

**ENGINEERING PROPERTIES OF MATERIAL BEING
USED FOR ROAD CONSTRUCTION AT BAHRIA TOWN
PHASE 8 RAWALPINDI, PAKISTAN**



A thesis submitted to Bahria University, Islamabad in partial fulfillment
of the requirement for the degree of B.S in Geology

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ABSTRACT

The study area is part of Potwar Basin and comprises thick deposits of recent Potwar clay. The study objectives consist of evaluation of asphalt, soil's index, and engineering properties as subgrade materials is purposed for Bahria Town phase 8 in district Rawalpindi. During field investigation different test pits were excavated as per project's specification along the purposed road alignment. In-situ compaction was determined by using Nuclear method and sand-cone method (ASTM D1556) which ranges from to 90-100 %. The grain friction analysis reveals that the gravel varies from 1 to 54 %, sand varies from 4 to 57% and silt/clays friction ranges from 33 to 92 %. The Atterberg limits data reveals that the Liquid Limit varies from 23.1 to 30.5 %, Plastic Limit 18.3 to 18.9 % and Group index varies is zero. The soil in the study area was classified as A-4 using AASHTO M 145 soil classification. The Californian Bearing Ratio at 1mm" penetration ranges from 4% to 9%. Based upon AASHTO soil classification and Central Laboratory of Bahria Town road specification, the soil of area is not recommended for purposed road subgrade.

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CONTENTS

| | Page |
|--|-------------|
| ABSTRACT | i |
| ACKNOWLEDGMENT | ii |
| FIGURES | vi |
| TABLES | vii |
| GRAPHS | viii |
| CHAPTER 1 | |
| INTRODUCTION | |
| 1.1 Introduction | 1 |
| 1.2 Location and Accessibility | 2 |
| 1.3 Purpose of project | 3 |
| 1.4 Methodology | 3 |
| CHAPTER 2 | |
| STRATIGRAPHY AND TECTONIC OF PAKISTAN | |
| 2.1 Tectonic Settings | 4 |
| 2.1.1 Karakorum Block | 5 |
| 2.1.2 Main Karakorum thrust | 5 |
| 2.1.3 Kohistan island arc | 5 |
| 2.1.4 Main mantle thrust | 6 |
| 2.1.5 Northern deformed fold and thrust belt | 6 |
| 2.1.6 The Main Boundary Thrust | 6 |
| 2.1.7 The Southern Deformed Fold and Thrust Belt | 7 |
| 2.1.8 The Punjab Fore deep | 7 |
| 2.2 Local Geology Islamabad/Rawalpindi | 8 |
| 2.2.1 Stratigraphy | 9 |
| 2.2.1.1 Murree Formation | 9 |
| 2.2.1.2 Kamlial Formation | 9 |

CHAPTER 3
ENGINEERING GEOLOGY

| | | |
|-----|-----------------------------------|----|
| 3.1 | Scope of engineering geology | 11 |
| 3.2 | Engineering aspects of study Area | 13 |
| 3.3 | AASHTO Standards | 15 |

CHAPTER 4
METHODOLOGY AND RESULTS

| | | |
|-------|-------------------------------------|----|
| 4.1 | Gradation (Sieve analysis) for soil | 19 |
| 4.1.1 | Needs and scope | 19 |
| 4.1.2 | Required equipment | 19 |
| 4.1.3 | Test Procedure | 20 |
| 4.1.4 | Gradation Test Formulae | 21 |
| 4.1.5 | Precaution | 21 |
| 4.2 | Sand cone method | 22 |
| 4.2.1 | Apparatus | 22 |
| 4.2.2 | Procedure | 23 |
| 4.2.3 | Calculations and formulas | 24 |
| 4.3 | Nuclear method | 26 |
| 4.3.1 | Procedure | 26 |
| 4.3.2 | Results | 26 |
| 4.3.3 | Plasticity Index (P.I.) | 27 |
| 4.3.4 | Group Index | 27 |
| 4.4 | Liquid Limit Test Determination | 27 |
| 4.4.1 | Apparatus | 27 |
| 4.4.2 | Procedure of Test Sample | 28 |
| 4.4.3 | Precaution | 29 |
| 4.5 | Plastic Limit Determination | 29 |
| 4.5.1 | Apparatus | 29 |
| 4.5.2 | Procedure | 30 |
| 4.5.3 | Precaution | 30 |
| 4.6 | Modified Proctor Test | 32 |

| | | |
|-------|--------------------------------|----|
| 4.6.1 | Apparatus | 32 |
| 4.6.2 | Procedure | 32 |
| 4.6.3 | Modified Proctor Test Formulas | 33 |
| 4.6.4 | Precautions | 33 |
| 4.7 | CBR (California Bearing Ratio) | 35 |
| 4.7.1 | Definition | 35 |
| 4.7.2 | Apparatus | 35 |
| 4.7.3 | Procedure | 36 |

