

**NEVADA STATE BOARD OF
PROFESSIONAL ENGINEERS
AND
LAND SURVEYORS**



**Interim Board Meeting
April 11, 2024
Virtual**

1. Meeting Call to Order

2. Pledge of Allegiance

3. Public Comment

4. NRS 625

Waiver Requests

[none]

5. Non-Appearance Applications for Initial Licensure

**NEVADA STATE BOARD OF PROFESSIONAL
ENGINEERS AND LAND SURVEYORS
EDUCATION CREDIT GUIDELINES**

DEGREE	YEARS CREDIT (MAX)	YEARS ACCEPTABLE EXPERIENCE REQUIRED
Undergraduate (BS): ABET/EAC accredited	4	4
Undergraduate (BS): ABET/ETAC accredited	4	4
Undergraduate (BS Engineering): Washington Accord	4	4
Undergraduate (BS Engineering): Non-ABET/non-Washington Accord (must meet NCEES education standard, any deficiencies to be considered by board)	4	4
Undergraduate (BS Construction Management): ABET accredited	4	4
Undergraduate (BS Construction Management): Not ABET accredited but institution has ABET accredited engineering programs	4	4
Engineering Masters: US Masters with non-US BS and/or non-Washington Accord in Engineering	6	2
Engineering Doctorate: US Doctorate with non-ABET/non-Washington Accord/foreign BS+MS in Engineering	6	2


Civil

ABDULLAH AL JABARI (22-591-09)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL


 **Applying To Nevada**

Application Type
Initial - PE

Application Date
03/31/2024

Citizenship
Jordan



SUMMARY



 **Engineering Experience after EAC degree**

Total Engineering Experience
9 years, 11 months


Experience under licensed engineer
3 years, 8 months

Disciplinary Action
None reported


 

EDUCATION


 **Meets NCEES Engineering Education Standard**

Bachelors in Civil Engineering
University of Jordan
September 2006–January 2011

Masters in Civil Engineering - Structures
University of Jordan
September 2017–June 2020



EXAMS

 **Fundamentals of Engineering (FE)**
AUS
May 2023

Principles and Practice of Engineering (PE)
Civil
AUS
September 2023

LICENSES

 **Additional Licenses**
None

ABDULLAH AL JABARI (22-591-09)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Arabian International Company
Amman (Jordan)
Structural design engineer
July 2011 — July 2014

Verified by
Malek Abu Asal
Malik.asal@gmail.com

Experience Summary
Full-Time
Engineering: 3 years
Experience under licensed engineer:
None



TASKS

Structural design for commercial and industrial steel structures.
Prepare structural design models for structural members.
Prepare structural design calculations for steel to steel connections.
Prepare structural design calculations for steel to concrete connections.
Prepare structural design drawings.
Prepare specifications of materials, welding, bolts, galvanization, painting, fireproof.
100 % of the tasks were engineering tasks.



REPRESENTATIVE PROJECTS

1- Prince Muhammad Bin Abdulaziz International Airport (PMIA) terminal building in Al Madinah Al-Munawarah in Saudi. The structural system consisted of palm trees alike cantilever columns to go with the environment and culture of Saudi. These columns are made of exposed structural steel sections supported on reinforced concrete columns using fixed baseplates.

As an employee with a Saudi steel supplier, my role was to perform structural design safety review for the terminal building of the airport and to design the steel to steel connections and steel to concrete connections.

To perform the structural design safety review task, the geometry of the structure was imported from a 3d model as DXF file into the design software. After that the members were assigned the stated section sizes and moment releases as indicated in the proposed design drawings.

The loads were calculated and assigned to the structural model as stated by the Saudi Building Code and ASCE 07. The loads included vertical loads, and lateral loads, seismic and wind pressure loads.

The design parameters were assigned as per AISC 360.

The design model was used to check if the structural system was adequate in terms of serviceability and safety.

The drift and deflection checks were performed as per the Saudi Building Code and ASCE 07.

After that, the beam end forces were extracted from the design model and used to perform the steel to steel connections design and steel to concrete connections design.

Some connections were designed using typical templates available in design software, other complex connections were designed using hand calculations because there were no available template for such complex connections.

The connections details were added to the design drawings and submitted to the draftsman to prepare shop drawings for the project.

2- King Abdulaziz International Airport (KAIA) baggage handling system in Jeddah in Saudi . My role was to design the structural steel platforms that will support the machines and the conveyers of the baggage handling system, and the connections details. The structural system that was used for most of the platforms is moment frame system. for some platforms with heavy machines with high vibrations, braced frames system was used to increase the fundamental frequency away from the excitation frequency of the operating machines to avoid resonance and fatigue issues. These platforms were designed to withstand the static and dynamic loads effects of the operating machines and baggage. Since the platforms are exposed to reversal loads, they were checked against fatigue as per AISC 360, and for the vibration limit states as per AISC design guide 11 due to excitation of

operating machines. The columns were supported on concrete pedestals using pinned baseplates. Some platforms were supported on the ceiling using posts that are hanging on the ceiling above the platform. It was mandatory to match the locations of the post with the locations of the ribs of the ribbed slab above the platform to ensure safe adequate fixation for the hanging posts, therefore, I asked for accurated as-built drawings describing the detailed layout of the ribbed slab above the hanged platforms to set the arrangement of the platforms.

I performed all the above mentioned tasks by myself.

ABDULLAH AL JABARI (22-591-09)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

*Dar Al-Handasah
Amman (Jordan)
Structural design engineer
August 2014–November 2017*

*Verified by
Yahia Walid Istanbouli
Yahia.i@arabpotash.com*

*Experience Summary
Full-Time
Engineering: 3 years, 3 months
Experience under licensed engineer:
None*

TASKS

As a structural design engineer, I performed structural design for commercial and industrial steel structures.

I prepared structural design models for structural systems. My role was to study the proposed architectural drawings in structural point of view, to provide the most economical safe structural system that fulfills the architectural requirement, in addition to the requirement of the mechanical and electrical loads and clear spaces.

I prepared structural design calculations for steel connections. I designed some of the connections using templates in connections design software. Since other connections don't have suitable template in the design software, I prepared manual calculations excel sheets that can deal with those nontypical connections.

I prepared structural design drawings for the structural system and the connections details.

Sometimes, when there is no plenty of time, I relied on the draftsman to prepare the drawings, and I reviewed the drawings to be submitted when they are ready.

I was responsible for submitting the deliverables of the projects within the deadline by myself.

I prepared specifications of materials, welding, bolts, galvanization, painting and fireproof.

100 % of the tasks were engineering tasks.

REPRESENTATIVE PROJECTS

Project no. 1

Project name : Salahaddin University

Duration : (11/2014 - 5/2016)

Location : Erbil / Iraq.

Project type : University facilities buildings.

Size of the project : Six facilities varies in length and width, with five stories, and a total area of 500,000 m2.

I designed the deck slab of the facilities. The deck slab consists of reinforced concrete on metal deck. I categorized the slabs into several types according to there spans and loads including the finishing as per the mechanical and architectural requirements. I used composite slab design concept by using shear studs at the top flanges of the beams that supports the slabs.

I design the structural system as braced frames system when there is a space available to use the vertical bracing. However, when there is no space available to use vertical bracing, I used moment frames system.

I used the seismic parameters that are mentioned in the soil investigation report to assign the seismic loads on the structure as per ASCE07 code.

I used the wind speed map of Iraq to assign the wind loads on the structure as per ASCE07 code.

I used AISC design guide 11 to check the accessible floors for vibration.

I designed 40 m span pedestrian bridge that connects two separate buildings together, and I checked the required seismic joint between the pedestrian bridge and the other building as per ASCE07. I used isolated bearing pad for this type of joint.

Project no. 2

Project name : AL Maktoum International Airport.

Duration : (5/2016 - 11/2017)

Location : Dubai / UAE.

Project type : Aircraft maintenance hangars.

Size of the project : Four hangars.

Hangar 1 is 50 m x 50 m x 15 m height

Hangar 2 is 50 m x 70 m x 15 m height

Hangar 3 is 40 m x 50 m x 10 m height

Hangar 4 is 40 m x 40 m x 10 m height

I proposed the structural system and performed the structural design to meet the architectural, and mechanical requirement for these facilities.

I used planar trusses for the large clear span roofs, and vertical trusses acting as laced columns to support the the roof trusses.

The structural system that I used is warren truss with verticals. This structural system ensures economical as well as aesthetical design.

I designed the runway beams that supports heavy rate crane bridges. I checked the fatigue for these structures as per AISC 360 due to high loads fluctuation, and I followed the guidelines of AISC design guide 7 to prevent fatigue.

I used the wind speed mentioned in Dubai wind speed map.

I assigned the wind loads considering the facilities as partially enclosed as per ASCE 07 code.

I used the seismic parameters to assign the seismic loads on the structure as per ASCE 07 code.

ABDULLAH AL JABARI (22-591-09)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Consolidated Consultants Group
Amman (Jordan)
Structural design engineer
July 2020 – March 2024

Verified by
ASHRAF Zayed ABU MAHFOUZ
Ashr7zayed@gmail.com

Experience Summary
Full-Time
Engineering: 3 years, 8 months
Experience under licensed engineer:
3 years, 8 months

TASKS

As a structural design engineer in Consolidated Consultants Group, I am performing structural design for residential, commercial, and industrial concrete and steel structures.

I am preparing structural design models for structural systems. My role is to study the proposed architectural drawings in structural point of view, to provide the most economical safe structural system that fulfills the architectural requirement, in addition to the requirement of the mechanical and electrical loads and clear spaces.

I am preparing structural design drawings for the structural systems and the connections details.

I am leading the junior engineers as a group leader to submit the required design works in the agreed schedule. I assign tasks to the junior engineers, give them some help when needed, and check their final product to be submitted.

I am preparing specifications of concrete mix, reinforcement bars, materials, welding, bolts, galvanization, painting and fireproof.

I am supervising and approving the site structural works.

I am performing structural assessment works for existing structures to study the feasibility of adding new stories to the existing structure.

100 % of the tasks were engineering tasks.

REPRESENTATIVE PROJECTS

Project no. 1

Project name : National Bank of Iraq
Duration : (07/2020 - 03/2022)
Location : Baghdad / Iraq.
Project type : Reinforced concrete commercial tower.
Size of the project : seventeen stories tower.

I designed the structural system of the tower using 3D finite element analysis model. I performed dynamic response spectrum analysis to study the seismic effects on the structural system. I used the seismic parameters mentioned in the soil investigation report to define the design response spectrum of the tower on the analysis model.

I used dual shear walls and moment frames system as a lateral force resisting system, because there were a lot of architectural requirements to keep open halls with no wall closures.

First five stories are car garages, so I used waffle slab because the required clear height is not high in the garages. For other stories I used solid slab system with columns capitals enlargement to avoid punching shear.

I used piles with raft foundation because the soil bearing capacity couldn't withstand the stresses underneath the raft foundation without the existence of the piles.

I recommended to place the heavy mechanical equipment of the tower at the lower stories as much as possible to minimize their effect on the seismic behavior of the structure.

Project no. 2

Project name : Zawaya Tower

Duration : (05/2022 - 02/2024)

Location : Riyadh / Saudi Arabia.

Project type : Reinforced concrete commercial tower / offices and retail areas.

Size of the project : sixty six stories tower.

I designed the structural system of the tower using 3D finite element analysis model.

The height of the tower was exceeding the limit of the conventional wind analysis methods of ASCE07 code, so I asked for the wind analysis to be performed using wind tunnel test, then I used the results of the wind tunnel test to assign the wind loads on the tower accordingly.

I used dynamic response spectrum analysis to design the tower for the seismic loads.

I used shear walls lateral force resisting system because there were a lot of places between the offices and the retail areas that could be closed by shear walls with no conflict with the architectural desire.

I categorized the structural members for several groups according to their story levels to minimize the construction materials as we are going up to the higher stories, so I can give an optimized design, and reduce the stresses on the foundation.

I used piles with raft foundation, and pile caps to prevent punching shear at the raft foundation.

RYAN GARDNER (13-376-16)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
03/14/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
8 years, 9 months

Total Engineering
Experience
9 years, 3 months

Experience under licensed
engineer
9 years, 3 months

Other Experience
2 years, 4 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
University of Nevada, Reno
August 2005–August 2012

EXAMS



Fundamentals of Engineering (FE)
Nevada
October 2011

Principles and Practice of Engineering (PE)
Civil
Nevada
April 2017



LICENSES



Additional Licenses
None

RYAN GARDNER (13-376-16)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

SRK Consulting
Nevada (United States)
Junior Engineer
February 2012—April 2015

Verified by
Roger Breese Burnley
bburnley@srk.com

Experience Summary
Full-Time
Engineering: 3 years, 2 months
Post EAC degree: 2 years, 8 months
Experience under licensed engineer:
3 years, 2 months

TASKS

Contributed as part of teams responsible for analysis and design for various mining facilities. The tasks included geotechnical field programs, monitoring plans, CAD design, and stormwater management covering new mines and facilities, expansions, and reclamation. The following is a list of projects that I have contributed to over my time at SRK.

- Comstock Mine Expansion, Storey County, NV
- Ruth Mine Expansion and Reclamation, Ely Nevada
- Gold Bar Mine, Eureka County, NV
- Hamilton Bald Mountain, White Pine County, NV
- Nevada Iron, Pershing County

Supply and monitoring well installation and analysis

- Gem Field, Esmerelda County, NV
- Comstock Mine, Storey County,

Solid waste analysis and reporting - review and analyze current waste demand and extrapolate future demand and capacity required.

- Lander County Solid Waste

REPRESENTATIVE PROJECTS

- Comstock Mine Expansion and Compliance Monitoring, Storey County, NV, May 2012 - August 2012

Monthly / quarterly monitoring well and pond sampling and analysis

September 2012 - October 2012

Supervise drilling, performed geologic logging and air lift and flow tests for 2 proposed production wells

February 2013 - October 2013

Geotechnical field investigations - test pitting historic "fingers" dump and borehole drilling, sampling, logging of proposed HLP expansion area. Assisted in slope stability calculations using soil characteristics from geotech investigations and SLIDE software. Performed surface water hydrology and hydraulic analysis for 100yr 24hr storm events using TR55. Drafting and grading design of expansion including roads and diversions, calculated underdrain collection systems to provide capacity for assumed application and leaching rates.

- Lander County Solid Waste Disposal Facility Expansion, December 2012 - February 2013

Review landfill data and extrapolate and estimate future waste requirements and capacities. Provide recommendations and conceptual grading layout for future expansion.

- Robinson Mine Expansion and Reclamation, Ely Nevada. February 2012 - June 2012

Borehole drilling and logging of historic waste dumps. Digitizing and analyzing the bore hole logs and assist in determining which samples to do further testing on

October 2014 - April 2015

Performed geotechnical field investigation, compilation and analysis of historic profile 1 data, drafting and grading plans for historic waste dump removal. Material take-offs and SRCE update for closure.

- Gold Bar Mine, Eureka County, NV March 2013 - August 2013

Cover soil sampling field investigation - investigate proposed cover soil stockpile areas. Collected cover soil samples for lab testing. Conceptual level sitewide stormwater hydrology and hydraulics analysis and design using TR 55 and drafting stormwater management facilities.

- Hamilton Bald Mountain, White Pine County, NV February 2013 - August 2013

Assisted in permit level design report and drawings. Calculated underdrain collection pipe system requirements including pipe crush calcs, determining thickness of overliner material, and HDPE geomember bearing pressure calculations, HLP stacking plan,

base grading.

- Gem Field, Esmerelda County, NV May 2013 - June 2013

Field investigation - well capabilities. Install and test flow rates for proposed production wells. Geologic logging of rock chips to aid in aquifer characterization.

- Nevada Iron Buena Vista Mine Characterization and Mine Water Supply, Pershing County April 2014 - June 2014

Field investigation - Log and test flow rates for proposed production wells. Create conceptual water balance based on well capacities and assumed usage

RYAN GARDNER (13-376-16)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Tectonics Design Group
Nevada (United States)
Staff Engineer
May 2015—May 2016

Verified by
Matt K Rasmussen
matt@tdg-inc.com

Experience Summary
Full-Time
Engineering: 1 year
Post EAC degree: 1 year
Experience under licensed engineer:
1 year



TASKS

Developed demolitions plans, site grading plans, utility plans, and stormwater management plans for Dollar General convenience stores.

Performed large scale grading plans for large industrial and commercial complexes located at the Tahoe Regional Industrial Complex. Tasked with optimizing grading and site plan for cut - fill quantities, stormwater management, and access.



REPRESENTATIVE PROJECTS

Numerous Dollar General Stores - Shady Cove, OR, Rogue River, OR, Lakeside, OR, Merrill, OR, Grants Pass, OR, Lakeview OR, Medina, OH, Pinon Hills, CA

Develop civil construction level design drawing sets including demolition plans, site plans, utilities plans, details, local jurisdictional requirements and tractor trailer access verification. Perform a stormwater hydro and hydraulics analysis and size retention and/or detention basins and include a stormwater management technical memo.

Siegel commercial / industrial developments - conceptual site plans - grading and optimizing cut-fill quantities, stormwater management, and access

RYAN GARDNER (13-376-16)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Huff Construction
California (United States)
Project Engineer
May 2016—December 2016

Verified by

Experience Summary

Full-Time

Other: 7 months

Experience under licensed surveyor:

None



DESCRIPTION

RYAN GARDNER (13-376-16)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NewFields
Nevada (United States)
Staff Engineer
December 2016—May 2017

Verified by
Paul - Kaplan
Pkaplan@newfields.com

Experience Summary
Full-Time
Engineering: 5 months
Post EAC degree: 5 months
**Experience under licensed engineer:
5 months**



TASKS

Assisted the project team in completing the design for the Vantage Mine Complex Bald Mountain, White Pine County, NV. Supported the design via tasks involving CAD design and drafting of the haul road and ramp at the proposed heap leach pad. Assisted in reviewing daily reports and material gradations for ongoing construction at Mooney Basin. Conducted CQA field testing and construction supervision at Mooney Basin, Bald Mountain Mine, White Pine County, NV. Nuclear density tests, soil sampling, modified proctor testing, and seive gradations.



REPRESENTATIVE PROJECTS

- Vantage Mine Complex Bald Mountain, White Pine County, NV. Assisted in design of proposed heap leach pad - stacking plan, haul road, haul ramp, construction quantities and material takeoffs
- HLP Expansion Mooney Basin Complex Bald Mountain, White Pine County, NV. Review daily reports and crusher sampling and testing results. Perform CQA field work during foundation construction of the HLP performing nuclear density tests, soil sampling and field lab testing.

