

PATHS

IN CIVIL ENGINEERING

AMERICAN SOCIETY OF CIVIL ENGINEERS

Do you ever wonder what path you would follow to become a...

**Chief Executive Officer? Facilities Manager?
Public Agency Director? Professor of Civil
Engineering? Senior Project Manager for a
construction management firm?**

While there are no magic formulas to achieve your career goals, the career paths presented here were developed by civil engineers in these fields and represent their knowledge of a logical career progression.

This brochure illustrates only five of the dozens of paths possible in the broad and expanding field of civil engineering. Your individual interests, skills, and training will dictate the path you should follow. Over time, you may modify your career path based on personal interests, values, goals, experiences, and new opportunities that present themselves.

This document is a tool to help you create a strategy for your own personal career development. Planning for advancing in your career can make the difference between simply holding a job and cultivating a rewarding and fulfilling career.



Civil engineers are uniquely positioned to build on their skills and knowledge and to serve in a wide range of roles for organizations ranging from small to global, both public and private, and to relate to almost every aspect of creating and maintaining our built environment.

Civil engineering careers described here are typical and illustrate the diversity of paths available, but don't cover all of the opportunities that civil engineers are equipped to pursue. More resources to help you choose your path and advance your career are available at <https://www.asce.org/career-paths>.



Public Agencies

Civil engineers who choose a career in public agencies may work in local, regional, state, or federal agencies.

This track is ideal for someone who has a strong desire to:

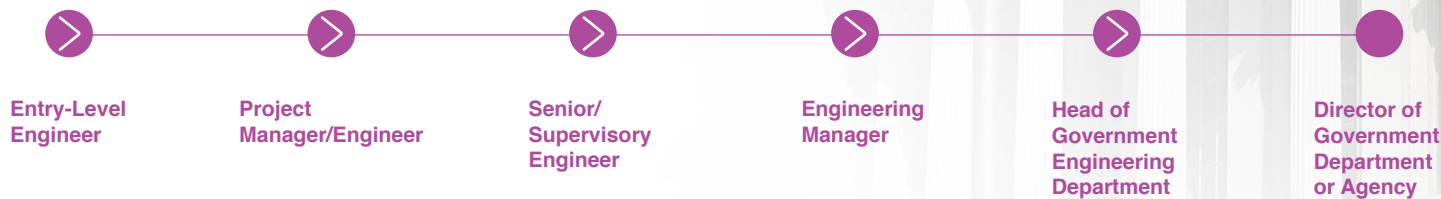
- Help shape their community
- Make a difference in the world around them

The work is challenging and varied, requiring a resourceful problem solver who enjoys a wide range of experiences. While government positions and advancement can be structured, there are often early opportunities to enter leadership roles for engineers with a desire to address important needs.

Engineers in public agencies can expect:

- Job stability
- Flexible benefits
- Employee retirement plans
- Career/training development opportunities

Engineers who enjoy working with the public and want to see their work go from concept to physical completion will find this a rewarding career path.





