

# DENNIS GROUP

## Career Pathway Building Mechanical Designer



# Your Journey Starts Here

Below are general guidelines on skills that are expected for different mechanical design positions in the Dennis Group. This list does not fully encompass all skills but is intended to reflect certain competencies that would be expected at various development levels. After you reach a Designer III level, different pathways can be followed according to the role you want to play in this company as a senior employee.

# Building Mechanical Designer Competencies

Mechanical Design Competency	Drafter	Designer I	Designer II	Designer III
Basic layout & drawing/sheet setup, symbols, layers & colors (specific to trade)	●	●	●	●
Understand DG drawing and numbering standards	●	●	●	●
Pull details required for project execution		●	●	●
Create plans and PIDs from Engineer mark-ups			●	●
Create plans and PIDs based on equipment selections and system requirements (little direction from Engineer)			●	●
Discipline drawing coordination review			●	●
Review and update mechanical design standards/details			●	●
Peer design reviews – for design quality, not necessarily engineering content			●	●
Equipment knowledge: RTUs, AHUs, Fans, Water Heaters, Sinks, pumps, compressors, etc		●	●	●

Ability to review and understand vendor drawings and requirements.			●	●
Basic sizing of piping, ductwork and system accessories		●	●	●
Understanding of DG Sanitary design considerations			●	●
Field support: Construction & start-up			●	●

# Traits of Building Mechanical Team

Below are general guidelines on potential career paths for building mechanical (HVAC, plumbing/piping) designer with the Dennis Group. The goal is for our mechanical designers is to be well rounded and grow to have a full understanding of DG work both mechanically and of all other disciplines throughout your growth as a designer with DG. The pathways are potential growth patterns for team members from entry level drafting to experience mechanical designers.

At any point in your career with DG you desire to change paths and wish to explore engineering (mechanical or other) or PM role DG offers tuition reimbursement related to the pursuit of DG related degrees. Such goals are encouraged and can be reviewed with office or department leads.

# Mechanical Drafter

Typical Minimum Experience: 0-2 Years

- Expected to know the basic operation of Revit and AutoCAD
  - Possesses good drafting capability without being a subject matter expert
- Works within the mechanical group alongside team members
- Sets up project drawing sets, details, schedules, etc.
- Day-day tasks assigned by Engineers or Sr. Mechanical Designers in the first year
  - Has the ability to multi-task to assist on multiple projects
  - Works autonomously on specific tasks
- Expected to gain knowledge and understanding of systems that are being drafted.
  - Most training is through project task assignments
  - Projects assigned based on individual learning curve
- Gains knowledge of how DG executes projects
- Learns basic system design tasks for the design and execution of projects
  - Becomes familiar with equipment, components, materials, specification, etc.
  - Becomes familiar with ductwork and pipe sizing for systems being drafted.
- No direct client contact

*Intra-Discipline Mobility: Mechanical Designer I*

# Mechanical Designer Level I

Typical Minimum Experience: 0 - 3 Years

- Expected to utilize DG templates and be a proficient operator of Revit and AutoCAD
- Works within the mechanical group alongside team members
- Sets up project drawing sets, details, schedules, etc.
- Day-day tasks assigned by Engineers or Sr. Mechanical Designers in the first year
  - Has the ability to multi-task to assist on multiple projects
  - Works autonomously on specific tasks
  - Most training is through project task assignments
  - Projects assigned based on individual learning curve.
- Accompanies Engineer or Sr Mechanical Designer to job site tasks
- Gains experience in both design and some engineering tasks
- Limited direct client contact

*Intra-Discipline Mobility: Mechanical Designer II*

# Mechanical Designer Level III

Typical Minimum Experience: 4 - 8 Years

- Expected to know DG templates and be proficient operator of Revit and AutoCAD
  - Provide template development support
  - Provide DG design standard support
  - Mentor Drafters and Designer I level co-workers
- Works within the mechanical group alongside team members
- Participates and/or leads in the coordination efforts with other trades
- Week-week tasks assigned by Engineers or Sr. Mechanical Designers
  - Has the ability to multi-task to assist on multiple projects
  - Works autonomously on specific tasks
- Gain exposure to equipment sizing:
  - Fans, AHUs, MAUs, etc.
  - Water heaters, Pumps, etc.
- Expected to have full understanding of systems being designed
- Performs site investigations independently
- Moderate client contact

*Intra-Discipline Mobility: Mechanical Designer III*



# Mechanical Designer Level III

Typical Minimum Experience: 3 - 6 Years

- Fully versed in use of Revit and AutoCAD
  - Provide template development support
  - Provide DG design standard support
  - Mentor Drafters and Designer I-II level co-workers
  - Create and Maintain company design standards
  - Coordinate company design standards between office senior designers and engineers
- Works autonomously on a complete project from beginning to end with little oversight or direction from Engineers
- Gain exposure to equipment sizing:
  - Fans, AHUs, MAUs, etc.
  - Water heaters, Pumps, etc.
- Able to work on several involved projects simultaneously.
- Has successfully executed several large mechanical projects (of various sizes, applications and in different roles)
- Participates and/or leads in the coordination efforts with other trades
- Strong exposure to all aspects of design/execution on larger projects.
- Performs site investigations independently
- Demonstrates ability to be an office Mechanical Design lead
- Possesses expertise in both design and engineering, to the extent that the engineering career pathway is now applicable.
- Interfaces directly with client

*Intra-Discipline Mobility: Engineering – refer to Mechanical Engineer Career Path for more information.*

*Other Mobility: Project BIM Coordinator*

# Project BIM Coordinator

Typical Minimum Experience: 8 - 12+ Years

- Encompasses all skillsets of a Mechanical Designer III
- Role would typically be in addition to daily Mechanical Designer III tasks
- Reports directly to the Project Manager and DG BIM lead.
- Fully versed in all activities associated with design and execution of DG projects
- Coordinates and leads project clash detection efforts between all trades
- Ensure project drawings and standards are being followed by all disciplines
- Maintain and assist team members with BIM360 site population and site navigation
- Point of contact for 3rd party consultants and contractors for access and use of project BIM360 site
- Interfaces directly with clients

*Intra-Discipline Mobility: Engineering – refer to Mechanical Engineer Career Path for more information.*

*Other Mobility: Overall DG BIM Coordinator – refer directly to department lead to further investigate this Career Path*