

JULIO GONZALES

MEP DESIGNER | BIM MODELER | CAD TECHNICIAN

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PROFESSIONAL SUMMARY

Detail-oriented Electromechanical Engineer with **3+ years of hands-on experience** in MEP design, BIM modeling, and CAD drafting for **Aviation, Healthcare, and Industrial** projects. Currently working with **US-based company** producing construction documentation per **US standards**. Proven ability to deliver high-quality **shop drawings, as-builts, and LOD 350+ BIM models** using **Revit MEP, AutoCAD, and Navisworks**. Previous remote collaboration experience with international teams, demonstrating strong communication and project coordination skills across time zones. Seeking remote entry-level position as **CAD Technician, BIM MEP Modeler, or MEP Designer** with growth-oriented firm.

CORE COMPETENCIES

BIM/MEP Modeling: Revit MEP (Mechanical, Electrical, Plumbing), Revit Architecture, LOD 300-400 Modeling

CAD Drafting: AutoCAD 2D/3D, Shop Drawing Production, As-Built Documentation, Construction Detailing

BIM Coordination: Navisworks Manage, Clash Detection, BIM 360/ACC, Model Coordination

MEP Design: HVAC Systems (VRF, Rooftop Units, DX), Electrical Distribution, Medical Gas (NFPA 99), Fire Alarm

Standards & Codes: NEC (NFPA 70), NFPA 99

Technical Skills: Quantity Take-offs, QA/QC Protocols, Dynamo Scripting, Python, Bluebeam Revu

Soft Skills: Remote Team Collaboration, Multi-project Management, Construction Documentation, Technical Communication

PROFESSIONAL EXPERIENCE

Duckworks Millwork Solutions

Millwork Drafter (*Full-time*)

Santa Cruz, Bolivia

May 2025 – Present

- Produce fabrication-ready **shop drawings** for custom casework and architectural millwork using **AutoCAD** and **Microvellum**, managing **2-4+ concurrent projects monthly** with varying complexity levels and strict submittal deadlines.
- Execute project-based workflow through **Smartsheet** task management, delivering drawing packages within assigned hour budgets ranging from 2-hour quick revisions to multi-day complex assemblies.
- Ensure 100% dimensional accuracy per **AWI Standards** and US Imperial specifications across diverse material types, coordinating directly with team leads to maintain design intent and minimize field revisions.

Contraix

MEP Designer (*Project: Princess Juliana International Airport*)

Remote

Jan 2025 – Mar 2025

- Supervised redline corrections for **22+ CAD as-built drawing sheets** across multiple disciplines, coordinating directly with General Contractor **Ballast Nedam** to ensure compliance with international aviation standards.
- Managed documentation accuracy for integrated building systems with primary focus on **electrical infrastructure**, including ICT, BMS, Fire Alarm (FAS), Access Control, and HVAC, facilitating smooth commissioning handover.
- Executed comprehensive **QA/QC reviews** on high-volume CAD drawing sets, receiving direct commendation from GC for superior accuracy and attention to detail in first remote collaboration with US-based team.

BMS Controls

BIM/MEP Modeler (*Project: Tier 3 Pediatric Hospital*)

Santa Cruz, Bolivia

Feb 2024 – Jun 2024

- Created comprehensive pre-construction BIM model in **Revit 2023** for **28,000 m² (300,000+ sf)** Tier 3 Pediatric Hospital (180 beds + 30 NICU cribs), developing **20+ custom families** for accurate **quantity**

take-offs and material cost estimation.

- Modeled complex low-voltage systems (**Nurse Call, Fire Detection, BMS, Access Control**) using coordinated Revit links from architectural and structural disciplines, focusing exclusively on material quantification rather than clash detection.
- Developed **4D Navisworks animations** using **Autodesk Construction Cloud/BIM 360** for client visualization and presentation purposes.

E.H Group

HVAC Supervisor (Full-time)

Santa Cruz, Bolivia

Oct 2023 – Feb 2024

- Supervised **6-person installation crew** for field installation of **80+ HVAC units** (VRF, Rooftop Units, DX Splits/Cassettes) across primarily residential projects with select commercial and industrial installations, ensuring alignment between shop drawings and on-site execution.
- Performed **manual thermal load calculations** using Excel-based formulas to validate equipment sizing and conducted technical site surveys to optimize material usage for non-VRF systems.
- Managed company inventory using custom software, controlling material logistics to prevent project delays and maintain operational schedules.

Clinic Gestar Project

MEP Designer

Santa Cruz, Bolivia

Aug 2023 – Oct 2023

- Delivered coordinated **LOD 350 Revit model** for **5-story medical clinic** (32m x 15m footprint), creating standalone MEP model to calculate copper piping quantities for medical gas and HVAC split systems, with minimal clash detection due to lack of architectural BIM coordination.
- Designed complete **NFPA 99-compliant** medical gas distribution networks (Oxygen, Vacuum, Medical Air), specifying copper fittings, manifolds, and compressors based on clinical demand calculations.
- Designed and detailed electrical infrastructure for **250 kVA H-Type transformer substation**, including complete MEP systems (medical gas, HVAC, electrical), securing technical approval from local utility provider (CRE).

Innovación Electrica

Electrical Drafter (Project: YPFB Aviation Fueling Station)

Santa Cruz, Bolivia

Mar 2023 – Aug 2023

- Produced **30+ electrical as-built drawing sheets** and layouts for **\$1.5M** aviation jet fuel servicing station, ensuring strict adherence to hazardous location classification standards for fuel handling areas.
- Ensured code compliance with **NEC (NFPA 70), NFPA 407** (Aircraft Fuel Servicing), **API RP 500**, and **NFPA 780** (Lightning Protection) using AutoCAD and Excel-based calculations.
- Compiled final **project databook** and **as-built documentation** per client standards, managing daily progress reports and technical addenda throughout construction phase.
- Executed precise material take-offs and component calculations using Excel to optimize procurement budgets for high-specification electrical installations.

EDUCATION

Universidad Autónoma Gabriel René Moreno

Bachelor of Science in Electromechanical Engineering

Santa Cruz, Bolivia

2018 – 2025

TECHNICAL PROFICIENCIES

BIM Software: Autodesk Revit 2023+ (MEP & Architecture), Navisworks Manage, BIM 360/Autodesk Construction Cloud, Dynamo

CAD Software: AutoCAD 2D/3D, Bluebeam Revu

Collaboration & PM: Microsoft Teams, Outlook, Smartsheet, Remote Team Coordination (UTC-4 timezone)

Engineering: HVAC Load Calculations (Manual/Excel), Electrical Distribution Design, Medical Gas Systems, Fire Alarm Systems

Codes & Standards: NEC (NFPA 70), NFPA 99

Programming: Python, Dynamo Visual Scripting, Excel VBA

Units: Proficient in both US Imperial and Metric systems