

CONSTRUCTION CONTRACT TERMINOLOGY

ALLOWANCE - in bidding, an amount budgeted for an item for which no exact dollar amount is available; a contingency for unforeseen costs; the classification of connected parts or members according to their tightness or looseness.

AS-BUILTS - edited construction drawings that indicate what was actually constructed, including adjustments made due to field conditions, change orders, etc.

CDs - construction or contract documents; drawings and specifications that set forth in detail the requirements for the construction of a project; also called working drawings.

CHANGE ORDER - a written order to a contractor authorizing a change from the original plans, specifications, or other contract documents, including a change in cost.

COST PLUS - an agreement under which a contractor or an architect is reimbursed for the direct and indirect costs of performance of the agreement and paid a fee for services; the fee is usually stated as a stipulated sum or as a percentage of cost.

DESIGN-BUILD - a term designating a contractor or subcontractor who provides both design and construction services.

DIVISIONS - the standard 16 Major Uniform Construction Index classifications used in specifying, pricing, and filing construction data.

EXCLUSIONS - items not included in an estimate or bid.

FINISH HARDWARE - visible, functional hardware that has a finished appearance, including hinges, locks, catches, pulls, and knobs.

GENERAL CONDITIONS - a general category for miscellaneous administration and common costs such as phone, supervision, toilets, office trailer, temporary power, etc.

NOTICE TO PROCEED - written communication issued by an owner to a contractor authorizing work to proceed and establishing the start date of construction

SCHEDULE OF VALUES - a statement furnished by a contractor to an architect and/or owner reflecting the portions of the contract sum allocated to the various portions of the work; also used as the basis for reviewing a contractor's applications for payment and for owner in submitting to lender.

SELECT BIDDER - a contractor which is one of a select list asked to bid or estimate project costs; normally, low bidder awarded the project.

SPECIALTIES - division 10 of the 16 Major Uniform Construction Index classifications, including toilet partitions and accessories, enamel boards, tack boards, lockers, louvers, signage, access flooring, fire extinguishers, etc.

STIPULATED SUM - a contract in which a specific dollar amount is set forth as total payment for performance of the contract, subject to any additions or deletions by change order; sometimes called "lump sum".

TAKE-OFF - a quantity tabulation taken from viewing construction drawings; part of the estimating process.

TI - tenant improvements.

COVERAGE RATIO - ratio of building footprint size to land size, usually expressed as a percentage (e.g., 50,000 sq. ft. building on 3.5-acre site has coverage ratio of 32.8%).

FLOOR AREA RATIO - similar to coverage ratio, but more common with office buildings, particularly multi-story; downtown office building of 300,000 sq. ft. on 40,000 sq. ft. lot has floor area ratio of 7.5:1.

A-201 GENERAL CONDITIONS - a document published by the American Institute of Architects setting forth the rights, responsibilities and relationships of the parties involved to the construction contract; usually appended to construction contract forms.

AIA CONSTRUCTION CONTRACT FORMS - the American Institute of Architects publishes a number of construction contract forms providing for different types of contracts between contractors and owners; types of forms include, but are not limited to: Stipulated Sum, Cost Plus, Stipulated Sum Short Form, etc.

CERTIFICATE OF OCCUPANCY - a certificate usually issued by the prevailing governmental authority.

SIZE - square footage of the property; two measurement standards are readily acceptable: Building Owners and Managers Association (BOMA) and the National Association of Industrial and Office Properties (NAIOP).

BOMA - standard measurement methods for office buildings including: Usable Area, Rentable Area, Store Area and Construction Area; for further information, contact Building Owners and Managers Association at 1201 New York Avenue, NW, Suite 300, Washington, DC 20005. Phone number: (202) 408-2662. Fax number: (202) 371-0181.

BOMA USABLE AREA - measures the actual occupiable area of a floor or an office suite and is of prime interest to a tenant.

BOMA RENTABLE AREA - measures the tenant's pro-rata portion of the entire office floor, excluding elements of the building that penetrate through the floor to areas below; the ratio of the usable area to rentable area is of interest to tenants and landlords, in order to determine how efficient the building is designed; percentage difference between rentable and usable called Loss Factor.

BOMA STORE AREA - measures the ground floor rentable area of an office building for occupancy as a store space.

BOMA CONSTRUCTION AREA - measurement used primarily to determine the building cost; not used for leasing purposes.

NAIOP - this area computation used for single or multiple tenant industrial/commercial facilities. It contains two measurement types: basic space and common space. The NAIOP standard is distinguished by BOMA primarily in that it measures to outside surfaces of the building including drip lines created by any overhangs or projections in contrast to the BOMA method which typically measures to the inside surface. For further information, contact NAIOP at 1215 Jefferson Davis Highway, P.O. Box 525, Merrifield, VA 22116-0525, phone (703) 979-3400, fax (703) 979-3409.

