

Planning, design, and construction

# Glossary of terms

2025





# Contents

<b>A</b> words	1
<b>B</b> words	2
<b>C</b> words	4
<b>D</b> words	7
<b>E</b> words	9
<b>F</b> words	9
<b>G</b> words	11
<b>H</b> words	12
<b>I</b> words	13
<b>J</b> words	14
<b>K</b> words	14
<b>L</b> words	14
<b>M</b> words	15
<b>N</b> words	16
<b>O</b> words	17
<b>P</b> words	17
<b>R</b> words	20
<b>S</b> words	21
<b>T</b> words	23
<b>U</b> words	24
<b>V</b> words	24
<b>W</b> words	25





# Glossary of Terms

## Access Flooring

A raised access floor provides an elevated structural floor above a solid substrate (often a concrete slab) to create a hidden void for the passage of mechanical and electrical services. Raised floors are widely used in modern office buildings, and in specialized areas such as command centers, information technology data centers and computer rooms, where there is a requirement to route mechanical services and cables, wiring, and electrical supply.

## Accessible Route

A continuous, unobstructed path connecting all accessible elements and spaces in a building, facility or site that can be negotiated by a person with a severe disability using a wheelchair and that is also safe for and usable for people with other disabilities.

## Acoustic System

Soundproofing, noise control, and acoustic treatments to enhance occupant comfort.

## ADA

### (Americans with Disabilities Act)

A civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public. The ADA became law in 1990.

## ADAAG

### (ADA Accessibility Guidelines)

Design requirements established by the ADA for the construction and alteration of facilities in the private and public sectors. ADAAG includes requirements for new construction and alterations.

## Addendum / Addenda

An addendum is a written or graphic supplement to the bidding documents, issued prior to the submission of bids, for the purpose of clarifying, correcting, adding to or deleting from the bidding documents previously issued. Addenda become part of the contract documents when the construction contract is executed.

## Additional Services

Architectural services beyond the Basic Services or original scope of the agreement between the architect and the owner, added and provided at an additional cost.

## Adverse Weather

Unusually severe precipitation, sleet, snow, hail, heat or cold conditions in excess of the norm for the location and time of year it occurred, occurring unexpectedly at the Project site, that affect the critical path of the Work and prohibit it from being safely or effectively performed as scheduled using normal and customary protective measures.

## Aggregate

A mixture of sand and stone, often a major component of concrete (to be mixed with cement and water).

## Air Barrier

Air barriers control leakage into and out of the building envelope. Air barrier materials include mechanically attached membranes or wraps, self-adhered membranes, fluid-applied membranes, closed-cell medium density spray applied polyurethane foam, and board stock such as plywood, OSB, or extruded polystyrene.

## Air Conditioner or Air Conditioning (A/C)

A system for controlling the humidity, ventilation and temperature in a building, typically to maintain a cool atmosphere in warm conditions.

## Air Handling Unit (AHU)

A device used to regulate and circulate air as part of a heating, ventilating, and air-conditioning (HVAC) system. An air handler is usually a large metal box containing a blower, furnace or A/C elements, filter racks or chambers, sound attenuators, and dampers. Air handlers usually connect to a ductwork ventilation system that distributes the conditioned air through the building and returns it to the AHU. Sometimes AHUs discharge (supply) and admit (return) air directly to and from the space served without ductwork.

## Allowance

An amount established in the contract documents for inclusion in the contract sum to cover the cost of prescribed items not specified in detail, with provisions that variations between such amount and the finally determined cost of the prescribed items will be reflected in change orders appropriately adjusting the contract sum.

## Alterations

A term used to describe partial construction work performed within an existing structure; remodeling without a building addition.

## Alternate Bid

An amount stated in the bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

### American Institute of Architects (AIA)

A professional organization for architects in the United States. The AIA offers education, government advocacy, community redevelopment, and public outreach programs to support the architecture profession and enhance its public perception. The AIA collaborates with other stakeholders in the design and construction industries to facilitate coordination within the building sector.

### Application for Payment

The contractor's written request for payment of amount due for completed portions of the work, and if the contract so provides, for materials delivered and suitably stored pending their incorporation into the work.

### Arcade

A covered walkway with a series of arches supported by a row of columns on one or both sides.

### Arch

A curved structure that will span an opening and support itself; often consists of wedge-shaped blocks having their narrower ends toward the opening.

### Architect

A designation reserved, usually by law, for a person or organization professionally qualified and duly licensed to perform architectural services, including analysis of project requirements, creation and development of the project design, preparation of drawings, specifications, and bidding requirements, and general administration of the construction contract.

### Architect – Engineer

An individual or firm offering professional services as both an architect and engineer.

### Architect's Basic Services

A recognized series of phases performed by an architect, including: Schematic Design,

Design Development, Construction Documents, Bidding or Negotiations, and Construction Contract Administration.

### Architect's Supplemental Instruction (ASI)

Changes, revisions, or additional information issued by the architect to the contractor, after bidding, to supplement the construction documents and to order minor changes in the work of the project.

### Architectural Woodwork Institute (AWI)

An American nonprofit professional trade association whose member companies are the fabricators of fine finished woodwork, millwork and furniture. AWI publishes the Quality Standards Illustrated, a technical specification referenced by design professionals and woodwork manufacturers to define and describe the criteria for fine architectural quality grades and customer expectations.

### Areaway

An excavated, subterranean space around the walls of a building, designed to admit light into a building or to facilitate egress from a below-grade story.

### Asbestos Abatement

A set of procedures designed to control the release of asbestos fibers from asbestos-containing materials. Asbestos abatement is utilized during general construction in areas containing asbestos materials, particularly when those materials are being removed, encapsulated, or repaired. Abatement is needed in order to protect construction workers and members of the general public from the many negative health impacts of asbestos.

### ASHRAE

American Society of Heating, Refrigerating, and Air-Conditioning Engineers

### ASHRAE 90.1

An ANSI Standard published by ASHRAE that provides minimum requirements for energy-efficient designs for buildings.

### As-Built Drawings

A set of drawings marked up by the contractor building a building that shows how the facility was actually built versus the way it was originally designed. They provide precise details about the changes performed at any interim stage of the project.

### ASME

Acronym for American Society of Mechanical Engineers

### ASTM

Acronym for American Society for Testing Materials

### Astragal

A member, or combination of members, fixed to one of a pair of doors to cover the joint between the doors when closed, and to close the clearance gap; provides a weather seal, minimizes the passage of light and noise, and retards the passage of smoke or flame during a fire.

### Atrium

An open court within a building, connecting two or more floors and closed at the top.

### Backfill

The replacement of soil into a previously excavated area, such as a trench or against a foundation wall.

### Backflow Preventer (BFP)

A device used to prevent water (or other liquids) from being siphoned into a potable water system.

### Backing, Blocking

Frame lumber or plywood installed between wall studs to provide support for drywall or an interior trim item or specialty, such as a TV monitor bracket, grab bar, cabinet, or wall stop.

In this way, items are anchored and mounted through the gypsum board to solid wood rather than to the gypsum board only, that will not provide the necessary support.

### Baseboard

A wooden, rubber or vinyl board or trim member covering the lowest part of an interior wall. Its purpose is to cover the joint between the wall surface and the floor. It covers the uneven edge of flooring next to the wall, protects the wall from kicks and abrasion, and can serve as a decorative molding. Also known as base molding and wall base.

### Base Bid

An amount of money stated in the bid as the sum for which the bidder offers to perform the work required by the project documents. The base bid does not include the work for which alternate bids are submitted.

### Basis-of-Design Product

A specific manufacturer's product that is named, including the make or model number or other designation, establishing the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance and other characteristic for purposes of evaluating comparable products of other manufacturers.

### Beam

A structural element that primarily resists loads applied laterally to the beam's axis. Its mode of deflection is primarily by bending. Beams are traditionally descriptions of building structural elements, where the beams are horizontal and carry vertical loads.

### Bearing Capacity

The capacity of soil to support the loads that are applied to the ground above. Ultimate bearing capacity is the theoretical maximum pressure which can be supported without failure. Allowable bearing capacity is the ultimate bearing capacity divided by a factor of safety.

### Bearing Wall / Partition

A wall or partition that supports any vertical load in addition to its own weight.

### Bed Count

The number of beds in a project, or the number of beds required by a project.

### Bedrock

A subsurface layer of earth that is suitable to support a structure.

### Bench Mark

In surveying, a permanent mark established at a known elevation, from which the elevation of other points or objects may be determined.

### Bid Bond / Bid Security

A deposit of cash, certified check, cashier's check, bank draft, or money order submitted with a bid and serving to guarantee to the owner that the bidder, if awarded the contract, will execute such contract in accordance with the bidding requirements and the contract documents.

### Bid Form

A standard written form furnished to all bidders for the purpose of obtaining the requested information and required signatures from the authorized bidding representatives.

### Bid Opening

The actual process of opening and tabulating bids submitted within the prescribed bid date/time and conforming with the bid procedures. A Bid Opening can be open (where the bidders are permitted to attend) or closed (where the bidders are not permitted to attend).

### Bidding Documents

The published advertisement or written invitation to bid, instructions to bidders, the bid form and the proposed contract documents including any acknowledged addenda issued prior to receipt of bids.

### Bidding Phase

The fourth phase of an architect's basic services during which the construction documents are issued to one or more general contractors for competitive bidding, and competitive bids or negotiated proposals are sought as the basis for awarding a contract for construction. Addenda are issued by the Architect as needed for clarification. The contractors estimate their costs to construct the project, acquire competitive bids from multiple subcontractors for specific trades, and submit bids for their work. (See Negotiations phase)

### Bidding Requirements

The written minimum acceptable requirements set forth by the owner to the contractor during bidding process. The owner usually reserves the right to reject a bid if the Bidding Requirements are not met. (see Bidding Documents)

### Bond Rating

A letter-based credit scoring method used to judge the quality and credit worthiness of a bond. Private independent rating services such as Moody's, Standard & Poor's, and Fitch provide these evaluations of a bond issuer's financial strength, or the ability to pay a bond's principal and interest in a timely manner.

### BREEAM (Building Research Establishment Environmental Assessment Method)

A sustainability assessment method that is used to masterplan projects, infrastructure, and buildings.

### British Thermal Unit (BTU)

British Thermal Unit; a standard unit for measuring heat gain or loss.

### Builder's Risk Insurance

A specialized form of property insurance to cover work in the course of construction.

**Building Code**

The legal requirements set up by prevailing various governing agencies covering the minimum acceptable requirements for all types of construction.

**Building Efficiency Ratio**

The ratio of the net usable area of a building to its gross floor area.

**Building Elevation**

A drawing of the exterior of a structure as if projected onto a vertical plane.

**Building Envelope**

The physical barrier between the interior and exterior environments of a building. The components include the exterior walls, windows, doors, roof, foundation, and any other structural elements, separate the buildings' conditions from the outside environment.

**Building Grossing Factor**

The ratio of gross floor area to net floor area within a building.

