

**FINAL ASSIGMENT**

**SOIL STABILIZATION WITH BUTON NATURAL ROCK ASPHALT  
(BNRA)**

**Proposed to Complete Any Assential to Obtain  
Bachelor Degres (S1) of Civil Engineering**



**Drafted By:**

**HASFIAH HAMADE**

**NIM :30201203336**

**WIDIA DWI UTAMI**

**NIM : 30201203352**

**DEPARTEMENT OF CIVIL ENGINEERING OF ENGINEERING  
FACULTY UNIVERISTAS ISLAM SULTAN AGUNG  
SEMARANG**

**2016**



YAYASAN BADAN WAKAF SULTAN AGUNG  
UNIVERSITAS ISLAM SULTAN AGUNG (UNISSULA)  
FAKULTAS TEKNIK

Jalan Raya Kaligawe KM. 4 Po. BOX 1054 Telp. (024) 6583584 Ext. 507 Semarang 50112

APPROVAL PAGE

FINAL ASSIGNMENT

SOIL STABILIZATION WITH BUTON NATURAL ROCK ASPHALT  
(BNRA)

By:



**HASFIAH HAMADE**  
NIM : 30201203336



**WIDIA DWI UTAMI**  
NIM : 30201203352

Have been agreed at, August 18<sup>th</sup>, 2016

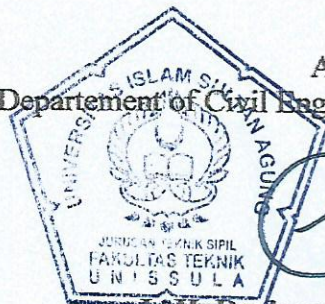
Supervisor

Co - Supervisor

**Ir. H. Gatot Rusbintardjo, M.R. Eng MSc., Ph.D**

**Ir.H. Rachmat Mudiyo, M.T., Ph.D**

Approved By,  
Head of Department of Civil Engineering, Faculty of Engineering UNISSULA



**Ir.H. Rachmat Mudiyo, M.T., Ph.D.**



**YAYASAN BADAN WAKAF SULTAN AGUNG  
UNIVERSITAS ISLAM SULTAN AGUNG (UNISSULA)  
FAKULTAS TEKNIK**

Jalan Raya Kaligawe KM. 4 Po. BOX 1054 Telp. (024)6583584 Ext. 507 Semarang 50112

**BERITA ACARA BIMBINGAN TUGAS AKHIR ATAU SKRIPSI**

**Nomor : 15 / A.1 / SA – T / VIII / 2016**

Pada hari ini, tanggal Agustus 2016 berdasarkan Surat Keputusan Rektor Universitas Islam Sultan Agung (UNISSULA) Semarang perihal penunjukan Dosen Pembimbing I dan Dosen Pembimbing II :

1. Nama : Ir. H. Gatot Rusbintardjo, M.R.Eng. MSc., Ph.D  
Jabatan : Dosen Pembimbing I
2. Nama : Ir.H. Rachmat Mudiyo, M.T., Ph.D  
Jabatan : Dosen Pembimbing II

Dengan ini menyatakan bahwa Mahasiswa yang tersebut dibawah ini telah menyelesaikan bimbingan Tugas Akhir atau Skripsi:

1. Nama : Hasfiah Hamade  
Nim : 30201203336
2. Nama : Widia Dwi Utami  
Nim : 30201203352  
Jurusan : Teknik Sipil  
Judul : "Soil Stabilization With Buton Natural Rock Asphalt"

Dengan tahapan sebagai berikut:

No.	Tahapan	Tanggal	Keterangan
1	Penunjukan Dosen Pembimbing		-
2	Pengumpulan Data		-
3	Penyusunan Laporan		-
4	Selesai laporan	8 Agustus 2016	Acc
5	Seminar Tugas Akhir	25 Agustus 2016	-

Demikian Berita Acara Bimbingan Tugas Akhir atau Skripsi ini dibuat untuk diketahui dan dipergunakan seperlunya oleh pihak-pihak yang berkepentingan.

Dosen Pembimbing I

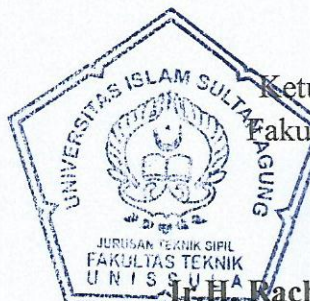
**Ir. H. Gatot Rusbintardjo, M.R.Eng. MSc., Ph.D.**

Dosen Pembimbing II

**Ir.H. Rachmat Mudiyo, M.T., Ph.D**

Mengetahui,

Ketua Jurusan Teknik Sipil  
Fakultas Teknik UNISSULA



**Ir.H. Rachmat Mudiyo, M.T., Ph.D.**

## SURAT PERNYATAAN KEASLIAN

Yang bertanda tangan di bawah ini:

Nama : Widia Dwi Utami / Hafifah Hamade

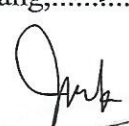
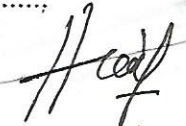
NIM : 30201203352 / 30201203336

Dengan ini saya nyatakan bahwa Karya Tulis Ilmiah yang berjudul:

.....  
SOIL STABILIZATION WITH BUTIR NATURAL ROCK ASPHALT.  
.....  
.....

Adalah benar hasil karya saya dan penuh kesadaran bahwa saya tidak melakukan tindakan plagiasi atau mengambil alih seluruh atau sebagian besar karya tulis orang lain tanpa menyebutkan sumbernya. Jika saya terbukti melakukan tindakan plagiasi, saya bersedia menerima sanksi sesuai dengan aturan yang berlaku.