RYAN GARDNER (13-376-16)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Huff Construction
California (United States)
Project Engineer
June 2017—March 2019

Verified by

Experience Summary

Full-Time

Other: 1 year, 9 months

Experience under licensed surveyor:

None



DESCRIPTION

RYAN GARDNER (13-376-16)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Golder - WSP
Nevada (United States)
Consultant
March 2019—November 2023

Verified by
Michael Pierre Bidart
michael.bidart@wsp.com

Experience Summary
Full-Time
Engineering: 4 years, 8 months
Post EAC degree: 4 years, 8 months
**Experience under licensed engineer:
4 years, 8 months**

TASKS

Assist in design aspects of mine facilities including CAD drafting and design, stormwater hydrology and hydraulic analysis, soil loss calculations, material takeoffs, engineering construction support, drafting technical specifications, gravity and pressure pipe systems analysis, construction quality assurance, geotechnical borehole drilling, test pitting, sample collection, geotechnical lab testing and analysis

REPRESENTATIVE PROJECTS

- Leeville Mine, Bag Farm, April 2019 - September 2019
I calculate seepage rate of solution from filter bags, hydraulic analysis of concrete channel capacity to collect and convey seepage. Size gravity pipes to carry seepage from bag farm to WTP ponds and perform pipe crush calcs for haul road crossing depth. Performing grading design and create conceptual level drawings and technical specifications
- Rhyolite Ridge Stage 1 Overburden Storage Facility, June 2019 - March 2020.
Design OSF to meet the goal storage capacity while meeting stability requirements. Developed stormwater management plan and water balance to size diversion channels, transfer pipelines, detention pond and contact water pond. Designed haul road / ramp.
- Rhyolite Ridge Stage 1 Process Area Contact Water Pond September 2019 - March 2020
I assisted in design of construction level drawings of a contact water pond located adjacent to the process plant area which was designed by others and provided. The design included access roads, calculating the hydraulics and geometry to design overflow spillway for large storm evenings, perform a hydrologic and hydraulic analysis to design stormwater management facilities along the perimeter of the plant area for contact and non-contact water, completed water balance to determine pond sizing.
- Rhyolite Ridge Life of Mine Overburden Storage Facility Expansion and Sitewide Stormwater Management August 2020 - January 2021
Conceptual design expanding stage 1 dump and an additional dump north of the pit. Conceptual life of mine stormwater management - design drainage around northeast area of site and diversion through site adjacent to county road. Design large spillway including hydraulic jump and additional energy dissipation
- Rain Mine Elko County, NV Underdrain Collection System Evaporation Pond February 2020 - October 2020
Assisted in preparation of construction level design package for an Engineering Design Change. Developed construction level design drawings and technical specifications. Developed CQA plan and set testing frequency and oversaw soil sampling, hdpe liner sampling/testing and laboratory soil testing during construction. Provided support to client and contractors through RFIs and field fit design changes. Reviewed and approved all material testing and installation documentation. Compiled data during construction and wrote Record of Construction report and drafted the As-Built drawing set that included the summary of construction highlighting any design changes and field fits.
- Mill 1 Tailings Storage Facility Seepage Collection System Evaporation Pond February 2021 - February 2022
Assisted in preparation of construction level design package for an Engineering Design Change. Developed construction level design drawings and technical specifications. Developed CQA plan and set testing frequency and oversaw soil sampling, hdpe liner sampling/testing and laboratory soil testing during construction. Provided support to client and contractors through RFIs and field fit design changes. Reviewed and approved all material testing and installation documentation. Compiled data during construction and wrote Record of Construction report and drafted the As-Built drawing set that included the summary of construction highlighting any design changes and field fits. Developed alternative stormwater management during construction. Performed hydrologic and hydraulic calculations to determine channel geometry within available area and develop stage storage for a retention basin.
- Twin Creeks Mine, Humboldt County, NV- Osgood Heap Leach Pad Final Plan for Permanent Closure and Engineering Design Change October 2020 - June 2021
Assisted in the closure design of the Osgood HLP regrading the existing slopes, providing benching and diversions, performed RUSLE calculations considering closure slopes and cover soils. Provided stormwater management analysis - hydrological and hydraulic calculations to determine revisions to existing diversion channels to handle 500yr-24hr storm events. Liner bearing

pressure calcs for exposed liner at HLP extents

Rain Mine HLP FPPC Update - June 2021 - December 2021

Performed stormwater management design. calculation H&H and routing diversions using culverts and calculation updated culvert sizes.

Chino Mine NLLS Expansion - June 2022 May 2023

Reconfigure collection pipe layout and capacity - perform pipe crush and pipe flow calcs

Determine/assume bedrock elevation from borehole logs to differentiate blasting vs ripping excavation quantities


stormwater management analysis and water balance - site wide H&H to determine pond sizing and active management of pond pumping

MAHDI JORAT (16-478-85)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL


 Applying To **Nevada**

Application Type **Initial - PE**

Application Date **03/13/2024**

Citizenship **United States**



SUMMARY


 Engineering Experience after EAC degree

Total Engineering Experience **6 years, 8 months**


Experience under licensed engineer **6 years, 8 months**

Disciplinary Action **None reported**



EDUCATION

 Bachelors in Construction Engineering Management
California State University, Long Beach
August 2015–December 2018

EXAMS

 Fundamentals of Engineering (FE)
California
August 2016

Principles and Practice of Engineering (PE)
Civil
California
October 2019

LICENSES

 Additional Licenses
None

MAHDI JORAT (16-478-85)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Los Angeles Department of Water and Power
California (United States)
Civil Engineering Associate
July 2017—March 2024

Verified by
Hermine Yegiazaryan
heather.yegiazaryan@ladwp.com

Experience Summary
Full-Time
Engineering: 6 years, 8 months
Experience under licensed engineer: 6 years, 8 months



TASKS

My engineering duties encompassed developing, reviewing, design, and/or approving project engineering tasks and proposals needed for the public utility related project. I developed task proposals and requests include scope of work analysis, Geotechnical testing, hydrological conditions, civil and mechanical systems of pump stations, production and monitoring wells, and specialized construction. Finally, I conducted field verification, conduct daily dam safety inspection and monitoring, preparing daily inspection report including including measured seepage weir data, and recommendations on any remedial actions that may be required for Dam Safety.



REPRESENTATIVE PROJECTS

July 2017 to Current - Tinemaha Dam Replacement Project Description:

The rebuilding of the Tinemaha Dam and outlet works will substantially reduce the risk and liability that the existing dam presents to LADWP. The new Dam will provide increased storage capacity and thus protection of LADWP facilities downstream, such as Owens Lake Dust Control Facilities and subsequent Dams downstream. I analyzed the status of the dam on a daily basis and responsible for dam safety inspection preceding the Construction of the new Dam. I reviewed and provided recommendations to maintenance crews related to Dam safety while the dam was operated at higher than permitted levels due to unprecedented runoff. I calculated the Dam seepage, and groundwater levels using data and design of mechanical systems on the dam.

July 2017 to Current - Van Norman Pump Station No. 1 (VNPS) Replacement Project Description:

Replace existing VNPS1 with four new 15,000 gpm IC diesel/electric combo units, suction and discharge surge tanks, a new electrical building, and a new industrial station. I calculated the impact of the project design to our capital improvement program. Mahdi developed task order specifications as to be utilized and followed by prime contractor. The new VNPS1 will be equal to 40% capacity of VNPS No.2 and can provide Ultimate Typical Summer Day Demands of the Upper San Fernando Valley, California.

July 2017 to Current - Grant Lake Outlet Valve Replacement Project Description:

This infrastructure improvement project replaces a 76 year old valve nearing the end of its useful lifecycle and includes the removal and complete replacement of existing 48-inch Roto Valve and assembly with a new Rotary Cone Valve, 48-inch Knife Gate Valve, 48-inch dismantling joint, 48-inch butterfly valve, and permanent 20-inch bypass pipelines and flowmeter. I oversaw project design task proposals and reviewed Scope of Work of civil and mechanical components.

July 2017 to Current - Topham Trunk Line Project Description:

This trunk line project consists of designing and constructing approximately 22,800 feet (4.3 miles) of 36-inch diameter welded steel pipe to replace the existing 24-inch diameter riveted steel pipe. I developed task order specifications for the geotechnical investigations. I calculated and reviewed the impact of the design and project lifecycle and reviewed project design task proposal. There's also a parallel distribution line of approximately 11,300 feet (2.14 miles) of maximum 12-inch diameter pipe.

MAHDI JORAT (16-478-85)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION



TIME GAPS

Start Date	End Date	Explanation
June 2013	July 2015	I attended community college and obtained an AA degree for Transfer to University during this time period.

CHRISTOPHER MCCREARY (14-268-59)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
03/26/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
13 years, 9 months

Total Engineering
Experience
14 years, 1 month

Experience under licensed
engineer
14 years, 1 month

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
University of Nevada, Reno
August 2002–May 2010

EXAMS



Principles and Practice of Engineering (PE)
Civil
Nevada
February 2024

Fundamentals of Engineering (FE)
Nevada
November 2009



LICENSES



Additional Licenses
None

CHRISTOPHER MCCREARY (14-268-59)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Summit Engineering
Nevada (United States)
Laboratory Manager
January 2010—May 2015

Verified by
Thomas Ogra Hannum
thannum@summitnv.com

Experience Summary
Full-Time
Engineering: 5 years, 4 months
Post EAC degree: 5 years
Experience under licensed engineer:
5 years, 4 months



TASKS

I was the Summit Engineering's, Elko, Laboratory Manager. Materials tested included soils, aggregate, Portland cement concrete, and bituminous mixtures. I was responsible for materials testing, technician training and supervision, and report generation and transmission.

I, also, produced Geotechnical Investigation Reports, which included, but was not limited to, field reconnaissance and exploration, calculations, recommendations, and report generation. As my experience increased the necessity for oversight of my investigations and modification of the reports I wrote decreased.

Additionally, I performed field inspection and testing for soils, aggregate, Portland cement concrete, and hot mix asphalt.



REPRESENTATIVE PROJECTS

The Idaho Street Reconstruction Project consisted of the reconstruction of nearly two miles of the main thoroughfare in Elko, Nevada.

This project was constructed in 2010.

I managed the materials laboratory responsible for the testing of the soils, aggregate, Portland cement concrete, and hot mix asphalt utilized in this project. Management of laboratory entailed testing and oversight of technicians performing tests, test data interpretation, report generation, and report transmission to the client and contractor.

The North Block Tailings Dam, 1st Lift Construction Project consisted of the construction of the first lift of a mine tailings impoundment area at the Barrack Gold Corp., Gold Strike Mine, in Eureka County, Nevada. After the construction of multiple lifts of the dam, to increase capacity, the current surface area is approximately 650 acres.

This project was constructed in 2012.

I managed the materials laboratory responsible for the testing of the soils, aggregate, and Portland cement concrete utilized in this project. Management of laboratory entailed testing and oversight of technicians performing tests, test data interpretation, report generation, and report transmission to the client and contractor.

The Marriott Towne Place Suites Geotechnical Investigation Report in Elko, NV consisted of site subsurface exploration, overall site evaluation, and recommendations for the construction of the 53,073 square-foot, 4 story structure, and the site improvements. This investigation was conducted in 2014.

I performed the site reconnaissance and exploration. I gathered representative samples from throughout the site, of each soil layer encountered, within the depth explored. I field classified and logged all soil encountered. I supervised and performed the laboratory testing on these soils. I then evaluated the laboratory results and updated the field classifications as necessary. Next, I performed bearing and settlement calculations. After that I created the investigation report including conclusions and recommendations.

CHRISTOPHER MCCREARY (14-268-59)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Lumos & Associates Inc.
Nevada (United States)
Geotechnician
June 2015—May 2023

Verified by
Mitchell Thomas Burns
mburns@lumosinc.com

Experience Summary
Full-Time
Engineering: 7 years, 11 months
Post EAC degree: 7 years, 11 months
**Experience under licensed engineer:
7 years, 11 months**

TASKS

At Lumos & Associates I was a Supervising Laboratory Technician and Geotechnician. Lumos & Associates has three AASHTO accredited laboratories. AASHTO accredited materials include soils and aggregate, Portland cement concrete, hot mix asphalt, asphalt cement, and emulsified asphalt. As the Supervising Laboratory Technician, I performed and oversaw the testing, of up to all three laboratories. Oversight included daily scheduling of technicians', technician training, review of test results, delivery of completed "Draft" reports, client/contractor interaction and results explanation, and maintenance of AASHTO accreditation.

As a Geotechnician my responsibilities increased with experience. The assigned duties of a Geotechnician at Lumos & Associates are the exploration, evaluation, and generation of site-specific geotechnical investigations reports. The I did not complete project bid estimates. Generally, I completed all aspects included when completing Geotechnical Investigation Reports. I was responsible for, but was not limited to, site evaluation and exploration. Exploration techniques included test pitting and boring. During exploration site soils were continuously logged and field classified, with representative samples gathered. I then determined the applicable laboratory testing. Once the testing was completed, I interpreted the field and laboratory data. I performed the calculations for settlement, bearing capacity and foundation design, slope stability, lateral earth pressure, seismic evaluation (including liquefaction potential), and pavement section design. I then generated the report which included conclusions and recommendations.

While at Lumos I also performed field testing and inspection of soils, aggregate, Portland cement concrete, hot mix asphalt, and emulsified asphalt mixtures.

REPRESENTATIVE PROJECTS

The Geotechnical Investigation Report for Nelson Meadows Subdivision in Fernley, Nevada consisted of the consisted of site subsurface exploration, overall site evaluation, and recommendations for the construction of the 93 lot, single family residential, subdivision.

This investigation was completed in 2016.

I performed the site reconnaissance and exploration. I gathered representative samples from throughout the site, of each soil layer encountered, within the depths explored. I field classified and logged all soil encountered. I with other technicians perform the laboratory testing on these soils. I then evaluated the laboratory results and updated the field classifications as necessary. Next, I performed pavement structural section, bearing capacity, settlement, slope stability, and seismic calculations. After that I created the investigation report including conclusions and recommendations.

The Naval Air Station, Fallon, Delta Taxiway Reconstruction and Runway 7-25 Rehabilitation project entailed the complete reconstruction of the 0.67 mile long, 125 feet wide Taxiway Delta and the "mill and fill" for the runway and shoulder reconstruction of Runway 7-25.

This project was completed in 2018.

I was the field supervisor for this project. I performed testing and inspection and was responsible for the oversight of testing and inspection, of subgrade soils, cement stabilized subgrade, cement treated base, aggregates, Portland Cement Concrete, stress absorbing membrane interlayer, and hot mix asphalt.

The Geotechnical Investigation Report for the Firestone Complete Auto Care Facility in Gardnerville, Nevada consisted of the site subsurface exploration, overall site evaluation, and recommendations for the single-story steel frame structure and associated site improvements.

This investigation was completed in 2019.

I performed the site reconnaissance and exploration. I gathered representative samples from throughout the site, of each soil layer encountered, within the depths explored. I field classified and logged all soil encountered. I with other technicians perform the laboratory testing on these soils. I then evaluated the laboratory results and updated the field classifications as necessary. Next, I performed pavement structural section, bearing capacity, settlement, slope stability, and seismic calculations. After that I created the investigation report including conclusions and recommendations.

The Geotechnical Investigation Report for the Kings Row Rehabilitation Project in Reno, Nevada consisted site subsurface exploration, overall site evaluation, and recommendations for the construction of the for cement stabilization of the subgrade/base course and paving with hot mix asphalt for 0.85-mile section of Kings Row from Keystone Avenue to Wyoming Avenue.

This report was completed in 2020.

I was part of the team that performed the site reconnaissance and exploration. I gathered representative samples from throughout the site, of each soil layer encountered, within the depths explored. I field classified and logged all soil encountered. I with other technicians perform the laboratory testing on these soils. I then evaluated the laboratory results and updated the field classifications as necessary. Next, I performed pavement structural section calculations. After that I created the investigation report including conclusions and recommendations.

The Geotechnical Investigation Report for the Victory Logistics – Southern Portion Project in Fernley, Nevada consisted of the site subsurface exploration (test pit and boring), overall site evaluation, and recommendations for the construction of the 878-acre commercial development project.

This report was completed in 2022.

I performed the site reconnaissance and exploration. I gathered representative samples from throughout the site, of each soil layer encountered, within the depths explored. I field classified and logged all soil encountered. I with other technicians perform the laboratory testing on these soils. I then evaluated the laboratory results and updated the field classifications as necessary. Next, I performed pavement structural section, bearing capacity, settlement, slope stability, Portland cement concrete slab design, and seismic calculations. After that I created the investigation report including conclusions and recommendations.

CHRISTOPHER MCCREARY (14-268-59)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Nevada Department of Transportation
Nevada (United States)
Aggregate Laboratory Supervisor II
May 2023—March 2024

Verified by
George Paul Helgerson
ghelgerson@dot.nv.gov

Experience Summary
Full-Time
Engineering: 10 months
Post EAC degree: 10 months
Experience under licensed engineer:
10 months

TASKS

Currently I am employed at the Nevada Department of Transportation (NDOT). I am the Supervisor II of the Aggregates Laboratory within the Materials Division. The Aggregates Laboratory is tasked with the qualification of all aggregates utilized in the construction and rehabilitation of all state and federal highways within the State of Nevada. I am responsible for all aspects of this laboratory, which include, the training and evaluations of technicians, evaluation of test results, and reporting of results.

REPRESENTATIVE PROJECTS

The US 395 North of Reno, From McCarran to Golden Valley Structure project consists of the construction of a Northbound and Southbound travel lane, braided ramp at the Panther Valley Interchange, and pavement rehabilitation in Reno, Nevada.

This project began construction in 2023.

I am responsible for the source testing and oversight of source testing for the mineral aggregates utilized on this project. Oversight includes all operations of the laboratory, technician training and technician evaluation to ensure adherence to test procedures. I interpret test results and generate test result reports.

The State Route 445, Pyramid Highway, From Queen Way To Golden View Drive project consists of the widening of State Route 445 from 2 to 6 lanes.

This project began in 2023.

I am responsible for the source testing and oversight of source testing for the mineral aggregates utilized on this project. Oversight includes all operations of the laboratory, technician training and technician evaluation to ensure adherence to test procedures. I interpret test results and generate test result reports.

CHRISTOPHER MCCREARY (14-268-59)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION



TIME GAPS

Start Date	End Date	Explanation
June 2001	July 2002	I have no applicable work experience during this period.

BRETT O'HAIR (19-287-79)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
03/08/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
2 years, 1 month

Total Engineering
Experience
2 years, 1 month

Experience under licensed
engineer
2 years, 1 month

Disciplinary Action
None reported



EDUCATION



Non-degree
Sierra College
August 2012–June 2016

Bachelors in Civil Engineering (EAC)
California State University, Chico
August 2016–December 2018

Masters in Civil and Environmental Engineering
University of Nevada, Reno
August 2019–December 2021



EXAMS



Fundamentals of Engineering (FE)
California
August 2018

Principles and Practice of Engineering (PE)
Civil
California
October 2022

LICENSES



Additional Licenses
None

BRETT O'HAIR (19-287-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Hogan Land Services
California (United States)
Structural Engineering Technician
February 2019—June 2019

Verified by
Brett O'Hair (Self)

Experience Summary
**Full-Time
Engineering: (0%)
Experience under licensed engineer:
None**



TASKS

Calculated wind and seismic loads for structural calculation packages. Drafted architectural and structural plans in direct communication with client. Assisted land surveyor in the performance of boundary surveys. Approximately 90-percent of my time was relating to engineering and the remaining 10-percent was surveying.



REPRESENTATIVE PROJECTS

I do not recall specific projects that I worked on. I drafted structural plans from architectural plans for many different projects.

BRETT O'HAIR (19-287-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Carollo Engineers, Inc.
Nevada (United States)
Staff Professional
February 2022—March 2024

Verified by
Timothy John Loper
TLoper@carollo.com

Experience Summary
Full-Time
Engineering: 2 years, 1 month
Post EAC degree: 2 years, 1 month
Experience under licensed engineer:
2 years, 1 month

TASKS

Staff Professional/Project Engineer: Working under the direction of licensed engineers performing civil engineering work primarily in wastewater system planning and design projects. This includes coordinating with CAD professionals for maps, coordinating with Document Processing personnel for technical specification development, reviewing detailed drawings and specifications, preparing technical memoranda, reports, and electronic deliverables, performing wastewater collection system modeling, presenting technical recommendations and alternatives to senior staff and clients, preparing cost estimates, reviewing and responding to requests for information, preparing integrated master plans for wastewater collection systems, performing data entry and analysis, and performing site investigations to determine project needs.

REPRESENTATIVE PROJECTS

Elsinore Valley Municipal Water District – 2023 Wastewater Master Plan Update (February 2022 – February 2024) - I built a hydraulic model in InfoSWMM using geographic information system (GIS) data, lift station drawings, and as-built records. I calibrated the model to represent the wastewater collection system in dry and wet weather flow conditions with field measured flow monitoring data. I then used the hydraulic model to identify and improve capacity deficiencies based upon the District's deficiency criteria. I communicated with the District to determine if capacity deficiencies observed in the hydraulic model are observed in the field. I created a capital improvement program (CIP) which encompasses all proposed improvements and their estimated cost. Lastly, I assisted in the writing of the 2023 Wastewater Master Plan Update which included drafting chapters and responding to comments provided by the District and senior engineers.

