



**ANALYSIS OF BORE PILE FOUNDATION CAPACITY IN HIGH
STOREY BUILDING AT PULOMAS, EAST JAKARTA**

UNDERGRADUATE THESIS

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TURNITIN

ANALYSIS OF BORE PILE FOUNDATION CAPACITY IN HIGH STOREY BUILDING AT PULOMAS EAST JAKARTA

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ABSTRACT

Foundation is very important for building as foundation is the lowest part of the building that transmits the building load to the soil or rock that is on the ground underneath. This study aims to determine the comparison of ultimate bearing capacity of bore pile foundation using several methods. Based on CPT data using Aoki & De Alencar method, the ultimate bearing capacity for bore pile foundation with diameter 80 cm are 187.74 *ton* and 339.76 *ton*, with diameter 100 cm, the ultimate bearing capacity are 285.17 *ton* and 522.53 *ton*. Using Meyerhoff method on CPT data, the ultimate bearing capacity for 80 cm diameter foundation are 986.96 *ton* and 767.05 *ton*, for 100 cm diameter foundation, the ultimate bearing capacity are 1542.12 *ton* and 1198.51 *ton*. Based on SPT data using Reese & Wright method, the ultimate bearing capacity are 994.26 *ton* and 921.76 *ton* for 80 cm diameter and for 100 cm diameter are 1861.53 *ton* and 1628.89 *ton*. The ultimate bearing capacity using Luciano Decourt method are 1361.54 *ton* and 1192.98 *ton* for 80 cm diameter. For 100 cm diameter, the ultimate bearing capacity are 1861.53 *ton* and 1628.89 *ton*. Lastly, there is O'Neill & Reese method which have 569.23 *ton* and 584.22 *ton* for 80 cm diameter, 729.77 *ton* and 749.55 *ton* for 100 cm diameter. The interpretation of Static Loading Test from Chin method has an ultimate bearing capacity 952.38 *ton*. The interpretation of Static Loading Test from Mazurkiewicz method have lower ultimate bearing capacity than Chin method which is 800 *ton*.

Keywords: Bored Pile, CPT, SPT, Carrying Capacity, Static Loading Test

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Hopefully, this thesis can be helpful for campuses and reads and can be a reference for students who will make a similar report like this. Not only for students in President University but also for all students in Indonesia. In the end, let me say thank you.

Cikarang, March 2023

A handwritten signature in black ink, appearing to read 'Nath2', with a long horizontal stroke extending to the right.

Nathanael Edward Wisan

TABLE OF CONTENTS

ADVISOR APPROVAL FOR JOURNAL/INSTITUTION'S REPOSITORY	ii
PANEL OF EXAMINERS' APPROVAL	iii
STATEMENT OF ORIGINALITY	iv
SCIENTIFIC PUBLICATION APPROVAL FOR ACADEMIC INTEREST	v
TURNITIN.....	vi
GPTZERO	vii
ABSTRACT	viii
ACKNOWLEDGEMENT	ix
TABLE OF CONTENTS	x
LIST OF FIGURES	xiii
LIST OF TABLES.....	xv
CHAPTER I.....	1
INTRODUCTION.....	1
1.1 Background	1
1.2 Scope of Problem	3
1.3 Research Objective	3
1.4 Benefits	3
CHAPTER II	4
LITERATURE REVIEW	4
2.1 Soil Test.....	4
2.1.1 Cone Penetration Test (CPT)	5
2.1.2 Standard Penetration Test (SPT)	7
2.2 Foundation	11
2.2.1 Bore Pile Foundation	12

2.3 Foundation Bearing Capacity	16
2.3 Static Loading Test	17
2.3.1 Interpretation of Static Loading Test Result	18
CHAPTER III	22
RESEARCH METHODOLOGY	22
3.1 Data Sources.....	22
3.2 Data Collection	22
3.2.1 Cone Penetration Test (CPT).....	22
3.2.2 Standard Penetration Test (SPT)	23
3.2.3 Laboratory Result.....	26
3.2.4 Bore Pile Design	27
3.2.5 Static Loading Test.....	28
3.3 Method.....	28
3.3.1 Bore Pile Foundation Bearing Capacity According to CPT	30
3.3.2 Bore Pile Foundation Bearing Capacity According to SPT	33
3.4 Flowchart	39
CHAPTER IV	40
DISCUSSION	40
4.1 General	40
4.2 Calculation of Bore Pile Foundation Capacity	44
4.2.1 According to Cone Penetration Test (CPT)	44
4.2.2 According to Standard Penetration Test (SPT).....	48
4.2.3 Interpretation of Static Loading Test (SLT).....	53
CHAPTER V	58
CONCLUSION AND RECOMMENDATION	58
5.1 Conclusion	58

