How to Gain Valuable Career Experience as an EI

NC Chapter of the American Water Works Association

Presenter – Kyle Pohle, EI
Outline

• Before You Graduate…
• Challenges as an EI
• How-To Points
• Communication and Teamwork
• Questions?
DISCLAIMER

• These tips come from my personal experiences

• This list is not all-encompassing!

• Talk to other EIs and experienced people in your company to gain more perspective
Before You Graduate...

• Try to gain relevant experience
  • Internships and co-ops
  • Job shadowing
  • Offer to volunteer
  • Skills and certifications

• My experience...
  • Internships in public and private sectors

WR at the NC State Engineering Career Fair
Before You Graduate...

• **Start making connections now**
  - Networking events
  - Conferences
  - Clubs/organizations

• **Take the FE!**

American Water Works Association

Engineers Without Borders

Tau Beta Pi
So You Finally Graduated

• You’re pretty much an expert, right?

Wrong!
Challenges as an EI

• Lack of experience
  • Can lead to frustration, feeling under-utilized

• Lack of confidence
  • Can lead to lack of initiative, not taking full advantage of opportunities
How to Capitalize on Time as an EI

1. Ask thoughtful questions
2. Build meaningful relationships
3. Get your hands dirty
4. Work on different projects in different roles
5. Take on responsibility
6. Learn the “business side”
7. Be passionate
8. Remember you will make mistakes!
1. Ask Thoughtful Questions

“If I had an hour to solve a problem and my life depended on it, I would use the first 55 minutes determining the proper questions to ask.”

Albert Einstein

• Utilize experience of project engineers and managers

• The only dumb question is the one not asked!

• It’s o.k. to disagree with teammates
2. Build Meaningful Relationships

Talk to people!

Example: AWWA career and volunteer events

Utilize LinkedIn

Clemson AWWA Career Panel
3. Get Your Hands Dirty

• Get out of the office and do some field work

• These experiences will be helpful in design in the future

Elkin Water Tank
3. Get Your Hands Dirty

Sample Collection

Construction Oversight

Utility Location
Lift Station Analysis

• Determine how efficiently pump stations are functioning

• Output data includes:
  • Electrical efficiency
  • Pump run time and data
  • Abnormalities
Fire Flow Testing

- Determine if fire flow requirements are met for new construction
- Need this testing for new construction permits
4. Work in Different Roles

- Different roles allow you to see the ‘big picture’

- Some examples of roles in a project include:
  - Permits
  - Design phase
  - Fieldwork
  - Communications with clients
5. Take on Responsibility

- Don’t be afraid to take on responsibility

- Taking initiative will likely give you a more involved role in the project
5. Take on Responsibility

• Examples

Be proactive; offer to help with projects before you are asked

Use your resources to learn as much as possible about the work you are doing
Learn about the Industry

• “Brown Bag” lunches and Webinars
  • Continuing education
  • Examples of topics include pre-cast concrete, pipe basics, pump basics

• Work with experienced professionals
  • Charles Underwood - VFDs
  • VFD = variable frequency drive
6. Learn the “Business Side”

- Is the requested effort of a task equal to the budget?

- Other examples include:
  - How projects are funded
  - Budgets and cost estimates
  - Revenue and expenses
  - How much do water/WW goods and services cost?
7. Be Passionate

Love what you are doing and you will succeed

Go the extra mile

“Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. The only way to do great work is to love what you do. If you haven’t found it yet, keep looking. Don’t settle.”

Steve Jobs
8. Remember You Will Make Mistakes!

- It’s o.k., it happens to everyone

- BUT, take steps to reduce mistakes
  - Have others check your work
  - Ask questions to people who have done the work before
  - Communicate clearly
Some Mistakes I’ve Made…

- **Reporting data to DEQ**
  - Mistakes: not asking questions; not getting work checked
  - Result: poor-quality product; unhappy PM

- Collecting drinking water samples
  - Mistake: not asking questions
  - Result: unhappy water customer and wasted time
Conclusions

• It all boils down to:

TEAMWORK  COMMUNICATION

Take advantage of the experienced people around you who want to see you, the company, and the clients succeed
At WithersRavenel...

• I’ve been able to put many of these items into practice
  • Diversity of utilities work
  • Experienced engineers on staff
  • Commitment to clients
  • Teamwork and Communication
Questions?

Thanks for your time!

Kyle Pohle, EI
Utilities
115 MacKenan Drive
Cary, NC 27511
kpohle@withersravenel.com
www.withersravenel.com

t: 919.469.3340
d: 919.238.0431
m: 804.426.9984