

**I. IDENTIFICATION**

<b>Master thesis title:</b>	ROUTING OPPORTUNITIES FOR COMMERCIAL CROSSINGS BETWEEN EL PASO AND JUAREZ.
<b>Author:</b>	MAREK MUSIL
<b>Reviewer:</b>	JOSE OSIRIS VIDAÑA BENCOMO
<b>Reviewer's affiliation:</b>	UNIVERSITY OF CIUDAD JUAREZ.

**II. EVALUATION**

<b>Thesis topic difficulty</b>
<i>How would you assess the thesis topic difficulty?</i>
Development of methodology and application is high difficult. The student had to dominate the topic of traffic flow, the specific case scenario for traffic modeling border crossing and, finally he had to simulate this case scenario in Dynust T platform. Therefore, the student had to develop huge dexterity in traffic engineering and transportation planning to accomplish the thesis research goals.

<b>Thesis topic fulfillment</b>
<i>Does the thesis content meet the thesis topic assignment?</i>
Yes, the results provide solid information to make decisions (GSA) about the planning of alternatives to improve commercial border crossing. Also provided information to evaluate the eventual case that BOTA POE close to commercial vehicles.

<b>Methodology</b>
<i>Did the student use suitable approach and methods?</i>
Yes. The methodology is according to the mesoscopic modeling process with specific adjustments of the POES's traffic characteristics to obtain data that allow traffic analysis to be carried out that can yield results focused on the objective of the research.

<b>Use of data sources and citations</b>
<i>How did the student work with literature and data sources?</i>
The document mentions and analyze a good number of references. All of them are recent, reliable, and related with the thesis topic.

<b>Language, structure and formatting</b>
<i>Did the student use suitable language for a diploma thesis? Is the thesis structured well? Does the formatting help reader to understand the topic and results?</i>
Yes- The student demonstrates his ability to transmit ideas and knowledge through writing the document. The document has excellent organization and structure and also shows that the student dominates the transportation technical language

<b>Overall comments</b>
<i>Your summary opinion of the thesis.</i>
The topic addressed in the thesis is important since it offers information on different scenarios that helps GSA people make decisions regarding the alternatives they are currently considering to improve commercial crossing.

<b>Questions for discussion</b>
<i>Questions to be asked during the thesis defense. Opponent usually asks at least one question.</i>
1In addition to the ITS technology the thesis mentions is utilized in POE's, what other ITS technology do you recommend to improve commercial crossing?

2. Which data source from Juarez network was used to update model? Page 40 mention AADT from Dirección General de Carreteras, but how did you get the rest of data such as type of road, number of lanes, left-turn and right-turn bays, saturation flow/lane, Free Flow speed, Traffic Signal Time, etc

3. Page 53 indicates that the mesoscopic model runs 24 hours, however the traffic volume collected is AADT, how did you do the distribution flow through each of the 24 hours? what criteria did you assume?

4.-The document indicates that the most impactful limitation is missing the exact calibration points in the Mexican link. In case you could obtained, how many calibration points would you need to get accurate results of the model?

5.- Figure 28 shows Truck traffic flow simulated, is this during a specific hour? Or is during 24hours?

I propose the following grade: **A - excellent.**

Date: **1.5.2024**

Signature:

