

# GUIDELINES FOR ENGINEERING LEVELS

|                                    | Level I  | Level II   | Level III   | Level IV   | Level V  | Level VI  | Level VII   | Level VIII  |
|------------------------------------|--|--|---|--|--|---|---|---|
| <b>General Characteristics</b>     | <ul style="list-style-type: none"> <li>Acquires limited knowledge and develops basic skills.</li> <li>Applies prescribed techniques and procedures in accordance with established criteria to perform assigned tasks.</li> <li>Performs routine technical work which does not require previous experience.</li> <li>Acquires an understanding of professional and ethical responsibilities.</li> </ul> | <ul style="list-style-type: none"> <li>Acquires basic knowledge and develops skills in a specific practice area.</li> <li>Applies standard techniques, procedures, and criteria to perform assigned tasks as part of a broader assignment.</li> <li>Exercises limited judgment on details of work and in application of standard methods for conventional work.</li> </ul> | <ul style="list-style-type: none"> <li>Develops broad knowledge and skills in a specific practice area.</li> <li>Evaluates, selects, and applies standard techniques, procedures, and criteria to perform a task or sequence of tasks for conventional projects with few complex features.</li> <li>Collaboratively uses judgment to determine adaptations in methods for non-routine aspects of assignments.</li> <li>Works on small projects or portions of larger projects.</li> </ul> | <ul style="list-style-type: none"> <li>Applies broad knowledge of principles and practices in a specific practice area.</li> <li>Independently evaluates, selects, and adapts standard techniques, procedures, and criteria.</li> <li>Acquires general knowledge of principles and practices of related fields, and ability to function on multi-disciplinary teams.</li> <li>Works on multiple projects of moderate size or portions of major projects</li> </ul> | <ul style="list-style-type: none"> <li>Independently applies extensive and diversified knowledge of principles and practices in broad areas of assignments and related fields,</li> <li>Uses advanced techniques in the modification or extension of theories and practices of sciences and disciplines to complete assignments.</li> <li>Works on a major project or several projects of moderate scope with complex features.</li> </ul> | <ul style="list-style-type: none"> <li>Applies a thorough knowledge of current principles and practices of engineering as related to the variety of aspects affecting their organization.</li> <li>Applies knowledge and expertise acquired through progressive experience to resolve crucial issues and/or unique conditions.</li> <li>Keeps informed of new methods and developments affecting their organization and recommends new practices or changes in emphasis of programs.</li> <li>Works on programs of limited complexity and scope.</li> </ul> | <ul style="list-style-type: none"> <li>Uses creativity, foresight, and mature judgment in anticipating and solving unprecedented problems.</li> <li>Makes decisions and recommendations that are authoritative and have an important impact on extensive organizational activities.</li> <li>Sets priorities and reconciles directions from competing interests.</li> <li>Works on programs with complex feat.</li> </ul> | <ul style="list-style-type: none"> <li>Makes decisions with broad influence on the activities of their organizations.</li> <li>Makes authoritative decisions and recommendations that are conclusive and have a far-reaching impact on the organization.</li> <li>Demonstrates a high degree of creativity, foresight, and mature judgment in planning, organizing and guiding extensive programs and activities of major consequence.</li> </ul> |
| <b>Technical Responsibilities</b>  | <ul style="list-style-type: none"> <li>Collects data and gathers information or documents.</li> <li>Performs standard computations or analysis.</li> <li>Prepares drawings and visual aids.</li> <li>Observes construction activities.</li> <li>Performs basic survey work.</li> </ul>   | <ul style="list-style-type: none"> <li>Performs basic design tasks.</li> <li>Assists on other tasks such as: preparation of permit applications, material testing, and CADD work.</li> </ul>   | <ul style="list-style-type: none"> <li>Assigns tasks to and directs engineers, technicians, and administrative staff.</li> <li>Plans and coordinates detailed aspects of the engineering work.</li> <li>Prepares scopes, budgets, and schedules for assignments.</li> <li>Assists with proposals to provide professional services or obtain funding for engineering projects or programs.</li> </ul>  | <ul style="list-style-type: none"> <li>Designs a complete project, system, component, or process.</li> <li>Prepares complete project documents.</li> <li>Designs and conducts experiments and analyzes and interprets data.