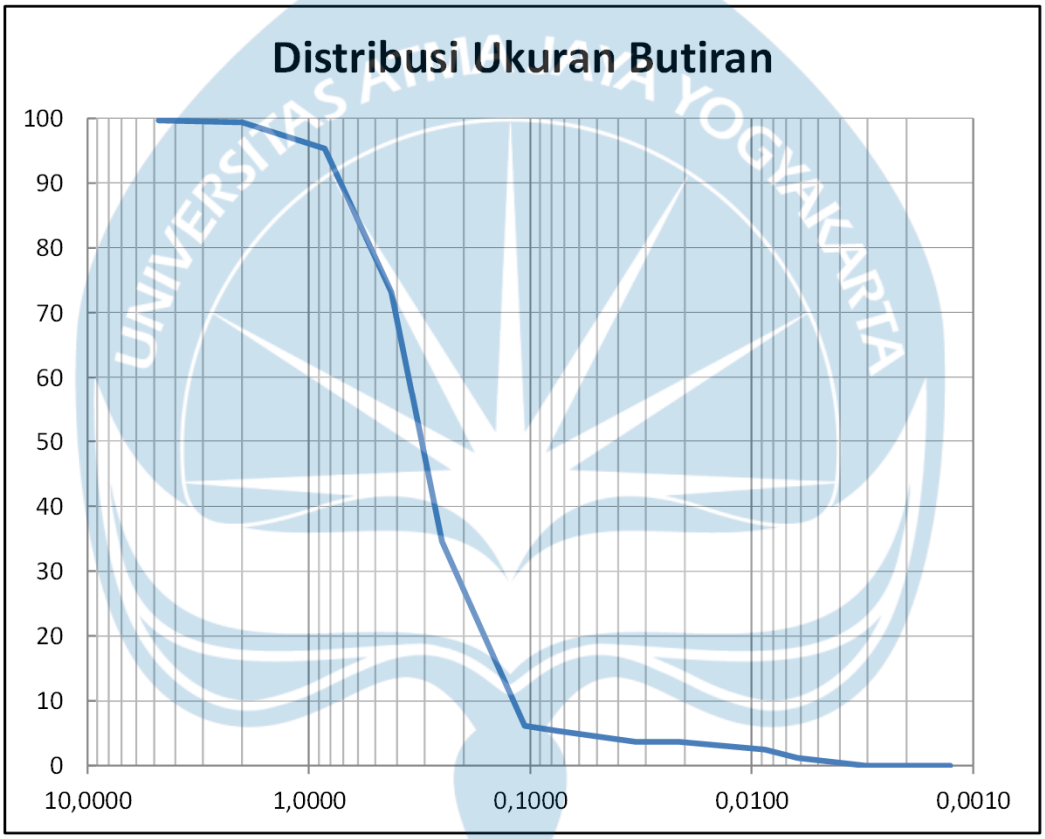
ANALISA BUTIRAN

Proyek :
Lokasi :
Tanggal :

Titik : BH2 10



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,3	99,7	99,69
10	2,000	0,3	99,4	99,41
20	0,850	4,1	95,3	95,30
40	0,425	22,2	73,14	73,14
60	0,250	38,6	34,54	34,54
140	0,106	28,4	6,12	6,12
200	0,075	0,8	5,32	5,32
Pan		5,32		

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Tel: +62-274-487711 ext. 1055
Fax: +62-274-487748

Boring Number:

BH-13

BOR LOG

CLIENT:

PROJECT TITLE :

PROJECT CONTRACT NUMBER:

PROJECT LOCATION :

DATE STARTED:

DATE COMPLETED :

DRILLING CONTRACTOR:

DRILLING METHOD: ROTARY SPINDLE, SKID MOUNTED TYPE

LOGGED BY:

CHECKED BY:

GROUND ELEVATION : - 0,50 m from road level

HOLE SIZE : 7.295cm

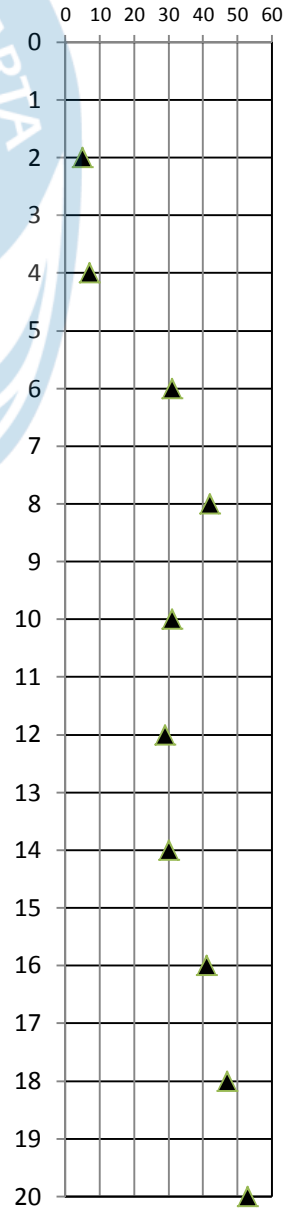
GROUND WATER LEVEL : - 3,00 m from ground level

WEATHER CONDITION : FINE

ESTIMATED SEASONAL HIGH : -

Depth (m)	Graph Log	Material Description (field observations)	Contact Depth (m)	Sample Number	Blow Counts (N Value) N1	N2	N3	NV	Water Level Elevation (m)
1		Pasir halus berlempung (coklat)	5						-3.00
2					1	2	3	5	
3									
4					2	3	4	7	
5									
6		Pasir kerikil (coklat, hitam)	1	I	8	12	19	31	
7		Pasir (coklat, hitam)	4						
8					9	15	27	42	
9									
10					7	13	18	31	
11		Pasir kasar (coklat, hitam)	6						
12				II	7	12	17	29	
13									
14					7	12	18	30	
15									
16					9	17	24	41	
17		Pasir (coklat, hitam)	4						
18					12	21	26	47	
19									
20					12	23	30	53	

SPT Value



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

Laboratorium Mekanika Tanah
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Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

REKAP HASIL PENGUJIAN TANAH

Proyek :
Lokasi :
Tanggal :

Titik	Kedalaman (m)	Kadar Air (%)	Berat Jenis (G)	γ_b (gr/cm^3)	γ_k (gr/cm^3)	Pengujian Geser Langsung	
						c (kg/cm^2)	θ˚
BH13	12	29,72	2,69	1,97	1,52	0,01	22,53

