

Instructional Terminology

Carpentry 46.0201.00



This Instructional Terminology is aligned to both the Program Blueprint for Instruction & Assessment as well as the Instructional Framework. It corresponds with the technical standards adopted on July 14, 2019. Use of content-specific terminology is provided to help identify consistent definitions.

1, 2, 3

16d nails - Long nails that are about 3 1/4 inches in length, used for heavy framing work

2X material - Lumber that is 2 inches thick (before finished), such as 2x4s or 2x6s, commonly used for framing walls and floors

3, 4, 5 Rule - A simple way to make sure a corner is a perfect 90-degree angle by measuring 3 feet on one side, 4 feet on the other side, and the diagonal should be exactly 5 feet

8d nails - Nails that are about 2 1/2 inches long, used for general construction and framing

A

ABC mix - A type of concrete that contains Air-entraining, Bonding, and Chemical admixtures for improved workability and strength

Anchor bolt - A metal bolt that is secured in concrete or masonry, used to anchor wood framing or other materials

Architectural scale - The ratio used on construction drawings so that measurements can be accurately depicted

B

Baseboard - A decorative strip of wood installed along the bottom of interior walls where they meet the floor

Beam - A strong, long piece of wood or metal that spans an opening and supports weight above it

Bird/frieze blocks - Decorative horizontal wooden pieces attached to exterior rafters under the eaves to provide ventilation for the attic

Blueprint components - The different parts that make up a blueprint, including the legend, scale, dimensions, and symbols

Blueprint reading - The skill of being able to understand and interpret all the information shown on construction blueprints

Blueprint symbols - Special lines, shapes, and labeled abbreviations used on blueprints to represent objects such as doors, windows, stairs

Blueprints - Detailed scale drawings that show the plans for construction projects so they can be built correctly

Bracing - Diagonal wood or metal supports installed to reinforce framed walls and prevent movement or leaning

Bridging - Small wood or metal cross-braces installed between floor joists or roof trusses to prevent twisting

Builders level - A tool used to determine if horizontal surfaces are perfectly level by showing when they are perfectly flat

Building lines - Chalked reference lines snapped on floors and foundations to show where framed walls will be built

C

Cantilever - An architectural style where part of the structure extends outwards unsupported, projecting past its base

Cantilever floor - A floor system where the joists extend outwards beyond their supports, creating an overhanging section

Carpenter's tools - The various hand tools and power tools used by carpenters for wood construction work, including hammers, saws, drills, etc.

Cartridges - Small explosive charges used to power nail guns and other powder-actuated tools on construction sites

Casing - Decorative trim pieces installed around door frames and window frames after they are installed

Ceiling joists - Horizontal framing members that run across the room providing support for the ceiling below the roof

Civil scale - The larger scale typically used for site plans showing roads, utilities, and grading

Collar tie - A horizontal wood member connecting two sloping roof rafters to strengthen the roof framing

Compressors - Machines that compress air and provide air pressure for powering pneumatic nail guns and other air tools

Concrete - An extremely hard construction material made from cement, sand, gravel, and water that is poured and allowed to cure

Construction cranes - Very tall, powerful machines used on job sites to lift extremely heavy loads high into the air

Conventional framing - The standard or typical type of floor framing using sawn lumber joists rather than manufactured wood trusses

Corner posts - The vertical wood framing members located at the corners where two walls meet and are anchored together

Curing - The process of allowing concrete to harden and gain strength over time after it has been poured and set

D

Dead load weight - The total weight of the permanent, non-moving structural elements such as framing, walls, floors, and roofing

Detail views - Enlarged drawings that focus on and call out specific small portions of a building

Diagonal method - Using the Pythagorean theorem to check if a corner forms a perfect 90-degree right angle by measuring diagonally

Door casing - The decorative trim pieces installed around the perimeter of a door frame after the door is hung

Door hardware - The operating components of doors such as hinges, knobs, locks, closers, etc. that allow them to function properly

Door installation - The process of properly hanging and securing a door unit within a rough door opening

Door openings - The framed spaces left in walls where doors will eventually be installed to allow passage through

Drawing dimensions - The precise measured lengths marked on construction drawings to indicate the intended size of everything

Drawing sets - The full collection of multiple blueprint sheets showing all views and details of the construction plans

