

# Ana Clara Rios Gouveia, E.I.T.

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education	<b>Harvard University Extension School, Cambridge, MA</b> Computer Science Coursework	<b>2016 – 2017</b>
	<b>University of Massachusetts Lowell, Lowell, MA</b> M.S. Structural Engineering, <i>Computation Focus</i> – ‘15 GPA: 3.12/4.00 B.S. Civil and Environmental Engineering, <i>Magna Cum Laude</i> – ‘14 GPA: 3.83/4.00	<b>2012 – 2015</b>
	<b>Bunker Hill Community College, Boston, MA</b> A.S. Engineering, <i>Highest Honors</i> – ‘13 GPA: 3.98/4.00	<b>2011 – 2012</b>
	<b>Harvard University Extension School, Cambridge, MA</b> Sustainability, Writing and Economics Coursework	<b>2009 – 2011</b>
	<b>University of the State of São Paulo, São Paulo, Brazil</b> Civil & Environmental Engineering Coursework	<b>2007 – 2009</b>
research focus	<i>Civil &amp; Structural Engineering, Computation, Applied Mathematics, Optimization Techniques, Student Leadership, Innovation &amp; Entrepreneurship, Community Engagement, Infrastructure.</i>	
experience	<b>STV Incorporated – Boston, MA</b> Engineering Specialist I <i>Issued Richard P. Howe Bridge Rating. Longfellow Bridge analysis of temporary diaphragm removal due to bridge work. Attended meetings with Chinese contractors representing MBTA for the design and delivery of Boston’s Orange and Red Line vehicles.</i>	<b>2015 – 2017</b>
	<b>Geodynamica – Lowell, MA</b> Office Manager & Staff Engineer <i>Assisted with the compilation and analysis of field data. Provided support to business operation and office management. Collaborated in the drafting of reports.</i>	<b>Late 2014</b>
	<b>Simpson Gumpertz &amp; Heger – Waltham, MA</b> Structural Engineering Intern <i>Performed calculations and structural analysis of a variety of structures and structural members. Designed typical details and structural members through the optimization of Excel spreadsheets. Collaborated in the development of reports and calculations.</i>	<b>Mid 2014</b>
	<b>University Innovation Fellow – Lowell, MA</b> Fellow <i>Co-founded UMass Lowell’s Innovation and Entrepreneurship (I&amp;E) Club. Participated international and regional I&amp;E conferences. Partnered with I&amp;E fellow from across the country in the further development and collaboration of local entrepreneurial projects.</i>	<b>2013 – 2015</b>

**ASCE's Student Chapter – Lowell, MA**

**2013 – 2015**

Web Developer

*Maintained a strong leadership role, organized professional enrichment opportunities for students.  
Designed ASCE's website to promote accessibility and content for a wide-range of users.*

**Bond Brothers – Everett, MA**

**Mid 2013**

Construction Management Intern

*Assisted with constructing administration by reviewing construction specifications and documents.  
Attended meetings and collaborated with client communications.*

**City Hall: Department of Development & Planning – Lowell, MA 2012 – 2013**

Civil Engineering Intern

*Assisted with general office and permitting tasks.*

*programming Knowledgeable in Matlab, Revit, SAP.2000, Staad.Pro, AutoCAD, Excel, GTStrudl, RAM, RISA, Mathcad, Abaqus, Qlik Sense, Tableau, R, RStudio, Fortran, C++, CSS, HTML, Python, PHP, Microsoft Office, VBA, MassDOT 4D Hwy Bridges, AASHTOWARE (former Virtis).*

*standards Proficient in AISC, ACI, NDS, IBC, AASHTO, ASTM and design methods for LRFD & ASD.*

*languages Fluent in Portuguese. Conversational in Spanish & German.*

**STV Incorporated**

**2015 – 2017**

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**Projects**

*proposals* **Boston's Northern Ave. Bridge – Boston, MA**

Assisted on several tasks on the proposal package. Compiled proposal materials. Developed and proposed structural drawings.

**Owners Representative Data Analysis Program – Boston, MA**

Collaborated with team on the compilation and presentation of data for the 28 largest construction projects in Massachusetts.