Semarang, 22/9/2016, .....

Widia Dwi Utami, Hafifah Hamade

Nama Terang .

## ACKNOWLEDGEMENT

Bismillahirrahmanirrahim.

Assalamu'alaikum Wr. Wb.

*Alhamdulillah rabbil'alamiin,. Wabihi nasta'inu ala umuri dunia waddin.*

In the name of Allah, Most Gracious, Most Merciful. Praise to be Allah the Cherisher and Sustainer of the Worlds, who has blessed me so I am able to finish my study.

I wishes to acknowledge my grateful appreciation to Ir. Gatot Rusbintardjo, M.R Eng. Sc., Ph.D. And Ir. H. Rachmat Mudiyo, MT., Ph.D. from Department of Civil Engineering of Engineering Faculty, UNISSULA for their intensive guidance, help and advice during period of my Final Assigment.

I also would like expressed my grateful appreciation to . H. Kartono Wibowo, MM., MT. Dean of Engineering Faculty of UNISSULA, Ir. H. RachmatMudiyo, MT., Ph.D. Head of Department of Civil Engineering of Engineering Faculty of UNISSULA.

I also would like to thank all the staff of the Administration Staff of Engineering Faculty who always help me in administration aid.

Furthermore, I also would like to thank to gratefully acknowledgement to my college friends for their good cooperation during five years my study in Engineering Faculty of UNISSULA 2012/2016.

Last, but not least, I would like to express my gratitude and great appreciation to my parents, La Hamade and Wa Afiah, my sisters Hasnawati Hamade and Hustiati Hamade for all of their love, understanding and encouragement during my study in Semarang.

Wassalamu'alaikum. Wr. Wb.

Semarang, Agustus 2016

Hasfiah Hamade

## ACKNOWLEDGEMENT

Bismillahirrahmanirrahim.

Assalamu'alaikum Wr. Wb.

*Alhamdulillah rabbil'alamiin,. Wabihi nasta'inu ala umuri dunia waddin.*

In the name of Allah, Most Gracious, Most Merciful. Praise to be Allah the Cherisher and Sustainer of the Worlds, who has blessed me so I am able to finish my study.

I wishes to acknowledge my grateful appreciation to Ir. Gatot Rusbintardjo, M.R Eng. Sc., Ph.D. And Ir. H. Rachmat Mudiyo, MT., Ph.D. from Department of Civil Engineering of Engineering Faculty, UNISSULA for their intensive guidance, help and advice during period of my Final Assigment.

I also would like expressed my grateful appreciation to . H. Kartono Wibowo, MM., MT. Dean of Engineering Faculty of UNISSULA, Ir. H. RachmatMudiyo, MT., Ph.D. Head of Department of Civil Engineering of Engineering Faculty of UNISSULA.

I also would like to thank all the staff of the Administration Staff of Engineering Faculty who always help me in administration aid.

Furthermore, I also would like to thank to gratefully acknowledgement to my college friends for their good cooperation during five years my study in Engineering Faculty of UNISSULA 2012/2016.

Last, but not least, I would like to express my gratitude and great appreciation to my parents, Sutikno and Jumeni, my sister Puput Aryani for all of their love, understanding and encouragement during my study in Semarang.

Wassalamu'alaikum. Wr. Wb.

Semarang, Agustus 2016

Widia Dwi Utami

## MOTTO AND DEDICATION

### **MOTTO :**

“On this day every soul be rewarded with what it earned, no one harmed today.  
Allah is swift at reckoning”.

(QS. Al Ghafir : 17)

“Behold along with the difficulty there is relief. Therefore when you're done (do something else). And hope to the Lord.

(QS. Al Insyirah : 6-8)

“Everything went well even though everything seems to go wrong at all if you are honest with yourself. Instead, everything is not good for you even if everything looks right, if you are not honest with yourself”.

(Mahatma Gandhi)

“Humans are given the ability by God for hope and expect, till then he hopes to take the negligence of his eyelids, so as to witness the true self. And who see the truth of real life for himself, for all human beings and the universe”

(Kahlil Gibran)

## **DEDICATION:**

### **◆ Widia Dwi Utami**

I dedicate this final project to:

- ❖ Both of my parents, Mr. Sutikno and Mrs. Jumeni, my sister Puput Aryani, and my big family that has provided material and spiritual encouragement.
- ❖ UNISSULA Lecturers Faculty of Engineering Department of Civil Engineering who have shared their knowledge.
- ❖ Hasfiah hamade as colleagues who have worked hard, fought together to resolve this Final.
- ❖ Friends UNISSULA Force Civil Engineering 2012, Iwan Sudirwan, Yusuf Aji Pamungkas, Aa Supriadi, Rashif Zul Arif, Muh. Abdu, Aswad Asrasal, Bayu Purnama, Khabiburahman, Seviana, and other comrades who could not mention who have helped the completion of this final report.

### **◆ Hasfiah Hamade**

I dedicate this final project to:

- ❖ Both of my parents, Mr. La Hamade and Mrs. Wa Afiah, my sisters Hasnawati Hamade and Hustiati Hamade, and my big family that has provided material and spiritual encouragement.
- ❖ UNISSULA Lecturers Faculty of Engineering Department of Civil Engineering who have shared their knowledge.
- ❖ Hasfiah hamade as colleagues who have worked hard, fought together to resolve this Final.
- ❖ Friends UNISSULA Force Civil Engineering 2012, Iwan Sudirwan, Yusuf Aji Pamungkas, Aa Supriadi, Rashif Zul Arif, Muh. Abdu, Aswad Asrasal, Bayu Purnama, Khabiburahman, Seviana, and other comrades who could not mention who have helped the completion of this final report.