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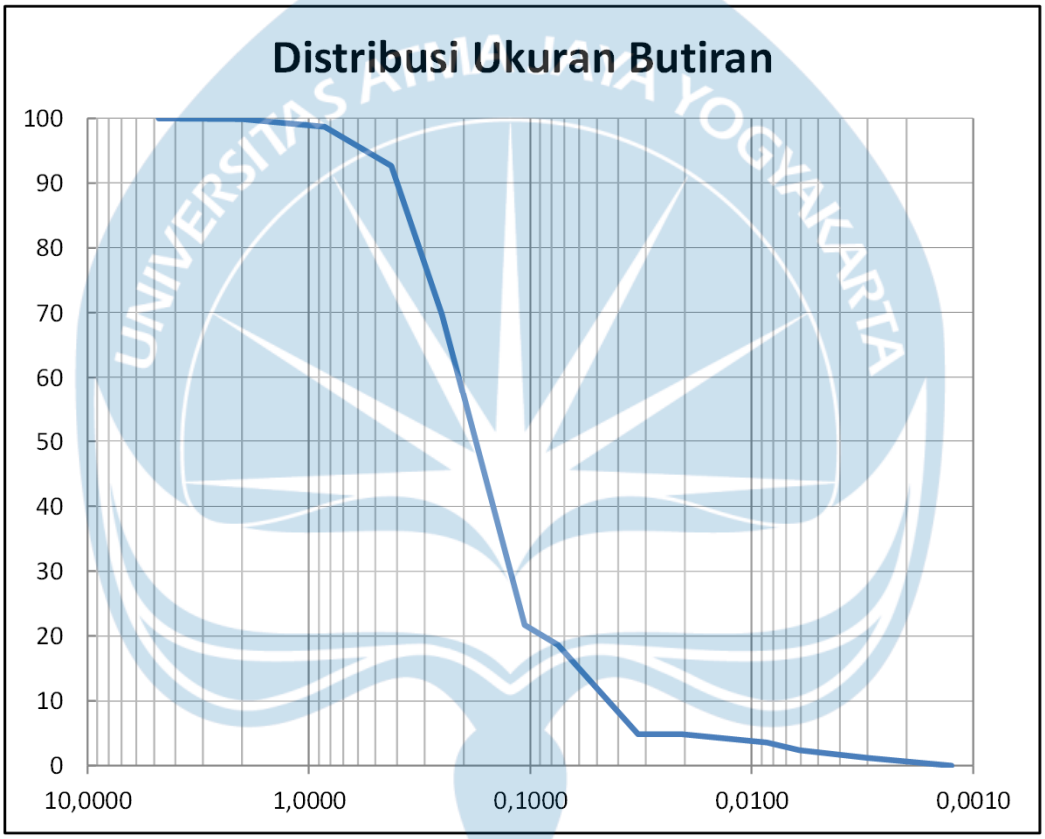
Telp. +62-274-565411 ext. 2052, Fax. +62-274-487748

ANALISA BUTIRAN

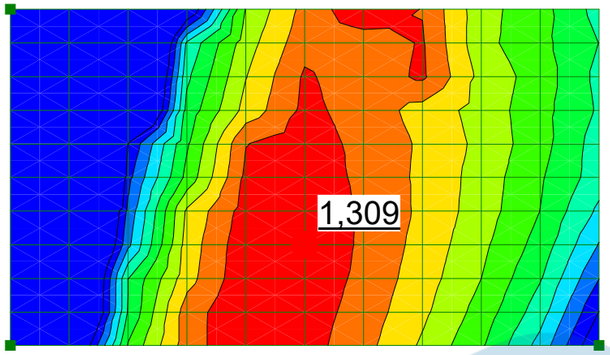
Proyek :
Lokasi :
Tanggal :

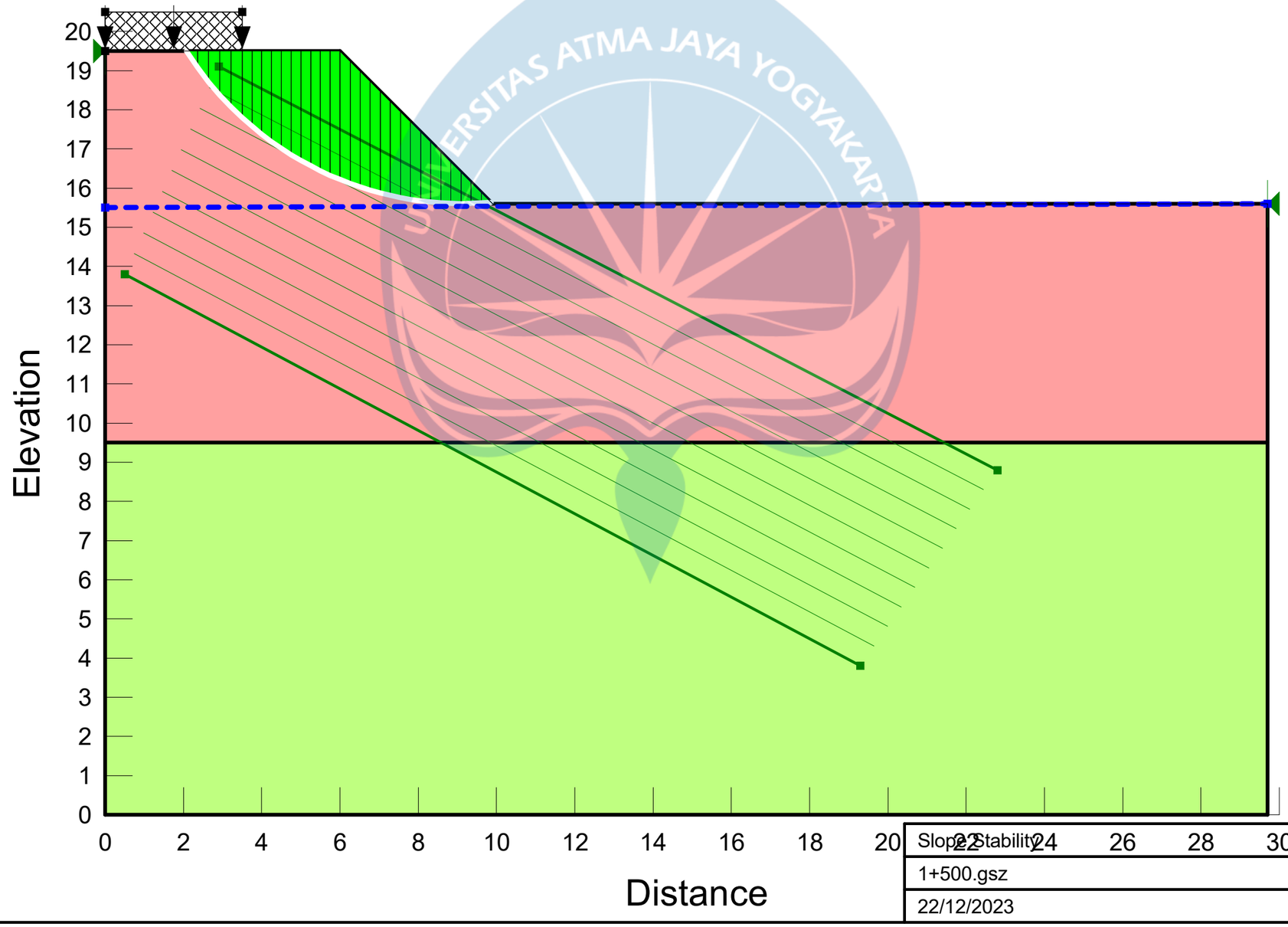
Titik : BH3 12



No. Sieve	Ukuran Butiran (mm)	Berat Tertahan	Berat Lolos	Prosen Lolos
4	4,750	0,1	99,9	99,94
10	2,000	0,1	99,8	99,84
20	0,850	1,1	98,7	98,70
40	0,425	6,0	92,69	92,69
60	0,250	23,0	69,67	69,67
140	0,106	48,0	21,66	21,66
200	0,075	3,0	18,63	18,63
Pan		18,63		