CONSTRUCTION LIENS - contractors, laborers, and material suppliers may file liens on properties, of different types depending upon the state of jurisdiction; typically, construction liens have priority related to the time of start of construction, and must be filed within a short period after completion of construction in order to be valid; lenders and owners typically require the contractors and material suppliers to provide lien releases, or partial lien releases prior to partial payment by the owner or lender.

TRIANGLE OF PARTIES - in a typical construction contract, there are three parties: owner, architect, and general contractor; the obligations and rights are divided between the three parties, in order to provide checks and balances throughout the process; general contractors typically write subcontracts with all of their subcontractors and material suppliers following execution of the general contract with the owner and architect.

BONDING - bonding is a type of insurance which can be procured by a contractor on behalf of an owner, in the event of financial failure of the general contractor; required in many public agency contracts, but not often used in private contracts; most private owners select a list of bidders which are qualified financially and operationally to perform the work, thereby saving the bonding insurance cost.

GUARANTEED MAX - a contract type in which the general contractor provides for a guaranteed maximum price based upon the scope of construction documents at time of entering into the contract, subject to additions or deletions by owners change orders; often combined with a cost sharing clause wherein some percentage of any savings below the guaranteed maximum are reimbursed to the contractor, thereby increasing contractor's profit and motivation to save costs.

WORKMANLIKE MANNER - a common law term describing a standard of work considering the type of construction and the accepted norm or standard in the local area for such work.

BUILDERS RISK INSURANCE - a type of insurance which is normally procured by the general contractor or owner to cover casualty loss on the property during the course of construction; for instance, fire, flood, vandalism, earthquake, etc.

CONSTRUCTION SCHEDULING

Modern construction scheduling is based upon the Critical Path Method (CPM), originally developed by the Navy for construction of ships and submarines. Essential features of a critical path schedule take into account the inter-relationship between an activity which must be completed prior to start of the next activity, a relationship known in scheduling as precedence. A number of definitions are helpful in understanding these schedules:

ACTIVITY - description of the particular activity; activities can be broken down into the smallest elements or summarizing a number of work items.

DURATION - the amount of time, usually in working days, to complete the activity under normal circumstances, the computerized scheduling programs automatically take into account weekends and holidays; when completing manually, it is best to compute the duration in calendar days.

EVENT/MILESTONE - an activity in the schedule which is instantaneous or near instantaneous duration such as approval or signature; for instance, if lease negotiation is expected to take 14 days, then lease execution would be an event/milestone occurring after lease negotiation.

EARLY START DATE - the earliest time an activity can be started, based upon preceding activities which must be completed first; for instance, the earliest start date for the building permit review process usually cannot be until completion of the construction documents.

EARLY FINISH DATE - the result of adding the duration to the early start; assumes that the activity is started immediately upon the early start date.

LATE FINISH DATE - the date established by determining the latest date upon which an activity must be completed in order to allow the next activity to occur without delay.

FLOAT - the number of days difference between the early finish and late finish dates; if an activity has float, then it does not have to be started immediately on the early start date in order to be completed by the late start date affecting subsequent activities; float most often occurs when a subsequent activity start date is constrained by another activity; for instance, if it is expected to take 30 days to get a building permit but only 14 days to complete the lease agreement, then construction of the tenant improvements probably could not start until obtaining a building permit thereby giving the lease activity 14 days of float since it must only be completed prior to starting the tenant improvement construction.

CRITICAL PATH - a critical path through the construction schedule is typically highlighted and includes those activities without any float which must be completed, resulting in whole project completed at the earliest time; the other activities in the schedule are not critical in the sense they have float time associated with their completion.

CRASHING THE SCHEDULE - if a preliminary schedule is written based upon the estimated duration for each activity and results in a completion date which is too late, then the scheduler can go back through each activity to determine which can be crashed or contracted in order to ultimately complete the whole project sooner; crashing activities schedule can be accomplished by a number of methods including overtime, air freighting of materials or obtaining a partial building permit so construction can begin prior to receiving the full building permit.

SCHEDULE DIAGRAMS - critical path schedules are typically displayed in two fashions: Precedence diagram and Gantt chart.

PRECEDENCE DIAGRAM - activities are depicted in boxes which are interconnected with arrows; activities starting on the left side of the page leading to the end of activities on the right side of the page; often detail schedules for complex projects can be very large, perhaps covering a whole wall; each activity box has a description of the activity, early start, early finish, and late finish dates and the duration; from the activity box, an arrow is drawn to the subsequent activity.

GANTT CHART – the most common type of schedule, primarily because it is easier to read for laymen, and can be printed on a series of 8 1/2 x 11 paper sheets; it contains a table at the left side depicting the activity, duration, early state, early finish, and sometimes late finish dates; then on the right side of the page it depicts a weekly calendar at the top lined up with bars or lines corresponding to the activities on the left; typically, the critical path activities are depicted by darkened bars and the activities with float open bars.