

## I. IDENTIFICATION

<b>Master thesis title:</b>	Smart Cities Applications for Green Infrastructure on Vitezne Namesti in Prague
<b>Author:</b>	Luisa Andrea Castrejon
<b>Reviewer:</b>	Kristie Chin, PhD
<b>Reviewer's affiliation:</b>	University of Texas at Austin Center for Transportation Research

## II. EVALUATION

<b>Thesis topic difficulty</b> <i>How would you assess the thesis topic difficulty?</i>
Moderate – The thesis develops a framework using analytical hierarchy process (AHP) for selecting sites and comparing green infrastructure (GI) designs.

<b>Thesis topic fulfillment</b> <i>Does the thesis content meet the thesis topic assignment?</i>
Yes, the thesis is a unique contribution to the fields of green infrastructure and smart cities research.

<b>Methodology</b> <i>Did the student use suitable approach and methods?</i>
Yes, the student collected diverse data for each of the sites and successfully applied the framework to the El Paso and Prague case studies. One area that is unclear is who provided the AHP rankings. This section could be strengthened by clarifying that the researcher submitted the rankings and providing justification for the researcher's rankings; additionally the researcher could have identified the types of stakeholders (city council, public works staff, state department of transportation, developers, local businesses, community organizations, etc.) who would be engaged in the site selection and design phases of a project. Knowing how different types of stakeholders can influence the AHP outcome would demonstrate an understanding of its limitations as a decision support method.

<b>Use of data sources and citations</b> <i>How did the student work with literature and data sources?</i>
The student drew upon literature related to green infrastructure and smart cities to formulate a thesis at the intersection of sustainability. Recognizing the complexity of green infrastructure, the student successfully collected multiple data sources (flood locations, surface temperatures, pavement conditions, traffic safety hazards) and applied the framework to the El Paso and Prague case studies.

<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 used suitable language and is well structured for a diploma thesis. The formatting could be improved to clarify the researcher's main points. The majority of figures could be included in an appendix and summary tables could be included in the main body of the thesis to enable the reader to readily compare the five site characteristics for the El Paso case study and the three scenarios in the Prague case study.

<b>Overall comments</b> <i>Your summary opinion of the thesis.</i>
Overall, the thesis is a good contribution to green infrastructure and smart cities research. Climate resilience is a very timely topic and the student drew upon the breadth of her experiences in El Paso and Prague to develop a new framework for green infrastructure site selection and design.

**Questions for discussion**

*Questions to be asked during the thesis defense. Opponent usually asks at least one question.*

Which stakeholders do you wish you could have included in the AHP process and how do you believe their roles would have influenced the outcome?

The Prague case study examines the many benefits of different vegetation scenarios. How would you incorporate costs for planting and maintaining each of the scenarios?

Beyond environmental, you also mention the economic and social aspects of sustainability. What other data sources would you add to expand the framework to incorporate economic and social aspects in selecting a green infrastructure site?

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

Date: **17.5.2023**

Signature:



Kristie Chin, PhD

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