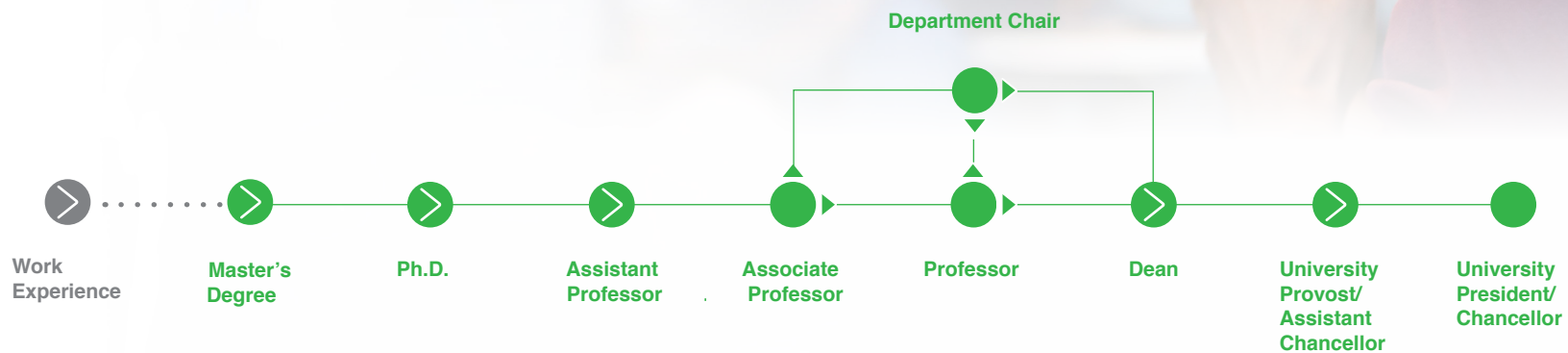
Education

Civil engineers in academia have an opportunity to help shape and make an impact on future generations of engineers.

Civil engineering educators typically enjoy job stability without routine. They often work collaboratively and have a flexible schedule that may include:

- Teaching
- Leading
- Mentoring
- Research
- Publishing

It is common for academics to engage with other faculty, industry representatives, and government officials on different projects. At many academic institutions, publishing research findings and obtaining grant funding for your academic institution are key elements to success. Facilitating student learning and achieving recognition as a top performing educator make this a fulfilling career choice.





Consulting

Civil engineers who choose a consulting career path have opportunities to devise and implement civil engineering solutions for a wide variety of projects and an array of clients.

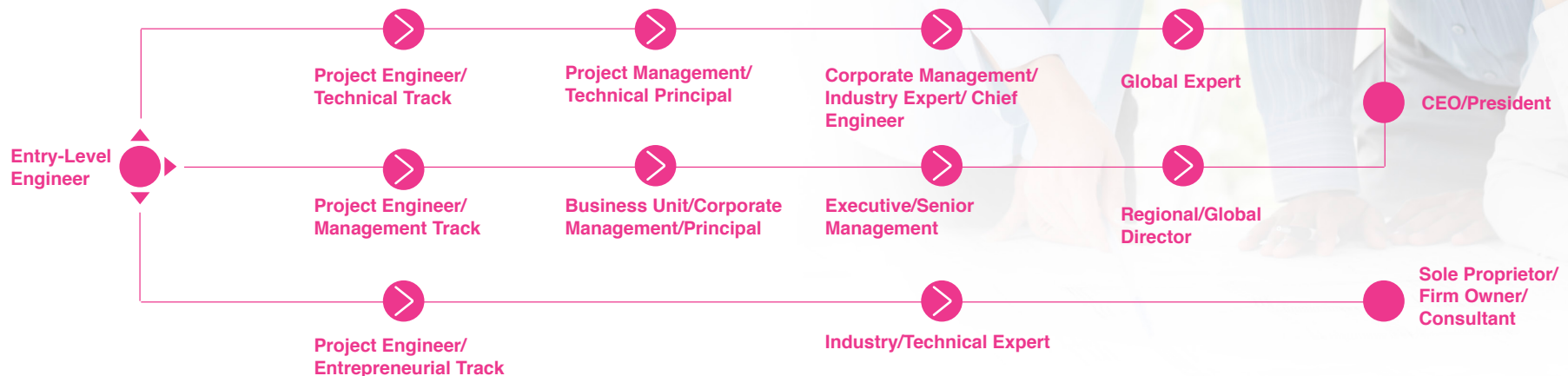
Consulting offers a multitude of career opportunities in firms ranging in size from fewer than 10 people to more than 1,000.

At smaller firms, civil engineers may work on varied projects, design challenges, and management-related activities. At larger firms, they may focus on specific projects, an area of technical expertise, or business management and development.

Consulting spans the gamut of engineering work, from:

- Design
- Project management
- Forensics
- Software development
- Construction services
- Field work

Whether at a small or large firm, civil engineers in consulting have control over their own success with opportunities to advance within companies or become business owners themselves.





Industry

Civil engineers bring technical expertise and innovation to industry for more successful and cost-effective operations, processes, and products.

In industry, civil engineers work in diverse settings including:

- Manufacturing
- Technology
- Pharmaceuticals
- Public facilities and utilities
- Goods and services

Civil engineers in industry manage large plants, oversee the design/construction of facilities, and are instrumental in new ventures requiring environmental site assessments and feasibility studies. They make significant contributions to decrease costs, increase profits, and produce smaller environmental footprints by developing more efficient processes, implementing waste minimization programs, and finding creative solutions to a wide range of issues.