Elsinore Valley Municipal Water District – Sedco Hills Septic to Sewer Conversion (June 2023 – January 2024) - I modeled the connection of a neighborhood that was converting its wastewater system from septic tanks to the District's wastewater collection system. The purpose of modeling this connection was to determine if there was capacity within the District's existing waste water collection system. I worked with the sewer design team to accurately model the inverts of each pipe and manhole within the proposed sewer system. I inserted wastewater flows into the hydraulic model based upon wastewater flow factors for each parcel that was connecting to the collection system. I identified capacity deficiencies downstream of the conversion project and communicated with senior engineers to develop alignments for multiple pipelines which would alleviate capacity deficiencies. I helped present these projects to the District so they could choose which project would serve them best.

Elsinore Valley Municipal Water District – Southern Section Inflow and Infiltration Analysis (October 2023 – November 2023) - I analyzed data from a wastewater flow monitoring program which was designed to locate and isolate areas with high inflow and infiltration (I/I) flow rates. The study area was approximately 1,300 acres and was broken into eight basins. I calculated average dry weather flow (ADWF) for each basin and compared it to peak wet weather flow (PWWF) to determine the severity of peak I/I inflow. The eight basins were then ranked by their peak I/I inflow and size. I developed recommendations for future testing and inspecting that should be performed in the basins with the greatest peak I/I.


City of Chico – 2023 Sanitary Sewer Masterplan Update (December 2022 – February 2024) - I served as the lead hydraulic modeler and project engineer for the City of Chico 2023 Sanitary Sewer Master Plan Update. I built a new hydraulic model in InfoSWMM using the City's GIS database, survey data, as-built records, and lift station drawings. I assisted in the selection of locations where flow meters would be installed based upon feedback from the City and recent developments within the service area. I inserted wastewater flows into the hydraulic model based upon water billing data and calculated return-to-sewer ratios. I then calibrated the model to dry and wet weather flow based upon flow monitoring data. I identified locations throughout the existing wastewater collection system that were deficient in the hydraulic model and presented this information to the City. I created a "build-out" scenario which imagines if the entire service area was completely developed. This build-out scenario was then used to identify all possible future deficiencies within the collection system. Throughout this process, I drafted technical memos for the City which contain details of the work described above.

JORGE OROZCO (12-835-69)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL


 Applying To
Nevada

Application Type
Initial - PE

Application Date
03/21/2024

Citizenship
United States



SUMMARY



 Engineering Experience
after EAC degree
7 years, 9 months

Total Engineering
Experience
7 years, 9 months


Experience under licensed
engineer
6 years, 3 months

Disciplinary Action
None reported


 

EDUCATION

 Bachelors in Civil Engineering (EAC)
California State University, Chico
August 2006–December 2012

EXAMS

 Fundamentals of Engineering (FE)
Nevada
March 2019

Principles and Practice of Engineering (PE)
Civil
Nevada
January 2024

LICENSES

 Additional Licenses
None

JORGE OROZCO (12-835-69)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NDOT
Nevada (United States)
Engineering Technician IV
March 2016—March 2019

Verified by
Regina Marlette Pierce
Rpierce@dot.nv.gov

Experience Summary
Full-Time
Engineering: 3 years
Post EAC degree: 3 years
Experience under licensed engineer: 3 years

TASKS

Engineering Technician IV/III (Inspector and Tester): IV: Under general direction, functioned independently at the advanced journey level performing technical work requiring knowledge of engineering theories, principles, concepts and practices in a specialized area (roads and bridges). Planned and executed assignments and independently coordinated projects with other technicians. Work assignments covered a wide range of technical engineering duties requiring considerable judgment and ingenuity. Determined individual work priorities and applied established procedures, techniques, standards and guidelines set forth by management. Performed specialized technical engineering work of an advanced nature and functioned under minimal supervision; used considerable judgment in making independent decisions. Technical or lead-worker responsibility for a project and staff of lower-level engineering technicians.

III: Work included technical engineering work such as cost estimating, material/soil analysis, quality assurance testing and sampling, construction inspection activities, data gathering and research, surveying, drafting, right-of-way engineering duties, relocation inspections, review of legal transfer documents, water rights ownership, and land acquisition research. Assisted in training lower-level staff as assigned. Applied judgment and knowledge in selecting and evaluating data and adapting methods to accomplish work assignments.

REPRESENTATIVE PROJECTS

US 6 roadway reconstruction

Between February 2017 and October 2017, I was part of a construction/inspection crew responsible for the reconstruction of US 6 outside of Ely, Nevada. The project consisted of Roadway reconstruction, Lane reconfiguration, Americans with Disabilities Act (ADA)/sidewalk/curb and gutter improvements, Bicycle lanes, Lighting, Flashing beacon pedestrian crossings, Aesthetics, Drainage improvements, Water and sewer pipeline replacement, Fiber optic installation. As a field inspector majority of my time, I read the soil report and verify the contractor was constructing per the recommendations of the soil report. I would take compaction tests and communicate to the contractor if additional compaction or moisture was required before the next lift of soil could be placed. The soil needed to be compacted to 90% within 2 feet of the basement wall and 95% everywhere else, the moisture content needed to be within 2% of optimum moisture content. I would write up daily reports of the progression of the construction, the location of where the compaction tests were taken, and the results of all the tests pass or fail. When grading was complete I used the AutoCAD software to create a figure of the site and label where all the compaction tests were taken. I provided all my daily reports and figures to my project manager Eduardo Gonzalez which he would use for the grading report.

SR 160 widening

Between January 2018 and March 2019, initially, we were required to use surveying equipment to lay out and prepare the boundaries of the project site for the contractor. Obtains data about angles, elevations, control points, and contours used for construction, map making, or other purposes; compiled notes, sketches, and records of data obtained, and work performed; directs work of subordinate members of survey crew; performs other duties relating to survey work as directed by the Chief of the party. holds a level rod or distance meter reflector at designated points to assist in determining elevation and laying out stakes for map making, construction, land, and other surveys; calls out reading or writes station number and reading in a notebook; marks points of measurement with elevation, station or other identifying mark.

I worked as a lab technician conducting modified proctor tests for the SR 160 widening project. Mass grading took place on site for the redevelopment of the area to accommodate the construction of a new median barrier, bicycle lanes, and the flattening side

slopes for safe turnouts, and other proposed enhancements such as the frontage roads for the Mountain Springs community. From the proctor test, I would determine the maximum dry density and optimum moisture content all reported to the crew resident engineer.

As the lead inspector, my roles consisted of weekly meetings with the developer, contractors, and engineer of record to discuss construction schedules, plan revisions, and any conflicts holding up the project. I was onsite daily and conducted compaction tests, sampling soil, sampling concrete, communicating with the contractors when work was not being done per the soil report, and writing daily reports.

JORGE OROZCO (12-835-69)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Clark County Public Works
Development Review
Nevada (United States)
Plan Checker I/II
June 2019—June 2022

Verified by
William Layne Weber
wlweber@ClarkCountyNV.gov

Experience Summary
Full-Time
Engineering: 3 years
Post EAC degree: 3 years
**Experience under licensed engineer:
3 years**

TASKS

As a Plan Checker, a major branch of engineering work I did was in drainage. My major task is reviewing technical drainage studies. I review an average of 12 to 15 studies a month. When I review drainage studies, I typically look over HEC-1, FlowMaster, HEC-RAS, and WSPG models. I verify the engineer uses correct input data based on local criteria and the proposed grading plans. Drainage Studies are accompanied by grading plans reviewed with the study. When I review grading plans, I verify plans are designed per the local criteria like Clark County Regional Flood Control District (CCRFCD) manual Hydrologic Criteria and Drainage Design Manual (HCDDM) and Clark County Title 30 and national criteria such as the International Building Code (IBC). After reviewing the drainage studies, I typed up a comment letter that I sent to the engineer along with redlines of the grading plans. Engineers of the studies can ask for clarification of the comments made and typically set up meetings in person or over the phone to review the comments together. When I approve a drainage study, An approval letter is emailed, letting the engineer of record know if concurrence with any other entities is required and if minor changes to the grading plans will be necessary. After the approval of a study I organized the entirety of the study this includes the technical Drainage Study, addendum(s), supplement(s), and figure(s) for imaging so they are available to the public and in our records.

REPRESENTATIVE PROJECTS

As a plan checker for the Clark County Public Works Development Review Division, I have reviewed drainage studies from 2019 to 2022 under the supervision of Layne Weber. Design manuals I reference for my review are the Clark County Regional Flood Control District (CCRFCD) manual Hydrologic Criteria and Drainage Design Manual (HCDDM), Clark County Title 30, International Building Code (IBC), and the American Association of State Highway and Transportation Officials (AASHTO) Policy on Geometric Design of Highways and Streets manual. Software manuals I use for my review are the US Army Corps of Engineers Hydrologic Engineering Center HEC-1, HEC-RAS, Bentley FlowMaster, and Water Surface Pressure Gradient (WSPG).

The engineer of record referenced off-site flow rates from previously approved drainage studies. When I review drainage studies, I always do my own research, such as looking up old approved drainage studies to verify flow rates. Engineers, at times, can provide inaccurate or misleading information. After I verified the off-site referenced flow rates, I reviewed the declinations made by the engineer of record for the onsite drainage basin for the existing and proposed conditions. A Standard Form 4 Sheet (per HCDDM) is given to calculate the time of concentration of each basin. I reviewed that they use the correct basin area, curve numbers (per the HCDDM), slopes, and travel length utilized. A HEC-1 model is provided for the hydrologic analysis of the onsite drainage basins. I verified the correct precipitation value per the HCDDM based on the site location used for the HEC-1 model. I reviewed the HEC-1 analysis and verified that the correct input data is utilized such as basin area, precipitation value, curve number, time of concentration, and 6-hour storm distributions. FlowMaster models are provided for the street hydraulic section analyses. When reviewing FlowMaster models, I verify the correct dimensions, Manning's number, flow rate, and slopes are being utilized, per the proposed grading plans. I reviewed the output data of the FlowMaster software to verify that HCDDM criteria are met such as the finish floor being properly elevated and flood protected, velocities are non-erosive (greater than 5 ft/sec), and the 10-year dry lane is met.

From May 2020 until August 2021, I reviewed the technical drainage study and grading plans for the Dean Martin Business Center project. The project is located south of Blue Diamond Road and West of the I-15. The current project proposes an open channel, drop inlets, and a storm drain. I reviewed the drop-inlet calculations and verified the curb openings, grate openings, and street slopes match what is shown as proposed on the grading plans. A WSPG model is provided for the storm drain analysis. I verified all the input data for the WSPG was entered correctly such as inverts, manning's number, length of pipes, manhole/junction losses, bend losses, geometry of pipes, flows intercepted from laterals or drop inlets, and where the tailwater depth was obtained from (a referenced study). I reviewed the output data to make sure results are within compliance with HCDDM, such as HGL being 1 foot below the finished grade and velocities between 3 to 25 ft/sec. A HEC-RAS model is provided for the open channel analysis of the site. I reviewed the input data of the model such as cross-section geometry, manning's number, the reach length

for the channel, left overbank, and right overbank, the expansion and contraction coefficients, and the flow rate. Clark County only accepts the HEC-RAS model run in the mixed flow regime, so I always request the model from the engineer of record. I reviewed the output data and verified criteria were met such as freeboard (HCDDM), and erosion control, and Froude's number is maintained at either sub-critical or super-critical with no hydraulic jump in the model. I reviewed the profiles for the proposed streets to verify the K-values met the criteria per AASHTO and verified the finish floors were properly elevated 18 inches above the centerline or top of the curb per Title 30.

JORGE OROZCO (12-835-69)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Clark County Public Works
Development Review
Nevada (United States)
Associate Engineer
June 2022—March 2024

Verified by
Gabriel Anthony Herrera
gah@ClarkCountyNV.gov

Experience Summary
Full-Time
Engineering: 1 year, 9 months
Post EAC degree: 1 year, 9 months
**Experience under licensed engineer:
3 months**

TASKS

Have a working knowledge of Engineering Mathematics, codes, and regulations; computer applications related to the work; standard office practices and procedures, including filing and the operation of standard office equipment; and record-keeping principles and practices. Apply engineering principles to the examinations of a wide variety of plans, interpreting, applying, and explaining applicable laws, codes, and regulations. Review and examine plans and specifications for residential, commercial, industrial, public works, amusement, and transportation device plans, specifications, and related documents. Research information, confirm ownership, ascertain assessor's values, determine zoning area and other information; research code provisions on difficult problems. Confer with developers, engineers, architects, contractors, property owners, and others to give information regarding codes, regulations, and procedures. Review calculations for completeness, code compliance, and accuracy. Prepare, and evaluate plans and specifications for a variety of public works, County and local agency buildings, facility roadways, traffic and wastewater and water plant designs, and maintenance projects. Performs project resident engineering oversight on various design projects; ensures compliance with plans and specifications. Conduct feasibility and cost studies; recommend alternative approaches, including the incorporation of new methods and materials. Review and evaluate parcel maps, records of surveys, subdivision and construction plans, and other documents submitted by the public; provide engineering design and code information and ensure that designs meet accepted standards. Research studies and prepares reports and recommendations regarding land use, building and facility design, transportation, housing, redevelopment, and a variety of engineering-related community service needs. Prepare a variety of written communications, including analytical reports and correspondence; direct the preparation of graphic materials. Make oral and graphic presentations or prepare materials for presentation to boards commissions and community groups. Answer questions and provide information and assistance to the public in person, on the telephone, and in writing.

REPRESENTATIVE PROJECTS

From August 2022 until the present day, I have been part of the Traffic review team on the Public Works Development review at Clark County. As part of my duties, I am required to participate in biweekly meetings where entitlement applications are reviewed and conditioned to a traffic study or mitigation if required. I review the provided analysis and reference code books such as Title 30 code (Clark County Code). Based on the peak hour trips generated per the analysis provided, using the ITE Trip Generation Manual (Institute of Transportation Engineers), I ensure the proposed development is within compliance. I review the analysis along with the site plan to ensure that the development is designed per local and state code law and statute.

I review the analysis submitted to determine if it is a Traffic Study or a Traffic mitigation is required. A Traffic study is different than traffic mitigation such that the Traffic Study Scope depends on the type and location of the proposed development and the surrounding area and the Peak hour trips generated.

The scope required in a Traffic study is (but not limited to, depending on variables involved with the development):

- I review the analysis provided for analyzed intersections that are both signalized and unsignalized.
- I review the analysis to ensure it includes, at a minimum, the existing and future conditions: counting cars and current lane configurations for current conditions and projection of future numbers (ITE Manual and Projection) and proposed lane configurations and controls.
- An unsignalized would have to be analyzed to see if a traffic signal would be warranted.
- Signalized intersections are analyzed to see if modifications to the current lane design are required.

Depending on the type of development, mitigation measures would have to address any failures, including:

- Right turn lanes or the addition or right turn lanes
- Left turn storage
- LOS (level of service) of intersection or pedestrian (sidewalk)
- Porte Cochere
- Etc

A developer's contributions are collected based on percentages calculated depending on the recommendations and improvements proposed (left turn lane/s or signaling intersection).

Mitigation measures are based on the projected numbers calculated and added to the existing conditions. After I review the analysis provided for a mitigation report I make recommendations to mitigate any poor or exacerbated conditions made.

When I review the Traffic mitigation or Traffic Study analysis and site plans I use code books and manuals such as Title 30, RTC Uniform Standard drawings, AASTHO, MUTCD, ADA and NRS must all be referenced to ensure compliance with all.

JORGE OROZCO (12-835-69)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION



TIME GAPS


Start Date	End Date	Explanation
January 2013	February 2016	took time between jobs to highly focus on the FE. was unsure if i had chosen the wrong career path only to reconfirm my love and passion for engineering during my time away

THOMAS PORTER (14-684-62)


All work experience reviewed by two licensed professionals





DISCIPLINE: CIVIL

GENERAL

 Applying To **Nevada**
Application Type **Initial - PE**
Application Date **03/25/2024**
Citizenship **United States**

SUMMARY


 Engineering Experience after EAC degree **6 years, 8 months**
Total Engineering Experience **6 years, 8 months**
Experience under licensed engineer **6 years, 8 months**
Other Experience **3 years, 5 months**
Disciplinary Action **None reported**

EDUCATION

 Bachelors in Civil Engineering (EAC)
University of Nevada, Las Vegas
August 2010–August 2014

EXAMS

 Fundamentals of Engineering (FE)
Nevada
October 2013
Principles and Practice of Engineering (PE)
Civil
Nevada
November 2023



LICENSES

 Additional Licenses
None

THOMAS PORTER (14-684-62)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Nye County School District
Nevada (United States)
Substitute Teacher
August 2007 – April 2008

Verified by

Experience Summary

Part-Time

Other: 6 months (75%)

Experience under licensed surveyor:

None



DESCRIPTION

THOMAS PORTER (14-684-62)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

GeoTek Operations Limited
Nevada (United States)
Staff Professional and Laboratory
Manager
August 2014—April 2021

Verified by
Joachim Wolfgang Gunther
Jgunther@geotekusa.com

Experience Summary
Full-Time
Engineering: 6 years, 8 months
Post EAC degree: 6 years, 8 months
**Experience under licensed engineer:
6 years, 8 months**

TASKS

All of my work at Geotek was supervised by a civil engineer. In the Construction and Materials Testing (CMT) department, I acquired several certifications from the International Code Council (ICC) (Reinforced Concrete, Masonry, and Soils Inspector), and the American Concrete Institute (Concrete Field Grade 1, Laboratory Technician 1, Concrete Strength Testing Technician, and Aggregate Testing Technician). These certifications qualified me to inspect multiple aspects of construction. My field experience and certifications helped advance my knowledge, resulting in success in the field, laboratory, and office.

In the Geotechnical Department, the soils certification allowed me to inspect earthwork and grading construction. I was responsible for ensuring that recommendations in the Geotechnical reports were followed. I checked depth and compaction of fill materials. I progressed to logging boring holes for Geotechnical reports, which included field classification of soils and other tests to determine soil properties.

In the office I was responsible for preparing proposals and reports for clients. In the Geotechnical Department, I prepared final grading reports, Geotechnical evaluations, geotechnical explorations, pad certifications, select backfill reports, and pavement design reports. In the CMT department, I prepared final special inspection reports. These reports included gathering and interpreting data in order to give recommendations for earthwork, concrete, masonry, and asphalt construction. Reports were reviewed and stamped by an engineer, then submitted to the governing jurisdictions for approval.

My knowledge and experience resulted in my promotion to materials testing laboratory manager. I was responsible for managing two supervisors and eight technicians. This position included ensuring that testing was performed efficiently and per applicable standards. I reviewed testing results for accuracy. I was responsible for tracking thousands of samples in various stages of the testing process. I also participated in branch management meetings and discussions regarding staffing, finances, operations, and other administrative concerns.

REPRESENTATIVE PROJECTS

2014 / 2015 - Pearl Creek – Henderson, Nevada – Residential Development: I was responsible for reviewing the construction documents and approved plans for quality assurance. I prepared final special inspection reports, pad certification reports, and grading reports. I performed inspections for the post-tension slabs of multiple single family homes. I analyzed the lab data to ensure compliance with the recommendations in the Geotechnical report and other construction documents. I performed sampling and various lab testing such as sieve analyses, Atterberg Limits, swell tests, Proctor tests, chemical tests, and moisture tests. I prepared and submitted reports to the City of Henderson for approval.

2015 – Rhodes Ranch South – Las Vegas, Nevada – Residential Development: I was responsible for reviewing the construction documents and approved plans for quality assurance. I prepared final special inspection reports, pad certification reports, and grading reports. I performed inspections for the post-tension slabs of multiple single family homes. I analyzed the lab data to ensure compliance with the recommendations in the Geotechnical report and other construction documents. I performed sampling and various lab testing such as sieve analyses, Atterberg Limits, swell tests, Proctor tests, chemical tests, and moisture tests. I prepared and submitted reports to Clark County Building Department for approval.