**Building Information Modeling (BIM)**

A digital representation of physical and functional characteristics of a facility. A BIM is a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life-cycle; defined as existing from earliest conception to demolition.

**Building Permit**

The approval given by a local jurisdiction to proceed on a construction project.

**Building Section**

A representation of a building as it would appear if cut by an imaginary plane, showing the internal structure.

**Building Systems**

Integrated and interdependent components that contribute to the functionality, safety, comfort, and efficiency of a building. The primary building systems include Structural,

Envelope, Mechanical (heating & cooling), Electrical, Plumbing, Fire Protection, Communication & Security, Vertical Transportation System, Acoustic, and Sustainability.

**Bulkhead**

Architectural feature / wall that creates a transition between the ceiling and the wall. It's used as a horizontal structure that extends from the ceiling and typically ends at the top of cabinetry or concealing ductwork, beams, and more.

**Cabinet Unit Heater**

A heater containing a heating element enclosed in a metal cabinet, usually with an intake grille below and an outlet for the heated air above; often contains a fan.

**Cable Tray**

An assembly of metalwork which is used to support insulated electric conductors, similar in function to a metal cable duct, but consisting of a ladder-like metal framework on the bottom and sides, with the top open.

**Camber**

A slight convex curvature built into a truss or beam to compensate for any anticipated deflection so that it will have no sag when under load.

**Campus Master Planning**

Developing an overall site plan for a campus, integrating residential, academic, and social functions along with parking, circulation, utilities, and other elements.

**Cantilever**

A structural element that extends horizontally and is supported at only one end, with the other end projecting beyond its support without additional vertical support.

**Cartoon Set**

An architect's "rough draft" of the sheets to include in the construction drawings, and the drawings, schedules or other information to show on each sheet. Cartoon sets are prepared to ensure that the final

construction document set includes all desired information, and meets the firm's established standards of documentation.

**Casework**

The aggregate assembled parts (including framework, finish, doors, drawers, etc.) which make up a case or cabinet.

**Cast Stone**

A refined architectural concrete building unit manufactured to simulate natural cut stone, used in unit masonry applications, and as architectural features, trim, ornament or facing for buildings or other structures.

**Cast-in-Place (C.I.P.) Concrete**

Concrete placed directly on a construction site using formwork instead of precast concrete, which is cast offsite and then brought to a construction site to be erected or assembled.

**Cavity Wall**

A type of wall typically built of two walls, or wythes, of masonry separated by an air space, or cavity, and anchored together with metal ties. An air and water barrier is applied to the exterior surface of the inner wythe. Flashing is included to direct water out of the cavity. A continuous layer of cavity insulation is typically used to reduce heat loss and minimize thermal bridging.

**Certificate of Occupancy (CO)**

A document issued by a local government agency or authority having jurisdiction certifying a building's compliance with applicable building codes and other laws, and indicating it to be in a condition suitable for occupancy.

**Chamfer**

An oblique surface produced by beveling an edge or corner, usually at a 45° angle, as at the edge of a board, or a concrete or masonry surface.



**Change Order (CO)**

A written order to the contractor signed by the owner and the architect, issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. A CO may add to, subtract from, or otherwise modify the scope of work.

**Change Order Proposal (COP)**

A contractor-generated document in response to a proposal request (PR) or change order request (COR), quoting a price for the extra work, itemized to show costs for labor and materials, markup, fees, etc. Once the owner and contractor have agreed on scope, price and schedule, a formal change order is prepared and signed by all parties. The Contractor then proceeds to perform the changed work.

**Charrette**

An intense period of design or planning activity, during which a group of designers draft a solution to a design problem, through dialogue between a diverse group of decision-makers and stakeholders.

**Chase**

A vertical space that provides an area for pipes or wiring to run through. These chases are placed strategically to minimize the length and size of horizontal piping and wiring on the floors or spaces connected by the chase.

**Circulation**

The way people move through and interact with a building. Corridors, elevators, stairs, and ramps are typical interior circulation elements.

**Clerestory**

A high section of wall that contains windows above eye level, for the purpose of admitting light, fresh air, or both.

**Code Footprint**

A building and life safety code compliance document that includes both graphic and narrative

information describing the intended life safety features in a public building, and showing an owner's compliance with state law to protect occupants from the dangers of fire and explosion. Code footprints are required by some jurisdictions to be submitted for new construction, additions, and building renovation/remodeling affecting active or passive life safety systems or changes in occupancy of buildings within that jurisdiction.

**Cold-Formed Metal Framing**

Light-frame construction where the vertical and horizontal structural elements are primarily formed by a system of repetitive framing members.

**Column**

A structural element that transmits, through compression, the weight of the structure above to other structural elements below. A small wooden or metal support is typically called a post.

**Commissioning**

A quality-focused process for verifying and documenting that the facility and all of its systems and assemblies are planned, designed, installed, and tested to comply with Owner's Project Requirements.

**Competitive Sealed Proposal (CSP)**

A procurement method in which all proposals are reviewed at a predetermined time and place and a contract is awarded in accordance with the terms of a solicitation.

**Composite Slab**

Sheets of corrugated steel bonded securely with concrete fill to produce a reinforced steel deck.

**Computer-Aided Design (CAD)**

The use of computers to aid in the creation, modification, analysis or optimization of a design. CAD software is used to increase the productivity of the designer,

improve the quality of design, improve communications through documentation, and to create a database. Similar terms are computer-aided drafting (CAD) and computer-aided design and drafting (CADD).

**Concept**

The central idea or guiding principle that informs the design of a building or space.

**Concrete Masonry Unit (CMU)**

A standard-sized rectangular block cast of portland cement and suitable aggregate, with or without admixtures, and intended for laying up in courses with other units in traditional masonry construction. Also called concrete block and cinder block.

**Condensing Unit**

A component of an air conditioning system designed to remove heat absorbed by the refrigerant and to transfer it to the outside environment, and consisting of an outdoor coil, compressor(s) and an air moving device.

**Conductor Head**

An enlargement or catch basin to receive rainwater from the gutter or scupper at the top of a downspout.

**Conduit, Electrical**

A tube or pipe used to protect electric wiring.

**Construction Change Directive**

A document signed by the owner and architect, directing the contractor to make changes in the work promptly to avoid a delay in its completion, but when the parties have not yet agreed to adjustments in the Contract Sum or Contract Time. Upon determination of the costs for the work, the Contract Sum (and Contract Time, where applicable) are adjusted by change order.

### Construction Contract Administration (CCA)

The duties of the architect during the construction phase, which may include but are not limited to advising, consulting and/or acting on behalf of the owner, reviewing and responding to RFIs, issuing ASIs, reviewing matters concerning performance of the owner and contractor, performing site visits and informing the owner about the progress and quality of the work, reviewing and certifying the contractor's applications for payment, reviewing submittals (shop drawings, product data and samples), preparing proposal requests, construction change directives and change orders, and conducting inspections related to substantial completion and final completion.

### Construction Cost Limitation (CCL)

The actual amount applied toward the construction of the Project including the cost of building construction as well as all costs for furniture, fixtures, equipment and technology infrastructure, excluding all contingencies, fees, and administrative costs. This limitation may not be exceeded during design without written approval of the Owner.

### Construction Documents

Written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a construction project necessary for obtaining a building permit.

### Construction Documents Phase

The third phase of the architect's basic services, during which the architect prepares from the approved design development documents, for approval by the owner, the working drawings and specifications and the necessary bidding information. The architect also assists the owner in the preparation of bidding forms, the

conditions of the contract, and the form of agreement between the owner and contractor.

### Construction Management at Risk (CMAR)

A project delivery method in which the owner hires a construction manager (CM) to oversee the project from design to construction closeout and deliver it with a Guaranteed Maximum Price (GMP) provided to the owner prior to the bid stage. The CM acts as consultant to the owner in the development and design phases (often referred to as Preconstruction Services), then as the equivalent of a general contractor during the construction phase. The CM must manage and control construction costs to not exceed the GMP, to avoid a financial hit to the CM company.

### Construction Specifications Institute (CSI)

CSI is a national association of construction industry professionals who are experts in building construction and the materials used therein. The work of CSI is currently focused in three areas: standards and publications, construction industry professional certifications, and continuing education for construction professionals. CSI publishes MasterFormat, which is a standardized classification for construction information such as detailed construction project cost estimates and construction specifications.

### Construction Type (I, II, III, IV or V)

The IBC establishes five types of construction in which each building must be categorized, based on the materials used in the building (combustible or noncombustible), and the fire-resistance of building elements such as building frame, roof, wall and floor systems. Depending on the type of construction, the specific building

element and its proximity to a lot line may be a factor in its classification.

### Consultant

A separate entity hired for a project, by the owner or the architect, to provide specific professional services or advice.

### Contract

A legally enforceable promise or agreement between the Owner and a Contractor describing their respective obligations in completing construction work for a specific project.

### Contract Documents

Typically, the Contract Documents include the Owner-Contractor Agreement, General, Supplementary and other Conditions of the Contract, Drawings, Specifications, Addenda issued prior to the execution of the agreement, other documents listed in the agreement, and modifications issued after execution of the agreement.

### Contract Period (or Contract Time)

The number of working days or calendar days from the specified date of commencing work (or Notice to Proceed) to the specified date of substantial completion, as specified in the contract. The Contract Period may be changed by Change Order.

### Contract Sum

The total agreeable amount payable by the owner to the contractor for the performance of the work under the contract documents. The Contract Sum may be changed by Change Order.

### Contractor

A person or company that undertakes the responsibility for the performance of construction work, including the provision of labor and materials, in accordance with plans and specifications and

under a contract specifying cost and schedule for completion of the work.

### **Contractor Furnished, Contractor Installed (CFCI)**

When equipment is indicated to be CFCI, the contractor is responsible to furnish the equipment, arrange its shipment to the jobsite, receive and unload it, handle and verify it's in optimal conditions, store it, set it up, commission it, and dispose of the debris generated from the transportation and packaging processes.

### **Contractor's Qualification Statement**

A written statement of the Contractor's experience and qualifications submitted to the Owner during the contractor selection process. The AIA publishes a standard Contractor's Qualification Statement form for this purpose.

### **Control Joint (CJ)**

A groove which is formed, sawn or tooled in a concrete, masonry, plaster, or gypsum board structure or assembly, and other similar materials, to regulate the location and amount of cracking and separation resulting from the dimensional change of different parts of the structure, thereby avoiding the development of high stresses.

### **Communication and Security Systems**

These include networking, data, security cameras, access control, alarms, and emergency communication systems.

### **Coping**

The capping or covering of a wall, typically made of stone, brick, terracotta, concrete or cast stone, tile, slate, wood, or various metals including aluminum, copper, stainless steel, steel and zinc. It should have a sloped or curved top surface to prevent standing water.

### **Cost Estimate**

The approximation of the cost of a program, project, or operation. The cost estimate is the product of the cost estimating process. The cost estimate has a single total value and may have identifiable component values.

