ASSESSMENT OF THE ADEQUACY OF THE EXISTING ACCESS OF ENTEBBE INTERNATIONAL AIRPORT FOR LONG TERM OPERATIONS

BY

JOSEPH KIWANUKA MUKIIBI
B.Sc. Civil Engineering (MAK)

A Thesis submitted to the Directorate of Research and Graduate Training in partial fulfillment of the requirements for the award of the Degree of Master of Science in Civil Engineering of Makerere University

MAY 2012
ABSTRACT

By 2025, about 7 billion people and 170 million cargo tons will annually use civil airports globally. Studies on increased airport capacity of access and other facilities are necessary. This study assessed adequacy of the existing access to Entebbe International Airport (EIA) for future long term operations. The objective was achieved through determining capacity and functional efficiency of the access parking lots, studying the organization of the available access modes, and determining capability of parking facilities to handle future traffic flows. Geometric characteristics and capacity of existing access components were compared to Standards. The quantitative approach employed entailed a cross-sectional survey involving a sample of respondents from Immigration Department, Planning, Road Toll, Taxi Drivers, CAA Employees and supervisors, workers as well as managers of different Departments in EIA. Questionnaires and interview guides were administered to a random sample of 168 out of a population of 271 employees in the relevant departments and 148 air passengers. Condition surveys and traffic studies were done on the parking facilities and roads. The results show that the only access method available for the airport is road via either private or public means. Traffic by private means is usually uninterrupted from origin only making a stopover at the check point and ticket issuing station. Motorists can pay for parking easily and conveniently using automated facilities making parking a smooth experience. Security checking takes long (3 – 15 minutes) with attendant delays. The access trip from Kampala to the airport takes a long time (lasting between 1 to 3 hours). This access road is majorly a two lane road and handles other traffic. It is prudent to open other access modes (rail and water) for the future, as well as, widen the existing road to 4-way divided equally in both directions. The exact access modes at EIA are taxicab, automobile, urban bus (staff bus) and charter bus. Entebbe Airport Cargo Transporters operates cargo to and from the airport. Most of the car parks are rectangular and can accommodate double loaded aisles. Parks for short and long term parking are provided to the south and east of the terminal building. Parking for employees and spectators is catered for with short-term parks. The available parking supply does not meet the future demand after 15 years. This inadequacy of access poses severe constraints on demand for air transport. Access facilities require improvement and increase in capacity to handle projected operations. It is proposed that sophisticated security checks be installed to reduce on time and improvement in the parking ticketing as well as expanding and redesigning the parking.