2016 – Faraday Future: Project Sarah – Las Vegas, Nevada – This project included materials testing and quality assurance for a super pad for a proposed electric car manufacturing facility. I was responsible for setting up a mobile materials testing laboratory to be located onsite. I ensured laboratory and compaction testing was performed in compliance with relevant standards and codes. I compiled all of this data into a final report and submitted it to the City of Las Vegas for approval.

2017 – Nova Ridge – Las Vegas, Nevada – Residential Development: I was responsible for reviewing the construction documents

and approved plans for quality assurance. I prepared final special inspection reports, pad certification reports, pavement design reports, select backfill reports, and grading reports. I performed inspections for the post-tension slabs of multiple single family homes and retaining walls. I analyzed the lab data to ensure compliance with the recommendations in the Geotechnical report and other construction documents. I performed sampling and various lab testing such as sieve analyses, Atterberg Limits, swell tests, Proctor tests, chemical tests, concrete strength, masonry strength, and moisture tests. I prepared and submitted reports to Clark County Building Department and Clark County Public Works Department for approval.

2018 – Indigo - North Las Vegas, Nevada – Residential Development: I was responsible for reviewing the construction documents and approved plans for quality assurance. I performed calculations to determine projected average daily traffic over a 20 year span, traffic indices for different street classifications, and pavement structural numbers. Using these calculations, I prepared reports to provide recommendations for asphalt pavement sections. These reports and calculations were submitted to the City of North Las Vegas for approval.

2018 – Jensen and Helena - Las Vegas, Nevada – Proposed construction of multiple 1 to 2-story single-family residences and associated improvements. I was responsible for preparing boring logs of the soil profile. I also reviewed records to identify faults, fissures, and well data to determine if the subject site required further testing per local codes. I sampled and performed lab testing including field classifications, Proctor testing, swell testing, Atterberg limits, and chemical tests. I prepared the Geotechnical Evaluation Report, which contained recommendations for site preparation, earthwork construction, foundation design/construction and development criteria.

2019 / 2020 – Hacienda Bridge - Clark County, Nevada – I reviewed project construction documents and prepared a cost estimate for inspections and materials testing. I managed scheduling and performed quality assurance inspections for the installation of a bridge expansion joint. I ensured that all work was performed in accordance with approved plans and construction documents. I prepared and submitted a report to Clark County Public Works Department for approval.

THOMAS PORTER (14-684-62)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Self employed
Nevada (United States)
Stock and cryptocurrency trader
April 2021 – March 2022

Verified by

Experience Summary

Full-Time

Other: 11 months

Experience under licensed surveyor:

None



DESCRIPTION

THOMAS PORTER (14-684-62)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Clark County Public Works
Nevada (United States)
Construction Management Inspector
March 2022—March 2024

Verified by

Experience Summary

Full-Time

Other: 2 years

Experience under licensed surveyor:

None



DESCRIPTION

THOMAS PORTER (14-684-62)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION



TIME GAPS

Start Date	End Date	Explanation
May 2008	July 2010	Mission for The Church of Jesus Christ of Latter Day Saints

SAMEEKSHA SAPKOTA (19-436-41)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
03/28/2024

Citizenship
Nepal

SUMMARY



Engineering Experience
after EAC degree

Total Engineering
Experience
5 years, 3 months

Experience under licensed
engineer
4 years, 8 months

Disciplinary Action
None reported



EDUCATION



Meets NCEES Engineering Education Standard

Bachelors in Civil Engineering
Tribhuvan University
November 2011–February 2016

Masters in Civil and Environmental Engineering
University of Nevada, Las Vegas
August 2017–December 2018

Masters in Project Management
University of the Cumberland
May 2022–December 2023



EXAMS



Fundamentals of Engineering (FE)
Nevada
May 2019

Principles and Practice of Engineering (PE)
Civil
Nevada
February 2024

LICENSES



Additional Licenses
None

SAMEEKSHA SAPKOTA (19-436-41)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Puspanjali Construction Pvt. Ltd.
Bāgmatī (Nepal)
Civil Engineer
February 2016—December 2016

Verified by
Sameeksha Sapkota (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

1. Assisted in civil engineering detail design work for roadway adhering to established design standards and regulations.
2. Assisted in cost estimation and prepared exhibits essential for the roadway construction, ensuring alignment with project budgetary constraints and regulatory requirements.
3. Actively participated in meetings with other engineering firms and local government bodies, facilitating effective communication, coordination, and alignment of project objectives with regulatory mandates.
4. Participated in on-site visits for specific segments of the construction, ensuring the implementation of proposed designs and adherence to quality standards.



REPRESENTATIVE PROJECTS

Reconstruction of Sakhu-Palubari Road, Kathmandu, Nepal

I assisted in the engineering design of a five mile road section from Sakhu to Palubari in Kathmandu, Nepal. I contributed to various aspects of the project, focusing on detail design, cost estimation, and preparation of exhibits for roadway construction. I ensured I adhered to established local standards and regulations during this process.

I also assisted in on-site visits and supervision for specific segments of the roadway construction, ensuring that the implementation aligned with the proposed designs and met quality standards. This hands-on involvement facilitated effective coordination between design specifications and practical execution, contributing to the project's success.

Moreover, I engaged in collaborative meetings with fellow engineering firms and local government bodies, fostering effective communication and stakeholder coordination. Through these interactions, I addressed concerns and ensured alignment with project objectives and regulatory requirements.

SAMEEKSHA SAPKOTA (19-436-41)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Ministry of Urban Development,
Government of Nepal
Bāgmatī (Nepal)
Civil Engineer
December 2016—July 2017

Verified by
Anjana Prajapati
anzanapraz@gmail.com

Experience Summary
Full-Time
Engineering: 7 months
Experience under licensed engineer:
None



TASKS

I reviewed the building designs that included site design, conceptual design, grading and utilities design and ensured it was according to Nepal Building Code (NBC) and other relevant design standards. I conducted comprehensive field supervision to ensure adherence to approved construction plans. I participated in meetings with locals and stakeholder engineering firms, fostering collaboration and communication among stakeholders and locals.



REPRESENTATIVE PROJECTS

Reconstruction Project after Earthquake of 2015, Residential Buildings, Bhaktapur, Nepal (December 2016 - July 2017)

I reviewed the complete package of building design, that included site design, conceptual design, grading plans, and utility plans of residential buildings in Bhaktapur district of Nepal. I ensured all the designs were according to relevant local standards. I performed field supervision to oversee the implementation of all approved construction plans. I conducted weekly site visits to monitor progress, inspect construction quality, and address any discrepancies or challenges encountered during the construction process. I actively participated in meetings with local communities and stakeholder engineers to facilitate the process.

SAMEEKSHA SAPKOTA (19-436-41)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Westwood Professional Services, Inc
Nevada (United States)
Graduate Engineer I
February 2019—March 2021

Verified by
Erwin Jeffrey Jayme Sacundo
ejsacundo@gmail.com

Experience Summary
Full-Time
Engineering: 2 years, 1 month
Experience under licensed engineer:
2 years, 1 month



TASKS

I assisted in the the planning and design phases of lift stations, pump stations, transmission and distribution sewer systems, and rehabilitation sewer systems. I developed planning studies, basis of design reports, technical specifications, and technical memorandums for water and wastewater projects. I also prepared civil engineering design drawings, and various exhibits for infrastructure projects using AutoCAD Civil 3D.



REPRESENTATIVE PROJECTS

City of Las Vegas Sewer Rehabilitation Project Group J, Las Vegas, NV (2019)

I prepared cost estimates for condition assessment and rehabilitation of a sanitary sewer for the City of Las Vegas Sewer Group J project area. I designed preliminary drawings for the rehabilitation design of existing manholes and pipelines.

CCWRD #18100 Collection System Capacity Upgrade, Package 1, Clark County Water Reclamation District, NV (2019-2020)

I developed sanitary sewer plans and profiles for sanitary sewer pipeline improvements located in six (6) separate project areas within the Las Vegas Valley. I prepared cost estimate for the 13,650 linear feet of project. I recommended improvements to relieve capacity constraints that allow for future development, reduce odors, and reduce the risk of sanitary sewer overflows.

Parker Point Lift Station Design, Henderson, NV (2020 - 2021)

I reviewed field contractor's shop drawings. I evaluated and approved/ rejected the shop drawings and sent responses to the contractor and the City of Henderson.

CCWRD #19101 Lincoln Lift Station Rehabilitation, Clark County, NV (2020-2021)

I prepared alternative #1 (Replacing of the entire lifts station) out of three (3) alternatives in the preparation of planning study. I calculated the design and sizing of bar screen and grit chamber in the Basis of Design Report (BODR). I calculated the required pipe diameter by Flowmaster. I developed 30% and 60% technical specifications for the project.

SAMEEKSHA SAPKOTA (19-436-41)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

The WLB Group, Inc.
Nevada (United States)
Project Engineer
April 2021 – January 2022

Verified by
Gerald Burke
gburke@wlbgroup.com

Experience Summary
Full-Time
Engineering: 9 months
Experience under licensed engineer:
9 months



TASKS

I developed civil engineering designs for various infrastructure projects, including improvement plans featuring grading, utility, and traffic designs, ensuring compliance with project objectives and regulatory standards. I utilized AutoCAD Civil 3D to prepare detail exhibits for infrastructure projects to facilitate clear visualization and communication of design concepts and specifications. I conducted water network analysis to assess water design for residential and commercial communities.



REPRESENTATIVE PROJECTS

Rainbow Raven Development, Residential Development Project, Clark County, NV (2021 - 2022)

I designed utilities that included water, sewer, and storm drain for residential community of Rainbow Raven development. I prepared traffic plans that included streetlight and signage for the adjacent streets and interior streets for Rainbow Raven development.

Saguaro North Development, Residential Development Project, Clark County, NV (2021-2022)

I designed utilities that included water and sewer mains and laterals for the Saguaro North development. I prepared water network analysis to assess water design for Saguaro North Development. I prepared grading plans, utility plans, and traffic plans in for the Improvement Plans (IPs) submittal. I also helped in addressed the review agency redlines and ensured that the project design was correct from start to finish.

Saguaro Pyle Development, Residential Development Project, Clark County, NV (2021-2022)

I designed utilities that included water and sewer mains and laterals for this project. I also prepared traffic plans that included streetlights and signage for this development. I prepared grading plans, utility plans, and traffic plans for this development. I prepared Water Network Analysis (WNA) for this project as well.

SAMEEKSHA SAPKOTA (19-436-41)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

The WLB Group, Inc.
Nevada (United States)
Assistant Project Manager
May 2022—March 2024

Verified by
Gerald Burke
gburke@wlbgroup.com

Experience Summary
Full-Time
Engineering: 1 year, 10 months
Experience under licensed engineer:
1 year, 10 months



TASKS

I developed civil engineering designs for various infrastructure projects, and improvement plans including grading, utility, and traffic designs to meet the project requirements and regulatory standards. I utilized AutoCAD Civil 3D to prepare detailed exhibits and designs for infrastructure projects. I conducted water network analysis to assess water design for residential communities. I ensured that the project met meticulous quality assurance/quality control (QA/QC) checks by developing specifications tailored to specific project requirements, thereby ensuring adherence to standards. I participated in meetings with clients and review agencies with clients and review agencies to facilitate project discussions and gather feedback on design.



REPRESENTATIVE PROJECTS

Nighthawk, Residential Development Project, City of Las Vegas, NV (2022 - 2023)

I designed utilities that included water, sewer, and storm drain for residential community of Nighthawk development. I prepared grading and plan and profile sheets for Nighthawk development. I also prepared wall plans to show the retaining walls for Nighthawk. I also prepared the quantity and bond estimate for this project.

Carlton, Residential Development Project, City of Henderson, NV (2022 - 2024)

I designed utilities that included water, sewer, and storm drain for residential community of Carlton development. I prepared grading plans, utility plans, and plan and profiles for Carlton. I also prepared water network analysis (WNA) for Carlton. I participated in meeting with clients and review agencies to discuss the project. I also prepared the quantity and bond estimate for this project.

TEC Equipment @ Brooks, Commercial Development Project, City of North Las Vegas, NV (2022 - 2023)

I prepared grading plans, detail/ sections and utility plans for TEC Equipment @ Brooks. I prepared traffic and fire access plans for this project. I also prepared water network analysis (WNA).

Southwest Ridge BMX Skills Park, Park Development Project, Clark County, NV (2023 - 2024)

I prepared grading plans and details/ sections for Southwest Ridge BMX Skills park. I designed water and sewer lines for the utility plans.

Ravenna, Residential Development Project, Clark County, NV (2024)

I prepared grading, utility, details/sections and traffic plans for Ravenna. I designed the pads and driveway slopes for this project.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL


 Applying To
Nevada

Application Type
Comity - PE

Application Date
03/26/2024

Citizenship
United States

SUMMARY



 Engineering Experience
after EAC degree


Total Engineering
Experience
8 years, 2 months

Experience under licensed
engineer
8 years, 2 months


Other Experience
7 years, 10 months

Disciplinary Action
None reported


 




EDUCATION

 Bachelors in Engineering Sciences
Dartmouth College
September 1985–June 1989

Masters in Civil and Environmental Engineering
Cornell University
September 1991–May 1993


 **NOTE:** Let CA license expire, does not have any intention in renewing it.

EXAMS

 Principles and Practice of Engineering (PE)
Civil
California
October 1998

Fundamentals of Engineering (FE)
California
October 1993

LICENSES

 Initial License
California
Issued: February 1999
Expires: June 2011

Additional Licenses
None

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Marseille Metro
Centre (France)
Engineer Trainee
June 1989—August 1989

Verified by
Theodore Weicker (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

I was doing steel calculations and visiting the work sites



REPRESENTATIVE PROJECTS

I calculated the steel struts needed to keep the walls of the excavation from not caving in.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Hardi International
Copenhagen city (Denmark)
Engineer Trainee
September 1989—February 1990

Verified by
Theodore Weicker (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

I was an engineer trainee



REPRESENTATIVE PROJECTS

I designed steel frames and also welded in workshop, but not under a US licensed engineer.

I designed Steel Frames for farming equipment using CATIA and then welded prototypes in their workshop.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Peak Solutions
California (United States)
Business Consultant
February 1990—August 1991

Verified by

Experience Summary
Full-Time
Other: 1 year, 6 months
Experience under licensed surveyor:
None



DESCRIPTION

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

ARUP
California (United States)
Design Engineer
June 1993—June 1997

Verified by
Atila Zekioglu
azekioglu@degenkolb.com

Experience Summary
Full-Time
Engineering: 4 years
Experience under licensed engineer:
4 years



TASKS

- Design Engineer
- Experience with Performance Design Codes in California
 - Earthquake Design and Analysis using SAP, ETABS and Drain-2D
 - Drafted details for Reinforced concrete
 - Experience with extreme loading on bridges
 - Significant experience with analysis of steel and glass structures
 - Programmed in FORTRAN to post-process analysis results
 - Designed Steel trusses for sports halls and bridges



REPRESENTATIVE PROJECTS

Project: Center for Clinical Sciences Research, California, USA , Dec 1996 - Apr 1997

Architect: Sir Norman Foster and Partners, London, England

Description: \$55 million, 20,000 m2, two 4 story buildings

Challenge: One of first projects in California to use new earthquake codes, in construction now at Stanford University. WE used ATC-40 to do Performance design of the concrete shear walls in the building. We did Pushover Analysis to measure the yielding in the walls to make sure the ductility limits were not exceeded. This required redistribution of reinforcement to strengthen some walls and weaken others, to ensure uniform yielding and ductility. I used Drain-2D to solve this problem.

Project: Liquid Natural Gas Tanks, Trinidad and Tobago, Sept - Nov 1996

Client: Whessoe Projects Ltd., contractor

Description: 72 m. diameter, 28 m. high, 102,000 cubic m. storage tank

Challenge: Produced video predicting behaviour of building during earthquake, identified critical locations to monitor. We used SAP90 to model the movement of the tower.

Project: Samsung Motors, Car Dealership, Seoul, Korea, May - Sept 1996

Architect: Sir Norman Foster and Partners, London, England

Description: £7 million, £1200/m2, prototype for 50 buildings in Korea

Challenge: Close coordination with architect, earthquake design and wrote design report for presentation to client. Used ETABS to do the steel frame of the building, and describe the loading.

Project: Potsdamer Platz, Daimler Benz Berlin, Germany, Oct 1995 - Apr 1996

Headquarters Architect: Renzo Piano, Piano Workshop, Paris, France

Description: £50 million high rise complex of 3 buildings

Challenge: Witnessed difficult working relationship due to language and cultural barriers. As a design engineer, also had opportunity to visit Berlin to see construction. My specific responsibilities involved doing the analysis of the frame of the building, modeling shear walls using beam/ column elements with rigid offsets. In addition, I had drafting experience, showing the very high % concrete reinforcement in the columns at the base.

Project: Abando Intermodal Railway Station, Bilbao, Spain, May - Sept 1995

Architects: Michael Wilford & Partners, London, England

Description: £70 million, 6 level, multifunction bus/rail depot

Challenge: 150 m. Center Arch, extreme loading due to railway

Tight restrictions on points of support for superstructure creating long spans requiring close coordination with civil engineering for railway alignment. I designed the concrete roof with arches close to the column to minimize reinforcement. In addition, the steel roof of the station was a grid of beams, modelled in SAP90.

Project: Lisbon Oceanographic Centre, Lisbon, Portugal, Mar - Jun 1995

Architect: Cambridge 7, Boston, Mass., USA

Description: £30 million, aquarium in Europe for World Expo '98

Challenge: Lead design engineer of 70m x 70m glass roof. The steel room was modelled in SAP90 and had to be modelled with loading in several stages, to correctly estimate roof deflection and required precamber.

Project: Bordeaux Villa, private home, Bordeaux, France, Dec - March 1994

Architect: REM Koolhaas, Office for Metropolitan Architecture, Rotterdam, Netherlands

Description: F.F. 7 million = £ 900,000, architectural visual effect of "floating concrete box" above glass 1st floor

Challenge: Report and specifications in French, Unconventional, modern concept for residential home requiring close integration w/ architect's ideas. I made the structural drawings and designed the concrete floor and composite steel/ concrete supporting beam.

Project: AYR Pool & Sports Centre, Ayr, Scotland, Sept 1994 - Jan 1995

Architect: Patel & Taylor, London, England

Description: £3 million sports hall

Challenge: Performed detailed analysis of 35m span steel roof truss, 30m floor bow truss, high costs prevented construction

Project: Hospital study following Northridge Earthquake, Los Angeles, California, Apr - Aug 1994

Description: Detailed 5 month study of hospital following earthquake, January, 1994. Wrote computer program to process results (using FORTRAN). The study was used to show which Moment Frame joints were likely damaged.

Project: Diverse assignments, San Francisco, California, Jan - Mar 1994

Description: 1) Museum with long span wood beams, designed for grass on roof 2) Refurbishment of hospital, brief study of existing plans to decide which walls could be demolished, calculate existing capacity of columns 3) Vibration study of steel staircase, safety levels for stampeding crowd

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

COWI
Copenhagen city (Denmark)
Design Engineer
June 1997 – December 2000

Verified by
Theodore Weicker (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

International Design Engineers, Bridge Department

Joined COWI as part of their effort to diversify their international experience. Potential of international projects where I could use earthquake experience and languages. Fascinating to be part of such large scale civil engineering projects.