### **Cost-Plus-Fee Contract**

A construction contract in which the owner agrees to pay the cost of the work, including all trade subcontractor work, labor, materials, and equipment, plus an amount for contractor's overhead and profit.

### **Counterflashing**

A metal flashing, typically provided where horizontal and vertical surfaces meet, turned down over the exposed top edge of a base flashing and used to prevent moisture entry.

### **Course**

A layer of masonry units running horizontally in a wall; bonded with mortar.

### **Coved Base**

A trim piece at the base of a wall forming a concave rounded intersection with the floor.

### **Creep**

The permanent and continuing dimensional deformation of a material under a sustained load, following the initial instantaneous elastic deformation.

### **Critical Path Method (CPM)**

An algorithm for scheduling a set of project activities, commonly used in conjunction with the program evaluation and review technique (PERT). A critical path is determined by identifying the longest stretch of dependent activities and measuring the time required to complete them from start to finish.

### **Cubic Feet per Minute (CFM)**

A rating that expresses the amount of air a blower or fan can move. The volume of air (measured in cubic feet) that can pass through an opening in one minute.

### **Cubic Yard (CY)**

A volume of measure equivalent to a cube with a length, width and height of 1 yard, or equal to 27 cubic feet.

### **Current Replacement Value**

The cost to construct a typical replacement building in today's dollars, based on the square footage of the current facility and the estimated current construction cost for that type of building. It would meet the current acceptable standards of construction and comply with regulatory requirements.

### **Curtain wall**

An outer covering of a building, typically constructed of lightweight materials such as aluminum and glass, in which the outer walls are non-structural, designed only to keep the weather out and the people in. The wall transfers lateral wind loads upon it to the main building structure through connections at floors or columns of the building.

### **Cylindrical Lock**

A door lock in which the locking mechanism is contained in a cylinder that includes the keyhole but is separated from the lock case.

### **Damper**

A device used to vary the volume of air passing through an air outlet, inlet, or duct.

### **Dampproofing**

A treatment of concrete or mortar to retard the passage or absorption of water, or water vapor, either by applying a suitable coating to exposed surfaces or by using a suitable admixture.

**Dead Load**

The weight of a structure itself, including the weight of fixtures or equipment permanently attached to it.

**Debt Service Coverage Ratio**

In investment real estate, the ratio of annual net operating income on a piece of investment property to its annual debt service. Banks use the DSCR to help determine whether to make or refinance loans for investment property.

**Decking**

Thick boards or planks used as structure flooring; light-gauge sheets of metal which are ribbed, fluted or otherwise integrally stiffened for use in constructing a floor or roof.

**Deferred Maintenance**

The practice of postponing maintenance activities such as reroofing or MEP equipment replacement to save costs, meet budget funding levels, or realign available budget monies. The failure to perform needed repairs could lead to asset deterioration and ultimately asset impairment; The total cost of existing major maintenance repairs and replacements identified by a comprehensive facilities condition audit, exclusive of program improvements or new construction.

**Demountable Partitions**

A nonload-bearing partition of dry construction, assembled from prefabricated components, which can be installed, removed, and then reinstalled at a different location; may be full height, from floor to ceiling, or partial height.

**Design-Bid-Build (DBB)**

A traditional project delivery method in which the agency or owner contracts with separate entities for the design and construction of a project. There are three main sequential phases to DBB, each of which is completed in sequence: The design phase, the

bidding phase, and the construction phase. There is no overlap between design and construction.

**Design-Build (DB)**

A project delivery system in which the design and construction services are contracted by a single entity, the design-builder, who is responsible for all work on the project to reduce risks and overall costs for the owner. The delivery schedule is commonly reduced by overlapping the design and construction phases of a project. Design-builders are often general contractors, but DB projects can be led by a design professional.

**Design Development (DD)**

The second phase of the architect's basic services, in which the architect prepares (from the approved schematic design) the design development documents consisting of drawings and other documents (including an updated cost estimate) to fix and describe the size and character of the entire project as to the architectural assemblies, materials and finishes, structural, mechanical and electrical systems, and such other essentials as may be appropriate. DD documents typically include outline specifications, floor plans (to scale with dimensions, room designations, references, wall types and ratings), building and wall sections, interior elevations, and preliminary civil, structural, mechanical and electrical drawings.

**Design Team**

The architect and its consultants or subconsultants as set forth in the Owner-Architect agreement.

**Detail**

A graphic scale representation (drawing at a larger scale) of construction part(s) or item(s) showing materials, composition and dimensions.

**Developer**

A private entity that contracts with the public entity, such as a university, to undertake some or all of the design, construction, financing, operations and maintenance relating to a project, such as a P3, that is to become subject to a financial agreement.

**Development Team**

The developer, builder, trade partners, architect, consultants, and in some P3 structures, operations and maintenance service providers.

**Dewpoint**

The temperature at which air becomes saturated with water vapor and below which moisture is likely to condense. The dewpoint varies with the amount of moisture contained in the air.

**Dimension Lumber**

Lumber cut to a particular size and stocked for the building industry; usually 2 to 5 inches thick and 5 to 12 inches wide.

**Direct Digital Control (DDC)**

The automated control of a condition or process by a digital device, using a centralized network-oriented approach. Instrumentation is gathered by various analog and digital converters which use the network to transport these signals to the central controller. The centralized computer then follows all of its production rules and causes actions to be sent via the same network to valves, actuators and other HVAC components that can be adjusted.

**Directed**

A command or instruction by the architect. Other terms including "requested", "authorized", "selected", "required", and "permitted" have the same meaning as "directed."

**Door Hardware**

Any of the items that are attached to a door (hinges, handles, locks, latches, openers, closers, plates, etc.) to enhance or facilitate its functionality or appearance.

**Door Mullion**

The center vertical member of a double-door opening, set between two single active leaves; usually forms the strike side of each leaf; may be removable. See Mullion.

**Downspout**

A pipe, often of sheet metal, used to conduct water from a roof drain or gutter to the ground or storm sewer system.

**Dried In**

The point in the building process where the structure has been enclosed and is now protected from the elements, thus assuring that weather-sensitive materials or work can begin indoors without those materials or processes suffering weather damage by rain, wind, snow, etc.

**Drilled Pier Foundation**

A deep foundation system that uses large diameter concrete cylinders constructed by placing fresh concrete and reinforcing steel into a drilled shaft. Drilled pier foundations are constructed to transfer heavy axial or lateral loads to a deep stratum below the ground surface.

**Drywall Construction**

Use of dry materials such as gypsum board, plywood, or other prefabricated materials, without the use of plaster or mortar.

**Ductwork**

The ducts in a heating, ventilating, or air-conditioning system, usually fabricated of metal, used to transfer air from one location to another.

**Eave**

That part of a roof that projects beyond the exterior wall; usually the lower edge of a sloped roof.

**Efflorescence**

The migration of a salt to the surface of a porous material such as stone, brick, plaster, or mortar, where it forms a visible coating, usually white. Usually caused by

free alkalis leached from mortar or adjacent concrete as moisture moves through it.

**Egress**

An exit, or means of exiting.

**Electrical System**

The infrastructure for power distribution, lighting, outlets, backup power, and control systems.

**Elevation**

See Building Elevation

**Engineered Fill**

Soil or crushed stone that is wetted or dried to near its optimum moisture content, then compacted to a minimum percent compaction as specified by a geotechnical engineer, and used as fill.

**Envelope Building**

The physical separator between the conditioned and unconditioned environment of a building, including the resistance to air, water, heat, light, and noise transfer.

**Envelope System**

The exterior shell of the building that protects it from environmental elements, including walls, roofs, windows, doors, and insulation.

**Environmental Impact Report (EIR)**

An assessment of all possible effects that a development or construction project may cause on the environment in a particular area. It may include metrics to quantify resulting changes to population, traffic, schools, fire protection, endangered species, archeological artifacts, as well as proposed mitigations that comprise conditions of approval.

**Environmental Product Declarations (EPDs)**

Defined by ISO 14025, and EPD is a Type III declaration that “quantifies environmental information on the life cycle of a product to enable comparisons between products fulfilling the same function.”

**EPDM Roofing**

A synthetic rubber roofing membrane (ethylene propylene diene terpolymer) widely used in low-slope buildings. EPDM can be installed either fully adhered, mechanically attached or ballasted, with the seams of the roofing system sealed with liquid adhesives or specially formulated tape.

**Escutcheon**

A flange on a pipe used to cover a hole in a floor or wall through which the pipe passes.

**Expanded Polystyrene Insulation (EPS)**

A lightweight, rigid, closed-cell thermoplastic foam material produced from solid beads of polystyrene, with high resistance to heat flow, fabricated as insulation in various densities to withstand load and backfill forces.

**Expansion Joint (EJ)**

A joint or gap between adjacent parts of a building, structure, or concrete work which permits their relative movement due to temperature changes or other conditions without rupture or damage.

**Exterior Insulation and Finish System (EIFS)**

A general class of non-load-bearing building cladding systems that provides exterior walls with an insulated, water-resistant, finished surface in an integrated composite material system.

**Extruded Polystyrene Insulation (XPS)**

A type of insulation material formed with polystyrene polymer using an extrusion process. XPS has a high R-value, good moisture resistance and high structural strength.

**Façade**

Generally, the front part or exterior of a building. Often a façade is the most important aspect from a design standpoint.

**Face Brick**

Brick specially made or selected to give an attractive appearance when used without surface treatment; made of selected clays, or treated, to produce the desired color and texture.

**Facility Condition Index (FCI)**

The total cost of the existing maintenance, repair, or renewal of the facility divided by the total estimated replacement value (or CRV, current replacement value) of the facility. Commonly, an FCI of 0-5% is “Good”, 5-10% is “Fair”, 10-30% is “Poor”, and 30% or greater is “Critical”.

**Factory-Finished**

Finished under controlled environmental conditions off site, and requiring no additional finish, except for touchup, at the project site.

**Fan Coil 2-pipe system**

This system provides either heating or cooling through an FCU using a single pair of pipes, one for supply and one for return.

**Fan Coil 4-pipe system**

This system provides heating and cooling simultaneously through an FCU using two separate supply and return pipes—one pair for chilled water and one for hot water. This allows for greater flexibility and individual zone control within a building.

**Fan Coil Unit (FCU)**

In air conditioning, a unit (which is in the space being air conditioned) containing an air filter, air heating and/or cooling coils, and a centrifugal fan.

**Fenestration**

The design, arrangement, and placement of openings in a building’s envelope, including windows, doors, skylights, curtain walls, and other glazed elements.

**Fiberglass Insulation**

An insulating material made from glass fiber arranged using a binder into a texture similar to wool. The

process traps many small pockets of air between the glass, resulting in high thermal insulation properties.

**Field Observation**

A service performed by the architect to become generally familiar with the progress and quality of the work and to determine if the work is being done in a manner that will yield results consistent with the contract documents. Each site visit performed is documented by an observation report.

**Finish Carpentry**

The craft of woodworking by joining pieces of wood, especially of the finish and trim workings of the interior of a structure, such as doors, paneling, trim, etc.

