

Aaron C. Hastings, P.E.

Summary of qualifications:

1993 - 2009 Las Vegas - Nevada

Civil - Geotechnical - Materials Engineer

- Over 15 years of Civil, Geotechnical and Materials Engineering experience in Southern Nevada. Positions of increasing responsibility have included: materials testing technician/inspector, field engineer, staff engineer, project manager, senior engineer and regional manager. Currently a Registered Professional Civil Engineer in Nevada. Project experience includes: federal and state highways, airports, USACE drainage projects, flood control, schools, local public works improvements, commercial and residential developments.

Registrations and Education:

1998 – Registered Professional Civil Engineer State of Nevada
NV# 13185 Exp 6-30-09

1988 - 1993 University of the Pacific Stockton, CA

1. B.S. Civil Engineering (May 1993)

- Civil Engineering emphasis in geotechnical engineering

2. B.S. Construction Management (August 1993)

Professional Experience:

2002 – Present: Arroyo Engineering Consultants, Inc.

President

- Consulting engineer for civil, geotechnical, materials and forensics engineering projects. Emphasis in the use of Micropile Foundation Systems.

1996 – 2002: J.A. Cesare and Associates Las Vegas, NV

Regional Manager – Senior Engineer – Project Manager

- Responsible for managing all of the aspects of the Las Vegas office, including; engineering, materials testing, forensics and administration service areas

1994 – 1996: GeoSoils, Inc Las Vegas, NV

Project Manager – Field Engineer

Responsible for conducting field investigations for geotechnical evaluations. Project manager for the materials testing and inspections department.

Professional Memberships:

American Society of Civil Engineers - Member • American Society of Testing and Materials (ASTM) – Member and Committee Member • American Concrete Institute (Las Vegas) Director 1999 to 2002 • American Concrete Institute (National) Certified Examiner • American Society of Foundation Engineers (NC) • National Ready Mix Concrete Association – Authorized Inspector

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SELECTED PROJECT EXPERIENCE - RECENT

Geotechnical Engineering Design:

- **TRTP – Micropile Foundation Design for 500 KV Transmission Line** – Coordinated the Design Build program for micropile foundations supporting 56 high voltage transmission towers through the Angles National Forest.
- **Project X (Las Vegas Nevada)** – Designed and installed deep soils settlement monitoring system using Multi-Point-Borehole-Extensometers. System allows for the collection of differential settlement below a 60+ story tower. Settlement is collected in 25 to 50 foot zones to 250 feet below the structure.
- **TIMET Metals Corp.** – VDP Cart Rail – Design Build micropile foundations for replacement cart rail – services included initial geotechnical investigation, design of micropiles and review during construction.
- **Palms Hotel** – Pool area and low rise distress – Investigated and designed repair for fill settlement located in pool area and adjacent low rise. Design included use of pressure grouting, micropiles and other deeper foundations.
- **Grand Canyon Skywalk, LLC** - West Rim of the Grand Canyon Visitors Center (Hualapai Indian Nation) – 60 foot glass and steel cantilevered walkway supported on conventional footings and micropiles. Services included initial geotechnical investigation, support during foundation design and construction.

Materials Engineering – Design – Inspection Services:

- **Perini Building Company** – Design of Crane Lift Pads for McCarran Airport Terminal 3
- **Nevada Ready Mix** – Design and review of ready mix concrete mix designs
- **DOW Construction** – Design and Review of shoring systems for utility excavations
- **Redhawk Company** – Provide site inspections and research for various projects in Nevada

Developer Services:

- **Carina Homes/Rhapsody Partners** – Consultant - Various Projects. Evaluate, design and repair of foundations for multiple single family residences
- **John Laing Homes** – Consultant - Various Projects. Evaluate, design and repair of foundations for multiple single family residences
- **D R Horton** - Consultant - Various Projects. Evaluate, design and repair of foundations for multiple single family residences

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SELECTED PROJECT EXPERIENCE – Continued

Civil Forensic Engineering:

- **Villani V. Geotek** – Civil Expert – Defense – Settled
- **Martinez V. Lennar Homes** – Civil Expert – Owner – Repairs Completed – Ongoing
- **Scottsdale Valley V. Homeowners** – Civil Expert – Developer – Settled
- **Green Valley Ranch V. American Nevada** – Civil Expert – Earthwork Subcontractor – Settled
- **Camino Carlos Rey Residences Distress** – Civil Expert – Developer - Deposed - Settled
- **Zicker ADV Bella Vista Partners** – Civil Expert – General Contractor – Expert Report - Settled
- **Basmajian ADV Bella Vista** – Civil Expert – General Contractor - Settled
- **Meadow Valley Contractors** - Western Beltway 7,8 and 9 – Consultant-Arbitration – Appeal pending
- **Morrison Knudsen V. CCSD** – Expert Report – Contractor – Settled
- A complete list of AEC’s Forensics Projects can be obtained by request.