I also worked in building design and worked on such building structures as the Copenhagen Metro Stations and the National Archives Building



REPRESENTATIVE PROJECTS

Project: Copenhagen Metro, Copenhagen, Denmark, Jul 98 - May 99

Description: Fitting out of stations, steelwork

Role: Detailed steel design of various steel projects: 3 meter glass +steel pyramid; Ventilation gratings; Glass elevator; 30m x 100m glass + steel roof for metro station

Challenge: Detailed design of steel to Eurocode; Construction drawings

Project: Danish National Archives, Copenhagen, Denmark, May - Jun, Sept 98

Client: Behnisch, Behnisch & Partners, Stuttgart, Germany

Description: 80 m high (23 story) steel building with 5 towers; Plan areas: 28m x 23m modules

Role: Performed scheme design on floor system, 23 m. span floor trusses, columns, stability forces transferred to core

Challenge: Long spans, heavy library loads and strict deflection criteria

Project: Seeong-Soo Bridge, Seoul, Korea, Jan - Mar 1998

Description: Memorial bridge, main artery to city center

Challenge: Earthquake design, and planning of construction phases

Project: Øresund Link, Cable Stayed Bridge, Denmark to Sweden, Apr 1997 - Jan 1998

Description: DKK 7 billion, 8 km bridge for car/ rail traffic

Challenge: Calculated steel quantities, performed design checks

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Consulting Group International (CGI)
Copenhagen city (Denmark)
Management Consultant
January 2000—December 2002

Verified by

Experience Summary

Full-Time

Other: 2 years, 11 months

Experience under licensed surveyor:

None



DESCRIPTION

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Idealand
Copenhagen city (Denmark)
Owner
January 2003—December 2005

Verified by

Experience Summary

Full-Time

Other: 2 years, 11 months

Experience under licensed surveyor:

None



DESCRIPTION

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Ramboll
Copenhagen city (Denmark)
Project Manager
January 2006—May 2014

Verified by
Theodore Weicker (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

Rambøll, Consulting engineers Project manager

Rambøll is leading the way in technical consultancy including: construction and design, traffic and infrastructure, environment and water, energy and climate and industry. With approx. 10,000 employees implement the projects worldwide from 130 offices in the Nordics and the UK as well as 28 offices in the rest of the world.

I was, among other things, assistant project manager at the Nordics' largest hotel, a project worth DKK 1.5 billion. DKK with more than 800 hotel rooms, as well as conference and wellness facilities. The construction is architecturally and technically groundbreaking for modular construction and requires close cooperation between architect and client. I had the primary responsibility for communication with external partners – architects and installation engineers, and I was responsible for prioritizing the tasks for Rambøll's construction engineers.

Was co-responsible for drawing up contract documents and schedules, as well as Rambøll's resource planning. Another important task was planning and quality control of drawings, calculations and descriptions.

Other skills: Business development

In addition to the above, I was mainly responsible for writing a business plan for a new product in 3-D visualization regarding the future market in Europe, Asia and the USA. This project required research into customer segmentation, market analysis, pricing and calculation of expected returns.



REPRESENTATIVE PROJECTS

Selected projects:

- Project Construction Engineer, Green Solution House, Hotel Ryttergården, Bornholm (2013) www.greensolutionhouse.dk
- Contract Manager for Copenhagen's Control and Maintenance Center for Cityringen (2012)
- Expertise in sustainable design, accredited LEED Green Associate (2012)
- Project manager in the energy department, where I worked on a waste-to-energy plant in Finland and northern Copenhagen (2011)
- Project manager / Designer of the H&M flagship store in Copenhagen Airport (2010)
- Project manager / Designer of new control tower, Faroe Islands Airport (2010)
- Assistant project manager at the 800-room Bella Sky Hotel in Copenhagen (2006-2009) www.acbellaskycopenhagen.dk

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

BuildGreen Engineering Consultancy
Copenhagen city (Denmark)
Owner

June 2014—October 2016

Verified by
Theodore Weicker (Self)

Experience Summary

Full-Time

Engineering: (0%)

Experience under licensed engineer:

None



TASKS

I make calculations on energy efficiency in buildings. I advised owners on what investments to take in order to save on energy costs.



REPRESENTATIVE PROJECTS

- Consulted for energy and environmental performance.
- Tracked ROI (Return on Investment) for green investments.
- Business Development for green technologies and renewable energy, such as battery energy storage, solar power, heat pumps and LED lighting for commercial and residential projects.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Damptech
Copenhagen city (Denmark)
Consulting Engineer
November 2016—December 2017

Verified by
Theodore Weicker (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

About Company: DAMPTECH A/S designs, produces, and sells damping devices that protect buildings and bridges against earthquakes, or any undesired vibration.

My role:

- Structural Engineering,
- Structural Specifications
- Structural Drawings,
- Testing of Prototypes,
- Project Planning/ Execution



REPRESENTATIVE PROJECTS

During this time, I helped document the damper's specifications and testing procedures.

I optimized steel plate thicknesses and reviewed manufacturing and shipping requirements for the product.

I made several design proposals for prospective clients in Chile, Turkey, South Korea and California.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

DAMPTECH
California (United States)
Structural Engineer
January 2018—February 2019

Verified by
Kirk Johnston
kjohnston@degenkolb.com

Experience Summary
Full-Time
Engineering: 1 year, 1 month
Experience under licensed engineer:
1 year, 1 month



TASKS

About Company: DAMPTECH A/S designs, produces, and sells damping devices that protect buildings and bridges against earthquakes, or any undesired vibration.

My role:

- Structural Engineering and Specifications for damper
- Structural Drawings,
- Testing of Prototypes,
- Project Planning/ Execution



REPRESENTATIVE PROJECTS

• January 2018 – Feb 2019 Retrofit of Bank of California, San Francisco (together with Degenkolb). I designed the steel damping device and connections linking two buildings. I also designed the strut linking the Damper to the roof diaphragm. . The dampers prevented pounding as well as provided stability. The dampers were modelled as a bi-linear element with a +/- 12% bound, virtually elastic then perfectly plastic. The samples were manufactured and tested in the USA.

In addition, I verified the testing compliance of the damper according to ASCE 7-16 Chapter 18. I supervised the testing machine and supervised the verification of the prototype to the design criteria specified. I certified that the camper complied with the code provisions: measuring force-displacement, force degradation, as well as temperature and frequency effects on the capacity.

The strut + damper was designed to allow movement in three directions: +/- 10 inches in the X,Y and Z direction.

I am including the name of the engineer that I worked closely with, named Kirk Johnston from Degenkolb.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Damptech
California (United States)
Structural Engineer/ Consulting
Engineer
March 2019—February 2020

Verified by
Ryan Edward Smith
Ryan.smith@mii.com

Experience Summary
Full-Time
Engineering: 11 months
Experience under licensed engineer:
11 months



TASKS

About Company: DAMPTECH A/S designs, produces, and sells damping devices that protect buildings and bridges against earthquakes, or any undesired vibration.

My role:

- Structural Engineering,
- Structural Specifications
- Structural Drawings,
- Testing of Prototypes,
- Project Planning/ Execution



REPRESENTATIVE PROJECTS

Project Mar 2019 to Feb 2020

During this time period, I made structural calculations on Steel Moment Frames, and made shop drawings for a series of dampers to be delivered in California.

I also wrote a scheme design guide to allow the dampers to be implemented in Steel Moment Frames in USA. I negotiated an agreement with Ryan Smith at SidePlate - that was not fully implemented - for a partnership agreement with profit sharing and joint consulting engineering services.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Damptech
California (United States)
Structural Engineer
March 2020—March 2021

Verified by
Jeffrey Keileh
jeffk@plantco.com

Experience Summary
Full-Time
Engineering: 9 months (75%)
Experience under licensed engineer:
9 months



TASKS

My role at Damptech included both engineering and non-engineering roles.

60% of my time was engineering/ 20% of my time was sales consulting with clients and 20% was working on cost estimations of the steelwork that we delivered to the client.



REPRESENTATIVE PROJECTS

- 19 story retrofit in Lakeside, Oakland (Project May 2020-Mar 2021, Structural Engineering: together with MKA, Magnusson Klemencic Associates, and Plant Construction) was a Non-Ductile pre-Northridge Moment Frame that was analyzed first using ASCE 7-16, Chapter 18.7.1. I modeled non-linear damping response of the structure. I modeled the dampers using ETABS, doing a Pushover Analysis and also a non-linear time history analysis.

The challenge of the project was that there was a soft story at the base and the columns did not have much extra capacity. It was necessary to stagger the damping throughout the structure. I modelled several interactions of the structure using various capacities and stiffnesses to check the sensitivity of the structure.

I also looked at the cost of fabricating the dampers and shipping them from overseas.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

DAMPTECH
California (United States)
Structural Engineer
April 2021 – December 2021

Verified by
Warren Reade Pottebaum
wpottebaum@buehlerengineering.com

Experience Summary
Full-Time
Engineering: 6 months (75%)
Experience under licensed engineer:
6 months



TASKS

My role at Damptech included both engineering and non-engineering roles.

60% of my time was engineering/ 20% of my time was sales consulting with clients and 20% was working on cost estimations of the steelwork that we delivered to the client.



REPRESENTATIVE PROJECTS

- 17 story retrofit of the Resources Building Renovation Project, a 657,000-square-foot building located at 1416 9th Street in downtown Sacramento (Project Jun-Dec 2021, Structural Engineering: together with Buehler Engineering) was a truss moment frame lateral system with limited ductility. I made a scheme design of the structure in ETABS using ASCE 7-16, Chapter 18.7.1. I modeled non-linear damping response of the structure. I also did a Pushover Analysis and also a non-linear time history analysis.

The challenge of the project was that the client/ Beuhler needed to keep the drift under about 0.5%, which was a challenge, since the dampers achieve damping through displacement. Small displacement = Small damping. However, the friction braced dampers were also effective at reducing the elastic drifts. I modelled several interactions of the structure using various capacities and stiffnesses to check the sensitivity of the structure.

I also looked at the cost of fabricating the dampers and shipping them from overseas.

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Damptech
California (United States)
Structural Engineer
December 2021 – February 2023

Verified by
Jared Christian Forrest Parker
jared@mytra.ai

Experience Summary
Full-Time
Engineering: 11 months (75%)
Experience under licensed engineer:
11 months



TASKS

During this time, I continued to do consulting for engineering companies, advising on vibration control and steel savings to structural designs.

My role at Damptech included both engineering and non-engineering roles.

60% of my time was engineering/ 20% of my time was sales consulting with clients and 20% was working on cost estimations of the steelwork that we delivered to the client.



REPRESENTATIVE PROJECTS

- Facebook Headquarters in Menlo Park (January 2022-Feb 2023, Structural Engineering: with Buro Happold) A larger steel and glass dome with a structural application of dampers at two locations. 1) at interface between the dome and a series of supports, to lower the reaction forces at the concrete framing system supporting the dome and 2) dampers located at 1/3 points of the arch, attached to the structure below, which reduced the out of plane bending forces, and member sizes, by 50%, allowing for significant steel savings and architecturally a more elegant solution, with smaller steel sections.

I provided assistance using Solidworks and design drawings for the damper to the structure. I also calculated the hysteresis loops for the friction damper.

For the project management, I provided cost estimates for the damper and the scheduling of the fabrication.

Jared Parker was the engineer of record that I worked with at Buro Happold
JParker@mytra.com

THEODORE WEICKER (23-719-99)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

High School Football Coach
California (United States)
Coach JV Football
March 2023—March 2024

Verified by

Experience Summary

Part-Time

Other: 6 months (50%)

Experience under licensed surveyor:

None




DESCRIPTION

PATRICK WOOD (21-221-82)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL


 Applying To **Nevada**

Application Type **Initial - PE**

Application Date **03/15/2024**

Citizenship **United States**



SUMMARY



 Engineering Experience after EAC degree **13 years**

Total Engineering Experience **13 years**


Experience under licensed engineer **5 years, 11 months**

Disciplinary Action **None reported**


 

EDUCATION

 Bachelors in Civil Engineering (EAC)
University of Nevada, Reno
August 2005–December 2009

EXAMS

 Principles and Practice of Engineering (PE)
Civil Nevada
December 2023

Fundamentals of Engineering (FE)
Nevada
April 2009



LICENSES

 Additional Licenses **None**

PATRICK WOOD (21-221-82)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Baker Hughes
Oklahoma (United States)
Application Engineer 4
January 2010—August 2013

Verified by
Davia Eleazar Gavia
dgavia@gmail.com

Experience Summary
Full-Time
Engineering: 3 years, 7 months
Post EAC degree: 3 years, 7 months
**Experience under licensed engineer:
3 years, 7 months**

TASKS

Oil/Natural gas drilling field engineer:

As an entry level Field Engineer I, I applied civil engineering principles to size nozzles, calculate drilling fluid flow velocities, and evaluate pump pressures for site-specific drill/well bore geometries. I analyzed fluid characteristics to optimize drill bit efficiency and cuttings removal. In addition, I reviewed proposed drilling practices to ensure that they aligned with current best practices for different regions.

Over a four-year span, I worked my way to a Field Engineer 4 position with greater responsibilities such as designing a “drill string” (pipe, motor, and drill bit assembly) to optimize performance based on a planned well bore geometry. I designed operational parameters based on available pump outputs and drill rig torques, in-situ rock classifications, while managing stresses on the drill string and drill bit. I calculated unconfined and compressive strength of in-situ rock formations to allow me to recommend parameters such as weight on the drill bit, rotations per minute, and drilling fluid flow rate. I designed drill strings assemblies to prevent drill pipe buckling. I performed root cause analysis to recommend improvements to drilling fluid parameters and drill bit flow channels that optimized new designs that minimized drill assembly erosion while maximizing cuttings removal.

REPRESENTATIVE PROJECTS

Canadian County Horizontal Well Bore Curve Applications - Kymera

Location: Canadian County, OK

Dates: 1/2012 - 8/2013

Scope/Role: I designed drill strings and assemblies to maximize the Kymera drill bit's strengths and minimize its weaknesses in the Woodford geological formation curve application. My design maximized fluid flow rates and minimized pump pressure to allow for adequate flow at the end of the curve to ensure successful completion of the section. I consulted with field operations to improve the speed of drilling and ensure minimal drill bit damage. I developed root-cause analysis reports analyzing drilling parameters, rock formations encountered in the well, drill bit wear patterns and drilling performance to recommend design changes. My analysis resulted in updated standard designs and procedures that decreased drilling torque variability, improved drilling performance, and provided greater ease of use to operational personnel.

6.125" Granite Wash Lateral Bit

Location: Wheeler County, TX

Dates: 1/2010 - 1/2012

Scope/Role: I consulted with operational personnel to define areas of improvement for drill strings/bits utilized in the granite wash geological formation of the Texas panhandle. I analyzed drill bit wear patterns and engineered design improvements that maximized performance in a hard and abrasive rock application. I optimized cutter locations in the drill bit design in response to the variable stresses seen throughout the cutting face of the bit. This resulted in improved longevity and increased performance of the drill bit for this specific geological formation.

PATRICK WOOD (21-221-82)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Baker Hughes
Colorado (United States)
Area Engineering Manager
August 2013 – April 2020

Verified by
William Moss
william.moss@bakerhughes.com

Experience Summary
Full-Time
Engineering: 6 years, 8 months
Post EAC degree: 6 years, 8 months
Experience under licensed engineer:
None

TASKS

Oil/Natural Gas Field Engineer 4 – Rockies Area Manager:

As a Field Engineer 4, I performed statistical analysis on drill bit wear pattern data to identify damage progressions and engineered new design parameters to prevent damage before it could occur. This allowed for value added engineering in increasing tool life and decreasing total lifecycle costs. I calculated drilling fluid flow velocities and evaluated pump pressures for site-specific drill/well bore geometries to maintain allowable drilling fluid flows and pressures for oil/natural gas well bores. I analyzed fluid characteristics to optimize drill bit efficiency and cuttings removal. I taught engineers and operations personnel best drilling practices for various formation types and geologic structures. I designed cutting elements to minimize impact loading during formation transitions and drilling dysfunction while maximizing the cutting tip cooling. I analyzed in-situ rock stratigraphic conditions to assist with drill bit selection and design. I designed bits to achieve complex 3D well bore geometries in the field. I calculated drill bit loading and selected drill bit material properties to prevent bit cracking while minimizing erosion of drill bit material during application.

As Rockies Area Manager, I reviewed and evaluated all designs for all drilling applications that were developed by a six-person team in the Denver, Colorado office. I taught junior engineers how to choose appropriate design parameters, gather necessary information from field visits, perform root cause analysis, and to understand how changes in the design (in conjunction with parameter adjustments) will impact bit longevity and performance.

REPRESENTATIVE PROJECTS

8.5" DJ Basin Autotrak Curve bit development

Location: Weld County, CO

Dates: 8/2013-4/2018

Scope/Role: The DJ Basin consists of sticky shale where rate of penetration and steerability/tracking are key to success. I designed and reviewed drill bits that worked with the AutoTrak Curve drilling system in the DJ Basin. This type of drilling system has different requirements than typical horizontal drilling. The AutoTrak Curve drilling system was very susceptible to vibrations and bit designs initially needed to be very stable and provide minimal vibrations while drilling. I calculated the three-point geometry of the tool to ensure drill bit gauge pad length and diameter didn't interfere with the system's ability to turn but also allowed the system to track when the well bore called for it. Initial methods of decreasing vibrations involved limiting the depth of cut and ultimately limiting the ROP potential for these tools. As the tool design progressed and improved, I adapted the drill bits to push the tool to its ultimate drilling potential. To increase rate of penetration (ROP) without increasing vibrations I increased the "sharpness" of the design to minimize the energy required to cut the rock. As the ROP increased, curve yields decreased, and the design required additional modifications. I investigated gauge pad dull conditions and combined that with real time steering variables to hone the gauge pad design and allow for improved curve drilling while still allowing the drill bit to track in straight sections of the well.

6" North Dakota Three Forks Formation Lateral

Location: Central North Dakota

Dates: 4/2017-4/2018

Scope/Role: The Three Forks lateral in North Dakota is a soft shale application that consistently drills 2-3 mile laterals. The difficulty with the Three Forks has always been impact damage and tool life due to vibrations. I analyzed dulls and drilling parameters to determine how best to solve the issues at hand. From working with operators, I determined that the impact damage was actually from contacting the extremely hard Bird-Bear sandstone below the Three Forks. I made the determination to move away from typical "abrasion" cutter that can be more sensitive to impact and to go with "impact" cutters. This along with improving the "sharpness" of the drill bit created extremely efficient drill bits that limited vibrations and maximized ROP.

6" North Dakota Bakken Formation Lateral

Location: Central North Dakota

Dates: 10/2017-4/2020

Scope/Role: The Bakken formation in North Dakota is a shale formation that saw a high rate of penetration (ROP) and was limited by available motor torque. In 2017 Baker Hughes developed a new motor that increased the available motor torque by over 50%. This increased torque combined with the motors shorter bit to bend length created extremely high stresses in the pin of the drill bit where it connects to the mud motor and the weld that connects the pin to the matrix body. Finding a solution to the issue was going to take time so I first had to determine how to limit field failures while a true solution was developed. I consulted with the Baker Hughes repair facility to develop a new inspection process to identify cracks in the pin using dye penetration testing. This new testing allowed shanks to be replaced before they failed in the field. I reviewed designs and made decisions to shorten the body of the bit to reduce the stresses seen while going through bends in the wellbore. I calculated flow areas in the annulus and approved a thicker shank OD/ID to increase the weld thickness and pin thickness without causing detrimental effects to the pump pressure, flow rate, and cleaning ability of the drilling fluid. I reviewed drilling fluid characteristics and signed off on the use of stronger more corrosion prone and brittle shank steel to further protect against weld/pin failures while drilling.

PATRICK WOOD (21-221-82)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Washoe County School District
Nevada (United States)
Construction Manager
June 2021 – November 2021

Verified by
Ken Blanchard
kennethjblanchard@gmail.com

Experience Summary
Full-Time
Engineering: 5 months
Post EAC degree: 5 months
Experience under licensed engineer:
None



TASKS

Construction Manager:

As a construction manager in the Washoe County School District's (WCSD) capital projects division, I was involved in design and construction of WCSD's capital improvements. I worked on design, construction coordination and inspection of several PROWAG access improvement projects and lead and asbestos remediation projects. Projects I worked on involved parking space improvements, sidewalk improvements to allow wheel chair access to playground areas and equipment, and asbestos and lead removal. I wrote scopes of work to bid and award projects. I worked with contractors to ensure construction of projects were on schedule and built per plans. I worked with other government entities to review designs and plans that could adversely effect WCSD properties.