**Finish Grade**

The top surface of lawns, walks, and drives, or other improved surface after completion of construction or grading operations.

**Finned Tube Radiation Heating**

A heating system using a metal tube having fins (metal plates, jointed to the tube, perpendicular to its length) to transfer heat from the tube to the surrounding air. Steam or hot water is circulated through the tube from a primary system.

**Fire Alarm Control Panel (FACP)**

The controlling component of a fire alarm system. The panel receives information from devices designed to detect and report fires, monitors their operational integrity, and provides for automatic control of equipment, and transmission of information necessary to prepare the facility for fire based on a predetermined sequence.

**Fire Alarm System, Addressable**

Digital fire protection system in which all fire and smoke detection devices are connected and communicate both with each other

and a central control monitoring location. This interconnectivity allows the control personnel to identify the location or “address” where the initial detection occurred. The information directs the emergency response team to pinpoint its efforts immediately to the precise location of the developing problem.

**Fire Door**

A fire-resistive door assembly, including frame and hardware, which can provide a specified degree of fire protection when closed. Usually provided with an automatic closing mechanism in the event of fire.

**Fire Resistance Rating**

The time in minutes or hours that a material or construction can withstand fire exposure, as determined in conformity with generally accepted standards, or from information derived from standard tests.

**Flashing**

Sheet metal or other thin, impervious material used in roof and wall construction to prevent water penetration and/or provide water drainage.

**Fire Protection System**

Active (sprinklers, alarms) and passive (fire-resistant materials, compartmentalization) fire safety measures.

**Floor Area, Gross**

The area within the inside perimeter of the exterior walls of a building, as measured from the inside surface of the exterior walls, without deduction for corridors, stairs, closets, thickness of partitions, columns or other interior features. With Net Floor Area, used for determination of occupant load.

**Floor Area, Net**

The actual occupied area not including unoccupied accessory areas such as corridors, stairways,

ramps, toilet rooms, mechanical rooms and closets. Net Floor Area is typically measured between inside faces of walls within a room, and with Gross Floor Area, is used to determine occupant load for a space.

### Floor Plan

A scaled diagram of a building viewed from above to show diagrammatically the relationships between rooms, spaces, circulation, and other physical features at one level of a structure. Floor plans typically include dimensions to specify room sizes and wall lengths, and may include details of fixtures, notes for construction to specify finishes and construction methods, and symbols to indicate partition and window types, section references, and other information.

### Fluid-Applied Membrane Air Barrier

A fluid-applied (with a sprayed or rolled application) air and water-resistant barrier that prevents air and water leakage in cavity wall, masonry veneer construction, stucco, EIFS, and other building wall assemblies.

### Footcandle

A unit of illuminance in US Customary units; equal to 1 lumen per square foot.

### Footing

That portion of the foundation of a structure that transmits loads directly to the soil; may be the widened part of a wall or column, the spreading courses under a foundation wall, a foundation of a column, etc.; used to spread the load over a greater area to prevent or reduce settling.

### Form

Temporary structure erected to contain concrete during placing and initial hardening.

### Foundation

Any part of a structure that serves to transmit the load to the earth or rock, usually below ground level.

### Frost Line

The depth to which the groundwater in soil is expected to freeze. Footings are typically placed below the frost line, to prevent damage caused by frost heave which occurs when the soil freezes and expands.

### Fur Down

A lowered section of a ceiling in construction is essentially a tiny drop-down area that is typically used to conceal plumbing, electrical wiring, or ductwork and often acts as a decorative element as well.

### Furnish

Supply and deliver to project site, ready for unloading, unpacking, assembly, installation and similar operations. See "Install" and "Provide."

### Furniture, Fixtures & Equipment (FF&E)

Items that have no permanent attachment to the structure of a building. FF&E encompasses items that are not included in the contract between the owner and the contractor. Typically, these items are not part of the construction drawings and will not be provided by the contractor.

### Furring

Spacers such as wood strips or metal channels which are fastened to joists, studs, walls or ceiling of a building so that the finish surface may be leveled; a method of finishing the interior face of a masonry wall to provide space for thermal insulation, to prevent moisture transmission, or to provide a level surface for finishing.

### Gable

A vertical surface commonly situated at the end of a building, usually adjoining a pitched roof, and most often triangular.

### Galvanized Iron / Steel

Sheet metal of iron or steel coated with zinc to prevent rusting; used extensively for flashings, roof gutters, gravel stops, metal roof decking, etc.

### Gantt Chart

A visual method of displaying a project timeline, and all of its tasks, dependencies, and assignees, across time.

### General Conditions (of the Contract)

The General Conditions define the basic rights, responsibilities, risk allocations, and contractual relationship of the owner and Contractor, and establish how the contract is to be administered.

### General Contractor (GC)

The GC is the person or business entity that contracts with the owner to be in charge of a building project, usually involving the use of subcontractors. The GC is responsible for providing all of the material, labor, equipment and services necessary for the construction of the project, and for the day-to-day oversight of the construction site, management of vendors and trades, and the communication to all involved parties throughout the course of a building project

### Generator, Emergency

Any generator of which the sole function is to provide emergency backup power during an interruption of electrical power from the electric utility. The emergency generator can be sized to provide power to the entire building, all circuits, or it can be designed to only provide power for life safety systems only, meaning activation of exit signs and emergency lighting, fire alarm systems, elevators, etc.

### Geotechnical Investigation

Investigation performed by geotechnical engineers or engineering geologists to obtain information on the physical properties of soil earthworks and foundations for proposed structures and for repair of distress to earthworks and structures caused by subsurface conditions. Subsurface exploration usually involves soil sampling and laboratory tests of the soil samples retrieved.

### Geothermal Heating and Cooling Systems

A central heating and cooling system that transfers heat to (or from) the ground into (or out of) a building, using the earth as a heat source in the winter or a heat sink in the summer as it harvests the heat absorbed at the earth's surface from solar energy.

### Glazing

Setting glass in an opening. The glass surface of a glazed opening.

### Gloss Level

The degree of surface luster; ranges from a matte surface practically without sheen to an almost mirror-like glossy finish; intermediate conditions (in increasing order of glossiness) are: flat, eggshell, semigloss, and full gloss or high gloss.

### Glued-Laminated Timber

A manufactured product consisting of four or more wood layers, none of which exceeds 2 in. in thickness, bonded together with adhesive; may be comprised of pieces which are end-joined to form any desired length, or which may be glued edge-to-edge to give greater width.

### Grade

Ground level, or the elevation at any given point. (See Finish Grade)

### Grade Beam

That part of a foundation system which supports the exterior wall of the superstructure; commonly designed as a beam which bears directly on the column footings, or may be self-supporting.

### Granular Material

Gravels, sands or silts which exhibit no characteristics of cohesiveness or plasticity; more permeable than cohesive or plastic soils, and therefore suitable where drainage through the material is desirable.

### Grid, Ceiling

The completed assembly of main and cross tees in a suspended ceiling system before the ceiling panels are installed.

### Gross Floor Area

See Floor Area, Gross

### Gross Square Feet (GSF)

The overall area of a building, including walls, circulation, mechanical space, etc., measured from the exterior face of the outside walls.

### Groundwater

Water near the surface of the ground which passes through the subsoil.

### Grout

Mortar containing a considerable amount of water so that it has the consistency of a viscous liquid, permitting it to be poured or pumped into joints, spaces, and cracks within masonry walls and floors, between pieces of ceramic clay, slate and floor tile, and into the joints between preformed roof deck units.

### Guaranteed Maximum Price (GMP)

A construction contract type in which the contractor agrees to complete the project for a price that will not exceed a set maximum limit. If the actual costs exceed this price, the contractor is responsible for covering the difference unless scope changes or unforeseen conditions justify adjustments.

### Guard

A building component or a system of building components located at or near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to a lower level. Sometimes mistakenly referred to as "guardrails", the guard consists of the entire vertical portion of the barrier, not just the top rail. (See Handrail)

### Gypsum Board

Gypsum board (also called plasterboard, wallboard, and sheet rock) is a panel made of gypsum, with or without additives, typically extruded between thick sheets of facer and backer paper, used in the construction of interior walls, partitions and ceilings. The gypsum can be mixed with fiber, plasticizer, foaming agents, and additives that can reduce mildew, flammability and water absorption.

### Handrail

A horizontal or sloping rail intended for grasping by the hand for guidance or support. Typically provided along walking surfaces that lead from one elevation to another, such as ramps and stairways. Handrails by themselves are not intended to be used in place of guards to limit falls at drop-offs. Where guards and handrails are used together, the handrail is a separate element typically attached to the inside surface of the guard.

### Hard Bid

A type of project delivery in which the owner hires the architect who then prepares the construction documents. The owner bids the work out to general contractors either through invitation or advertising the bid. The lowest qualified bidder is selected.

### Hard Costs

Also known as Construction Costs, hard costs are the direct expenses associated with the physical construction of a building and site development. They include all the contractor's scope, expenses, and responsibilities in performing by contract.

### Head

In general, the top or upper member of any structure; the upper horizontal cross member, between the jambs, which forms the top of a door or window frame; may provide structural support for construction above if required.



### Health Product Declarations (HPDs)

HPDs provide a full disclosure of the potential chemicals of concern in products by comparing product ingredients to a set of priority “hazard” lists based on the greenscreen for Safer Chemicals and additional lists from other government agencies. HPDs qualify for numerous green building schemes, including LEED v4, WELL, Google Portico, and Living Product Challenge.

### Heat Pump

A device that transfers heat from a cooler reservoir to a hotter reservoir by means of a heat exchanger, requiring the expenditure of mechanical energy in the process; used in an air conditioner whose cooling cycle can be reversed so that it can function as a heater.

### Heating Ventilation and Air Conditioning (HVAC)

Thermal technologies and services that provide occupants with environmental comfort in fully- or partially enclosed spaces, such as a building.

### Heavy Timber Construction

Construction in which fire resistance is obtained by using wood structural members of specified minimum size and wood floors and roofs of specified minimum thickness and composition; by using bearing walls and nonbearing exterior walls of noncombustible construction; by avoiding concealed spaces under floors and roofs; and by using approved fastenings, construction details, and adhesives for structural members.

### High Rise Building

Per the IBC, a building with an occupied floor located more than 75 feet above the lowest level of fire department vehicle access.

### Hollow Metal Door

A metal door (commonly of the flush panel type) fabricated of sheet steel and reinforced by light metal channels; has a hollow core, sometimes filled with a light filler material. Can also be filled with an approved fireproof insulating material for fire resistance.

### Hollow Structural Section (HSS)

A type of metal profile with a hollow cross section and a uniform wall thickness; can be circular, square or rectangular.

### Hydraulic Elevator

An elevator powered by the energy of a liquid under pressure in a cylinder which acts on a piston or plunger to move the elevator car.

### Indirect Lighting

Lighting which distributes 90% to 100% of the emitted light upward so that illumination is provided primarily by reflected light rather than by direct light.

