

Federal Wage System Job Grading Standard For Carpentry, 4607

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WORK COVERED

This standard is used to grade nonsupervisory work involved in constructing, altering, maintaining, and repairing buildings, structures, partitions, panels, tool cabinets, bookcases, work benches, and other items using wood, wood substitutes, and composite building materials. The work requires knowledge of construction and repair techniques; the type, grade, and working characteristics of wood and wood substitute materials such as strengths and applications, and skill and accuracy in the operation of hand and power tools and equipment.

WORK NOT COVERED

This standard does not cover the following work.

- ! Making, repairing, and assembling boxes, crates, and shipping and storage containers and structures made with wood or wood substitute materials. (See [Job Grading Standard for Wood Working, 4604.](#))
- ! Making and repairing high grade wood items such as fine cabinetry and furniture requiring precise and intricate joining, and the shaping and contouring of surfaces. (See [Job Grading Standard for Wood Crafting, 4605.](#))
- ! Structural and finish work where the preponderance of the work involves such activities as roofing, tile or floor covering installation, plastering, insulating, or masonry should be classified in the appropriate occupational series within the [Structural and Finishing Work Family, 3600.](#)
- ! Fabricating, modifying, repairing, and installing plastic items, parts, assemblies, and structures exclusively. (See [Job Grading Standard for Plastic Fabricating, 4352.](#))
- ! Constructing, placing, and installing wooden blocks, wedges, bracing structures and other staying devices to secure cargo shipment by land, sea, or air. (See [Job Grading Standard for Blocking and Bracing, 4602.](#))

TITLES

Jobs covered by this standard below the grade 9 level are titled *Carpentry Worker*. Jobs covered by this standard at the grade 9 level and above are titled *Carpenter*.

GRADE LEVELS

This standard describes two levels of nonsupervisory carpentry work at grades 7 and 9. The standard does not describe all possible grades at which jobs may be established in this occupation, or in any way limit the authority of agencies to assign work or particular duties to positions.

If jobs differ substantially from the levels of skill, knowledge, and other work requirements of the grades described in this standard, they may warrant grading either above or below these grades, based on the application of sound job grading principles.

HELPER AND INTERMEDIATE JOBS

Helper jobs are graded by the Office of Personnel Management [Job Grading Standard for Trades Helper Jobs](#).

The grade 7 level in this standard does not apply to jobs that are part of a planned program of training and development of skills for advancement to a higher grade. Such trainee jobs are covered by the Office of Personnel Management [Job Grading Standard for Intermediate Jobs](#). Grade 9 in this standard is used as the journey level in applying the Intermediate Job Grading Table.

CARPENTRY WORKER, GRADE 7

General: Carpentry workers at this grade level measure, cut, construct, install, repair, and modify wood, composite, and wood substitute items where specific fit and accuracy are within allowable limits to produce a serviceable product. Finished appearance of work products is not the primary consideration at this grade level. Grade 7 carpentry workers apply standard measurements, specifications, and instructions when constructing, installing, or repairing items such as frame structures, decking, partitions, shelving, doors, forms, siding, and scaffolds. They apply a general knowledge of wood, composite materials, wood substitutes, and woodworking techniques, as well as basic shop mathematics to plan, measure, and lay out materials according to dimensional requirements and specifications. Workers at this level typically follow specific instructions and are aided through the use of templates, or preplanned, or precut materials.

Skill and Knowledge: Grade 7 carpentry workers have a working knowledge of woodworking techniques and basic shop mathematics and are skilled in using measuring tapes, squares, levels, and other carpentry tools to plan, lay out, measure, cut, construct and install materials according to dimensional requirements and specifications. Workers at this level have a basic knowledge of material strengths and applications. They are skilled in use and operation of a variety of hand and power tools such as hammers, hand saws, drills, planes, routers, screwdrivers, power nailers and fasteners, glue guns, metal shears, screw guns, power saws, and power sanders and planes. They are able to work from sketches, work orders, basic blueprints, and instructions which are complete in terms of type of job required and materials and methods to be used. They are able to perform mill work, construct framing, and make items such as

benches, partitions, frames, and tables. They are able to perform limited repairs to office-type furniture such as regluing loose joints and replacing shelving and slide mechanisms. They are knowledgeable of woodworking techniques to prevent splitting, chipping, and splintering and of the types and uses of various nails, screws, specialized fasteners, and bonding materials.

Responsibility: Grade 7 carpentry workers work under general supervision or with a higher graded worker and receive assignments orally or through work orders, sketches, or basic blueprints. They select the proper tools to be used and determine methods and techniques based on established practices or specific instructions from the supervisor or a higher grade worker. Deviations from standard practices and material substitutions generally require approval. Work is spot-checked in progress and checked upon completion to insure requirements have been met in terms of fit, dimensions, structural integrity, and other required objectives.

Physical Effort: Carpentry workers at this level work in wood shops and at job sites. When working in a shop, grade 7 carpentry workers stand for extended periods while operating machines such as bench planers, saws, and drill presses. The work requires considerable bending, kneeling, and stooping. When at a job site, strenuous physical exertion is sometimes required when handling heavy and bulky materials such as sheets of plywood, framing members, and other building and construction materials.