CHAPTER 5
AGGREGATE ANALYSIS

| | | |
|-------|---------------------------------------|----|
| 5.1 | Sand equivalent test | 41 |
| 5.1.1 | Apparatus | 41 |
| 5.1.2 | Procedure | 41 |
| 5.1.3 | Sand equivalent formulas | 42 |
| 5.1.4 | Precautions | 42 |
| 5.2 | Los Angeles abrasion test | 44 |
| 5.2.1 | Apparatus | 44 |
| 5.2.2 | Procedure | 45 |
| 5.2.3 | Los Angeles Abrasion Test calculation | 45 |

CHAPTER 6
ASPHALT TEST

| | | |
|-------|-------------------------|----|
| 6.1 | Bitumen Penetration | 46 |
| 6.1.1 | Apparatus | 46 |
| 6.1.2 | Procedure | 47 |
| 6.1.3 | Results | 47 |
| 6.2 | Temperature test | 47 |
| 6.2.2 | Apparatus | 47 |
| 6.2.3 | Results | 48 |
| 6.3 | Bitumen Extraction test | 48 |

| | |
|-----------------------|-----------|
| 6.3.1 Apparatus | 48 |
| 6.3.2 Procedure | 49 |
| 6.3.3 Calculations | 50 |
| CONCLUSIONS | 52 |
| RECOMMENDATION | 53 |
| REFERENCES | 54 |

FIGURES

| | Page |
|--|------|
| Figure 1.1. Map of the study area. | 2 |
| Figure 1.2. Sampling and field density test. | 3 |
| Figure 2.1. Tectonic setup of northern Pakistan. | 8 |
| Figure 4.1. Quartering box used for mixing the collected sample to Obtained qualified result. | 20 |
| Figure 4.2. Sand cone apparatus. | 23 |
| Figure 4.3. Nuclear density meter. | 26 |
| Figure 4.4. Apparatus for determination of liquid limit and plastic limit. | 28 |
| Figure 4.5. Method of rolling thread on glass plate. | 29 |
| Figure 4.6. CBR test machine. | 37 |
| Figure 5.1. Apparatus use in sand equivalent test. | 42 |
| Figure 5.2. Loss Angeles Abrasion Machine. | 44 |
| Figure 6.1. Penetrometer. | 46 |
| Figure 6.2. Temperature gauge. | 48 |
| Figure 6.3. Centrifuge Extraction. | 49 |

TABELS

| | Page |
|---|------|
| Table 2.1. Stratigraphic column. | 10 |
| Table 3.1. Classes of material for each layer according to AASHTO standard. | 15 |
| Table 3.2. Specified test value for sub – base material. | 16 |
| Table 3.3. Gradation of coarse Aggregate through sieve analysis. | 16 |
| Table 3.4. Classes of material for each layer. | 17 |
| Table 3.5. Gradation analysis of fine Aggregates. | 17 |
| Table 3.6. Gradation requirements of Sub-Base material. | 18 |
| Table 4.1. Result obtained from sub base gradation. | 20 |
| Table 4.2. Result of 3/4 Aggregate. | 21 |
| Table 4.3. Result of 3/8 Aggregate. | 22 |
| Table 4.4. Results of sand cone method (moisture content). | 24 |
| Table 4.5. Results of sand cone method (field density). | 25 |
| Table 4.6. Result of Consistency limit. | 30 |
| Table 4.7. Result of plastic limit, liquid limit and plastic index. | 31 |
| Table 4.8. Sieve analysis value used for plastic, liquid limit. | 31 |
| Table 4.9. Results maximum moisture content for proctor test. | 33 |
| Table 4.10. Results maximum dry density for proctor test. | 34 |
| Table 4.11. Standard load Value. | 37 |
| Table 4.12. CBR Results. | 37 |

| | | |
|-------------|--|----|
| Table 4.13. | Result of dry density. | 38 |
| Table 4.14. | Result of moisture content. | 38 |
| Table 4.15. | Density C.B.R values for mould 1. | 39 |
| Table 4.16. | Density C.B.R values for mould 2. | 39 |
| Table 4.17. | Density C.B.R values for mould 3. | 40 |
| Table 5.1. | Result of Sand equivalent for Aggregate. | 43 |
| Table 5.2. | Result of Sand equivalent for Aggregate base coarse. | 43 |
| Table 5.3. | Results of Los Angeles. | 45 |
| Table 6.1. | Results of Bitumen penetration test. | 47 |
| Table 6.2. | Results of Asphalt Temperature test. | 48 |
| Table 6.3. | Results of bitumen extraction. | 50 |

GRAPHS

| | Page |
|--|------|
| Graph 4.1. Liquid limit value | 31 |
| Graph 4.2. Results of Proctor | 34 |
| Graph 4.3. Result of CBR Curve Mould 1,2,3, | 40 |
| Graph 6.1. Asphalt wearing course analysis curve | 50 |