### Install

Unload, temporarily store, unpack, assemble, erect, place, anchor, connect, apply, work to dimension, finish, cure, protect, clean, and similar operations at the project site. See “Furnish” and “Provide”.

### Instructions to Bidders

That portion of the Bid Documents that explains the background and procedures for submitting a bid. The documents describing the manner in which a bidder shall prepare and submit a bid.

### Insulated Metal Panels (IMPs)

Lightweight, composite exterior wall and roof panels with metal skins and an insulating foam core.

### Insulation, Thermal

A material providing high resistance to heat flow; usually made of mineral wool, cork, fiberglass, foam glass, foamed plastic, diatomaceous earth, etc.; fabricated in the form of batts, blankets, blocks, boards, granular fill and loose fill.

### Integrated Project Delivery (IPD)

A project delivery method that seeks efficiency and involvement of all participants (people, systems, business structures and practices) through all phases of design, fabrication and construction. IPD combines ideas from integrated practice and lean construction. The objectives of IPD are to increase productivity, reduce waste (waste being described as resources spent on activities that do not add value to the end product), avoid time overruns, enhance final product quality, and reduce conflicts between owners, architects and contractors during construction. IPD emphasizes the use of technology to facilitate communication between these parties involved in a construction process.

### International Building Code (IBC)

A model building code developed by the International Code Council which has been adopted for use as a base code standard by most jurisdictions in the United States. The IBC addresses both health and safety concerns for buildings based upon prescriptive and performance related requirements. The IBC is fully compatible with all other published ICC codes. The code provisions are intended to protect public health and safety while avoiding both unnecessary costs and preferential treatment of specific materials or methods of construction.[3] The code is updated every three years.

### Intermediate Distribution Frame (IDF)

A free-standing or wall-mounted rack for managing and interconnecting the telecommunications cabling between end user devices and a main distribution frame (MDF).

### International Existing Building Code (IEBC)

The International Existing Building Code is a model code in the International Code family of codes intended to provide requirements for repair and alternative approaches for alterations and additions to existing buildings.

### International Energy Conservation Code (IECC)

A model building code that sets minimum efficiency standards in new construction for a structure's walls, floors, ceilings, lighting, windows, doors, duct leakage, and air leakage.

### International Fire Code (IFC)

This comprehensive fire code establishes minimum regulations for fire prevention and fire protection systems using prescriptive and performance-related provisions.

### International Mechanical Code (IMC)

Published by the International Code Council, the IMC is a convention concentrating on the safety of heating, ventilation and air conditioning systems. The IMC protects public health and safety for all building heating, cooling and ventilation related design, installation and inspection by providing minimum safeguards for people at homes, schools and workplace.

### International Plumbing Code (IPC)

A plumbing code and standard, published by the International Code Council, that sets minimum requirements for plumbing systems in their design and function, and which sets out rules for the acceptance of new plumbing-related technologies.

### International Residential Code (IRC)

Published by the International Code Council, this code comprises all building, plumbing, mechanical, fuel gas and electrical requirements for one- and two-family dwellings and townhouses up to three stories.

### Intumescent Paint

A type of reactive paint which swells up or "intumesces" to many times its original thickness when exposed to high temperatures, to thermally insulate structural materials such as steel and timber in a fire, stopping premature collapse of the building and slowing down the fire.

### Jamb (Opening)

One of the vertical members at each side of an opening such as a door frame or window frame.

### Joint Reinforcement

Any type of steel reinforcement, such as reinforcing bars or steel wire, which is placed in or on mortar bed joints.

### Joist

One of a series of parallel beams of timber, reinforced concrete, or steel used to support floor and ceiling loads, and supported in turn by larger beams, girders, or bearing walls; the widest dimension is vertically oriented.

### Kickplate

A protective plate applied on the lower rail of a door to prevent marring.

### Kiln-dried

Dried or seasoned artificially in kiln; excess moisture has been driven off by heating.

### Labeled Door

A fire-rated door carrying a certified rating by the Underwriters' Laboratories, Inc.

### Labor and Material Payment Bond

A type of insurance that is used to guarantee that subcontractors and material suppliers are paid for the work and material they supply on the job. The company that provides the bond, that in effect insures payment for the work and materials, is called the surety bond company. From the perspective of a subcontractor or supplier, this type of bond provides

protection to them that they will be paid. From the perspective of the owner, the bond provides protection that monies released to the General Contractor are in fact paid to the relevant suppliers and subcontractors.

### Lamp

A man-made light source which produces radiation in or near the visible region of the spectrum; often called a bulb or tube to distinguish it from the complete lighting unit consisting of the source and associated parts such as reflectors, etc.

### Land Survey

A survey of landed property establishing or reestablishing lengths and directions of boundary lines.

### Landing

The horizontal platform at the end of a stair flight or between two flights of stairs; a similar platform at the end of a ramp run, or between two ramp runs.

### Large Format Tile

Any tile with one side longer than 15".

### Leadership in Energy and Environmental Design (LEED)

A green building certification program used worldwide. Developed by the non-profit U.S. Green Building Council (USGBC), it includes a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes, and neighborhoods, which aims to help building owners and operators be environmentally responsible and use resources efficiently. Some U.S. federal agencies, state and local governments require or reward LEED certification. This can include tax credits, zoning allowances, reduced fees, and expedited permitting.

**Leaf**

A hinged part; a separately movable division of a folding or sliding door; One of a pair of doors or windows.

**Life Cycle Cost**

The funds or materials required to maintain the building and/or equipment during its expected life cycle.

**Light**

1. An aperture through which daylight is admitted to the interior of a building.
2. A pane of glass, a window or a compartment of a window (as in sidelight, skylight, transom light)
3. An artificial source of illumination.

**Light Emitting Diode (LED)**

A semiconductor device that emits light when current flows through it. The color of the light is variable.

**Lightweight Concrete Masonry Unit (LWCMU)**

A concrete masonry unit made with low-density aggregates such as expanded clay or shale that reduce the weight when compared to a standard concrete block.

**Lintel**

A horizontal structural member over an opening which carries the weight of the wall above it; usually of steel, stone or wood.

**Liquidated Damages**

A provision in construction contracts obliging the contractor to pay the owner a specified sum in the event of contractor delays extending beyond the agreed-upon completion date, by billing the contractor a fair market value for each day of delay after scheduled completion.

**Live Load**

The moving or movable external load on a structure; includes the weight of furnishings of a building, of the people, of equipment, etc., but does not include wind load.

**Living Building Challenge**

An international sustainable building certification program created in 2006 by the non-profit International Living Future Institute. It is described by the Institute as a philosophy, advocacy tool and certification program that promotes the measurement of sustainability in the built environment. It can be applied to development at all scales, from buildings—both in new constructions and renovations—to infrastructure, landscapes, neighborhoods, both urban and rural communities, and differs from other green certification schemes such as LEED or BREEAM.

**Louver**

An assembly of sloping, overlapping blades or slats; may be fixed or adjustable; designed to admit air and /or light in varying degrees and to exclude rain and snow; esp. used in doors, windows, and the intake and discharge of mechanical ventilation systems.

**Low-e**

Low emissivity refers to a surface condition that emits low levels of radiant thermal (heat) energy. Low-e coatings applied to glass reduce the emission of radiant infrared energy, thus tending to keep the heat on the side of the glass where it originated while letting visible light pass. The result is glazing with better control of energy – heat originating from indoors in winter remains inside, while heat during summer does not emit from the exterior, keeping it cooler inside.

**Lump Sum**

A type of construction contract, sometimes referred to as a stipulated sum, where a single price is quoted for an entire project based on plans and specifications and covers the entire project and the owner knows exactly how much the work will cost in advance. This type of contract requires a full and complete set of plans and specifications and includes all the indirect costs plus the profit. The contractor will receive progress payments each month minus retention.

**Luxury Vinyl Tile (LVT)**

Vinyl floor tile that realistically mimics the appearance of natural materials with an added layer to improve wear and performance. Typically, products that mimic stone and ceramic tile.

**Maintenance Material (Attic Stock)**

Overage material, spare parts, specialties, fixtures, motors, equipment, etc. furnished (but not installed) by the contractor and kept in storage by the owner to ensure that identical materials / products are available for future replacement or project repairs. Quantities of attic stock required to be furnished are typically specified by the architect.

**Masonry**

The craft of building a structure with stone, brick, concrete block, cast stone, glass block, adobe, or similar material, which are often laid in and bound together by mortar. The term masonry can also refer to the building units themselves.

**Massing**

Refers to the perception of the general shape, form and size of a building. A Massing model is a physical representation of the shape, form, and size of a building.

**Master Format**

An organization standard that defines the master list of Divisions, Sections and Section Titles for construction project specifications in the U.S. and Canada. It is authored by the Construction Specifications Institute (CSI).

**Materiality**

In architecture, this refers to selecting and using materials in a design. It involves considering how materials affect a building's aesthetics, functionality, and environmental impact.

### Mechanical, Electrical and Plumbing (MEP)

The installation of services and systems which provide a comfortable space for the building occupants. The in-depth design and selection of these systems.

### Mechanical System

The heating, ventilation, and air conditioning (HVAC) system regulates indoor temperature, air quality, and humidity.

### Mezzanine

An intermediate level or levels between the floor and ceiling of any story.

### Mineral Wool

A wool-like material of fine inorganic fibers such as those made from molten rock, slag, or glass; used as loose fill or formed into blanket, batt, block, board, or slab shapes for thermal and acoustical insulation; also used as reinforcement for other materials such as insulating cements and gypsum wallboard.

### Miter Joint

A joint between two members at an angle to each other; each member is cut at an angle equal to half the angle of the junction; usually the members are at right angles to each other.

### Mobility Accessible vs. Communication Accessible

Accessibility features for users with mobility issues (e.g. ramps and grab bars) vs. hearing/vision-impaired users (e.g. audible signals, flashing lights)

### Mockup

A model of an object in the course of design or construction, as a section of a window or its parts; built to scale or at full size, for purposes of studying construction details, judging appearance, testing performance, and/or establishing a standard by which subsequent construction will be judged.

### Modified Bituminous Membrane Roofing

Modified bitumen roofing uses polymer-modified bitumen reinforced by several layers of glass fiber or polyester fabric or a combination of the two. Modified bitumen roofing can be installed conventionally or can be self-adhered. A typical roof assembly consists of a five-layer combination: Insulation, modified-bitumen membranes, modified-base sheets or plies, adhesive and surfacing that provides the roof with its weather-resistance capability and protects it from UV radiation.

### Mortar

A plastic mixture of cementitious materials (such as cement and lime) with water and a fine aggregate (such as sand); can be troweled in the plastic state; hardens in place. When used in masonry construction, the mixture may contain materials to increase its plasticity and durability.

### Mortise Lock

A lock designed to be installed in a cavity, or mortise, cut into the edge of a door, rather than applied to a door's surface.

### Mullion

A vertical member separating ( and often supporting) windows, doors, or panels set in a series.

