HIGHER TECHNICAL INSTITUTE
NICOSIA - CYPRUS

CIVIL ENGINEERING DEPARTMENT

Academic Year 1993/94

Diploma Project Number : C/715

TITLE: DESIGN OF BITUMINOUS MIXES

OBJECTIVES:

1. To give an account of the types of bituminous mixes and discuss the various properties required from their.

2. To give an account of the mechanical testing of bituminous mixes giving emphasis on the mechanical properties required from the bituminous mixes.

3. To write on the methods employed for the design and specification of bituminous mixes.

Terms and conditions:

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IE/ML

SUMMARY

The purpose of this project is the design of bituminous mixes using the Marshall method of design. The design of asphalt paving mixes is largely a mat ter of selecting and proportioning materials to obtain the desired properties in the finished construction. The overall objective of the design procedure is to determine an economical blend and gradation of aggregates and asphalt that yields a mix having:

- Sufficient asphalt to ensure a durable pavement.

- Adequate mix stability to satisfy the demands of traffic without distor tion or displacement.

- Voids content high enough to allow for a slight amound of additional compaction under traffic loading without flushing, bleeding, and loss of stability, yet low enough to keep out harmful air and moisture.

- Sufficient workability to permit efficient placement of the mix without segregation.

The selected mix design is usually the most economical one which will satisfactorily meet all of the established criteria. Mix design is a tool used in control. It is utilised in material acceptance, job mix control and final pavement compaction.

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