Grade 7 carpentry workers use manual or portable power tools for extended periods in uncomfortable positions. On-site work typically requires bending, stooping, crawling, and climbing on ladders, scaffolding, and rooftops. Workers may lift and move materials up to 18 kilograms (40 pounds), unassisted, and occasionally lift or move heavier items with the assistance of lifting devices or other workers.

Working Conditions: Some work is performed in shop areas where the worker is exposed to moderate or high noise levels from operating machinery, sawdust in the air, glue fumes, and hazards associated with woodworking and related power equipment. When working at job sites, workers may be exposed to weather conditions and the hazards of working on and around scaffolds and ladders. They are subject to cuts, bruises, and contusions. Carpentry workers may work in confined areas such as crawl spaces and attics which may be dusty and dirty. They use protective devices such as ear plugs, safety glasses, respirators, and gloves.

CARPENTER, GRADE 9

General: Grade 9 carpenters use skilled techniques to construct, install, repair, and modify wood and wood substitute structures and items requiring close tolerance fit and structural soundness. They construct and repair a wide variety of structural items such as building frames, rafters, concrete forms, walls, staircases, door and window frames, interior and exterior trim, and miscellaneous items such as workbenches, counter tops, bookcases, equipment cabinets, computer consoles, and items requiring limited decorative trim and molding. They also construct air and weathertight assemblies such as equipment shelters for ships undergoing refitting of military hardware.

Grade 9 carpenters set up and operate a wide variety of wood working machines and tools. They assemble items with a variety of joining techniques such as miters, rabbets, dados, biscuit, and mortise and tenon, and use glues and adhesives to secure wood pieces, veneers, and counter tops. They use wood, metal, and various composite materials when installing or replacing interior partitions, flooring, panels, suspended ceilings, counter tops, and moldings. Unlike grade 7 carpentry workers, grade 9 carpenters interpret drawings, blueprints, and specifications independently, and determine the layout and work sequences and types of lumber or special related materials. Carpenters at this level plan and carry out projects from initial layout to completion. Accuracy, spacing, fit, and structural soundness and finished appearance are essential.

Skill and Knowledge: Carpenters at this level have a thorough knowledge of wood and wood substitute materials, and construction techniques. They are skilled in the operation of general and precision carpentry and woodworking equipment and are able to produce finished products with precise fits, accurate dimensions, and acceptable appearance. By comparison with grade 7 carpentry workers, who work with basic blueprints and sketches, grade 9 carpenters are able to interpret complex instructions, sketches, blueprints, and building codes. They are able to measure for layouts such as those required to construct footings for structural foundations and construct concrete forms and related structures with little or no supervisory guidance. They use advanced shop mathematics to plan, compute, and lay out more complex and exact projects with features such as arcs, tangents, and circles. They are skilled in setting up and operating the full range of industrial woodworking and related machinery such as routers, band and scroll saws, and drill presses. They are able to determine the proper grade, size, and type of lumber or wood substitute material required for the job. They have skill in operating and using power and hand tools and other woodworking equipment such as portable drills, clippers, joiners, shavers, tenoners, sanders, routers, power activated nailers, combustion type saws, screw fasteners, drill presses, and table saws. They also have skill in setting up and adjusting stationary power equipment by checking and adjusting, for example, the "squareness" of the blade on a radial arm saw in relation to the surface of the cutting table. They have skill in performing routine maintenance on equipment by lubricating machines, changing and sharpening saw blades, and by adjusting drive belt tensions. Grade 9 carpenters are able to mill heavy lumber, cut bevels, rabbets, chamfers, grooves, and compound miter joints, and apply plastic laminates to wood and other surfaces on counter tops, cabinets, desk tops, and tables.

Responsibility: Unlike the grade 7 carpentry worker, who works under the overall guidance of a higher grade worker or supervisor and receives detailed and easily understood instructions for assignments, grade 9 carpenters lay out work, determine material and equipment needs, and plan and accomplish a wide range of work sequences ranging from basic repairs to complex project segments with minimal supervision or review of work in progress. Grade 9 carpenters use initiative and judgment in accomplishing work assignments. For example, they evaluate problems and determine how or what repairs to make and the type and grade of wood or appropriate wood substitute materials and type of tools to use. They accomplish all phases of work independently including work requiring close tolerances, precise fit, and a finished appearance. Unlike the grade 7 carpentry workers, who work under the guidance of a supervisor or higher grade worker, and whose work is regularly spot checked, grade 9 carpenters typically initiate and complete assignments under minimal supervision. Review of work is primarily for compliance with building codes, objectives, timeliness, and quality of workmanship. Grade 9 carpenters are responsible for safely operating powered equipment and hand tools and adhering to all safety procedures.

Physical Effort: Physical effort at this level is the same as that described at [grade 7](#).

Working Conditions: Working conditions at this level are the same as those described at [grade 7](#).