### Multiple Prime Contracts

A project delivery method where multiple contractors of various disciplines (e.g. mechanical, electrical, plumbing) contract directly with the owner to complete specific elements of work.

### National Electrical Code (NEC)

A regionally adoptable standard for the safe installation of electrical wiring and equipment in the United States. Part of the National Fire Code series published by the NFPA.

### National Fire Protection Association (NFPA)

A U.S.-based international nonprofit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. The NFPA publishes more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks.

### Negotiation Phase (See Bidding Phase)

That phase of a project that follows the Construction Documents phase, in which bidding documents are prepared, approved by the Owner, and issued to prospective bidders for submission of proposals to provide construction services. The preparation of addenda to incorporate any substitutions or modifications that the Owner may, as a result of the bidding and negotiation process, approve for inclusion in the Construction Documents, is a part of this phase.

### Net Operating Income (NOI)

The annual income generated by an income-producing property, considering and including all income collected from operations, and deducting all expenses incurred from operations.

### Noise Reduction Coefficient (NRC)

An average rating of how much sound an acoustic product can absorb. A single number value ranging from 0.0 to 1.0 that describes the average sound absorption performance of a material. An NRC of 0.0 indicates the object does not attenuate mid-frequency sounds, but rather reflects sound energy.

### Nominal Dimension

In masonry, a dimension greater (by the thickness of a mortar joint) than the dimensions of the actual masonry unit; In lumber, a dimension that may vary from the actual dimensions as provided for in the local building code.

**Nonbearing Wall**

A wall supporting no load other than its own weight; a non-load-bearing wall.

**Non-Structural Metal Framing**

Typically drywall framing, thinner and not as robust as structural cold-formed steel. Only used for interior studs and cannot be used on load-bearing walls. As a standard, it has a thinner galvanized coating that protects against corrosion.

**Not in Contract (NIC)**

Designation for an item that is mentioned in the contract, or in the Contract Documents, only for reference purposes and as such has no bearing or relation to the contract.

**Notice of Contract Award**

An official notification sent by the Owner to the successful bidder awarding the construction contract. The notice is typically accompanied by the contract documents.

**Notice to Proceed**

A formal written or electronic document issued by an owner (or an owner's CM) to notify a contractor of the contract's official start date for work on a construction project.

**Occupancy Classifications**

The categorization of structures based on their usage, primarily for building and fire code enforcement. Occupancy classifications are usually defined by building codes and vary somewhat among them.

**Occupant Load**

The number of persons for which the means of egress of a building or portion thereof is designed, the determination of which is governed by code.

**Occupancy Permit**

See Certificate of Occupancy

**Occupational Safety and Health Administration (OSHA)**

A large regulatory agency of the U.S. Department of Labor. Its mission is to "assure safe and healthy working conditions for working men and

women by setting and enforcing standards and by providing training, outreach, education and assistance."

**Oilcanning**

A slight buckling in sheet metal, causing a wavy or uneven appearance.

**Operable Partition**

A partition composed of a number of large panels which are hung from a ceiling track, permitting the panels to be moved easily from their closed position (in which the panels form a partition) to an open position (in which the panels are either stacked against each other or accordion-folded and retracted into a ceiling cavity).

**Operation and Maintenance Data**

Emergency manuals, operation manuals for systems, subsystems and equipment, product maintenance manuals, and systems and equipment maintenance manuals prepared and submitted to the owner by the contractor in accordance with the specifications, to provide an Owner's maintenance personnel with essential information about property and equipment upkeep.

**Overhead Coiling Doors / Grilles**

Doors of metal slats or grilles that roll up above the opening, forming a compact coil.

**Owner-Architect-Contractor (OAC) Meeting**

A meeting between the project owner, the project architect, and the general contractor.

**Owner-Furnished, Contractor-Installed (OFCI)**

A designation for equipment and materials purchased by an owner to be installed by the contractor.

**Owner-Furnished, Owner-Installed (OFOI)**

A designation for a product that will be furnished and installed by the owner, the accommodation of which must be provided for by the contractor. For example, wall-mounted TV monitor brackets may be OFOI, but the concealed blocking to support them shall be provided by the contractor.

**Packaged Air Units**

A packaged system typically consisting of some combination of an air conditioner, furnace, evaporator coils, condensers, humidifiers, air handlers, and other components, in one self-contained cabinet that is located outdoors, rather than "split" into an indoor unit and outdoor unit.

**Panel Board**

In an electrical installation, a single panel or group of panel units designed for assembly in the form of a single panel; includes buses, and may include switches as well as automatic overcurrent protective devices for the control of electrical circuits. Designed to be placed in a cabinet or cutout box and accessible from the front only.

**Panic Exit Device**

A door locking device used on exit doors; the door latch releases when a bar across the inside of the door is pushed.

**Parapet Wall**

An upward extension of a wall at the edge of a roof. Originally used to defend buildings from military attack, today they are primarily used as guard rails, to conceal rooftop equipment, reduce wind loads on the roof, and to prevent the spread of fires.

**Partial Occupancy**

Occupancy of a portion of a project or system, prior to final acceptance.

**Particleboard**

A large class of building boards made from wood particles and a binder.

**Payment Applications**

See Applications for Payment

**Penthouse**

A structure occupying usually less than half the roof area of a flat-roofed building, and most commonly used to house equipment for elevator, ventilation or air conditioning, or other mechanical or electrical systems serving the building.

**Percentage Fee**

A fee to be paid a firm which is based upon a negotiated percentage of the resultant construction contract.

**Performance Bond**

A bond of the contractor in which a surety guarantees to the owner that the work will be performed in accordance with the contract documents.

**Pile**

A concrete, steel, or wood column, usually less than 2 ft. in diameter, which is driven or otherwise introduced into the soil, usually to carry a vertical load or to provide lateral support.

**Pitch**

The slope of a roof, usually expressed as a ratio of vertical rise to horizontal run, as in 4:12 or 1/4" / Ft.

**Plaster**

Usually a mixture of gypsum or lime with sand and water, producing a paste-like material that is applied in the plastic state, usually over lath fastened to a surface such as a wall or ceiling, and forming a hard surface when the water it contains evaporates.

**Plastic Laminate**

A composite building material made from kraft paper, resin, and adhesives, bonded and compressed under heat. Laminate is often chosen for its realistic finish which can be designed to mimic other materials such as stone, tile, wood or metal. The decorative paper or melamine top

layer on a sheet of laminate is made from a high quality photographic image of these types of materials, and may contain true wood grains, stone veining, or other patterns and textures that add to the quality of the finish.

**Plenum**

In suspended ceiling construction, the space between the suspended ceiling and the underside of the deck above.

**Plumb**

Exactly vertical.

**Plumbing System**

Water supply, drainage, waste removal, and fire suppression systems like sprinklers.

**Polished Concrete Finishing**

A multi-step process where a concrete floor is mechanically ground, honed and polished with bonded abrasives in order to cut a concrete floor's surface, then refined with each cut in order to achieve a specified level of appearance.

**Polystyrene Foam Insulation**

A foamed plastic expanded chemically, mechanically or thermally to form a lightweight closed-cell structure, used as thermal insulation. See EPS and XPS.

**Polyvinyl (PVC) Roofing**

A single-ply white membrane roofing solution used on low-slope commercial or industrial roofs.

**Porcelain Tile**

A dense, fine-grained, smooth ceramic mosaic tile or paver, usually impervious.

**Portland Cement**

The most common type of cement in general use around the world as a basic ingredient of concrete, mortar, stucco, and non-specialty grout. Its name is derived from its resemblance to Portland stone which was quarried on the Isle of Portland in Dorset, England.

**Post-Occupancy Evaluation (POE)**

The process of analyzing how functional and comfortable a building is in a systematic and rigorous manner after users have been occupying it for some time. The POE generates recommendations based on all stakeholder groups' experiences of the building's effects on productivity and wellbeing.

**Precast Concrete**

A construction product produced by casting concrete in a reusable mold or "form" which is then cured in a controlled environment, transported to the construction site and maneuvered into place. Examples include precast beams and wall panels for tilt up construction.

**Pre-Design Services**

Services provided by an architect, typically as supplemental services, prior to schematic design. Pre-Design services vary by project, and may include master planning, site analysis and selection, geotechnical and structural studies, traffic studies, existing building condition assessment, programming, conceptual studies, blocking and stacking diagrams, project scheduling and project budgeting.

**Prefabricated Construction**

Prefabrication is the practice of assembling components of a structure in a factory or other manufacturing site, and transporting complete assemblies or sub-assemblies to the construction site where the structure is to be located.

**Preinstallation Conference**

Conducted by the contractor, pre-installation conferences take place before each construction activity that requires coordination with other construction, and are intended to set expectations, review and clarify ambiguities relating to all drawings and specifications, product data, application manuals, applicable standards, codes, sequencing and scheduling.

**Prime Contractor**

A contractor, often a general contractor, that has a contract with an owner.

**Primer**

A paint, applied as a first coat, which serves the function of sealing and filling on wood, plaster, and masonry; inhibits rust and improves the adhesion of subsequent coats of paint on metal surfaces.

**Process Phases**

The Architectural Design Process consists of distinct phases that guide a project from initial concept to completion. Each phase involves specific tasks, deliverables, and stakeholder collaboration. The typical phases of architectural design are Pre-design, Schematic Design (SD), Design Development (DD), Construction Documents (CDs), Bidding, Construction Contract Administration (CA), and Post-Occupation and close-out. SD through CA are what are called the Architect's basic services. Pre-Design and Post-Occupation phases are traditionally additional services that can incur additional fees.

**Product Data**

All information about a product that can be read, measured and structured into a usable format.

**Professional Liability Insurance**

A form of liability insurance which helps protect professional advice-, consulting, and service-providing individuals and companies from bearing the full cost of defending against a negligence claim made by a client, and damages awarded in such a civil lawsuit.

**Program**

A building's program outlines the project's goals, purpose, conditions and objectives. Prepared by or for an owner, with or without an architect's assistance, the program includes detailed requirements such as a complete listing of the rooms required, their sizes, special facilities, etc.

**Programming**

Part of the pre-development phase of a building project, it is the research and decision-making process that brings together your list of building wants and needs, ultimately identifying the scope of work to be designed – the Program.

**Progress Payment**

A partial payment made to the contractor during the progress of the work, on account of work completed and/or materials suitably stored.

**Project Architect**

The individual responsible for overseeing the architectural aspects of the development of a design, production of the construction documents (plans), and specifications. The position generally involves coordinating the needs of a client, possibly a designer and technical staff, and outside consultants such as structural, civil, and mechanical engineers, as well as interior designers and landscape architects.

**Project Closeout**

The final inspection, submission of necessary documentation, acceptance, and concluding payment on a construction project as required by the contract documents.

**Project Cost**

The total cost of a project including professional compensation, land costs, furnishings and equipment, financing and other charges, as well as the construction cost.