The variety of jobs in industry provides nontraditional career paths, opportunities to build relationships with and learn from industry experts, and unique challenges.





Construction

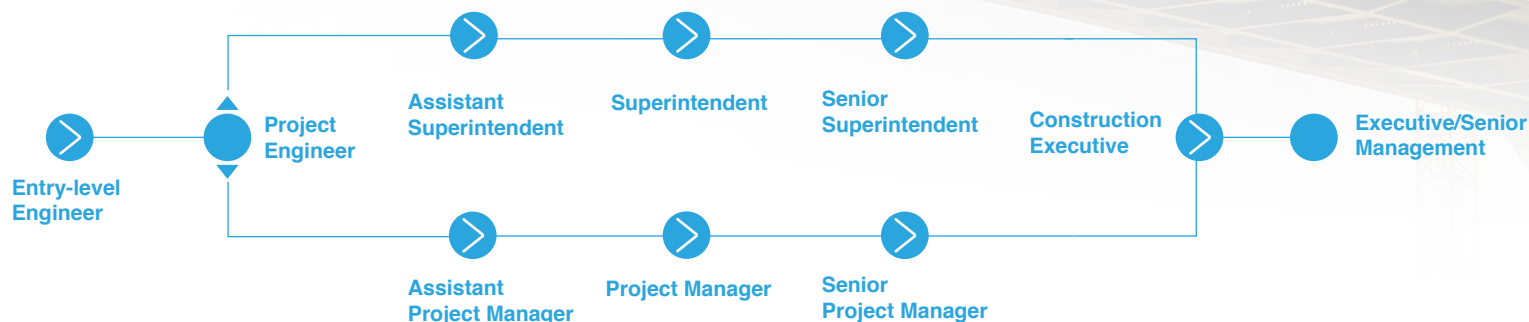
Civil engineers in construction have an opportunity to build a sustainable future—ensuring safety and excellence in the built environment.

In construction, civil engineers may work for a contractor, owner, developer, or program manager to create the built environment, transforming engineering and architectural design drawings from paper to reality. They are involved in projects of every size and complexity and may spend much of their time on project sites. No two days are the same as projects move forward and present a variety of challenges to be resolved while maintaining progress.

Rewards for those who succeed in this often fast-paced environment include:

- Higher salaries
- Team camaraderie
- Tangible results

Civil engineers in the construction sector are instrumental in building and maintaining the world we live in.



Basic requirements



Build your foundation

- Start with high school math, science, and humanities courses.
- Pursue a bachelor's degree in civil engineering. Pass the [Fundamentals of Engineering \(F.E.\) exam](#) as soon as you are eligible.

Advance your career

- Gain work experience under a Professional Engineer (P.E.)
Pass the [Principles and Practice of Engineering exam](#) and seek licensure as a P.E.
- Pursue an advanced degree(s) in civil engineering or related areas including:
 - Civil engineering specialty area(s)
 - Engineering management
 - Public administration
 - Business administration
- Earn advanced credentials as appropriate.
- Continue your professional development.

Attain the body of knowledge

The Civil Engineering Body of Knowledge for the 21st Century defines the knowledge, skills, and attitudes necessary to exercise responsible charge in the practice of civil engineering and outlines typical pathways to achieve them. For more information, visit go.asce.org/BOK3.

Navigate transitions

Every career has uncharted twists and turns and you can transition from one career path to another.

Here are some suggestions on how to find a path that works well for you:

- Develop a long-term vision.
- Have a short-term plan.
- Review your career plan annually.
- Enhance your communication skills.
- Listen to and learn from others' experiences.
- Find a mentor.
- Improve your skills through continuing education.
- Don't be afraid of change.
- Be willing to take risks.
- Challenge yourself.
- Have fun.

Embrace the journey

Each of the career paths has inherently different benefits. Seek out the career path that best fits your goals and will be most satisfying to you. Enjoy the journey.

Learn more about these career paths by viewing the on-demand Career Discovery Series sessions at collaborate.asce.org/careerdiscovery