</li> <li>Formulates and solves problems.</li> </ul>  | <ul style="list-style-type: none"> <li>Reviews complete project documents for conformity and quality assurance.</li> <li>Develops new techniques and/or improved processes, materials, or products.</li> <li>Assists upper-level management and staff as a technical specialist or advisor.</li> </ul>   | <ul style="list-style-type: none"> <li>Serves as the technical specialist for the organization in the application of advanced concepts, principles, and methods in an assigned area.</li> <li>Keeps informed of new developments and requirements affecting the organization for the purpose of recommending changes in programs or applications.</li> <li>Interprets, organizes, executes, and coordinates assignment.</li> </ul>  | <ul style="list-style-type: none"> <li>Develops standards and guidelines.</li> <li>Leads the organization in a broad area of specialization or in narrow but intensely specialized field.</li> </ul>  | <ul style="list-style-type: none"> <li>Performs advisory or consulting work for the organization for broad program areas or an intensely specialized area with innovative or important aspects.</li> </ul>  |
| <b>Managerial Responsibilities</b> | <ul style="list-style-type: none"> <li>No managerial responsibilities at this level.</li> </ul>  | <ul style="list-style-type: none"> <li>Assigns tasks to and coordinates with technicians or administrative staff.</li> </ul>   | <ul style="list-style-type: none"> <li>Assigns tasks to and coordinates work with entry-level engineers, technicians, or administrative staff.</li> <li>Assists in determining schedule and budget requirement</li> </ul>   | <ul style="list-style-type: none"> <li>Assigns tasks to and directs engineers, technicians, and administrative staff.</li> <li>Plans and coordinates detailed aspects of the engineering work.</li> <li>Prepares scopes, budgets, and schedules for assignments.</li> <li>Assists with proposals to provide professional services or obtain funding for engineering projects or programs.</li> </ul>   | <ul style="list-style-type: none"> <li>Supervises all staff necessary to complete assignments.</li> <li>Reviews and approves scopes, budgets, and schedules for assignments.</li> <li>Prepares proposals to provide professional services or obtain funding for engineering projects or programs,</li> </ul>   | <ul style="list-style-type: none"> <li>Supervises a staff of engineers and technicians.</li> <li>Plans, schedules, or coordinates the preparation of documents or activities for multiple major projects, or is responsible for an entire program of an organization.</li> <li>Reviews operational procedures to ensure compliance with applicable policies and performance measures.</li> </ul>  | <ul style="list-style-type: none"> <li>Supervises several organizational segments or teams.</li> <li>Recommends facilities, personnel, and funds required to carry out programs.</li> <li>Oversees the technical, legal, and financial issues of an entire program.</li> <li>Determines program objectives and requirements.</li> <li>Develops standards and guidelines.</li> </ul>                                       | <ul style="list-style-type: none"> <li>Leads an entire program critical importance.</li> <li>Decides the kind and extent of engineering and related programs needed for accomplishing the objectives of an organization.</li> </ul>   |
| <b>Direction Received</b>          | <ul style="list-style-type: none"> <li>Receives close supervision on all aspects of assignments.</li> </ul>  | <ul style="list-style-type: none"> <li>Receives close supervision on unusual or difficult problems, and general review of all aspects of work.</li> </ul>  | <ul style="list-style-type: none"> <li>Receives instruction on specific objectives.</li> <li>Receives direction on unconventional and/or complex problems, and possible solutions.</li> <li>Receives a thorough review of completed work for application of sound professional judgment.</li> </ul>   | <ul style="list-style-type: none"> <li>Receives general direction on key objectives.</li> <li>Receives guidance, when necessary, on unconventional or complex problems, direction on modified techniques, and new approaches on assignments with conflicting criteria.</li> </ul>  | <ul style="list-style-type: none"> <li>Receives supervision and guidance relating to overall objectives, critical issues, new concepts, and policy matters.</li> <li>Receives direction on unusual conditions and developments.</li> </ul>   | <ul style="list-style-type: none"> <li>Receives administrative supervision with assignments given in terms of broad general objectives and limits.</li> </ul>   | <ul style="list-style-type: none"> <li>Receives administrative supervision with assignments given in terms of broad general objectives and limits.</li> </ul>   | <ul style="list-style-type: none"> <li>Receives general administrative direction from a board of directors regional council.</li> </ul>   |