**Boston's South Station Tower Design – Boston, MA**

Assisted on several tasks related to development of a proposal package.

*client-relations* **Red & Orange Line Vehicles – Boston, MA**

Attended meetings with Chinese contractors in behalf of MBTA to assist communications about the design, development and delivery of Boston's Red and Orange Line vehicles.

**McArdle Bascule Bridge – Boston, MA**

Developed bridge grid deck inspection & memorandum draft.

**Belden Bly Lift-Span Bridge Design – Boston, MA**

Assisted Senior Structural Engineer with the development of a bridge's drawings according to MassDOT requirements.

**Fore River Movable Bridge – Boston, MA**

Assisted with fast compilation of project data.

**North Washington Swing-Span Bridge – Boston, MA**

Assisted with the rating of bridge's south leaf members. Attended pre-construction meeting with City of Boston Structural Engineer.

**Longfellow Bridge – Boston, MA**

**Boston's 1,760ft – 11 span – Steel arch and framing system Salt & Pepper.**

Temporary diaphragm-removal and bracing analysis. Calculated dimensions for the crane's base plates. Assisted structural engineering staff with several other temporary works tasks, related to technical, construction, and project marketing including conference's presentation design and support. Reviewed construction submittals.

**Richard P. Howe Bridge – Lowell, MA**

**A (520ft) [2]–260ft continuous span, 4–Deck truss bridge located over the Merrimack River.**

Developed a 970–page bridge rating report, including complete analysis as required by MassDOT. Developed Excel spreadsheet for bridge rating analysis. Expanded spreadsheet to updated analysis and rating of the bridge's interior and exterior gusset plates. Coordination of bridge site visit.

**Westfield Main & Sister Bridges – Westfield, MA**

**Two (360ft) 2–continuous span, Through truss bridge located in Westfield, Mass.**

Bridge rating completion scheduling. Developed and updated based on current regulations the Gusset plates rating update spreadsheet based on AASHTO BME. Collaborated with Senior Structural Engineer and interns for the complete development of reports along with their delivery. Bridge rating drawing, calculations and reports.

**Boston Bridges – Boston, MA**

Assisted with inspection, field visits, drawings and reports in several of the city owned structures.

**Connecticut Rail Bridges – Lowell, MA**

Assisted with compilation of the Connecticut Rail Bridges inventory. Developed bridge inspection software as part of Harvard University Fall 2016 coursework.

**Massachusetts State Bridge's Inspections – Lowell, MA**

Coordinated with Professional Engineer for the inspection, field visits, development of several types of bridge drawings. Developed reports for several of the state-owned structures.

**Massachusetts School Buildings Authority (MSBA) K–12 Public Schools Assessment – MA**

Assisted project manager with technical and computer related issues. Collaborated with inter-firm's staff to ensure the team had a consistent and comprehensive understanding of the project. Assessed 85 school buildings in Massachusetts. Developed building software as part of venture-owned initiative.

**MBTA Wellington Carhouse – Boston, MA**

Designed dunnage frame based on the optimization of material, connections and costs. Collaborated with team on the drafting of structural engineering drawings and details. Assisted with the development of a proposed design load analysis and structural calculations

*Additional list of projects and tasks available upon request.*

**Simpson Gumpertz & Heger (SGH)**

**2014**

**Projects**

*marketing*

**Summer Boston Society of Architectures (BSA) Structures Lectures – Boston, MA**

Assisted in several tasks on the proposal package. Compiled proposal material. Developed proposed structure drawings.

*client–relations*

**Pella Window Investigation – Wisconsin, WI**

Traveled to out-of-state site to assist client with building envelope and Pella products quality investigation. Drafted report for Senior Engineer.

**St. Paul School & Philips Academy – Boston, MA**

Reviewed structural steel shop drawing.

*Technical*

**Westin Hotel (Building) – Boston, MA**

*Boston's Waterfront Hotel, Underground Parking Lot Structural Repair Work*

Assessed steel-members deficiency computation. Worked with original building drawings in AutoCAD to determine the building's load. Assisted structural engineering staff with RAM analysis and evaluation of members.

**Windsor Pipe Repairs (Infrastructure) – Windsor, Canada**

Assisted with development of complete CAD drawing set for pipes repair.