5.2 Recommendation	59
REFERENCES	60
APPENDICES	62

LIST OF FIGURES

Figure 2.1.1.1 Cone Penetration Test Tool	6
Figure 2.1.2.1 Standard Penetration Test Tool	8
Figure 2.3.1 Static Loading Test.....	18
Figure 2.3.1.1 Chin Method.....	19
Figure 2.3.1.2 Interpretation of Static Loading Test using Chin Method	19
Figure 2.3.1.2 Interpretation of Static Loading Test using Mazurkiewicz.....	21
Figure 3.2.1.1 Chart of S1-S4	23
Figure 3.2.5.1 Static Loading Test Graph	28
Figure 3.4.1 Research Flowchart	39
Figure 4.1.1 Correlation of SPT and CPT at Bor-Log BH-1	42
Figure 4.1.2 Correlation of SPT and CPT at Bor-Log BH-2.....	42
Figure 4.2.3.1 Chin Method.....	53
Figure 4.2.3.2 Mazurkiewicz Method	54
Figure 4.2.3.3 CPT Result Comparison.....	54
Figure 4.2.3.4 SPT Result Comparison	54
Figure 4.2.3.5 Comparison of Bore Pile Capacity using Several Methods	55
Figure 4.2.3.6 Comparison of Bore Pile Capacity in Percentage to Chin Method.....	55
Figure 4.2.3.7 Comparison of Bore Pile Capacity in Percentage to Mazurkiewicz Method	55
Figure 4.2.3.8 Comparison of Bore Pile Capacity in Graph at Bor-Log BH-1.....	55
Figure 4.2.3.9 Comparison of Bore Pile Capacity in Graph at Bor-Log BH-2.....	56
Figure 4.2.3.10 Comparison of Bore Pile Capacity in Graph excluding Aoki & De Alencar method at BH-1	56
Figure 4.2.3.11 Comparison of Bore Pile Capacity in Graph excluding Aoki & De Alencar method at BH-2.....	57
Figure A: Aoki & De Alencar Method Calculation	62
Figure B: Aoki & De Alencar Method Calculation	62
Figure C: Meyerhoff Method Calculation at Bor-Log BH-1	63
Figure D: Meyerhoff Method Calculation at Bor-Log BH-2	63
Figure E: Reese & Wright Method Calculation at Bor-Log BH-1	64

Figure F: Reese & Wright Method Calculation at Bor-Log BH-1	64
Figure G: Luciano Decourt Method Calculation at Bor-Log BH-1	65
Figure H: Luciano Decourt Method Calculation at Bor-Log BH-2	65
Figure I: O'Neill & Reese Method Calculation at Bor-Log BH-1	66
Figure J: O'Neill & Reese Method Calculation at Bor-Log BH-2.....	66
Figure K: CPT Result at S-1	67
Figure L: CPT Result at S-2.....	67
Figure M: CPT Result at S-3.....	68
Figure N: CPT Result at S-4.....	68
Figure O: Bore Pile Design Ø100 cm.....	69
Figure P: Bore pile Design Ø80 cm.....	70
Figure Q: Value of C_u and N_c at Bor-Log BH-1 and BH-2	71

LIST OF TABLES

Table 2.1.2.1 Correction Value in SPT.....	10
Table 3.2.5.1 The Value of N_1 , N_2 , N_3 , N_4 and N	28
Table 3.3.1.1 Empirical Factor Fb	31
Table 3.3.2.1 Soil Coefficient Value.....	36
Table 3.3.2.2 Relationship of the value of Su , and Nc	37
Table 4.1.1 CPT and SPT Correlation.....	41
Table 4.1.2 Correction of N_{spt} at Bor-Log BH-1 and BH-2	43
Table 4.2.3.1 Load vs Settlement.....	53