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|--|---|--|---|---|--|--|---|---|
| <b>Communication Skills</b>                | <ul style="list-style-type: none"> <li>• Possesses basic oral and written communication Skills.</li> <li>• Interacts with other staff.</li> </ul> | <ul style="list-style-type: none"> <li>• Interacts with staff, general public, officials, and contractors</li> </ul> | <ul style="list-style-type: none"> <li>• Possesses effective oral and written communication skills.</li> <li>• Assists with client, customer, or official contacts and communication per-training to specific assignments or meetings.</li> </ul> | <ul style="list-style-type: none"> <li>• Interacts with clients, customers, officials, contractors, and others.</li> <li>• Attends project meetings and presents specific aspects of engineering assignment.</li> </ul> | <ul style="list-style-type: none"> <li>• Possesses advanced oral and written communication skills.</li> <li>• Represents the organization in communications and conferences pertaining to broad aspects of engineering assignments.</li> </ul> | <ul style="list-style-type: none"> <li>• Routinely interacts with clients, customers, officials, contractors, and others.</li> <li>• Leads project meetings and makes presentations.</li> <li>• Represents the organization and maintains liaison with individuals and related organizations.</li> </ul> | <ul style="list-style-type: none"> <li>• Possesses exceptional oral and written communication skills.</li> <li>• Routinely interacts with organization leaders, clients, customers, officials, contractors, and others.</li> <li>• Initiates and maintains extensive contacts with key engineers and officials or other organizations and companies and is skilled in persuasion and negotiation of critical issues.</li> </ul> | <ul style="list-style-type: none"> <li>• Negotiates critical and controversial issues with top-level engineers and officers of other organizations and companies.</li> <li>• Conducts presentations and may participate in media interviews.</li> <li>• Represents their organization at important functions or conferences, including media interviews as required.</li> </ul> |
| <b>Typical Titles</b>                      | Fire Protection Consultant (Relevant 4-year degree),<br>Fire Protection Technician (Less than 4-year degree),<br>PLC Consultant, IPS Consultant   |  |   | Fire Protection Engineer, Fire Protection Consultant (if not licensed)<br>Senior Fire Protection Technician,<br>PLC Engineer, IPS Engineer<br>APM, PM   | Senior Fire Protection Engineer,<br>Senior Fire Protection Consultant<br>Senior Tech, PM   |  | Senior Fire Protection Engineer,<br>Senior Fire Protection Consultant<br>Senior Tech, Senior PM   | Chief Engineer,<br>Director of Engineering,<br>Executive VP   |
| <b>Experience</b>                          | Eng:<br>4-10 Years  | 1+ Years<br>4-10 Years   | 3+ Years<br>4-15 Years  | 4+Years<br>15-30+ Years   | 8+years<br>15-30+ Years  | 10+Years<br>15-30+ Years   | 15+Years<br>15-30+ Years  | 20+Years  |
| <b>Promotion Guidance:</b>                 | Automatic: E2 after 1 year of experience and E3 after 3 years of experience (assuming acceptable performance)                                     |  |   | Based on individual's experience and performance  |  |  |   |   |
| <b>Education</b>                           | Bachelor's Degree in engineering or engineering technology from an ABET Accredited Program or other engineering technology degree or certificate  |  |   | Bachelor's Degree in Engineering from an ABET accredited program. Master's degree or Equivalent. Engaged in life-long learning to maintain knowledge of contemporary issues.  |  |  |   |   |
| <b>Licensure and Certification</b>         | Engineer in Training, Engineering Intern<br>NICET Levels I and II   |  |   | Professional Engineer<br>NICET Level III +  |  | Professional Engineer, Specialty Certification   |   |   |
| <b>Professional Activities</b>             | Member of professional practice organization  | Member of professional practice Organization, member of local program committee                                      |   | Member of professional practice organization, chair of local program or committee   | Member of professional practice organization, national Board member or office, national technical or policy commit   |  | Member of professional practice organization, national Board member or officer, Recognized expert on statewide activity. Resource for national activities and organizations.  | Member of professional practice organization. Recognized expert on national activity or spokesperson for the profession.  |
| <b>Equivalent Federal General Schedule</b> | GS-5  | GS-7   | GS-9  | GS-11   | GS-12  | GS-13  | GS-14   | GS-15, Senior Executive Service (SES)   |