LAMPIRAN 9





Slope Stability	
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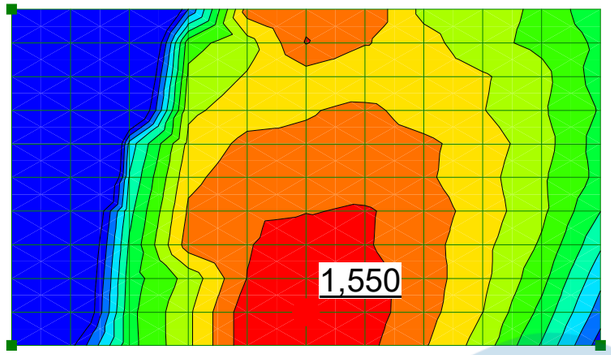
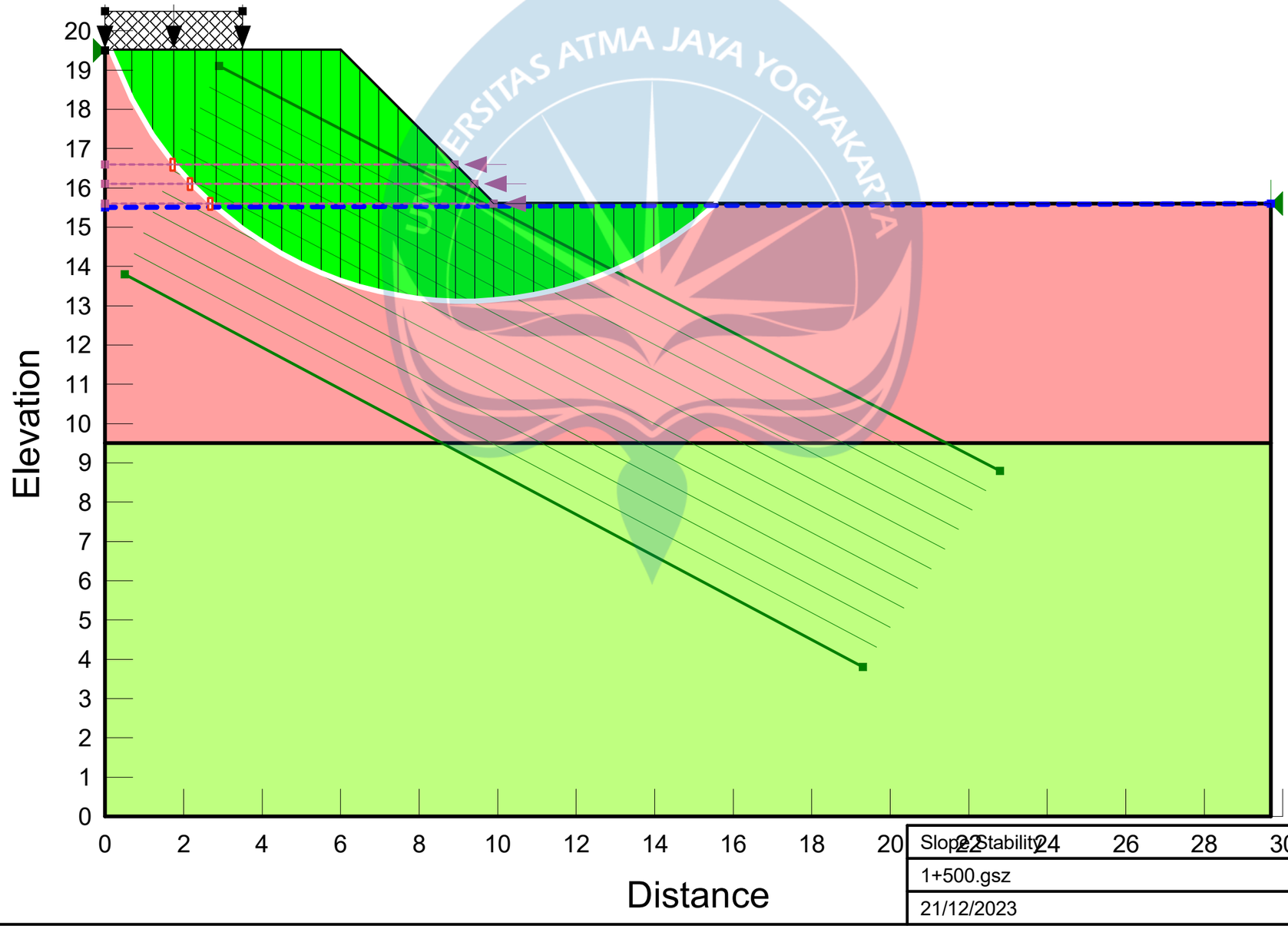
22/12/2023	1:120





Slope Stability	
1+500.gsz	
21/12/2023	1:120

LAMPIRAN 10

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