

**FINAL ASSIGNMENT**

**DESIGN UPPER STRUCTURE OF CANTILEVER SPAR CABLE-  
STAYED BRIDGE**

**Proposed to Fulfill Academic Requirement for  
Civil Engineering Degree in Faculty of Engineering  
Sultan Agung Islamic University**



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2018**



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**APPROVAL PAGE**

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Have been approved at, September, 6 2018

Supervisor

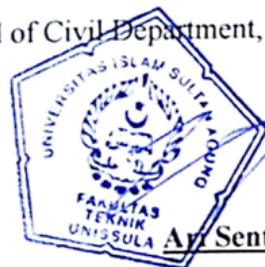
**Ir. Gatot Rusbintardjo, M.R.Eng, M.Sc, Ph.D**

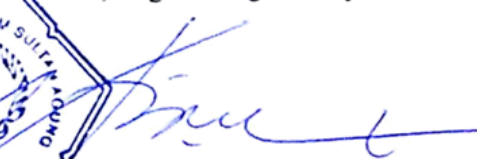
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**Ari Sentani, ST., M.Sc**

## DECLARATION

The undersigned below :

Name : 1. Arshad Yahya H (30201403707)  
2. Jamaludin Ibnu Sanjaya (30201403807)

Department : Civil Engineering

Hereby declare this our Final Assignment is entitled : **DESIGN UPPER STRUCTURE OF CANTILEVER SPAR CABLE STAYED BRIDGE** is a scholarly work free from plagiarism. If later there is proven plagiarism from this final assignment, then I am willing to accept sanction in accordance with applicable legislation.

Semarang, September 2018

By :

Editor I



**Arshad Yahya H**

Editor II



**Jamaludin Ibnu Sanjaya**


Approved :

Supervisor



**Ir. Garot Rusbintarjo, M.R.Eng.Sc., Ph.D**

Co – Supervisor



**Ir. M. Faiqun Ni'am, MT., Ph.D**

## MOTTO

“Don’t compare yourself with anyone in this world. If you do so, you are insulting yourself.”

(Bill Gates)

“A journey of thousand miles begins with a single step.”

(Lou Tzu)

“Orang yang terlalu memikirkan akibat dari sesuatu keputusan atau tindakan, sampai kapan pun dia tidak akan menjadi orang pemberani.”

(Ali bin Abi Thalib)

كُتِبَ عَلَيْكُمُ الْقِتَالُ وَهُوَ كُرْهُ لَكُمْ وَعَسَىٰ أَنْ تَكْرَهُوا شَيْئًا  
وَهُوَ خَيْرٌ لَّكُمْ وَعَسَىٰ أَنْ تُحِبُّوا شَيْئًا وَهُوَ شَرٌّ لَّكُمْ وَاللَّهُ يَعْلَمُ  
وَأَنْتُمْ لَا تَعْلَمُونَ

“Boleh jadi kamu membenci sesuatu, padahal ia amat baik bagimu, dan boleh jadi (pula) kamu menyukai sesuatu, padahal ia amat buruk bagimu, Allah mengetahui, sedangkan kamu tidak mengetahui.”

(QS. Al-Baqarah : 216)

## **DEDICATION**

I dedicated this final assignment to the knowledge of civil engineering in general and bridge engineering in particular as my worship to Allah Subhana Wa Ta'ala

## ACKNOWLEDGEMENTS

الاسلأ مكيلعم اللهأةمحرو هتاكربو

[Alhamdulillah Robbil `Alamin](#), Praise be grateful always poured into the presence of Allah SWT, who gave His mercy and guidance so that this Final Assignment Report can be completed with title "Design of Superstructure Cantilever Spar Cable-Stayed Bridge".

Our special thanks go to the Dean of the Faculty of Engineering of the Sultan Agung Islamic University (UNISSULA), Ir. H. Rahmat Mudyono, M.T., Ph.D., and Head of the Civil Engineering Study Program, Faculty of Engineering of the Sultan Agung Islamic University (UNISSULA), Ari Sentani, ST., M.Sc., for permission, to take the final assignment as a requirement for achieving a bachelor's degree in Civil Engineering at the Faculty of Engineering of the Sultan Agung Islamic University (UNISSULA).

On this opportunity, the author would like to thank all those who have helped to complete this final assignment report. **In particular, I wish to express my sincere appreciation to my main final assignment supervisor, Ir. Gatot Rusbiantardjo, M.R.Eng.Sc., Ph.D., for his encourage, guidance, criticism, and friendship. I am also very thankful to my co-supervisor Ir. M. Faiqun Ni'am, MT., Ph.D., for his guidance, advice, and motivation. Without their continued support and interest, this final assignment report would not have been the same as presented here.**

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الاسلأو مكيلعم محرواللهأة هتاكربو

Semarang, September 2018

Arshad Yahya H / 3.02.014.03707  
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