**Project Delivery Method**

The specific approach used to organize, manage, and execute a construction project from inception to completion. It outlines the roles, responsibilities, and relationships between the key stakeholders—such as the client, architect, contractor, and consultants—and determines how risks, costs, and timelines are managed. Examples are Design-Bid-Build (DBB), Design-Build (DB), and Construction Manager at Risk (CMAR).

**Project Scope**

The term used to describe what is included in the architect's professional services for a project.

**Project Site**

The area or plot of ground with defined limits on which a building, project, park, etc. is located or proposed to be located.

**Proposal Request (PR)**

A document prepared by the architect that informs the contractor of a proposed change in the work and appropriately describes in written and/or graphic form the change, requesting an itemized labor and material quotation be submitted by the contractor for the proposed modifications to the contract documents.

**Provide**

Furnish and install, complete and ready for the intended use. (See "Furnish" and "Install").

**Public Private Partnership (P3)**

A contractual arrangement that is formed between public and private-sector partners. These arrangements typically involve a government agency contracting with a private partner to renovate, construct, operate, maintain, and/or manage a facility or system, in whole or in part, that provides a public service. Under these arrangements, the agency may retain ownership of the public facility or system, but the private party generally invests its own capital to design and develop the properties. Typically, each partner shares in income resulting from the partnership.

**Public Way**

Per the IBC, a street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet.

**Rafter**

One of a series of inclined members to which roof decking is attached.

**Rainscreen**

An exterior wall assembly or system in which the wall cladding stands off from the moisture-resistant surface of an air/water barrier applied to the sheathing to create a capillary break and to allow drainage and evaporation.

**Rake**

The sloping edge of a gable.

**Ramp**

A walking surface with a running slope steeper than 1:20, or 5 percent. The slope of ramps used as part of a means of egress cannot exceed 1:12, or 8 percent. Other pedestrian ramps cannot exceed 1:8, or 12.5 percent slope.

**Receptacle**

An electrical device installed in an outlet box to receive a plug for the supply of electrical current.

**Record Documents**

Drawings prepared by the design team at the end of a project illustrating the constructed “as-built” conditions of the project for the Owner’s records. Record Drawings are based on as-built drawings received from the contractor.

**Reflected Ceiling Plan (RCP)**

A drawing showing the items located on the ceiling of a space, drawn to display a view of the ceiling as if it was reflected onto a mirror on the floor.

**Reimbursable Expenses**

Amounts expended for or on account of the project which, in accordance with an agreement, are to be reimbursed by the owner.

**Reinforced Masonry**

Masonry units in which reinforcement, usually steel rods, is so embedded that the materials act

together in resisting forces. Certain cores of hollow masonry units are filled solidly with grout, encasing the reinforcing.

**Release of Lien**

An instrument executed by one supplying labor, materials or professional services on a project which releases his mechanic’s lien against the project property.

**Request for Information / Interpretation (RFI)**

A process initiated by a contractor, subcontractor or supplier, to request information or raise concerns that must be formally answered by the owner or the design team. The answer can change the project’s scope of work and may also require approval when it affects the contract cost.

**Request for Proposal (RFP)**

A procurement document issued by an organization looking for the right firm to provide architectural services. The RFP is essentially a questionnaire that outlines an architectural project and includes a list of requirements and questions. The purpose of the document is to gather vendor information in a standardized way to enable clear comparisons. Questions about fees or cost are sometimes included. (See RFQ.)

**Request for Qualifications (RFQ)**

An RFQ isn’t the only procurement document commonly used in architectural projects. Because of the vast number of architectural firms as well as the technical requirements of building projects, often the process begins with a request for qualifications (RFQ). When used as a first step, the RFQ helps buyers narrow down their vendor selection to a short list based on the firms’ qualifications and experience. Typically, an RFQ does not include questions about fees or cost. (See RFP.)

**Resilient Channel**

A fabricated sheet metal member having two faces with a flexible interconnection; used for attaching gypsum board to studs or joists without a solid connection to reduce the transmission of noise and vibration.

**Resilient Flooring**

A manufactured interior floor covering, in either tile or sheet form, and typically made of a resilient material like PVC, rubber, linoleum and cork, which regains its original shape and size after compression.

**Resinous Flooring**

Often referred to as seamless floors or epoxy flooring, resinous floors are poured floors built for functionality and aesthetics. They are layered two-part systems, either epoxy, polyurethane or acrylic, which are applied onsite, creating a smooth, non-porous, chemical-resistive surface.

**Retainage**

A sum withheld from progress payments to the contractor in accordance with the owner-contractor agreement. Commonly, 10% of the amount due is retained until the project reaches 50% completion, then the amount of the retainage is “frozen” until payment of retainage is requested at Substantial Completion. An amount sufficient to cover the completion of punch items is withheld at that time, and the remainder of the retainage is released.

**Retaining Wall**

A freestanding or laterally-braced wall that resists lateral and other forces from the material in contact with one side of the wall.

**Revit**

Autodesk Revit is a building information modelling software for architects, landscape architects, structural engineers, mechanical, electrical, and plumbing (MEP) engineers, designers and contractors.



The software allows users to design a building and structure and its components in 3D, annotate the model with 2D drafting elements, and access building information from the building model's database.

### Riser

The vertical face of a stair step or platform. A water-supply, drainage, gas, steam, or vent pipe, electrical or data cable, or duct that extends vertically one full story or more to service several branches or a group of fixtures, distribute electrical power or data to distribution panels or hubs, or to distribute air to branch ducts, on different floors of a building.

### Rooftop Unit (RTU)

A prefabricated encased room air conditioner that is mounted atop a roof to provide cooling for the rooms below.

### Rowlock

A brick laid on its edge so that its end is visible.

### Run

The horizontal distance covered by a flight of stairs, or between the landings of a ramp.

### Running Bond

In masonry, an arrangement in which bricks or stones are laid lengthwise; all courses are laid with the vertical joints of one course centered between those of adjacent courses.

### R-Value

A measure of how well a two-dimensional barrier, such as a layer of insulation, a window or a complete wall or ceiling, resists the conductive flow of heat. The thermal resistance of a material or component "per unit area." The higher the R-Value, the better the performance.

### Sample

A small specimen of material or a single unit of many such items to be furnished which conforms to the specified requirements, is submitted for review, and which establishes standards by which work will be judged.

### Sash

Any framework of a window, either movable (sliding or pivoting) or fixed.

### Scale Drawing

A drawing, usually considerably reduced in size from the actual or designed object, site, construction, or building, but which is drawn to scale, so that definite units represent units of larger magnitudes. E.g., 1/8" = 1'-0".

### Schedule of Values

A statement submitted by the contractor to the architect reflecting portions of the contract sum allotted for the various parts of the work and used as the basis for reviewing the contractor's applications for progress payments.

### Schematic Design (SD)

The initial phase of the basic architectural services, where broad ideas and concepts are translated into preliminary drawings and layouts. It serves as a foundation for the project's design direction, addressing spatial organization, functionality, massing, and aesthetics while considering site conditions, client requirements, and regulatory constraints.

### Scupper

An opening in a wall or parapet that allows water to drain from a roof.

### Section

A representation of a building, or portion thereof, drawn as if it were cut vertically to show the profile, makeup, or internal structure.

### Sectional Door

Doors for large openings, made up of panels, or sections, fixed together by strong hinges. Casters are fixed to

the panel edges allowing the door to move up and down a track system fixed to the door opening jambs.

### Selective Demolition

Demolition and removal of selected portions of a building or structure, or of selected site elements.

### Sheathing

Board or panel material used in floor, wall and roof assemblies, serving primarily to form a surface onto which other materials can be applied. Sheathing can be of a variety of materials, depending on its function.

### Sheet Carpeting

Carpeting produced on a wide loom and commonly sold in 12- to 15-foot-wide rolls. Typically laid atop carpet padding and cut to size for wall-to-wall installation. Also known as broadloom carpeting.

### Sheet Metal and Air Conditioning Contractors' National Association (SMACNA)

An international trade association known for its standards development work. SMACNA standards and manuals address all facets of the sheet metal industry, from duct construction and installation to air pollution control, energy recovery and roofing.

### Shingle Roofing

Roof shingles are a roof covering consisting of individual overlapping elements. These elements are typically flat, rectangular shapes laid in courses from the bottom edge of the roof up, with each successive course overlapping the joints below. Shingles are supported by the roof rafters and are made of various materials such as wood, slate, flagstone, metal, plastic, and composite materials such as fiber cement and asphalt shingles.

### Shop Drawing

Drawings, diagrams, illustrations, schedules, performance data, brochures and other data prepared by the contractor or any subcontractor, manufacturer, supplier, or distributor which illustrates how specific portions of the work shall be fabricated and/or installed, including their relationship to other portions of the work.

### Single Ply Membrane Roofing

Sheets of rubber and other synthetics that can be ballasted, chemically-adhered, or mechanically fastened to insulation to create a layer of protection for a building. Types of single-ply membrane commercial roofing types are Thermoplastic Polyolefin (TPO), Ethylene Propylene Diene Terpolymer (EPDM) and Polyvinyl Chloride (PVC).

### Single Prime Contracting

Bidding and contracting through a process in which only a general prime contractor has a contractual relationship with the Owner and all subcontractors are identified as subcontractors to the general prime contractor.

### Site Development

The process by which site design concepts are designed in detail and brought to realization on the ground. Site development elements typically include drainage, earthwork, utilities, roads, paths, exterior pavements, site structures, exterior signage, exterior lighting, site furnishings, lawns and plantings.

### Soffit

The exposed undersurface of any overhead component of a building, such as a roof overhang, arch, balcony, beam, cornice, lintel, or vault.

### Soft Costs

Sometimes referred to as "Development Costs", the indirect, non-physical costs associated with a building project. Unlike hard costs, which are directly related to the

construction (materials, labor, equipment), soft costs involve all the expenses that are not tied to the physical construction process but are essential for the project's planning, management, and legal aspects, such as Design Fees, Permitting, Financing costs, and Furniture, Fixtures and Equipment (FFE).

### Solid Surfacing

A man-made, non-porous, low-maintenance material used for surfaces such as countertops, or cast into a variety of shapes including sinks, shower pans and bathtubs.

### Sound Transmission Class (STC)

An integer rating of how well a building partition attenuates airborne sound, widely used to rate interior partitions, ceilings, floors, doors, windows and exterior wall assemblies. A higher number indicates more effective sound insulation than a lower number.

### Special Inspections

Inspection of construction requiring the expertise of an approved special inspector in order to ensure compliance with the code and the approved construction documents.

### Specifications

A part of the contract documents consisting of written technical descriptions and requirements to be satisfied by a given material, design, product or service, including quality standards and workmanship.

### Split System Air Conditioning

An air conditioning or heating system that has both indoor and outdoor units that are connected with copper refrigerant tubing.

### Spray-Applied Polyurethane Foam Insulation

A versatile insulation material, available in "closed-cell" and "open-cell" varieties, that is sprayed onto building surfaces or into cavities

where it quickly expands and molds itself to its surroundings. Closed-cell polyurethane foam (CCPF) has a high R-value, and acts a vapor barrier.