REPRESENTATIVE PROJECTS

Lenz Elementary School ADA sidewalk:

Date: 9/2021

Description: Lenz Elementary school had a steep slope separating the playground from the school buildings. Children in wheel chairs were limited to teacher availability to wheel them down the slope if they wanted to play with kids in and around the playground. The project involved creating a ramp that connects the two areas.

Role: My duties included project scoping, bidding, construction coordination and inspection. I wrote project specifications and bid documents. I bid and awarded the project to the lowest eligible bidder. During the construction of the project, I attended construction meetings, worked with the contractor to make field adjustments, and executed change orders. I reviewed the design with PROWAG to ensure accessibility requirements were being met.

PATRICK WOOD (21-221-82)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NVEnergy
Nevada (United States)
Engineer 2
November 2021 – March 2024

Verified by
Devon Kendall
dkendallunr@gmail.com

Experience Summary
Full-Time
Engineering: 2 years, 4 months
Post EAC degree: 2 years, 4 months
**Experience under licensed engineer:
2 years, 4 months**

TASKS

I designed new steel pole transmission lines, re-conductors, re-terminations and relocations. I created comprehensive construction packages to aid field crews in the construction of those lines including plan and profile drawings, material orders, and structure drawings. I created estimates for transmission line projects for capital improvement projects, renewable generator inter-connections, and high voltage distribution lines. I reviewed grading plans of substation expansions and block wall additions for NDPP fire safety in tiered fire zones throughout the Sierra Nevada mountains. I calculated steel and wood pole strengths for addition of overhead distribution lines and transmission lines. I communicated with project teams and clients through recurring meetings to discuss design updates and project scheduling. I worked with the internal standards department to review new substation and transmission standards including both materials and design practices. I provided engineering support to field crews during the construction phase of projects. I designed foundations based on geotechnical borings and designed structure loading.

REPRESENTATIVE PROJECTS

624 Line Rebuild

Location: Douglas County Nevada

Dates: 2/2022 - 2024

Scope/Role: The 624 Line connects Glenbrook substation to Voltaire canyon substation going over mountainous terrain. I designed the line using PLS-CADD following NESC and company standards. I created a construction package, which included plan and profiles, structure framing drawings, and materials required for the project. I coordinated with field crews in order to develop a plan for constructing the line with minimal disturbance to historical and culturally sensitive areas. I provided field crews with engineering support throughout the construction process. I designed connections to and sized a steel pole to allow new 60kV reclosers to operate on a steel pole instead of inside a substation.

#116 Line Clearance Improvements

Location: Washoe County Nevada

Dates: 12/2021 - 11/2022

Scope/Role: I analyzed a model of the existing 11.7 mile 120kV line in PLS-CADD based off of LiDAR data to ensure compliance with NESC standards. I identified sections of line that required increased ground clearance in order to operate safely at the systems designed ampacity. I designed modifications to those sections of line in PLS-CADD which included new steel structures and the re-tensioning of existing conductor, following NESC and company standards. I created a construction package, which included plan and profiles, structure framing drawings, and materials required for the project. I provided engineering support to field crews throughout the construction phase of the project.

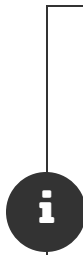
Electrical

MOHIT MOHTA (22-706-67)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
03/14/2024

Citizenship
India

SUMMARY



Engineering Experience
after EAC degree

Total Engineering
Experience
2 years, 2 months

Experience under licensed
engineer
2 years, 2 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Electronics & Communication Engineering
Amity University
August 2015–November 2019

Masters in Energy Systems
Northeastern University
August 2019–December 2021



NOTE: Credential evaluation waived due to the applicant having a US Masters degree.

EXAMS



Fundamentals of Engineering (FE)
Nevada
October 2022

Principles and Practice of Engineering (PE)
Electrical & Computer
Nevada
March 2024

LICENSES



Additional Licenses
None

MOHIT MOHTA (22-706-67)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Nevada Gold Mines
Nevada (United States)
Solar Project Engineer
January 2022—March 2024

Verified by
Kevin Scott Sessions
ksessions@nevadagoldmines.com

Experience Summary
Full-Time
Engineering: 2 years, 2 months
Experience under licensed engineer:
2 years, 2 months



TASKS

With Masters in Energy Systems and undergraduate degree in electronics and communication engineering. I have been working as a Project engineer for Nevada Gold Mines where my job is to manage the development of Capital Projects. Duties include but not limited to

- Feasibility Studies
- Reviewing engineering drawing packages
- Developing procurement packages
- Technical Bid Evaluations
- Construction Management
- Forecasting, Budgeting
- Scheduling



REPRESENTATIVE PROJECTS

- 90 Day Hazardous Waste Storage Facility - Project Manager
Carlin, Nevada
February 2022-December 2022

Scope of project is developing a hazardous waste storage facility to accumulate mine waste.

I was the Project Manager for the project. I led the progress the civil, structural and electrical engineering for the project by reviewing and approving the drawings submitted by the engineering firm, developing a EDC package for submittal to NDEP. I evaluated the drawings and developed RFP packages which was sent out to multiple vendors for various scope of work. I forecasted and budgeted the estimated project cost and developed a schedule for the course of the project. I did technical bid evaluations and recommended specific vendors. I provided construction management support verifying the construction is being done up to the required codes and standards bringing the project to successful completion.

- TS Solar - Solar Project Engineer
Dunphy, Nevada
January 2022 - Ongoing

Scope of the project is developing 225 MW ac solar facility for Nevada Gold Mines

I reviewed structural, civil and electrical drawings developed by the engineering firm for the solar facility and substation. I did technical bid evaluations for the bids received from different vendors. I reviewed and approved the quality plan to make sure the required installation would be up to the code and standards. I presented technical findings to various stake holders. I acted as a communication link between various moving parts to make sure correct information is relayed. I provided construction management support to make sure installation is being done in accordance to the approved drawings, up to the code and specifications.

- Cyanide Dissolution - Project Manager
Dunphy, Nevada
August 2023 - Ongoing

Scope of project is developing a centralized cyanide handling facility and multiple on-site dissolution facility for gold processing needs for Nevada Gold Mines


I am working as the Project Manager for the project. Led the Approval for Expenditure process by estimating the total cost of the project. Initiated the design and engineering process with the engineering firm - reviewed and approved the drawings. Acting as a liaison between the sites operation and maintenance teams by understanding their need and implementing it in the design. Currently, in the procurement process where I am preparing bid packages based on the required specifications, completing technical bid evaluations and recommending award to most technically sound bid.

BRENT NATSUHARA (14-877-06)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL

GENERAL


 Applying To **Nevada**

Application Type **Initial - PE**

Application Date **03/20/2024**

Citizenship **United States**



SUMMARY



 Engineering Experience after EAC degree **7 years, 2 months**

Total Engineering Experience **7 years, 2 months**


Experience under licensed engineer **6 years, 3 months**

Disciplinary Action **None reported**


 


EDUCATION

 Bachelors in Electrical Engineering (EAC)
Virginia Polytechnic Institute and State University
August 2010–May 2014


EXAMS

 Fundamentals of Engineering (FE)
Virginia
May 2014

Principles and Practice of Engineering (PE)
Electrical & Computer
Nevada
October 2022



LICENSES

 Additional Licenses **None**

BRENT NATSUHARA (14-877-06)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

USN
South Carolina (United States)
Ensign
June 2014—October 2016

Verified by
Brent Natsuhara (Self)

Experience Summary
**Full-Time
Engineering: (0%)
Experience under licensed engineer:
None**



TASKS

Student training to qualify for operation of a navy nuclear reactor.



REPRESENTATIVE PROJECTS

Operation of Navy Nuclear Power Reactor.
Electrical System Operation.
Mechanical Systems Operation.
Material analysis.
Chemical analysis.
Nuclear Systems Operation

BRENT NATSUHARA (14-877-06)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

USN
California (United States)
Advance Base Construction Engineer
(Platoon Commander)
October 2016—July 2019

Verified by
Tyson Joseph Baca
tyson.j.baca.mil@us.navy.mil

Experience Summary
Full-Time
Engineering: 2 years, 9 months
Post EAC degree: 2 years, 9 months
Experience under licensed engineer:
1 year, 10 months



TASKS

Advance Base Construction Engineer (Platoon Commander), responsible for the planning and establishment of an expeditionary camp. Expeditionary camp requirements included reviewing facility layouts; reviewing electrical demand and distribution; reviewing water storage and consumption. I led a 20 personnel team. Engineering responsibilities 40% and Non-Engineering responsibilities 60%.



REPRESENTATIVE PROJECTS

Expeditionary Camp Construction, and Operations and Maintenance, July 2017-July2019. I was the project lead responsible for leading 20 personnel in the establishment of a camp to be able to support 200 personnel, and 50 pieces of Civil Construction Equipment. As the lead engineer and project manager for the planning, design and construction of the camp, I was responsible for planning the layout of the camp; determining placement of critical structures; housing locations; sanitation locations; water storage location; analyzing the electrical load demand; reviewing and approving the electrical generation requirement and grid layout. I performed electrical load calculation reviews, detailed design reviews of the electrical grid, and onsite construction engineering inspections of the electrical system to ensure compliance with the design and electrical specifications. After camp construction was complete, I was responsible for camp maintenance where I analyzed the fuel consumption of our power generator, analyzed the changing electrical loads and reviewed and approved design changes to meet the changing requirements, monitored water consumption, and monitored maintenance teams responsible for camp operations.

BRENT NATSUHARA (14-877-06)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

USN
Guam (Guam)
Engineering Officer
July 2019—December 2023

Verified by
Brian William Christner
brian.w.christner.mil@us.navy.mil

Experience Summary
Full-Time
Engineering: 4 years, 5 months
Post EAC degree: 4 years, 5 months
Experience under licensed engineer:
4 years, 5 months

TASKS

Assistant Public Works Officer, responsible for programming, budgeting, and execution of facility management. Duties included development and review of; investment, acquisition engineering, and services; base transportation; utilities; environmental compliance; and real estate services for Department of Defense installations on Guam.

Resident Engineer, responsible for the budgeting, planning, and execution of new construction in support of Department of Defense actives on Guam and Africa. Duties included reviewing construction specifications, and drawings; acceptance of design and construction projects; and supervising a Quality Control team of 10 personnel.

Assistant Operations Officer, responsible for the acquisition strategy, and developing the project requirements for post hurricane recovery efforts on Guam.

REPRESENTATIVE PROJECTS

July 2019-July 2021, Assistant Public Works Officer, Naval Base Guam, Guam, "Hardening of Main Power Lines" and "Facility Operation and Maintenance". I was responsible for the review and coordination of 50 electrical utility outages, requiring the analysis of utility maps to minimize outage impacts while executing repairs or installation of conduit into the electrical grid. "Hardening of Main Power Lines", calculated electrical cable requirements, and reviewed the proposed material alternative provide by contractors. "Facility Operation and Maintenance" I reviewed the electrical specification of proposed of back-up generators, and upgrade of existing electrical utilities (Junction boxes, cables, and switchgears). "Facility Operation and Maintenance" was for 10 projects with a value of approximately \$200M.

July 2021-September 2023. Resident Engineer Andersen Airforce Base, Guam, for 15 projects, the three major projects I was responsible for during this period were "Aircraft General Maintenance Hangar", "Aircraft Fuel Maintenance Hangar", and "Aircraft Corrosion Control Hangar". The hangar projects were new construction contracts valued at over \$250M, I was responsible for review of proposed construction material, and proposing field changes for the hangars. I reviewed the hangar construction specifications and drawings. These reviews contained: structural, architectural, interior, electrical, sewage, water, fires suppression, and mechanical system. Two systems I oversaw the commissioning of, were the Hangar ground power, for aircraft to connect to, and the backup generator, observing and reviewing the data for the load testing, and calibration

September 2023 – September 2024, Residential Engineer, Djibouti, Africa, I was responsible for 15 projects, of note: "Upgrade the Main Power Generators", and "Installation of CT Scan Machine". For the generator upgrades, I was responsible for design review of the proposed replacement generators, this project was for the main electrical grid for the Department of Defense Installation supporting a multi-international security force and airfield operations. For the CT Scan Machine I had to develop a solution to integrate an USA made CT Scan Machine with the European electrical requirements utilized in Africa, proposed the use of an Uninterrupted Power Supply, and Dynamic Transformer

September 2023 – December 2023, Assistant Operations Officer, "MAWAR Recovery" project was for the post hurricane recovery efforts on US Navy installations cumulative scope of project valued at \$900M. My primary responsibility was reviewing the damaged facility and utilities assessments provided by field inspection team, and determine the scope of repair, or replacement required. "Hardening of the Electrical Grid" was a proposed project, requiring the burying of existing overhead lines. I was responsible for the cost estimate to install, new transformers, conduit banks, and cables to support this project, was valued at \$50M.

PATRICK WOOD (21-221-82)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION



TIME GAPS

Start Date	End Date	Explanation
May 2020	May 2021	During Covid my wife and I moved back to Nevada to be close to family. I stayed home and took care of our son until we were able to secure child care.

Mechanical

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

DISCIPLINE: MECHANICAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
03/21/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
4 years, 6 months

Total Engineering
Experience
4 years, 10 months

Experience under licensed
engineer
4 years, 10 months

Other Experience
6 years, 4 months

Disciplinary Action **None**
reported



EDUCATION



Bachelors in Mechanical Engineering (EAC)
Brigham Young University - Idaho
January 2015–July 2019

EXAMS



Fundamentals of Engineering (FE)
Idaho
June 2019

Principles and Practice of Engineering (PE)
Mechanical
Nevada
November 2023



LICENSES



Additional Licenses
None

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Brad Whiting
Nevada (United States)
Laborer
June 2012—July 2012

Verified by

Experience Summary

Full-Time

Other: 1 month

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Cooling and Power Rentals
Nevada (United States)
Laborer
July 2012—January 2013

Verified by

Experience Summary

Full-Time

Other: 6 months

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

None
Kentucky (United States)
Proselyting Missionary for the Church of
Jesus Christ of latter-day saints
January 2013—January 2015

Verified by

Experience Summary

Full-Time

Other: 2 years

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Primo Electric
Nevada (United States)
Electrician's assistant
January 2015—April 2015

Verified by

Experience Summary

Full-Time

Other: 3 months

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

BYU-Idaho
Idaho (United States)
Full time student
April 2015—July 2015

Verified by

Experience Summary

Full-Time

Other: 3 months

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NRC Concrete
Nevada (United States)
Laborer
July 2015—December 2015

Verified by

Experience Summary

Full-Time

Other: 5 months

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

BYU-Idaho
Idaho (United States)
Full time student
January 2016—July 2016

Verified by

Experience Summary

Full-Time

Other: 6 months

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Dekenkolb Engineers
California (United States)
Admin Assistant
July 2016—December 2016

Verified by

Experience Summary

Part-Time

Other: 4 months (75%)

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

BYU-Idaho
Idaho (United States)
Full time student
January 2017—July 2018

Verified by

Experience Summary
Full-Time
Other: 1 year, 6 months
Experience under licensed surveyor:
None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Degenkolb Engineers
California (United States)
Assistant CAD specialist
August 2018—December 2018

Verified by
David Mark Martin
dmartin@degenkolb.com

Experience Summary
Full-Time
Engineering: 4 months
Experience under licensed engineer:
4 months



TASKS

I was assigned to update the typical detail CAD library for a structural engineering firm. This included manually overlaying company standardized details over typical details from a variety of sources. This also included creating a script to automatically find and replace old, non-standard details with the company standard details.



REPRESENTATIVE PROJECTS

Project duration: Manual portion – Sept 5 to Dec 3
Automatic portion – Dec 3 to Dec 21
Complexity: Manual portion – Low
Automatic portion – Medium

I used Revit and AutoCAD to standardize typical details from various sources into one company library. I was the sole person on the project and had weekly meetings with my supervisor to review my work. I worked in a copy of the Company CAD library to prevent any mistakes from propagating to the library used by the engineers. Once I had manually updated the library and removed the old details, I was then tasked with creating a script using Dynamo to automatically look for non-standard details and replace them with the appropriate details.

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

BYU-Idaho
Idaho (United States)
Full time student
January 2019—July 2019

Verified by

Experience Summary

Full-Time

Other: 6 months

Experience under licensed surveyor:

None



DESCRIPTION

LOGAN DAVIS (20-303-44)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Mission Support and Test Services LLC
Nevada (United States)
Maintenance Engineer
August 2019–February 2024

Verified by
Clark Gabriel McCarrell Jr
MccarrCG@nv.doe.gov

Experience Summary
Full-Time
Engineering: 4 years, 6 months
Post EAC degree: 4 years, 6 months
Experience under licensed engineer:
4 years, 6 months

TASKS

As a Mechanical Engineer I support the Maintenance Facilities Division Supervisors in maintaining/monitoring system health on Balance of Plant/General Service Structures, Systems and Components based on the best maintenance and reliability centered maintenance practices. This includes:

- Reviewing design drawings for new construction to ensure code compliance as well as maintainability of equipment.
- Ensuring a Master Equipment List is current and updated to allow for efficient tracking of each system's health for each facility.
- Acting as Subject Matter Expert for HVAC, Plumbing, Fire Suppression, and Electrical Systems in each facility. This involves performing calculations to determine what types of life safety systems should be in place and providing direction on frequency and type of maintenance activity based on Manufacturer recommendations as well as from data gathered from predictive tools such as vibration and motor circuit analysis.
- Performing Root Cause Analysis on system/equipment failure to better understand where the problems are occurring and provide solutions to those problems.
- Analyzing data from predictive tools to prevent costly downtime and identify areas of improvement.

I have also been heavily involved in starting the Predictive Maintenance Program for the company.

REPRESENTATIVE PROJECTS

Design review for new construction and upgrades: 2019-Present
I have served as Project Maintenance Engineer during the design, construction, and turnover process for new facilities. I review and recommend changes to accommodate maintenance for 30-60-90 and 100 % design drawings. Two buildings have been completed with two more to be completed by March of 2024. I also review existing drawings and provide recommendations for upgrades. I have started a project to take the company's set of facility drawings and update them to current configurations and submit them to the Design Engineering department to be approved as technical baseline documents. The first phase will involve reviewing existing drawings to determine what drawing to use for the final As-Built. It will also involve physically walking down buildings to verify each system is correctly captured. The ultimate goal is to have a drawing that is linked to the company's Computerized Maintenance Management System (CMMS) such that an individual can pull up a drawing, click on a piece of equipment, and be directed to the equipment's record in the CMMS.

Predictive Maintenance Program: 2019-Present
I have been developing the company's Predictive Maintenance Program since 2019. Up to this point it has involved training on condition based monitoring equipment such as vibration monitoring and motor circuit analysis. Through our pilot program, we successfully convinced senior management to fully fund a predictive maintenance program. After analyzing data, I recommended actions to prevent premature failure of equipment. Starting in 2022 I began analyzing current maintenance procedures and comparing them with industry best practice, manufacturer recommendations, and code requirements.

- Crane Hoist
- Pumps
- Cooling Towers
- HVAC Systems
- Chillers
- Fire Protection Equipment
- Heat Exchangers
- Plumbing and Water Hammer Arrestors
- Miscellaneous Equipment

In 2019 I was tasked with designing a temporary bypass system in order to replace one of our heat exchangers which served a critical server room that could not be shutdown.

Fire Protection Inspection and Compliance: 2019-Present
I manage compliance for fire protection in several area within the Maintenance Division

I was tasked in 2019 with calculating the roughness coefficient in one of our complex's domestic water lines. In order to do this, I used a variation of the Hazen-Williams equation in combination with flow testing to determine the actual roughness coefficient and compare with known values to determine the health of the pipes. To acquire the test data, I had to develop a plan for which valves needed to be shut off and which valves needed to be open to obtain the needed values for the Hazen-Williams equation. Ultimately the project was put on hold due to the concern that the aging valves would not reopen if closed.

