

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

EXPERIENCE

Graduate Research & Teaching Assistant

University of Florida

August 2019 – Present

Gainesville, FL

- Developed optimization algorithms for corridors considering automated-vehicles.
- Assisted on control strategies deployment of optimization algorithm for isolated intersections.
- Assisted on promoting outreach of the department.
- TA for TTE 6267: Traffic Flow Theory. Provide assignments explanation.

Highway & Traffic Consultant

WSP

May. 2019 – Aug. 2019

Panama

- Provide safety assessment for interchanges, on-ramps, off-ramps, and roundabouts
- Developed geometric design proposals.
- Earthwork estimation.

Highway Engineer

Louis Berger

Jul. 2014 – Aug. 2017

Panama

- Developed geometric designs for proposal to as build for highway projects. Projects portfolio comprise 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 includes sidewalks, and bike path along the corridor.
- This projects considers 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 includes sidewalks, bike paths and 6 roundabouts and 2 interchanges.
- Construction amount: \$428.0 millions

Linea Uno del Metro de Panama | Panama

Nov 2014 – Dec 2014

- 1 km of a urban arterial, level terrain.
- The design includes sidewalks to serves commuter near metro-station
- The design included the adecuation 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 un urban areas.
- 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 stablity analysis of corridor Madden-Colon corridor.
- Solutions 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 | Panama

Jan 2014 – Nov 2014

- The project located on mountainous terrain required several road access for the construction of the dam.
- 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
- The project included children's park and ground improvements technics such as densification, replacement, geotextile inclusion, mechanic stabilization.
- This projects considers as principal constraints a 1 meter diameter pipe below the existent alignment.
- Construction amount: \$95.0 millions

Expresa Sur Interchanges | Peru

Nov 2013 – Dec 2013

- Assitance on MSE wall design
- Construction Amount: \$ 200 millions

Cinta Costera III Marine Access | Panama

Nov 2012 – Apr 2013

- Eliptical roundabout and multiple level intechanges at both end of the viaduct
- Winner of best project.
- The design includes sidewalks, and bike path along the corridor.
- Viaduct of 3 km above sea water, sorrounding the old-town.
- Construction Amount: \$ 45 millions

TECHNICAL SKILLS**Languages:** Python, R.**Softwares:** AutoCAD Civil 3D, Infracore, Slide-Rockscience.**Developer Tools:** Github, Visual Studio.**Libraries:** pandas, NumPy, Matplotlib, CPLEX.