### Sprayed Fire Resistive Materials (SFRMs)

Passive fire-protection materials intended for direct application to structural building members. Predominantly cementitious or mineral-fiber based, with fire-resistive qualities and physical characteristics varying widely between the respective types.

### Standing Seam Metal Roofing

A standing seam system consists of wide, relatively flat metal panels that have vertical legs (or ribs) along each long edge. The metal panels are designed to lock together, and are mounted to the roof by being fastened to the sheathing underneath through a series of concealed clips.

### Stipulated Sum

See Lump Sum.

### Stored Materials

Materials and items purchased ahead of their planned use in a construction project, that have not yet been incorporated into the building. Stored materials are typically required to be stored in a bonded warehouse in a manner that is separate and identifiable from other stored materials and accessible for inspection.

### Storefront Framing

A lightweight system of exterior cladding, composed predominantly of extruded aluminum framing and insulating glass, which is attached to the structural element of a building and intended to be single span structures, anchored at the head and sill only.

### Structural Steel Framing

A building technique with a "skeleton frame" of vertical steel columns and horizontal beams, typically constructed in a

rectangular grid to support the floors, roof and walls of a building which are all attached to the frame.

### Structural System

The framework that supports and stabilizes the building, including foundations, columns, beams, and load-bearing walls.

### Subcontractor

A person or organization who has a contract with the prime contractor, or another subcontractor, to perform a portion of the work on the project or to supply equipment or material. A subcontractor may execute a contract with a sub-subcontractor.

### Submittal (Action, Informational)

Written and graphic information and physical samples provided by a contractor, subcontractor or supplier to the general contractor, then submitted to the design team for review of dimensions, configuration, components, materials, aesthetic qualities, etc. before the submitted items are purchased, fabricated and/or delivered to the project. Submittals can be presented in various formats such as shop drawings, data sheets on equipment, and material samples. Submittals are required primarily for the design team to review them for the limited purpose of checking for conformance with the information given and the design concept expressed in the Contract Documents.

### Substantial Completion

A legal term that refers to the stage where the work on a construction project is certified as being sufficiently complete and in compliance with the contract, such that the Owner can begin occupying the project for its intended purpose.

### Substitution

A material, product, or process offered in lieu of, and as being equivalent to, a specified material product or process.

### Supplementary General Conditions

Formal modifications to the General Conditions on a construction contract. When formally issued by an Owner, Supplementary General Conditions are prepared in a separate document, such as an amendment or addendum, and its provisions supersede the General Conditions of the contract.

### Sustainable Design

The philosophy of designing physical objects, the built environment, and services to comply with the principles of ecological sustainability and also aimed at improving the health and comfortability of occupants in a building. Sustainable design seeks to reduce negative impacts on the environment, the health and well-being of building occupants, thereby improving building performance. The basic objectives of sustainability are to reduce the consumption of non-renewable resources, minimize waste, and create healthy, productive environments.

### Sustainability Systems

Energy management, renewable energy integration, water conservation, and green building strategies.

### Switchgear

Electrical disconnect switches, fuses or circuit breakers used to control, protect and isolate electrical equipment. Switchgear is used both to de-energize equipment to allow work to be done and to clear faults downstream.

### Temporary Facilities

Facilities used for the limited time or purpose only, such as for the duration of a construction project. These typically include buildings (construction offices, storage sheds, warehouses, etc.), utilities (water, electricity, etc.), and infrastructures (fencing, pedestrian protection, site security systems, trash removal, etc.) to be used during the construction activities.

### Testing, Adjusting and Balancing (TAB)

The three major steps used to achieve proper operation of heating, ventilation, and air conditioning systems. TAB usually refers to commercial building construction and the specialized contractors who employ personnel that perform this service.

### Testing Agency

An agency approved by the Owner and architect as qualified and equipped for testing of products, materials, equipment and installations in accordance with nationally recognized standards.

### Testing Services

Testing undertaken during the construction phase of the work as specified, and performed by a Testing Agency.

### Thermoplastic Polyolefin (TPO) Roofing

Thermoplastic polyolefin is a roofing material introduced in the early 90s, and is a single-ply roofing membrane composed of three layers (a TPO polymer base, a polyester-reinforced scrim, and a TPO compounded top ply).

### Tile Carpeting

A tile made of carpeting material that is used for flooring.

### Tilt-up Construction

A construction technique for casting vertical concrete elements, such as wall panels, in a horizontal position at the job site and then tilting them to their final position in a structure.

### Traction (Electric) Elevator

The most common type of elevator. Elevator cars are pulled up by means of rolling steel ropes or flat steel belts over a pulley, or sheave. The weight of the car is balanced by a counterweight.

### Transformer

A device with two or more coupled windings, used to convert a supply of electric power at one voltage to another voltage.

**Transom**

A horizontal member, usually of wood, stone or aluminum, that separates a door from a window, fanlight, or panel above it; sometimes called a transom bar; An operable window hinged to the transom, directly above a door.

**Transom Light**

A glazed light above the transom bar of a door.

**Transparent Finish**

A clear and semi-transparent topcoat (such as varnish, shellac, or lacquer) applied to a wood substrate to provide a transparent or translucent film.

**Tread**

The horizontal surface of a step.

**U-Factor**

A measure of thermal transmittance of a material (such as insulation or concrete) or an assembly (such as a wall or window), expressed in the United States as BTU per hour-square feet-degrees Fahrenheit:  $\text{BTU}/(\text{h}\cdot\text{ft}^2\cdot^\circ\text{F})$ . Well-insulated parts of a building have a low thermal transmittance whereas poorly insulated parts of a building have a high thermal transmittance.

**Underlayment**

A material such as plywood or hardboard placed on a subfloor to provide a smooth, even surface for applying the finish.

The material used to cover a roof deck before shingles are applied.

**Unit Heater**

A direct-heating, factory-made, encased assembly including a heating element, fan and motor, and directional outlet.

**Unit Price**

Unit prices are items, such as portions of work or certain materials, for which a contractor provides separate prices on a per-unit basis, typically based on an

anticipated quantity stated in the contract documents. In practice, the specifications usually describe the mechanism by which the actual quantity of units will be measured. The contractor is to be compensated based upon the actual quantities used in the work.

**United States Green Building Council (USGBC)**

A private, membership-based non-profit organization that promotes sustainability in building design, construction and operation. USGBC is best known for its development of the Leadership in Energy and Environmental Design (LEED) green building rating systems and its annual Greenbuild International Conference and Expo. Through its partnership with the Green Business Certification Inc. (GBCI), USGBC offers a suite of LEED professional credentials that denote expertise in the field of green building. USGBC incentivizes LEED certification by awarding extra certification points to building projects completed with a LEED-certified professional on staff.

**Value Engineering (VE)**

An organized effort directed at analyzing designed building features, systems, equipment, and material selections for the purpose of achieving essential functions at the lowest life cycle cost consistent with required performance, quality, reliability, and safety.

**Vapor-Permeable**

Often referred to as breathability, vapor permeability describes a material's ability to allow water vapor to pass through it. Unlike bulk water holdout, which refers to water in its liquid form, vapor permeability concerns water in its gaseous form.

**Variable Air Volume (VAV)**

A type of heating, ventilating, and/or air-conditioning (HVAC) system. Unlike constant air volume (CAV) systems, which supply a constant

airflow at a variable temperature, VAV systems vary the airflow at a constant or varying temperature. The advantages of VAV systems over constant-volume systems include more precise temperature control, reduced compressor wear, lower energy consumption by system fans, less fan noise, and additional passive dehumidification.

**Variable Refrigerant Flow (VRF)**

VRF systems use refrigerant as the heating and cooling medium and vary the flow of refrigerant to indoor units based on demand. The refrigerant is conditioned by one or more condensing units (which may be outdoors or indoors, water or air cooled), and is circulated within the building to multiple indoor units. This ability to control the amount of refrigerant provided to the indoor units makes the VRF technology ideal for applications with varying loads or where zoning is required. Air handlers and large ducts are not used which can reduce the height required above a dropped ceiling. Structural impact is reduced as VRF uses smaller penetrations for refrigerant pipes instead of ducts.

**Vertical****Transportation System**

Elevators, escalators, and lifts for movement within multi-story buildings.

**Vinyl Asbestos Tile (VAT)**

A resilient, semiflexible vinyl floor tile with an asbestos backing, most commonly found in buildings constructed before the mid-1980s, and still found in many buildings. As the asbestos backing is sealed from the atmosphere by the overlaying vinyl, the risk of exposure to airborne fibers from asbestos-backed vinyl flooring is low unless the vinyl material is damaged or disturbed.

**Vinyl Composition Tile (VCT)**

A finished flooring material used primarily in commercial and institutional applications, frequently

chosen for high-traffic areas because of its low cost, durability and ease of maintenance.

### Volatile Organic Chemicals (VOCs)

Organic compounds that have a high vapor pressure at room temperature. Some VOCs are dangerous to human health or cause harm to the environment. Anthropogenic VOCs are regulated by law, especially indoors, where concentrations are the highest. Most VOCs are not acutely toxic but may have long-term chronic health effects.

### Waivers of Mechanic's Lien

In construction, a waiver is an express agreement by a claimant to waive its rights to assert a lien against the project in exchange for payment for performed work.

### Wall Covering

Material such as wallpaper or textured fabric used as a decorative covering for interior walls.

### Wall Section

A drawing that cuts a vertical "slice" through a building's wall and reveals the internal makeup of the wall and all of its components, including the structure, the continuity of elements such as insulation, weather barriers, and vapor retarders, transitions of materials and assemblies, and flashings, and serves as a key for details where the construction of the wall or roof cannot be clearly shown at the scale of the wall section.

### Wall Stop

A wall-mounted device used to prevent a door from opening too widely and damaging the wall.

### Warranty

A written document issued by a manufacturer or service provider that provides a guarantee of quality. When a product or service has a defect, or fails to meet that quality, the purchaser in possession of the

warranty can enact the guarantee to replace or repair the product or service. In construction, express warranties are issued by contractors and part of the construction agreement's documents.

### Waterproofing

A material, usually a membrane or applied compound, used to make a surface impervious to water.

### Waterstop

A premanufactured joint filler used to prevent the transmission of water through a concrete construction joint.

### Wayfinding

Strategies, design elements, and systems that help people navigate and orient themselves within a built environment.

### WELL Building Standard

The WELL Building Standard® is a performance-based system for measuring, certifying, and monitoring features of the built environment that impact human health and wellbeing, through air, water, nourishment, light, fitness, comfort, and mind. The WELL Building Standard® is third-party certified by the Green Business Certification Incorporation (GBCI), which administers the LEED certification program and the LEED professional credentialing program.

### Wireless Access Point (WAP)

A networking hardware device that allows other Wi-Fi devices to connect to a wired network.

### Work

All labor necessary to produce the construction required by the contract documents, and all materials and equipment incorporated or to be incorporated in such construction.

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