Most recently I have developed an action plan for the removal and replacement of outdated antifreeze systems. In conjunction with the Fire Protection AHJ, Fire Marshal, Industrial Hygiene, and Safety representatives, and in accordance with NFPA code, I have determined the path forward for the safe removal of outdated antifreeze products and the proper replacement products. In order to extend the life of the new antifreeze product, I reviewed weather data collected for the past 30 years and found the average low temperature to determine what temperature the antifreeze needs to be replaced at. I was able to bring the temperature threshold from 0°F to 15°F, thus prolonging the need to recharge the system and extending the life of the antifreeze product.

Lightning Protection Program: 2020-Present

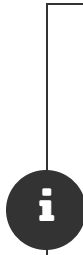
I have been tasked since 2020 to develop maintenance procedures and work steps for Lightning Protection Systems (LPS). I have used NFPA 780 as well as our Company Document derived from NFPA 780 and the recommendations of the Subject Matter Expert (SME). I have performed lightning risk assessments by calculating the tolerable lightning frequency (Nc) and annual threat of occurrence (Nd) and comparing the two. If Nc is less than Nd, an LPS is recommended. Once it has been identified that an LPS is needed, I have developed the maintenance program. I have also developed work instruction, under the direction of the AHJ, for dismantling an LPS that is no longer required. I am being trained to be the SME and future design authority for all LPS's at the Nevada National Security Sites (NNSS).

JUSTINA JOHNSON (18-699-00)

All work experience reviewed by two licensed professionals

DISCIPLINE: MECHANICAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
04/02/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
4 years, 10 months

Total Engineering
Experience
4 years, 10 months

Experience under licensed
engineer
3 years, 8 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Mechanical Engineering (EAC)
University of Nevada, Las Vegas
August 2014–May 2019

Bachelors in German
University of Nevada, Las Vegas
August 2014–May 2019



EXAMS



Fundamentals of Engineering (FE)
Nevada
February 2019

Principles and Practice of Engineering (PE)
Mechanical
Nevada
March 2024

LICENSES



Additional Licenses
None

JUSTINA JOHNSON (18-699-00)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Johnson Controls
Nevada (United States)
Systems Application Engineer
June 2019—April 2022

Verified by
Jon Jensen
jrjensen592@gmail.com

Experience Summary
Full-Time
Engineering: 2 years, 10 months
Post EAC degree: 2 years, 10 months
Experience under licensed engineer:
1 year, 8 months

TASKS

I was a System Applications Engineer at Johnson Controls. I was the technical subject matter expert on Johnson Controls Heating, Ventilation and Air Conditioning Equipment. I provided technical support, designed equipment selections, and project estimation support for the sales engineers, field technicians and licensed engineers. My role consisted of performing mechanical system design under the supervision of licensed engineers, design review, design support, equipment selection, project cost estimation, manufacturing coordination, project management and technical support (including engineering calculations and equipment troubleshooting). I designed mechanical equipment selections to meet the design intent of the licensed engineers I was working with. Mechanical selections required me to determine the heat transfer medium flow rate, number of fins, number of coil rows, entering and leaving water and air temperatures, operable ambient temperatures, direct expansion or water-cooled mediums and other factors. I performed load calculations and psychrometric calculations to ensure that my equipment was meeting the design intent. I prepared technical specifications for the equipment that I was providing. I was responsible for ensuring that the mechanical equipment I was providing complied with proper Uniform Mechanical Building Code Requirements and ASHRAE standards including ventilation (62.1), energy standards (90.1) and safety (15). I coordinated with the Sales Engineers, Mechanical Design Engineers, Contractors and Developer to ensure all project needs were being met and to ensure a smooth project execution from design review and equipment selection to project closeout. In addition to providing equipment selections, design and preparing cost estimates, I acted as project manager. Upon verification of meeting design intent, I obtained contract signatures from the contractors purchasing the equipment. I facilitated the order of equipment from the factory and insured that equipment completion stayed on track. I verified that all required equipment arrived on the jobsite without issue.

REPRESENTATIVE PROJECTS

1. I provided the variable air volume box and air handler selections for the Mountain View Tower/ER Expansion project in Las Vegas Nevada. This project took place from June of 2019 until April of 2022. Mountain View Hospital and ER is part of the HCA medical partners group. Johnson Controls was the sole supplier of all variable air volume boxes and air handlers for these hospitals. I designed a special variable air volume box configuration for purposes of providing strict sound attenuation and controlled flow to spaces within the hospital. I designed complex air handling units to meet the strict air change, humidification, ventilation and cooling requirements for operating rooms and clean rooms. I designed the units to be constructed in pieces in the field. The pieces were broken down into fan, filter, coil and plenum sections. I created the cost estimates for the air handling units and variable air volume units.
2. I designed the custom air handling units for the Grant Sawyer Government Building renovation. The Grant Sawyer Government Building is located in the Downtown area of Las Vegas. The project had many phases and the design took place between November 2019 to April 2022. I designed complex custom air handling units. I used custom built air handling units to accommodate strict space requirements, which resulted in L, H and T shaped air handling units. There were also strict unit height requirements.
3. I assisted in the retrofit design of air handling units at the Bellagio Hotel in Las Vegas. The project took place from December 2019 until May 2020. I assisted in the design build solution for replacing the existing air handling units with new air handling units. The existing air handling units operated in a maintenance room within the Bellagio. The only access point to remove the existing units and install replacements was via a large outside air vent along the wall of the mechanical room. I helped provide solutions to either replace the whole units or retrofit them in pieces. I designed an option to install new units in sections (i.e. separate coil, filter, fan, humidifier and plenum sections). I designed a second option to retrofit the existing units by replacing the pieces of the unit (i.e. fan, coils, etc.).
4. I designed the package rooftop units for the Vernon and Burke High School project in Las Vegas Nevada. The project took place from August 2019 until April 2022. I designed five package rooftop units to replace old existing rooftop units. Throughout the construction process, I discovered a design flaw and the units were missing hot gas bypass. I coordinated with the field technicians, contractors and sales engineer to design a field installed version of hot gas bypass by using a Rawal valve. The Rawal valve operated in a fashion similar to hot gas bypass, allowing the rooftop units to no longer short cycle and mitigate

potential cooling coil freezing.

5. I designed the equipment selections for The Dream Hotel in Las Vegas Nevada. The project design took place from November 2021 to April 2022. The Dream Hotel was designed to be installed on the south end of the Las Vegas strip and act as a hotel for business personnel. I designed the package rooftop units, air handling units, multizone mini-split systems and chillers for this project. I designed the chillers to be water cooled centrifugal chillers to serve the large tonnage of the hotel. I designed the package rooftop units to be heat pumps ranging from 5 tons to 25 tons. I designed the air handling units to use water as the cooling medium. The air handling units handled cooling loads of 25,000 cfm and above. I designed the multi-zone split systems to serve the small spaces in the hotel. I completed the cost estimate for the equipment on this project and the total estimate amounted to close to 5 million dollars. This was the largest project I had designed and estimated.

6. More projects available upon request.

JUSTINA JOHNSON (18-699-00)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Russell Sigler
Nevada (United States)
Sales Engineer
April 2022—August 2023

Verified by
Jeffrey Beryl Bollinger
Jeff@dgkoch.com

Experience Summary
Full-Time
Engineering: 1 year, 4 months
Post EAC degree: 1 year, 4 months
Experience under licensed engineer:
1 year, 4 months

TASKS

I was a Sales Engineer for Russell Sigler. I specialized in and designed residential and commercial Heating, Ventilation, and Air Conditioning equipment and control systems. These systems included Variable Refrigerant Flow Multi-Zone Systems, Water and Air-Cooled Chillers, Package Rooftop Direct Expansion Units, Fan Coils Units, Chilled Beams, Cooling and Heating Coils, Large Water-Cooled Air Handling Units and much more. I assisted licensed engineers in designing new and retrofit residential and commercial mechanical equipment selections for projects in Las Vegas. I performed psychrometric calculations and load calculations to verify designs prior to performing equipment selections. I performed psychrometric and load calculations to verify that the the equipment I was selecting met the building loads and design requirements. I used my technical knowledge of mechanical systems and Heating, Ventilation and Air Conditioning equipment to recommend and design the best Heating, Ventilation and Air Conditioning equipment to meet the design needs and to obtain Basis of Design. I determined new/retrofit building needs through factors including Equipment costs, Labor costs, Building Efficiency requirements, space restrictions and design requirements. I provided equipment selections to comply with the Uniform Mechanical Building Code requirements and ASHRAE standards for ventilation (62.1), energy standards (90.1) and safety (15). I prepared and provided technical specifications for the equipment that I was providing. I prepared engineering cost estimates and project proposals for Heating, Ventilation and Air Conditioning equipment for my designs and new developments within Las Vegas, Nevada. I led technical seminars and lunch and learns that educated my customers (Mechanical, Electrical, Plumbing Design Firms) on existing and new Heating, Ventilation and Air Conditioning Equipment, Controls, and technological developments within the industry. My customers relied on my equipment and controls technical aptitude, so I could provide the best selections and solutions for the project.

REPRESENTATIVE PROJECTS

1. I provided the chiller selections and design for the Green Valley High School mechanical retrofit project. This project took place from April 2022 to August 2023. I aided the mechanical designer from the Mechanical, Electrical, Plumbing design firm in designing the new retrofit chillers for Green Valley High School. The total tonnage needed to serve the school was 800 tons. I chose to use two 400 ton Carrier Magnetic Bearing Water Cooled Chillers (19MV) to serve the school. Magnetic Bearing chillers are one of the newer technologies in water cooled chillers. I chose magnetic bearing because they have a longer service life and less maintenance than a centrifugal chiller, due to the elimination of bearings. I also chose the magnetic bearing chiller because the operating efficiency is much better than other centrifugal, screw or scroll chillers. I strive to provide the most efficient equipment when working on Clark County School District projects to help keep costs low and maintain efficiency standards.
2. I collaborated on the design of seven EOS fitness centers throughout Nevada and parts of Arizona with HPA Consulting Engineers in Las Vegas. The EOS fitness center designs took place between November 2022 to August 2023. I designed and selected similar Package Rooftop Units, both cooling and heat pump, for each EOS fitness center. The required cooling loads, calculated per zone being serviced, ranged from 4 tons of cooling and heating to 20 tons of cooling and heating needed. I performed psychrometric calculations to confirm the design loads needed, based on the ambient dry and wet bulb temperatures and desired internal temperatures.
3. I collaborated with a mechanical, electrical and plumbing design firm in Las Vegas on the design expansion and retrofit of the heating and cooling system at First Good Shepherd Church and school. The project took place from December 2022 to August 2023. I provided equipment selections for variable refrigerant flow systems, multizone split systems, a custom new direct expansion cooling and heating coil and four commercial condensing units to pair with the air handling unit. I obtained Basis of Design on the project. I designed the proposed coil as a custom coil, due to the project being a retrofit and needing direct expansion (refrigerant). I provided four different design options and collaborated with the mechanical design engineer to determine which coil and condensing unit combination would best fit the needs to the project and provide the correct cooling load. I provided a four circuit coil with four 7.5 ton condensing units (Heat Pump and Cooling Only), a three circuit coil with three 10 ton condensing units (Cooling Only), a three circuit coil with three 10 ton condensing unit (Heat Pump) and a six circuit split coil with three 10 ton condensing units (Cooling Only). I finalized the design with four 7.5 ton condensing units and the 4 circuit coil. I chose this design for purposes of redundancy and reliability. I designed the unit configuration and piping layout for the variable refrigerant

cooling equipment for the school based on the specified location of the condensing units, desired class room cooling/heating loads and the running distances between each internal unit. I selected the variable refrigerant flow system for the classrooms to allow for simultaneous cooling and heating within the classrooms. The design engineer relied on my technical knowledge of the above equipment to help him best complete the mechanical equipment design for the project.

4. I collaborated with a different mechanical, electrical, and plumbing design engineer in Las Vegas to design the chillers and package rooftop units for the Clark County School District Harold Brinley Middle School. I selected different chiller options (heat recovery, screw compressor and centrifugal compressor) for the mechanical designer to best fit the budgetary, cooling and efficiency needs of the school. I designed the package rooftop units to operate at 125 degrees Fahrenheit ambient temperature to comply with the Clark County School District updated design request. Typical designs are selected at 115 degrees Fahrenheit, but the school district requested a higher ambient operating condition to account for a safety factor in unit loading during the summer months.

5. More projects available upon request.

JUSTINA JOHNSON (18-699-00)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Southwest Gas
Nevada (United States)
Engineer II
August 2023—April 2024

Verified by
Joel Martell
joel.martell@swgas.com

Experience Summary
Full-Time
Engineering: 8 months
Post EAC degree: 8 months
**Experience under licensed engineer:
8 months**

TASKS

I am an Engineer II with Southwest Gas. I prepare design drawings for new polyethylene plastic distribution and service gas pipelines and facilities for new Multi-Family, new Subdivision and new Commercial developments within Las Vegas, Nevada, under the supervision of Craig Sisco who is a registered Mechanical PE. I verify and review existing landbases, verify and review soil conditions of the land being constructed and verify existing Right-of-Way conflicts. Coordinating with the Right-of-Way team is critical in ensuring my new gas design is located within the Southwest Gas legal rights. I review the existing civil engineering plans provided by the developer and assess the validity of the impending structure location and review for any potential physical conflicts. I assess the location of other new proposed and existing utilities to ensure my new gas pipe design does not conflict with any other structures or utilities. I coordinate with multiple utility companies and government entities to coordinate utility design and resolve any physical or future potential utility conflicts. I design the location and path of the new distribution and service gas lines. I determine the pipe size, length and path by performing load/flow calculations on the new proposed gas lines. I create the cost estimates for the projects, which include proper materials and labor expenses. I provide technical expertise on polyethylene distribution and service gas designs for the construction teams. I provide conflict resolution and technical aptitude when conflicts or emergencies happen at the project location with my field construction teams. I perform load calculations on Meter Set Assemblies. I designed gas Meter Set Assemblies for developments that required large metering devices, typically 1000 cubic feet per head of gas and above. I assisted in annual gas valve data inspections with a means to maintain safe and operable gas valves.

REPRESENTATIVE PROJECTS

1. My first project with Southwest Gas was called Ascaya Canyon. The design of Ascaya Canyon took place from August 2023 to March 2024. Ascaya Canyon is a new residential Subdivision development in the City of Henderson in Southern Nevada. The location of the subdivision had previously been designed for a different subdivision layout. I abandoned (removed) three of the existing 2 inch gas distribution lines that were set to service houses and designed three new 2 inch gas distribution lines to meet the new subdivision layout. The three new 2 inch distribution gas lines tie into and receive gas from the existing 4 inch polyethylene distribution gas line on Ascaya Blvd. I reviewed the existing civil drawings provided by the developer to determine the proposed locations of the new water, sewer and electrical utility locations. I coordinated with the other utilities to ensure my new gas line design would not conflict. The gas lines require a minimum separation of 3 feet from water lines and 6 feet from sewer lines. I abandoned (removed) existing polyethylene services lines from the previous design. I abandoned (removed) old service lines and designed new ones to better supply gas to the location of the new homes. I also confirmed that the new subdivision was being built in hard soil. I designed for special equipment made to dig up hard soil to be used for proper excavation and easier installation of the new gas lines. I created the material and labor cost estimate for the Ascaya Canyon design. I performed flow calculations to ensure the gas load needs would be met with the new pipeline design.
2. I designed the new 2 inch polyethylene distribution and service gas line for the Hardinger Residence in the City of Las Vegas. The project design took place between August 2023 and February 2024. The Hardinger Residence is a free standing house located on a large plot of land with no gas service. I designed the tie in point, location and path of the new polyethylene distribution and service gas lines. There were three potential tie in points and four potential routes for the new gas line. All of the routes crossed through private property and required special permission to construct. I coordinated with the Right-of-Way department to determine the best legal route for the new gas line, that would result in the least impact to surrounding owners. The new gas line ties in to an existing 4 inch polyethylene distribution gas line on Elkhorn Rd, travels down Rio Vista St and then turns through a private plot of land on Rio Vista and Witting and then drops into the property.
3. I designed the new Meter Set Assembly for Intermountain Health SW in Clark County in Southern Nevada. The project design took place from October 2023 to February 2024. Intermountain Health SW is classified as a commercial project and is health facility in Southern Nevada. The facility requires a total connected gas load of 17,400 cubic feet per head at 5 PSI. Commercial buildings that require a pressure of 5 PSI are automatically classified as Large Meter Designs. I designed the Meter Set Assembly to be a 16M Meter Set Assembly with a 2 inch riser servicing the customer. I designed and verified the components needed to

build the Meter Set Assembly and performed load calculations to ensure the the 16M meter would meet the total connected load and pressure.

4. I designed the new distribution and service gas line and gas tie in for Stations Tavern Silverado Ranch. The project is located in the middle of Las Vegas and took place from November 2023 until March of 2024. My design tied into the existing 4 inch main at the intersection of Silverado Ranch and Arville and transition to 2 inch main to service the new tavern. I redesigned the project for a second time after a conflict arose with another gas tie in being designed. I collaborated with the engineer working on the project conflicting with mine to come to a design tie in that worked for our project needs.

5. More projects available upon request.

KALEIPUAKEA MEYER (18-911-95)

All work experience reviewed by two licensed professionals

DISCIPLINE: MECHANICAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
04/02/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
4 years, 7 months

Total Engineering
Experience
4 years, 7 months

Experience under licensed
engineer
4 years, 7 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Mechanical Engineering (EAC)
University of Nevada, Reno
June 2014–May 2018

Masters in Business Administration
University of Nevada, Reno
June 2018–December 2019



EXAMS



Fundamentals of Engineering (FE)
Nevada
May 2018

Principles and Practice of Engineering (PE)
Mechanical
Nevada
November 2023

LICENSES



Additional Licenses
None

KALEIPUAKEA MEYER (18-911-95)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

ADM Associates
Nevada (United States)
Engineer II
July 2019—February 2024

Verified by
taghi alereza
Taghi@admenergy.com

Experience Summary
Full-Time
Engineering: 4 years, 7 months
Post EAC degree: 4 years, 7 months
**Experience under licensed engineer:
4 years, 7 months**

TASKS

I most recently have served as the impact evaluation lead for a commercial & industrial energy efficiency program. I am responsible for the M&V process (Sample design, M&V plan writing, and field work), Site-level analysis, and program-level analysis and report writing. Development of M&V plans includes specifying appropriate methodologies used to determine savings based on IPMVP protocols such as using a temperature bin analysis to determine energy savings when installing a more-efficient chiller system, Installing monitoring equipment on newly installed HVAC equipment to create a load-profile, modeling building's HVAC operation using applications such as eQuest, or calculating pre and post-installation consumption based on listed equipment specifications and baseline code efficiencies, or using pre and post-installation billing data to perform a regression adjusted for TMY3 weather data. Once I have decided upon the appropriate savings methodology, I write the M&V plan so that field technician performing site visit can gather pertinent information that will be used during the site-level analysis to determine project savings. Site-level analysis includes reviewing projects documentation such as drawings and equipment submittals, confirming that the project meets applicable building code specifications (i.e. ASHRAE 90.1, IECC, etc.), using information gathered during site visit and from project documentation to determine project savings, and identifying reasons for any discrepancies observed between claimed savings and verified savings. For reports, I write technical reports detailing the methodologies used to determine savings along with any discrepancies with equipment operations observed during the EM&V process affecting verified savings; For program-level reports, I compile findings for all site-level analyses of a program, making recommendations for ways to improve results for future iterations of the program.

REPRESENTATIVE PROJECTS

Working at ADM my engineering work is primarily calculations, I have worked on hundreds of projects spanning multiple different programs throughout my career. I began my work at ADM primarily working on deemed analyses. That is, I would be performing savings calculations for energy efficiency project utilizing a deemed savings methodology, typically from a state or region specific technical resource manual (TRM). This includes measure such as boilers, chillers, and air conditioner/heat Pumps among others. More recently I primarily work on custom projects utilizing billing or production data to calculate project savings as described in the Tasks and Duties.

First Energy C&I Energy Efficiency – Engineer 2019-2020

I served as an engineer supporting program evaluation. I wrote M&V plans for prescriptive projects and performed prescriptive calculations and analysis for these projects.