Miscellaneous Geotechnical Engineering Projects:

- **Commercial and Light Industrial** - new construction geotechnical investigations – various projects throughout Southern Nevada, project size ranges from 1 acre to 20 acres.
- **Residential** - new construction geotechnical investigations – various projects throughout Southern Nevada, project size ranges from single family to 40 - acre subdivisions.
- **Contractor Support** – various clients and projects – provide on - call services for contractor support, including shoring, temporary excavations, repairs to foundations, etc.

TABLE 1 – CHAPTER 40 PROJECT LIST

Case Name	Client	Representing	Expert Report	Deposition	Status
Albright Stoddard Warnick and Albright					
▪ Chateau Versailles Geotechnical Expert	Albright Stoddard	American Asphalt	10/12/07	N/A	Active
▪ Grand Teton Geotechnical Expert	Albright Stoddard	American Asphalt	N/A	N/A	Active
▪ Metropolis Geotechnical Expert	Albright Stoddard	American Asphalt	5/25/07	N/A	Active
Bennion Clayson Marias					
▪ Tapatio II Civil Expert	Bennion Clayson Marias	Stuart and Sundale Concrete			Active
▪ Timberlake	Bennion Clayson Marias	American Asphalt and Grading	8/29/08	N/A	Active

Bower Hold and Smith

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|--|---|----------------|-----|-----|---------------|
| ▪ Stone Mountain Individual Lots –
Geotechnical Expert | Bower Holt and
Smith/ Pengilly
Robbins and Slater | Neutral Expert | N/A | N/A | Closed |
|--|---|----------------|-----|-----|---------------|

Brady Vorwerck Ryder and Caspino

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|---|-------------------------------------|----------------|-----------|-----|---------------|
| ▪ Toscana- Anderson Jenamar
Geotechnical Expert | Brady, Vorwerck,
Ryder & Caspino | Neutral Expert | 7-13-2007 | N/A | Closed |
|---|-------------------------------------|----------------|-----------|-----|---------------|

Luh and Associates

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|--|-------------------------------|-------------|---------|-----|--------|
| ▪ Highland Hills
Geotechnical Expert | Charlie Luh and
Associates | Alford Inc. | 9/16/08 | N/A | Active |
|--|-------------------------------|-------------|---------|-----|--------|

Donovan Hatem

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|--|---------------|--------------------------------|-----------|-----|---------------|
| • Red Rock Casino
Geotechnical
Expert | Donovan Hatem | John A. Martin &
Associates | 2-15-2007 | N/A | Closed |
|--|---------------|--------------------------------|-----------|-----|---------------|

Helm and Associates						
▪ BHB Berman – Geotechnical/Civil Expert –	Helm and Associates	BHB Inc.	N/A	N/A		Closed
• Charter School Geotechnical Expert	Helm and Associates	Ferraro Tile	N/A	N/A		Active
▪ Eagle Creek – Geotechnical/Civil Expert –	Helm and Associates	Pipes Paving	N/A	N/A		Active
▪ Las Brisas Civil Expert	Helm and Associates	Pipes Paving	N/A	N/A		Closed
▪ Quail Ridge – Geotechnical/Civil Expert –	Helm and Associates	Chieftain Construction	5-16-07	No		Closed
Jones Vargas						
▪ Traverse Point Geotechnical Expert	Jones Vargas, Albright Stoddard,	Landwell	8-31-2007	N/A		Closed

Lincoln Gustafson Cercos

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|--|-----------------------------|--------------------|---|--|---------------|
| ▪ Cagle
Geotechnical
Expert | Lincoln Gustafson
Cercos | Landscape Services | - | | Active |
|--|-----------------------------|--------------------|---|--|---------------|

Marquis and Aurbach

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|--|---------------------|------------|-----------|-----|--------|
| ▪ Courts at Aliente –
Geotechnical Expert
– Developer | Marquis and Aurbach | D R Horton | 4-12-2007 | N/A | Active |
| ▪ Dorrell Square –
Geotechnical Expert
– Developer | Marquis and Aurbach | D R Horton | N/A | N/A | Active |

**Morris Polich & Purdy LLP
Olson, Cannon, Gormley, and Desruisseaux**

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|---|--|----------------------|---------|-----|---------------|
| ▪ Wexford
Geotechnical Expert | Morris Polich & Purdy
LLP
Olson, Cannon,
Gormley, and
Desruisseaux | White Eagle Concrete | 7/30/07 | N/A | Closed |
|---|--|----------------------|---------|-----|---------------|