Drawing symbols - Standardized pictorial representations such as lines, shapes, and patterns used on drawings to depict construction objects

Drywall - Panels made of gypsum plaster pressed between two thick paper faces, used to construct interior walls and ceilings

Drywall cutting - Using a utility knife or saw to cut drywall panels to the needed sizes and shapes to fit wall framing

Drywall installation - The process of securing drywall panels to wood or metal wall framing using nails or screws

E

Easements - Legal rights allowing certain use of private property by utility companies or neighbors

Eaves - The part of a roof that extends out past the exterior walls to provide an overhang

Elevations - Scaled drawings depicting how the exterior face of a vertical building surface will appear

Estimates - Calculating the approximate total costs of a project by determining the quantities of required materials, labor, etc.

Excavations - Holes dug into the ground, such as for footings, foundations, basements, graves, pools, or burying utilities

Extension cords - Long, flexible electric cables with a male plug on one end to provide temporary power from an outlet

Exterior moldings - Decorative strips of wood installed on the outside of buildings to cover joints and add aesthetic details

Exterior trim - Wood or plastic pieces used to cover raw edges and gaps on the exterior of a structure

Exterior walls - The structural framing assembled on the outside of a building to support the roof and exterior siding

F

Fascia - Horizontal boards attached to the ends of rafters along the eaves to create a smooth finish

Fasteners - Any hardware such as nails, screws, bolts, etc. used to securely join building materials together

Finish nails - Very thin nails with small heads used for securing trim, molding, and other lightweight applications

Fire stops - Building materials such as caulking or solid blocks inserted into wall cavities to contain fire spread

Float - To smooth and level freshly poured concrete using a flat tool before it hardens

Floor assembly - The complete structural floor system including joists, subfloor, underlayment, and finish flooring

Floor joists - The horizontal wood framing members that the subfloor rests on to support the floor above

Floor systems - The specific construction method used for framing floors, including conventional joists or manufactured trusses

Footing - The base structure made of concrete that is built below ground level to support the foundation walls and weight of a building

Forms - Temporary molds or shaping structures made of wood or metal into which concrete is poured and allowed to harden

Frieze board - A decorative horizontal board installed along the tops of exterior walls beneath the sloping roofline

G

Gable roof - A sloped roof shape formed by two angled roof sections that come together at a ridgeline, creating a triangular gable at each end

Generators - Portable gasoline, diesel, or solar-powered machines that produce electricity to run power tools on job sites

Girder - A large, heavy horizontal beam used to transfer loads across an open space and support joists or trusses

H

H clip - A rigid metal connector used to join two wood members together in line at right angles

H tie - An H-shaped metal connector strap nailed across a wood joint to hold two perpendicular framing members solidly together

Hand tools - Non-powered tools such as hammers, saws, wrenches, planes that are operated manually by the user's hands

Hazards - Dangerous situations, conditions, or materials on job sites that could potentially cause injuries or harm

Header - A horizontal framing member installed over wall openings such as doors and windows to transfer weight across the gap

Health hazards - Workplace conditions or materials that can potentially make people sick, such as dust, fumes, noise, or chemicals

Hoses - Flexible rubber or plastic tubes used to deliver air, water, or other fluids under pressure

I

Impermeable - Not allowing liquid or air to pass through, describing materials that provide a full moisture barrier

Insulation - Materials such as fiberglass or foam installed in walls and attics to prevent heat loss or gain

J

J bolt - A steel bolt formed into a "J" shape used to anchor wood framing to concrete foundations

Joist - Any of the parallel horizontal framing members in a floor or ceiling assembly that transfer loads

K

L

Ladders - Portable steps leaned against surfaces, or A-frame structures, which allow workers to safely climb up and down

Lap boards - Horizontal wood boards that overlap each other, installed as exterior siding on some houses

Laser level - A tool that projects a level reference laser line or plane to check elevations

Legends - The labeled boxes on blueprints that explain what each line type and symbol represents

Level - Having an even, flat, horizontal plane with no slope or tilt in any direction

Levels - Tools used to determine if a surface is perfectly flat and level using air bubbles or lasers

Live load weight - The sum of all temporary or movable weight including people, furnishings, or snow on a roof

Local building codes - Construction regulations established by municipal governments that must be followed