**Atrium Mall (Building) – Newton, MA**

*Chestnut Hill Mall Structural Analysis and Design Work*

Utilized RAM to obtain current structure data. Developed railing load analysis. Developed and updated based on current regulations a Steel Reinforcement spreadsheet. Collaborated with Senior Structural Engineer for comprehensive development of calculation. Designed Excel spreadsheets for beam reinforcements based on RAM data, assigns appropriate connection (bolts and/or welds). They also allowed the user to obtain optimized beam shape based on DCR. Developed three reinforcement beam drawings as part of the structural design package. Performed Seismic Analysis of 2-Tower Additions to building.

**Expo China Pavilion (Building) – Italy**

Assisted with structural design having done several drawing mark-ups. Collaborated with CAD staff in between Boston and NYC team.

**Forefront (Parking Garage) – Waltham, MA**

Assisted with compilation of the field data on the structure; mostly around the concrete parking deck evaluation.

**Union Station Rail Tunnel Leakage Investigation – Worcester, MA**

Coordinated with Professional Engineer for the inspection and field visit. Assisted with the development of notes based on leakage investigation.

**74 Grand Street (Building) – New York, NY**

Assisted with the development of waterproofing design drawings and other CAD mark-ups.

**Hudson Yard Towers – New York, NY**

Assisted Senior Engineers with the development of drawings for Below Grade Waterproofing.

**Courtyard (Building) – New York, NY**

Assisted Senior Drafter with the development of drawings. Aided the Engineers mark-ups.

**Equinox Fitness (Building) – New York, NY**

Assisted Senior Engineer with the development of drawings for openings in ramp walls.

**MIT Garages W45, E62, Stata and N4 / Fargo (MIT Parking Garages) – Cambridge, MA**

Assisted with the construction administration, project submittal monitoring, review and bookkeeping of general documentation and project needs such as meetings. Drafted weekly reports for the projects.

**Loui (Infrastructure / Dynamic Load Monitoring) – USA**

Assisted Senior Engineer with the monitoring of explosive blasts nearby American infrastructure.

**Merrymount (Building) – Quincy, MA**

Assisted Senior Engineer with the development of structural drawings for 4–story wood and steel building.

**Gainsborough Leakage Investigation (Northeastern University Garage) – Boston, MA**

Assisted Senior Engineer with the roof and second floor surveying, data analysis and slabs deflection calculations.

**Porte Liberte III Leakage Investigation (Building) – Boston, MA**

Assisted Senior Engineer with the development of drawings for openings in ramp walls.

**Towers on The Park – New York, NY**

Assisted Senior Engineers with the development of drawings, project quantity, take–off and memorandum drafting.

**Hyatt Building Envelope Consultation (Building) – Boston, MA**

Assisted Senior Engineer with CAD drafting.

**Hynes Convention Center (Building) – Boston, MA**

Assisted Senior Engineer with roofing repairs, tasks ranged from CAD drafting and other construction administration tasks.

**Basilica of St. Patrick’s Old Cathedral (Building) – New York, NY**

Assisted Senior Engineer with the drafting of project.

**Winchester Hospital (Building) – Winchester, MA**

Reviewed Senior Engineer’s pile take–off calculations.

**Emerson Hospital (Building) – Boston, MA**

Assisted with the construction administration, project submittal monitoring and review.

*Additional list of projects and tasks available upon request.*

**University of Massachusetts Lowell**

**2012 – 2015**

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**Academic Experience**

<b>PDEs Circular Foundation Settlement Solver</b>	<b>2015</b>
Numerical Methods (Matlab / FEM / Report Available)	
<b>Practice of Structural Engineering</b>	<b>2015</b>
5–Story Building Analysis & Design (Mathcad / Excel)	
<b>New Venture Plan Pahk</b>	<b>2015</b>
Business Plan & Project Development Researcher (Presentation Available)	
<b>Advanced Steel Design Project</b>	<b>2014</b>
Manager of 2–Story Steel Building (Excel / Report and Presentation Available)	
<b>University of Steel Design Grading Assistant</b>	<b>2014</b>
Graded the homework of over 80 students.	