

Agustin Guerra H.

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EDUCATION

University of Florida

PhD. in Civil Engineering

Gainesville, FL

Aug. 2019 – Expected May 2023

University of Kansas

MS in Civil Engineering

Lawrence, KS

Aug. 2017 – May 2019

Universidad Tecnologica de Panama

BS in Civil Engineering

Panama

March. 2008 – May 2013

TECHNICAL SKILLS

Expertise: Transportation Engineering, Operation Research, Machine Learning, Statistical Analysis.

Languages: Python, R.

Softwares: AutoCAD Civil 3D, Infracore, Slide-Rockscience.

Developer Tools: Github, Visual Studio.

Libraries: pandas, NumPy, Matplotlib, CPLEX.

EXPERIENCE

Graduate Research & Teaching Assistant

University of Florida

August 2019 – Present

Gainesville, FL

- Developed optimization algorithms for corridors considering automated-vehicles capabilities.
- Assisted on the testing of optimization algorithm for isolated intersections.
- Assisted on promoting the outreach of the UFTI department.
- Student Representative at the Internal Steering Committee at UFTI.
- ITE Student Chapter vice-president.
- TA for TTE 6267: Traffic Flow Theory.

Highway & Traffic Consultant

WSP

May. 2019 – Aug. 2019

Panama

- Provided safety assessment for interchanges, on-ramps, off-ramps, and roundabouts
- Developed geometric design proposals.
- Conducted earthwork estimation for highway projects.

Highway Engineer

Louis Berger

Jul. 2014 – Aug. 2017

Panama

- Developed geometric designs for proposal and as-built drawings for highway projects. My project portfolio comprises several projects in the Latin American region (Panama, Colombia, Honduras, Peru) adding up to \$3 billion in construction amount.
- Coordinated with different departments (geotechnical, hydraulic, pavement) to achieve deadlines.
- Developed digital model terrain (DTM) for highway projects.
- Assisted with slope stability analysis.
- Supervised drafter team (4 people).

PROJECTS

4th Bridge over the Panama Canal | *Panama*

May 2019 – August 2019

- A cable-stayed bridge across the Panama Canal, 450 m span with two interchanges on both ends and a clearance of 80 m.
- Construction amount \$1.2 billions.

Portobelo - Maria Chiquita Highway (Proposal) | *Panama*

May 2019 – August 2019

- Rural multi-lane highways in a mountainous terrain about 33 km length
- The proposal included two main interchanges.

- Corredor Panama Norte** | *Panama* Jan 2016 – Jun 2017
- Widening from Two to Four-lane highway of 9.42 km length including five interchanges, medium terrain.
 - The design included sidewalks, and bike path along the corridor.
 - This projects considered as principal constraints a 1 meter diameter pipe below the existent alignment.
 - Construction amount: \$95.0 millions
- Corredor Perimetral Oriente de Cundinamarca** | *Colombia* Jan 2015 – Dec 2015
- Included 45 km of new alignments and 73.9 km of rehabilitation in a mountainous terrain, rural 2-lanes highway.
 - The design included sidewalks, bike paths, 6 roundabouts and 2 interchanges.
 - Construction amount: \$428.0 millions
- Line One of the Panama Metro** | *Panama* Nov 2014 – Dec 2014
- Around 1 km of reconstruction of a urban arterial, level terrain.
 - The design included sidewalks and bus-stop bays.
 - It also included the adequation of U-turns and reshaping from 3 to 2 lanes per direction to alleviate traffic and provide more surface for pedestrians.
- Corredor Panamerican Highway Section Santiago -Vigui** | *Panama* Jan 2014 – Dec 2014
- Widening from two to four-lane highway of 70 km length including several intersection on rural setting.
 - The design includes sidewalks, along the corridor in urban areas. Level to moderate terrain.
 - Construction amount: \$340.0 millions
- Corredor Turistico La Barca – El Progreso – Tela** | *Honduras* Jul 2014 – Aug 2014
- Widening from two to four-lane highway of 105 km length including 3 roundabouts in urban settings.
 - The design includes sidewalks, along the corridor in urban setting.
 - Construction amount: \$120.0 millions
- Slope Stabilization Studies 53 km** | *Panama* Feb 2014 – Apr 2014
- Slope characterization, and stability analysis of the Madden-Colon corridor.
 - Alternatives such as soil nailing, reshaping and drainage improvement were proposed.
 - For embankments solutions as MSE walls were proposed.
 - Construction amount: \$0.4 millions
- Hydroelectric Project Chan II (Proposal)** | *Panama* Jan 2014 – Nov 2014
- The project located on mountainous terrain required several access roads to allow the construction.
 - Construction amount: \$1000.0 millions
- Amador Widening** | *Panama* Jan 2014 – Feb 2014
- Marine embankment of 3.3 km length on level terrain, including 5 roundabouts to improve mobility.
 - The project included children's park and ground improvements technics such as densification, replacement, geotextile inclusion, mechanic stabilization, MSE walls.
 - Construction amount: \$95.0 millions
- Coastal Beltway** | *Panama* Nov 2012 – Apr 2013
- Eliptical roundabout and multiple level intechanges at both end of a marine viaduct.
 - This project was elected on 2015 as the Global Best Project in Roads and Highways by the ENR.
 - The design included sidewalks, and bike path along the corridor.
 - Viaduct of 3 km above sea water, surrounding the Panama's old-town.
 - Construction Amount: \$ 45 millions

AWARDS

Fulbright Fellowship: Awarded by the U.S embassy in Panama to complete a Master's Degree at the University of Kansas.

REFERENCES

Lily Elefteriadou PhD: Barbara Goldsby Professor, Director of the UFTI
Gabriel Borrás: Country Manager WSP Panama.
Sofia Berger:Senior Vice President, Advisory Services WSP.

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