Lockout/tagout - Safety procedures to render machinery inoperable and apply tags when repairing equipment

Long point - The sharp end of a framing nail as opposed to the flat head on the other end

Lumber - Wood boards and planks that have been pre-cut to standard sizes for construction use

M

Material handling - The tasks involved in loading, moving, and unloading heavy construction materials

Material schedules - Lists on blueprints that specify the quantities and types of materials required

Mathematical formulas - Equations using operations such as addition, subtraction, or multiplication to calculate dimensions

Metal stud wall - An interior wall framed with lightweight steel studs rather than wood studs

Midspan blocking - Short horizontal blocks installed between joists or trusses to provide lateral support

Miter cut - An angled cut made across the corner of a wood board, often 45 degrees for joining trim pieces

Moisture protection - Building techniques and materials used to prevent water damage from rain or moisture

Molding - Decorative strips of wood installed to cover joints and provide ornamental detailing

Mortar - A paste-such as mixture of cement, sand, and water used for bricklaying and masonry work

Mortar joint - The horizontal and vertical gaps between bricks or blocks filled with mortar

Mudding - Applying joint compound over tape on drywall seams to create a smooth, seamless surface

N

National building codes - Construction standards and regulations established for the entire country that must be followed

O

OSB - Oriented Strand Board, manufactured structural wood panels made of wood chips and resins

OSHA - The Occupational Safety and Health Administration that creates workplace safety regulations

Outriggers - Horizontal braces that extend out from scaffolding to provide extra stability

P

Partition Ts - The top and bottom horizontal wood members that interior wall partitions are framed into

Permeable - Describing a material that allows air or liquid to pass through it, not waterproof

Personal protective equipment (PPE) - Safety gear such as hard hats, gloves, respirators worn to protect workers

Pier - A reinforced concrete pillar or column extending down to bedrock to support a foundation

Pitch - The steepness of a sloped roof, expressed as the rise over the run distance

Plates - The horizontal top and bottom wood members that studs are nailed into when framing walls

Plumb - Perfectly vertical with no leaning or slanting, describing something straight up and down

Plumb cut - An angled cut made on a rafter or truss to allow it to join perpendicularly at the proper pitch

Plywood - Structural wood panels made of thin wood veneers laminated together in alternating directions

Pneumatic nail gun - A power tool that uses air pressure to drive nails rapidly into wood framing

Pneumatic tools - Power tools including nailers and wrenches that are powered by compressed air

Post - A vertical supporting column or pillar that carries weight from above down to the ground

Powder-actuated tools - Nail guns that use explosive charges to fire nails into concrete or steel

Power equipment - Machinery such as generators, compressors, saws that use electric or combustion power

Power tools - Any tools operated by electricity, batteries, compressed air, or explosives instead of by hand

Precision measurements - Very exact and accurate measurements taken to ensure proper fit and alignment

Pressure treated wood - Lumber that has been chemically treated under pressure to resist rot, insects, and moisture damage

Pressure-treated lumber - Wood that has been chemically treated under pressure to resist rot, insects, and moisture damage

Pylon - A tall, slender vertical concrete or steel column used to support elevated structures

Pythagorean Theorem - A mathematical formula ($a^2 + b^2 = c^2$) used to calculate the length of one side of a right triangle

Q

R

Rafters - The sloped framing members that extend from the ridge to the walls to create the shape of the roof

Rat run - A horizontal board installed between studs near the floor to stiffen the wall framing

Redhead - A type of nail with a red polymer coating used for improved holding in wood

Ridge beam - A horizontal support beam that runs along the very peak of a roof that rafters attach to

Ridge block - Short wood blocks installed between each pair of rafters at the ridge line of a roof

Rim joist - The exterior boundary joist around the perimeter outline of a floor framing system

Rise - The vertical height between two elevations, such as the rise of a stair step or roof pitch

Roof openings - Framed gaps or holes built-in to allow for chimneys, vents, skylights, etc. to pass through

Roof sheathing - The exterior layer of wood panels or boards installed over the roof framing

Run - The horizontal distance between two points, such as the run length of a stair tread or roof slope

S

Safety practices - Following proper procedures and using PPE to avoid potential hazards and injuries on job sites

Scaffolds - Temporary elevated working platforms supported by a metal frame to allow construction at higher levels

