

أجندة طالب الدراسات العليا



أسم الطالب :خلدون طالب فالح

التخصص : هندسة الجيوماتيك

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أسماء لجنة المناقشة :-

- 1- الاستاذ المساعد الدكتور عدي زكريا جاسم ، الجامعة التكنولوجية / هندسة البناء والانشاءات رئيساً
- 2- الاستاذ المساعد الدكتور اسماء ثامر ابراهيم ، جامعة النهرين / الهندسة المدنية عضواً
- 3- الاستاذ المدرس الدكتور رشا حسن الربيعي ، الجامعة التكنولوجية / هندسة البناء والانشاءات عضواً
- 4- الاستاذ الدكتور عبد الرزاق طارش زبون ، الجامعة التكنولوجية / هندسة البناء والانشاءات عضواً ومشرفاً
- 5- المدرس الدكتور زينب ابراهيم قاسم ، الجامعة التكنولوجية / هندسة البناء والانشاءات عضواً ومشرفاً

أسم المقوم العلمي : الاستاذ الدكتور اياد عاشور حمزة / جامعة بغداد / كلية الهندسة.

أسم المقوم اللغوي : الاستاذ الدكتور أياد جهاد شمس الدين / الجامعة التكنولوجية.

عنوان البحث للرسالة :

"The Utilization of Geomatics Techniques for Analysis of Urban Areas Transportation Network"

" استخدام تقنيات الجيوماتك في تحليل شبكات النقل للمناطق الحضرية "

عنوان البحث المستل :

"GIS Application To Evaluate Transportations Network in Nasiriyah City"

تقدير المناقشة : امتياز



ABSTRACT:

مستخلص البحث :

Al-Nasiriyah City suffers from traffic congestion in different spots. The reasons behind that are: high population density, small road network, concentration of local and international institutions of Al-Nasiriyah City. Therefore, there is a need for scientific-foundations for transportation planning in order to evaluate the existing situation of Al-Nasiriyah transportation system and the experience of future development scenarios of transportation system and land use. Most of the development processes that are applied to Al-Nasiriyah faced many challenges in the conventional travel demand forecasting process such as: the absence of previous transportation planning studies and lack of traffic data so that was necessary to make a traffic count through the Mobile Speed Safety System (MSSS) device and also questionnaires on traffic, to obtain data that can be adopted as the basis for travel demand forecasting process.

Given this context, the main objectives of this research are analyzing the existing traffic situation of Al-Nasiriyah City based on a reliable traffic count, modelling and building the road network of Al-Nasiriyah City using a suitable transportation planning software.

According to the study area, (O-D) matrix (Original – Destination) has been developed and built using traffic count in addition to estimating and evaluating the traffic flow and network performance based on the selected process.

The methodology of the research is based on two levels of evaluation of Al-Nasiriyah transportation system, it selects the best route between various stations by using a techniques (Arc GIS 10.3), and network level where TransCAD software. The results of data collection and analysis show that the morning peak period is from 7:00 a.m. to 8:00 a.m. The highest peak hour of traffic flow is [4585.7 pcu/hr] at the northern entrance for Nasiriyah city Baghdad entrance (EX1), as for intersections the value amounted to [3874.3 pcu/hr] in Al-Bahoo intersection in city center. Using TransCAD software a traffic assignment was made for the (Stochastic User Equilibrium) and (System Optimum) Assignment, Models for assignment and distribution of the traffic in Al-Nasiriyah road network are built, the results

of two models were nearly convergent and there is a small improvement in the work of road network by using the system optimum model. The results show that there is a great imbalance in the city center for increasing congestion and lack of services where the percentage (v/c) is greater than or equal to one and this is proven by counting the traffic that clarified the large traffic flow in these regions and gradually the (v/c) to rest of the network. The Presentation of proposals concerning improving each of (road system, car parking, major intersections of the city) through choosing five major intersections to improve, the more congestion is Al-Bahoo intersection, where the percentage (v/c) is about 1.331 and this ratio is relatively large. Proposals suggested are: Signalized (2-phase), U-turns 100m from intersection on dedicated lane, Prohibition of HGVs during daytime, Additional lanes (all approaches), that improve the v/c ratio by 0.70.