Parker Nelson

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|--|---------------|---------------|----------------------|-----|--------|
| ▪ Bright v. Atlas
Geotechnical
Expert | Parker Nelson | H M Byars | 8-7-2007
9-5-2007 | N/A | Active |
| ▪ Gaylor v. CR Homes | Parker Nelson | Russell Meads | | | |
| ▪ Cobblestone Ridge | Parker Nelson | MS Concrete | | | |

Pengilly Robbins and Slater

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|---|-----------------------------|-----------------|------------|-----------|---------------|
| ▪ Monument at Lone Mountain – Civil Expert | Pengilly Robbins and Slater | Signature Homes | 1-10-2007 | 6-27-2007 | Closed |
| ▪ Farias
Geotechnical Expert | Pengilly Robbins and Slater | Stanpark | 10-28-2008 | - | Closed |
| ▪ Silver Pines – Civil Expert | Pengilly Robbins and Slater | Signature Homes | 1-10-07 | 6-14-2007 | Closed |

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- **Stone Mountain Common Areas** – Civil Expert Pengilly Robbins and Slater Signature Homes N/A N/A Active
 - **Pippin Residence** Civil Expert Pengilly Robbins and Slater CR# 2 Family Limited Partnership 1-18-08 N/A **Closed**

Snell and Wilmer

- **Alexander Dawson II** – Geotechnical Expert Snell and Wilmer Jaynes Corporation N/A N/A **Closed**

Stephenson Dickenson

- **Acacias** – Geotechnical/Civil Expert – Stephenson Dickenson Frank Iovino and Sons Masonry 11-10-2006 N/A **Closed**

Stutz Artiano Shinoff and Holt

- **Chateau Nouveau** Geotechnical Expert Stutz Artiano Shinoff and Holt C & C Concrete N/A N/A **Closed**

Sylvester and Polednak

- **Fielder**
Geotechnical Expert Sylvester and Polednak Mesquite Vistas 7-14-2008 N/A Active

**Thorndal, Armstrong, Delk,
Balkenbush & Eisinger**

- **Tiburon II**
Civil Expert Thorndal, Armstrong, Delk, Balkenbush & Eisinger K H Landscape 10/8/07 N/A **Closed**

Wood Smith Henning and Berman

- **Cassero Ranch**
Geotechnical Expert Wood Smith Henning and Berman D R Horton Homes N/A N/A Active
- **Whisper Creek –**
Geotechnical Expert Wood Smith Henning and Berman John Laing Homes N/A N/A Active

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|---|----------------------------------|----------|-----|-----|--------|
| <ul style="list-style-type: none"> ▪ Turtle Creek
Civil Geotechnical
Expert | Wood Smith Henning
and Berman | KB Homes | N/A | N/A | Active |
|---|----------------------------------|----------|-----|-----|--------|

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|--|----------------------------------|------------------|-----|-----|--------|
| <ul style="list-style-type: none"> ▪ Barbarino
Civil Geotechnical
Expert | Wood Smith Henning
and Berman | D R Horton Homes | N/A | N/A | Active |
|--|----------------------------------|------------------|-----|-----|--------|

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|---|------------------------------|----------|---------|--|--------|
| Woodbury Morris and Brown | | | | | |
| <ul style="list-style-type: none"> ▪ Martinez Residence | Woodbury Morris and
Brown | Martinez | 1-29-09 | | Active |

**ARROYO ENGINEERING CONSULTANTS, INC.
PROFESSIONAL ENGINEERING SERVICES -
FORENSICS
RATE SHEET – 2009**

General

- Senior Engineer/Engineering Design \$200.00
 - Depositions/Trial \$250.00
 - Project Engineer/Engineering Review* \$160.00
 - Field Engineer/Engineering Inspector \$140.00
 - Field Technician/Assist. Inspector \$90.00
 - Laboratory Technician \$80.00
 - Sample Pick Up/Delivery \$40.00
1. Travel more than 30 miles round trip will be billed at \$0.50 per mile. Travel time in excess of 1 hour (Round Trip) will be billed at $\frac{1}{2}$ of the corresponding rate above.
 2. Rates for laboratory testing can be supplied upon request.
 3. Outside cost will be billed at cost +10 percent when paid within 30 days from invoice, and cost Plus 15 percent when paid later than 30 days.

* Standard Expert rate for Aaron C. Hastings, P.E.

ADDITIONAL SERVICES

Proposals for additional services will be provided upon request. Verbally approved additional services will be provided at the rates shown above.