Scales - The labeled measurements on the edges of blueprints that provide the ratio for converting drawn dimensions to actual sizes

Schematic drawing - A very simple, basic diagram showing the general layout and major components

Screed - A straight, rigid tool used to level and smooth freshly poured concrete by dragging it across the surface

SDS - Safety Data Sheets providing information about hazardous chemicals and how to handle them safely

Seat cut - An angled cut made near the top end of a rafter to allow it to properly rest on the ridge beam

Section views - Drawings that show what a structure would look such as if sliced vertically or horizontally

Semi-permeable - Describing materials that allow some moisture vapor to pass through while still providing basic water resistance

Setbacks - The minimum distance required between a building and property lines or other structures

Shim - A thin wedge piece of material used to fill small gaps and provide a level surface when installing something

Short point - The flattened head end of a nail as opposed to the sharpened point on the other end

Siding - Exterior wall covering materials such as wood, vinyl, fiber cement, etc. installed over sheathing

Sill plate - The bottom horizontal framing member that rests on the foundation which the studs are started from

Skirt board - A horizontal trim board installed along the top of a foundation wall, under the siding, creating a gap for ventilation

Slope - The degree of incline of a surface, usually expressed as the ratio of rise to run

Soffit - The exposed undersurface attachment area where the roof overhang extends past the exterior walls

Square - Forming an exact 90-degree angle, with no slanting, leaning or other angles present

Stairways - A set of steps allowing passage from one floor level to another by walking up or down

State building codes - Construction rules and regulations established by each individual state government that must be followed

Stringer - The inclined boards that the stair treads are attached to, forming the sides of a staircase

Stud walls - Walls framed with vertical wood or steel studs rather than solid masonry

Sub points - Small protrusions or anchors sticking out of concrete to secure framing members

Subfloor - The base layer of flooring installed over the floor joists before finish flooring goes on top

Surveying - Precisely measuring distances, elevations, boundaries using specialized equipment on a job site

T

Taping - Applying paper or mesh tape over drywall seams before mudding to reinforce the joints

Texturing - Creating a rough, patterned finish on drywall surfaces by spraying or applying drywall compound

TGI truss - Manufactured floor trusses made of wooden chords and metal web members for open floor span

Thermal protection - Insulation and vapor barriers used to control temperature transfer and prevent condensation

Threshold - The bottom horizontal trim piece that bridges the gap between floor and door opening

TJI - Manufactured wooden I-beam floor joists with top and bottom flanges formed into one piece

Tongue and groove panel - Plywood or OSB panels with mating profiles cut into the edges for interlocking installation

Transit level - A precise surveying instrument used to measure elevation differences over long distances

Tread - The horizontal surface of each step that is stepped upon in a staircase

Trench - A long narrow ditch dug into the ground, often for footings or running utility lines

Trim - Finished wood moldings installed as decorative edging to cover joints and raw edges

Truss - A rigid framework made of triangular wooden, or metal supports used for roofs and floors

Truss systems - Pre-engineered framing structures made of triangular wood or metal trusses used for roofs, floors, etc.

Type A fire extinguisher - An extinguisher filled with water that is suitable for putting out fires involving ordinary combustibles such as wood, paper, cloth

Type ABC fire extinguisher - A multi-purpose dry chemical extinguisher that can be used on Class A, B, and C fires

Type B fire extinguisher - An extinguisher containing foam, carbon dioxide or dry powder to extinguish flammable liquid and gas fires

Type C fire extinguisher - An extinguisher filled with carbon dioxide or dry chemicals made for electrical equipment fires

Type D fire extinguisher - A specialized extinguisher containing dry powder meant for combustible metal fires

U

V

Vapor barrier - A water-resistant material such as plastic sheeting installed to prevent moisture from passing through

W

Wall framing - The structural wood or metal skeleton that forms the walls of a building

Web bracing - Metal strapping or wood blocking installed diagonally between trusses or joists for lateral support

Window casing - Decorative trim moldings installed around the perimeter of a window frame after installation

Window installation - The process of properly fitting and securing a window unit within a framed rough opening

Window openings - Holes framed into walls to allow windows to be installed

Wood stud walls - Walls framed using vertical wooden boards called studs as the primary structural members

X

Y

Z