

**THE FINAL REPORT**

**EXECUTION PLANNING OF TRANSMIGRATION  
LOCAL ROADWAY CONSTRUCTION IN MENTAWAI  
ARCHIPELAGO REGENCY SIPORA ISLAND**

*This Report is Intended to Complete the Academic Terms in the 6<sup>th</sup> Semester  
In Academic Year 2007/2008*

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PADANG  
2008**





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**PERSONAL IDENTITY**

a) Place/Birth of Date : Pandan/January, 10<sup>th</sup> 1987. b) Name of Parents : Akmal and Asriati. c) Faculty : Polytechnic of Andalas University. d) Major : Civil Engineering Department. e) No.ID : 05 072 038. f) Date of Completion: November, 5<sup>th</sup> 2008. g) Predicate : h) GPA : i) Duration of Study: 3 years. j) Address of Parents : Linggarjati Street no.40 F in Tabing Padang.

**Execution Planning Of Transmigration Local Roadway Construction In Mentawai Archipelago Regency Sipora Island**

The Final Project for Diploma III Degree by Arif Fardila  
Supervisor 1 : Revalin Herdianto, ST., M.Sc Supervisor 2 : Ir. Takdir Alamsyah

**ABSTRACT**

Roadway is one of land transportation facility that support economy of society, so that it needs effective steps in executing the roadway project to achieve a good result, and also to give services and comfort for any parties that use the roadway. Therefore, the roadway in Mentawai Archipelago Regency Sipora Island (West Sumatera) should be upgraded and enhanced, so that, the first step is a plan for executing the roadway project by arranging the final project.

The cost estimation for executing the roadway with the length 10.635 km is Rp 27,565,369,000.00 (twenty seven billions five hundred sixty five millions three hundred sixty nine thousands rupiahs) and the duration for executing the highway project by using Precedence Diagram Method is 49 weeks. Controlling (quality control, time control, and cost control) are needed to help each people on structure to meet the roadway specifications. The specific evaluation is flexible pavement design by using "Metoda Analisa Komponen" from Bina Marga. The real project is new roadway construction with rigid pavement layer 4 cm. However, in specific evaluation it is assumed that the project is new and some data are assumed therefore the result is different from that of the real project. The design of pavement layer of specific evaluation are, Asphalt Treated Base (ATB) = 5 cm, Class A Aggregate (Base Layer) = 15 cm, and Class B Aggregate (Sub Base Layer) = 12.5 cm.

The final project had been presented in the evaluation test and graduated on **November, 5<sup>th</sup> 2008**. The abstract had been approved by evaluation team are as follows:

Signature	1.	2.	3.	4.
Name	Revalin Herdianto, ST., M.Sc	Lisnar Rusli, ST	Ir. Soehendik Halwar, MT	Fauza Adibroto, ST., MT

Approved by:  
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	Name	
No Faculty Alumnus:	Name:	Sign:
No University Alumnus:	Name:	Sign:

# CHAPTER I

## INTRODUCTION

### 1.1 Background of Final Project

Engineering and technology degrees tend to be highly structured with programmes biased towards the acquisition of knowledge. Somehow more time needs to be devoted to enabling students to develop inquiring and creative minds, intellectuality, professional human resources quality and a project based on a student centred learning approach with role play at its heart is one answer in college education curriculum improves.

Pursuant to mentioned above, Polytechnic of Andalas University as one of the college that had 3 years study that every student learns about theory and practice in the workshop and laboratory.

Based on the rule of Polytechnic of Andalas University, every student obliged to make the final project as a condition to follow the final examination. The final project shows the ability of students in mastering sciences that have been given during study in Polytechnic of Andalas University.

In writing the final project with according to approval from the Head of Civil Construction Program and the Supervisors, therefore the title of this final project is **“Execution Planning of Transmigration Local Roadway Construction in Mentawai Archipelago Regency Sipora Island”**.



## **1.2 Objectives of Final Project**

In writing the final project, writers had been consisted the purposes into two types are as follows:

### **1.2.1. General Purposes**

The general purposes of final project as follows:

- a. Making the final project as a condition to follow the final examination that for graduating the study in Polytechnic of Andalas University.
- b. Implementation of successful of acceptance knowledge and its application during education in Polytechnic of Andalas University.
- c. Improving the students with the work experience after study in Polytechnic of Andalas University.

### **1.2.2. Specific Purposes**

The specific purposes of final project as follows:

- a. Understanding and know about the planning of construction methods, execution and also project execution methods.
- b. Calculating the cost estimation as a procedure of roadway project execution.
- c. Arranging the work procedure and network planning of the project.

## **1.3 Data Collecting Methods**

In data collecting methods, the data(s) is important things that improved the writing of final project.

## CHAPTER VI

### CONCLUSIONS

#### VI Conclusion

The results of execution planning of transmigration local roadway construction in mentawai archipelago regency sipora island are:

1. The Real Cost Estimation used in this project is based on book "Panduan Analisa Satuan Bina Marga Nomor: 028/T/BM/1995" licensed by "Subdirektorat Penyusunan Standar Direktorat Bina Teknik, Direktorat Jenderal Bina Marga Departemen Pekerjaan Umum".
2. Total Cost Estimation Road Project Excecution Transmigration Local Roadway Construction in Mentawai Archipelago Regency Sipora Island is Rp 27,565,369,000.00 (Twenty Seven Billion Five Houndred Sixty Five Million Three Houndred and Sixty Nine Thousand Rupiahs).
  - The maximum cost execution at the project item work Class B Aggregate for Sub-Base Layer with the cost is Rp 8,052,573,241.54 percentage to the total cost: 32, 13 %.
  - The minimum cost execution at the project item work "Marka Jalan" with the cost Rp 19,913,426.80 percentage to the total cost: 0,079 %.

3. Net Work Planning (NWP) is the effective method for planning the duration of execution project, because this method will be give the efficient analyze. From analyze this project got the duration of this project is **49 Week**.
  - Maximum execution time at the work item Aggregate for Sub-Base Layer with the duration is **27 weeks**.
  - Minimum execution time at the work item Demobilization with the duration is **one week**.
4. The result from thickness pavement design got 3 alternative pavement thickness with comparison between 1<sup>st</sup> alternative with 2<sup>nd</sup> alternative is 9.48 % and comparison the 2<sup>nd</sup> alternative with 3<sup>rd</sup> alternative is 17.72 %. The alternative 1<sup>st</sup> and 2<sup>nd</sup> better than 2<sup>nd</sup> alternative and 3<sup>rd</sup> alternative.
5. At the calculation the thickness pavements design, got the result less than the site project design.

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