PSO Multifamily & Midstream Energy Efficiency Programs – Engineer 2019 – 2021

I served as the lead impact engineer, calculating savings using TRM methodologies. Most of these projects were basic utilizing the equipment specifications and prescribed equations to determine savings. At the end of each year, I write program findings in the report, detailing any issues with tracking data or any reasons for discrepancy.

JCP&L C&I Energy Efficiency Program – Engineer 2022-2023

I served as an engineer supporting program evaluation, writing M&V plans performing engineering analysis for both custom and prescriptive projects, with an emphasis on custom projects with more in-depth calculations. An example of the type of custom projects I performed calculations for are a facility that installed energy efficient heat pumps. I used monitoring data covering a two month period used to calculate the cooling and heating load of the facility which was then extrapolated to a year using TMY3 weather data. Code baseline efficiencies and the installed equipment specifications were then used to determine annual energy savings. Additionally reviewed and updated customer equipment efficiency standards to make sure that equipment was meeting code requirement based on federal efficiency requirements beginning 1/1/2023.

Avangrid C&I Energy Efficiency – Lead Impact Engineer 2022-2024

Planned program sample, choosing projects to evaluate from program population with 10% precision using a 90/10 confidence interval. Wrote M&V plans for sampled projects. Performed field work, visiting project facilities to gather information on installed equipment and its operation, installing monitoring equipment such as current loggers on HVAC equipment. Primarily performed

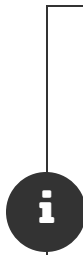
analysis for custom projects. An example is a project where new chillers were installed along with a new chiller staging control strategy was implemented. A bin analysis was utilized for this project calculating the chiller pump power draw at each bin interval, with bin hours being determined using TMY3 weather data. Another example is a project I wrote an M&V plan for, a ski resort where more efficient ski guns were installed to produce snow during the ski season. My plan was to use water consumption or air compressor production data along with the baseline and installed equipment specifications to calculate snow made during season, determining energy and water savings with the new equipment. Production data was not provided by the customer and instead savings were verified using a snowmaking goal of 5 feet of snow depth per square foot resort area and weather data from the past ten ski seasons to estimate hours per season where snowmaking would be necessary.

NAM NGUY (17-848-58)

All work experience reviewed by two licensed professionals

DISCIPLINE: MECHANICAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
03/28/2024

Citizenship
Vietnam

SUMMARY



Engineering Experience
after EAC degree
4 years, 2 months

Total Engineering
Experience
4 years, 2 months

Experience under licensed
engineer
4 years, 2 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Mechanical Engineering (EAC)
University of Nevada, Las Vegas
January 2014–May 2017

Masters in Management Information System
University of Nevada, Las Vegas
August 2020–May 2022



EXAMS



Fundamentals of Engineering (FE)
Nevada
April 2017

Principles and Practice of Engineering (PE)
Mechanical
Nevada
February 2024

LICENSES



Additional Licenses
None

NAM NGUY (17-848-58)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Mariano Engineering
Nevada (United States)
Project Design Engineer
June 2017—June 2020

Verified by
RONALD G. MARIANO
marrizap@marianoeng.com

Experience Summary
Full-Time
Engineering: 3 years
Post EAC degree: 3 years
Experience under licensed engineer:
3 years



TASKS

During my tenure at Mariano Engineering, I served as an HVAC Mechanical Designer, Plumbing Designer, and Project Manager. My responsibilities encompassed the comprehensive production of HVAC and plumbing plans across a diverse range of building projects, including custom homes, townhouses, low-rise apartments, tenant improvements, and commercial buildings. In the realm of mechanical and plumbing design, my duties included file setup, conducting essential load calculations, drafting designs using AutoCAD, providing equipment schedules and details, and meticulously reviewing and finalizing plans for distribution in PDF format. Additionally, I ensured the accuracy and completeness of equipment schedules and details, facilitating the seamless implementation of design specifications during the construction phase. In my capacity as Project Manager, I not only oversaw mechanical and plumbing design processes but also facilitated coordination with other disciplines and clients to ensure alignment and resolution of any plan discrepancies. This involved meticulously gathering project information, liaising with stakeholders, and adhering to project timelines. Upon project assignment, I initiated coordination with our in-house team to evaluate their current workload and allocate resources efficiently. Subsequently, I facilitated meetings between our team and clients to delve into the specifics of mechanical, plumbing, and electrical designs, and project timelines.



REPRESENTATIVE PROJECTS

The Dr. Bui Dental Office stands as a Tenant Improvement (TI) project situated at 5980 S. Jones Blvd. in Las Vegas, Nevada. This project involved the conversion of an existing 4,981 square foot shell building into a fully functional dental office. The newly configured space contains multiple treatment rooms, a sterile room, offices, a reception area, a waiting area, restrooms, and a dedicated mechanical room. The project's design phase commenced in mid-2019. As a key contributor, my role as a mechanical designer was integral to ensuring the seamless integration of mechanical systems within the facility. This encompassed engaging in extensive consultations with the client to gather pertinent information, conducting meticulous load calculations, and utilizing AutoCAD to draft and finalize the mechanical plan.

Syres Reno Apartment, situated at the intersection of South Virginia St. and Longley Lane in Reno, Nevada. This new construction encompasses multiple three-story buildings, each housing a variety of one to three-bedroom units. The design phase, spanning from late 2019 to early 2020. My involvement in Syres Reno Apartment centered on mechanical design. As part of this role, I was primarily responsible for crafting comprehensive mechanical plans tailored to the project's specifications. Additionally, I actively participated in bi-weekly meetings, where I collaborated with professionals from various disciplines to ensure seamless coordination and integration of mechanical systems within the larger architectural framework.

NAM NGUY (17-848-58)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Mariano Engineering
Nevada (United States)
Project Design Engineer
June 2022—August 2023

Verified by
RONALD G. MARIANO
marrizap@marianoeng.com

Experience Summary
Full-Time
Engineering: 1 year, 2 months
Post EAC degree: 1 year, 2 months
**Experience under licensed engineer:
1 year, 2 months**



TASKS

After pursuing my master's degree at UNLV, I rejoined Mariano Engineering in June 2022 with the title of Project Design Engineer. Resuming my role, I continued to serve as an HVAC Mechanical Designer, Plumbing Designer, and Project Manager. My responsibilities encompassed the comprehensive production of HVAC and plumbing plans for a diverse portfolio of building projects, including custom homes, townhouses, low-rise apartments, tenant improvements, and commercial buildings. In the realm of mechanical and plumbing design, my duties involved file setup, conducting load calculations, drafting designs using AutoCAD, providing equipment schedules and details, and meticulously reviewing and finalizing plans for distribution in PDF format. As a Project Manager, I facilitated coordination between disciplines and clients. This entailed gathering project information, liaising with stakeholders, and ensuring adherence to project timelines. After receiving a new project, I organized meetings with our team to ensure everyone's workload was manageable. Then, I arranged discussions between our team and clients to go over the project details, including designs, timelines, and who to contact for each aspect.



REPRESENTATIVE PROJECTS

Calida Cadence Parcel 23, situated in Las Vegas at Parcel: 17906311003, is a new construction project containing over 200 detached units ranging from one to four bedrooms, a clubhouse house, and a pool house. The design phase was initiated in mid-2022 and completed in February 2023. My involvement in Calida Cadence Parcel 23 centered on mechanical design. I conducted heat loss and gain calculations as per Manual J, and I designed the ductwork per Manual D. I selected the appropriate equipment, such as: air conditioner, heat pump, supply and return grilles, and exhaust fan. Then, I drafted the entire mechanical plan using AutoCAD. I coordinate structure engineer and architect to create space for mechanical equipment. I am also the project manager for this project, I collaborate with other disciplines to ensure seamless coordination and integration of mechanical and plumbing systems within the project framework.

NAM NGUY (17-848-58)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION



TIME GAPS


Start Date	End Date	Explanation
June 2010	December 2013	I was studying at Seattle Central College during that time period
September 2023	March 2024	⊘ Not Set

WYATT SHIELDS (19-871-52)


All work experience reviewed by two licensed professionals





DISCIPLINE: MECHANICAL

GENERAL

 Applying To **Nevada**
Application Type **Initial - PE**
Application Date **03/05/2024**
Citizenship **United States**

SUMMARY

 Engineering Experience after EAC degree **4 years, 10 months**
Total Engineering Experience **4 years, 10 months**
Experience under licensed engineer **2 years, 11 months**
Disciplinary Action **None reported**


EDUCATION

 Bachelors in Mechanical Engineering (EAC)
University of Nevada, Reno
August 2014–May 2019

EXAMS

 Fundamentals of Engineering (FE)
Nevada
February 2019
Principles and Practice of Engineering (PE)
Mechanical
Nevada
September 2023

LICENSES

 Additional Licenses **None**

WYATT SHIELDS (19-871-52)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Marelich Mechanical
California (United States)
Project Engineer
May 2019—April 2021

Verified by
Elizabeth Fregoso
L.fregoso@marelich.com

Experience Summary
Full-Time
Engineering: 1 year, 11 months
Post EAC degree: 1 year, 11 months
Experience under licensed engineer:
None



TASKS

I was a project engineer assisting on the project delivery of jobs I was assigned to.

This includes generating RFI's, contract review, compilation of contract documentation required for substantial completion, submittal review and coordination, construction plan reviews, fabrication tracking, labor tracking, and Commissioning coordination



REPRESENTATIVE PROJECTS

May 2019-April 2021

Projects:

May 2019-Feb 2021

Kaiser Permanente Medical facility
Redwood city, California

I wrote change order's and suggested the routing of updated piping plans, I wrote RFI's and I suggested solutions and coordinated the implementation of the solutions, I reviewed the Contract and associated documentation, I coordinated Revit model review with field foreman, I attended and occasionally made suggestions in design meetings and I coordinated the commissioning of the mechanical equipment

Feb 2021-April 2021

Trinity- Apartment complex
Downtown San Francisco

I coordinated the commissioning of mechanical equipment, I scheduled equipment technicians, I coordinated the completion of closeout documentation, and I wrote RFI's

WYATT SHIELDS (19-871-52)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NDI Plumbing and Mechanical
Nevada (United States)
Mechanical Engineer/Project Manager
April 2021 – March 2024

Verified by
Neil DeMent
Neil@ndireno.com

Experience Summary
Full-Time
Engineering: 2 years, 11 months
Post EAC degree: 2 years, 11 months
Experience under licensed engineer:
2 years, 11 months

TASKS

I am a Mechanical engineer, I design mechanical and plumbing systems on commercial, residential and industrial projects.

This includes sanitary sewer system design packages, Domestic water supply design packages, Gas supply design packages, Heating and air conditioning design packages, Exhaust fan design packages, Booster pump design packages, Mechanical and plumbing Code compliance checks, Product selection to accommodate calculations below.

Calculations I do include: fresh air, heat load, cooling loads, refrigeration sizing, Duct sizing, pump sizing, fan sizing, Hot water load, pipe sizing for; sanitary sewer systems, Gas systems and water supply systems.

REPRESENTATIVE PROJECTS

Start date April 2021-Present:

April 2021- January 2022: Bender mechanical design package
Address: 9560 North Virginia street Building E, Reno, Nevada

This project was a tilt up warehouse with office TI spaces. I worked on the design of the HVAC in the office space. I calculated the heating loads, I calculated the cooling loads, I calculated the fresh air calculations required to accommodate ASHRAE 62.2. I designed the ductwork layout to accommodate adequate spacing for the throw of the diffusers I selected. and I calculated the proper duct size for the volume of air output by the rooftop unit.

December 2021- February 2023: Sage point 7/GameStop TI Plumbing Design Package
Address: Leer Boulevard, Stead, Nevada

This project was a tilt up warehouse with a TI office that consisted of multiple bathrooms, breakrooms and conference rooms. I calculated the drainage required to accommodate all the plumbing fixtures with proper pipe sizing and elevation calculations. I calculated the water supply requirement to accommodate the linear footage and flush valves on the project and designed a booster pump system to increase the incoming water pressure to a sufficient amount to supply the building. I calculated and design a gas system to accommodate all the HVAC units added to the office spaces.

February 2022- October 2023: Rancharrah TI's Plumbing Design Packages
Address: Rancharrah Parkway, Reno, Nevada

This project was a ground up shell with tenant improvements. I worked on the plumbing design packages for all the tenant improvement spaces. I calculated drainage requirements for all equipment being added to each space. I verified code compliance for health and plumbing requirements. I calculated hot water demand for each space and designed a water heater to accommodate the spaces. I calculated and sized booster pumps for each individual space's pressure requirements. I calculated grease interceptor sizing and designed associated grease piping. I calculated and designed gas systems for all the water heaters, make up air units and rooftop heating and cooling equipment.

September 2023- Present: Holly Warehouse project Mechanical and Plumbing design packages
Address: 800 Mallory Way, Carson City, Nevada

This project is a tilt up warehouse building. I calculated the heating loads to accommodate freeze protection requirements. I calculated and designed fans to accommodate ventilation requirements per ASHRAE 62.2. I calculated and designed sanitary

sewer systems to meet owners future intents. I calculated and designed water supply systems to meet owners future intents. I calculated and designed gas systems to accommodate all the heating equipment required to meet freeze protection as well as accommodate owners future intents.


Structural

TOMAS BONSEMBIANTE (18-675-19)

All work experience reviewed by two licensed professionals

DISCIPLINE: STRUCTURAL

GENERAL


 Applying To
Nevada

Application Type
Initial - PE

Application Date
03/11/2024

Citizenship
United States



SUMMARY



 Engineering Experience
after EAC degree
3 years, 2 months

Total Engineering
Experience
3 years, 2 months

Experience under licensed
engineer
3 years, 2 months

Disciplinary Action
None reported


 

EDUCATION

 Bachelors in Civil Engineering (EAC)
Virginia Polytechnic Institute and State University
August 2014–May 2018

Masters in Civil Engineering
Polytechnic University of Milan
September 2018–December 2020


EXAMS

 Fundamentals of Engineering (FE)
Guam
August 2018

Principles and Practice of Engineering (PE)
Civil
Alabama
September 2022

NCEES 16HR Structural (SE)
Alabama
October 2023

LICENSES

 Additional Licenses
None

TOMAS BONSEMBIANTE (18-675-19)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

*Amorient Engineering
Guam (Guam)
Civil-Structural Engineer
June 2018—August 2018*

*Verified by
Gregory Edward Cantelo
Gregory.Cantelo@amorient.com*

*Experience Summary
**Full-Time
Engineering: 2 months
Post EAC degree: 2 months
Experience under licensed engineer:
2 months***



TASKS

Civil-Structural Engineer

I was responsible for the stormwater and grading design around a Helipad.



REPRESENTATIVE PROJECTS

06/2018-08/2018

Guam National Guard Helipad Grading

I performed the grading and storm-water analysis using the TR-55 method to calculate storm-water runoff around a newly constructed Helipad.

TOMAS BONSEMBIANTE (18-675-19)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Amorient Engineering
Guam (Guam)
Civil-Structural Engineer
January 2021 – May 2021

Verified by
Gregory Edward Cantelo
Gregory.Cantelo@amorient.com

Experience Summary
Full-Time
Engineering: 4 months
Post EAC degree: 4 months
**Experience under licensed engineer:
4 months**



TASKS

Civil-Structural Engineer

Performed structural engineering tasks related to load-generation, structural analysis of crane-rigging devices, code-study and conceptual design of a pedestrian bridge.



REPRESENTATIVE PROJECTS

Philippines Pedestrian Bridge, Preliminary Conceptual Bridge Design
01/2021-04/2021

I conducted the preliminary design of a 100-foot span pedestrian bridge for an Engineers without borders project in the Philippines according to AASHTO pedestrian bridge specifications.

Crane Spreaderbars and Strongback Design, Structural Design
01/2021-05/2021

I designed and analyzed various steel spreader bars and strongbacks to ASME and AISC specs for use in crane rigging operations.

Fiesta Hotel Cladding Analysis, Structural Analysis
03/2021-04/2021

I determined the suitability of components and cladding for a 20-story hotel on the Guam coastline.

TOMAS BONSEMBIANTE (18-675-19)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

LBYD Federal
Alabama (United States)
Structural Project Engineer
June 2021 – February 2024

Verified by
Nicole Donnee Sommerville
nsommerville@lbyd.com

Experience Summary
Full-Time
Engineering: 2 years, 8 months
Post EAC degree: 2 years, 8 months
Experience under licensed engineer:
2 years, 8 months



TASKS

Structural Design Engineer -

As a structural design engineer I was responsible for the design and analysis of various building project under the direction of a senior engineer. Tasks included load determination; building modelling; FEM analysis and verification; gravity and lateral system design; and building component design. CA tasks included checking miscellaneous assigned submittals.

Structural Project Engineer -

As a structural project engineer I had the same responsibilities as my previous title with the addition of detailing and drawing preparation. Furthermore, as a project engineer, I am involved in the coordination with the rest of the design team and contractor. CA tasks included checking and assigning submittals to be checked following the project schedule.



REPRESENTATIVE PROJECTS

ACURL Building Phase II, Florida,
06/2021-07/2022

I was the structural design engineer for a two-story steel building addition. I calculated the general load determination, performed gravity framing design, foundation design, and checked on wing walls/roof beams for components and cladding wind pressures.

Tyndall 325th Fighter Wing HQ and SAPR Buildings, Florida,
08/2021-07/2022

I was the structural design engineer for a two-story structural steel building with precast cladding and a single-story steel building with masonry cladding. I designed all components for gravity and high wind speeds. I also designed the lateral system using the MWFRS Directional method. I designed both buildings on shallow foundations and sized the foundations using service level loads. I also checked buildings for drift limits imposed by the UFC standards.

College of Eastern Idaho Technology Building, Idaho
11/2021-12/2022

I was the structural design engineer for a two-story structural steel building under moderate seismic loads (SDC C) and high snow loads. I performed a detailed snow drift analysis on an atypical building shape with multiple roof levels. I designed the lateral system using ASCE seismic guidelines and incorporated overstrength factors into the design of chord and collectors. I conducted Vibration analysis to ensure occupant comfort at typical bays, the social stair, and interior footbridges that connected the two sides of the building above the atrium.

Tyndall and Airey Gates Complex, Florida,
06/2022-12/2022

I was the structural design engineer for two large canopies consisting of several long (75'-100') exposed HSS trusses that served as entry gate canopies for the Tyndall Air Force Base. I performed a detailed wind analysis using guidelines from ASCE 7 and ASCE Wind Loads for Petrochemical Facilities considering the accumulation of wind loads resulting from the exposed members. I also performed the HSS truss design and the foundation and base plate design.

Tyndall Marine Recreation Facility, Florida,
07/2022-ONGOING

I was the structural design engineer and project engineer for a two-story structural steel building under gravity loads, high wind speeds, and flood loads. I designed the lateral system and gravity framing for open structure wind loads and enclosed wind loads,

as well as the design and detailing of wall panel system and connections designed to breakaway from building under flood loads to not overload the structure's lateral system. I designed the building and foundation system was to meet ASCE 24 guidelines and the foundation system consisted of a deep foundation system (precast piles) tied together by grade-beams I designed for tension, flexure, and torsion induced by flood loads and scour. The building's lateral system consisted of a combination of steel braced frames and a concrete shear wall core. I designed the shear wall core for the lateral loads transferred by the building as well as flood loads resulting from the design flood event as required by the client. Additional tasks include CA and answering RFI's from design-build team.

Tyndall Chapel and Community Commons Facility, Florida,
10/2022-ONGOING

I was the project engineer for the design of two single story-steel braced framed buildings and one two-story moment framed steel building. I designed the two-story moment framed building and partial detailing of some components. I organized, initial set-up and review of design tasks, structural analysis models, and design calculations for the other two buildings.

DOJ Building, Alabama,
02/2023-ONGOING

I was the project engineer for the design of a four-story steel office building. I configured the design and detailing of gravity and lateral system, progressive collapse design and detailing, preparation of construction drawings, coordination with design team and contractor, and various construction administration tasks. All design tasks were done to UFC and IBC 2021 specifications.

6. Public Comment

7. Adjournment