

Construction Terminology Cheat Sheet

Planning

Assignable Square Footage (ASF)

Usable square footage within a physical space (measured from finished wall to finished wall).

Addendum (Addenda)

Written information adding to, clarifying or modifying the bidding documents. An addendum is generally issued by the owner to the contractor during the bidding process and as such, addenda are intended to become part of the contract documents when the construction contract is executed.

Feasibility Study

A study based on a Project Program to determine a project budget, schedule and requirements for starting a Capital Improvement Project. The feasibility study usually includes a conceptual design, site investigation such as geotechnical and utility infrastructure, cost estimating including construction costs, project management fees, financing requirements and investigation into any issue that will have an effect on the outcome of the project. A report is provided to describe if the project is feasible and what will be required to move forward with the project.

Group I Equipment

Building Elements that are considered "part of the building". These items are typically built into the structure of the building and are not movable. ie: wall mounted items, lighting, cabinetry, a/v equipment, etc.

Group II Furniture/Equipment

Furniture/Equipment are movable and can be relocated from one space to another with ease. ie: tables, chairs, desks, office furniture, classroom equipment, lab equipment, etc. Also known as FF&E (Furniture, Fixtures and Equipment).

Gross Square Footage (GSF)

Square footage that includes all unusable space within a building, ie: corridors, custodian closets, inside walls, utility spaces, etc.

Major & Minor Capital Improvement Project

A Major Capital Improvement Project is any project using Campus or CSU financing over \$632,000. All projects under \$632,000 are considered Minor Capital Improvement Projects.

Performance Specifications

Performance Specifications contain the minimum acceptable standards and results to be achieved rather than dictating methods. This includes specifying a minimum acceptable quality standard (above normal code requirements) and aesthetic values. Using performance specifications in lieu of material specifications allow the design/build team the greatest flexibility in meeting the project goals.

Project Program and Programming

A Project Program is all the physical requirements of a Capital Improvement Project. This includes all occupancy and use requirements as well as infrastructure requirements to meet the user's needs. The Project Program is not a design, but the basis for the design. Programming is the process of creating the Project Program and usually involves a series of meetings with all the potential stakeholders to determine the requirements for the project.

Design

CSI Master Format

The CSI Master Format is a system of numbers and titles for organizing construction information into a regular, standard order or sequence. By establishing a master list of titles and numbers Master Format promotes standardization and thereby facilitates the retrieval of information and improves construction communication. It provides a uniform system for organizing information in project manuals, for organizing project cost data, and for filing product information and other technical data

Construction Documents (CD Phase)

Detailed plans indicating how to construct the physical spaces of a building – or All drawings, specifications and addenda associated with a specific construction project.

Constructability Review

Review of plans and specifications either by a contractor or third party reviewer to ensure accuracy and proper detail of the construction plans.

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Leadership in Energy and Environmental Design (LEED)

Sustainable design through use of materials, construction practices, efficient building design, etc.

Preliminary Design (PD Phase)

Further developed plans showing physical spaces and attributes such as doors, windows, walls, etc.

Schematic Design (SD Phase)

Conceptual plan showing locations of program space at scaled size.

Specifications

A detailed, exact statement of particulars, especially statements prescribing materials and methods; and quality of work for a specific project. The most common arrangement for specifications substantially parallels the CSI (Construction Specification Institute) format. (see CSI)

Construction

Alternate Bid

Amount stated in the bid to be added or deducted from the base bid amount proposed for alternate materials and/or methods of construction.

Architects Supplemental Information (ASI)

An ASI is a form used by an architect to specify additional instructions and interpretations relating to a set of architectural plans. An ASI is also issued to order minor changes in the architectural work to be accomplished, changes that may vary from the original plans.

As-Built Drawings (also known as Record Drawings)

Contract drawings marked up to reflect changes made during the construction process. It is good practice to make *As-Built drawings* by marking the changes on reproducible drawings such as sepias for duplication purposes later

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.

Building Envelope (Sometimes referred to as Building Shell)

1. The waterproof elements of a building which enclose conditioned spaces through which thermal energy may be transferred to or from the exterior.
2. The outer structure of the building. (See Tenant and Leasehold improvements for building interiors)

Building Manager

The person responsible for monitoring the buildings to which they are assigned

Campus Master Plan

The document that comprises the policies, guidelines and development standards for the campus

Capital Construction Project

Any project in which the total budget exceeds \$632K

Change Order

A written document between the owner and the contractor signed by the owner and the contractor authorizing a change in the work or an adjustment in the contract sum or the contract time. A change order may be signed by the architect or engineer, provided they have written authority from the owner for such procedure and that a copy of such written authority is furnished to the contractor upon request. The contract sum and the contract time may be changed only by change order. A change order may be in the form of additional compensation or time; or less compensation or time known as a Deduction (from the contract) the amount deducted from the contract sum by change order.

Construction Manager at Risk (CM@R)

Delivery method in which the Architect and Contractor hold separate contracts with the owner (CSU) but work as a collaborative team during design.

Critical Path

The set of activities that must be completed on time for the project completion date to be met. Activities on the critical path have no slack time.

Date of Substantial Completion

The date certified by the architect when the work or a designated portion thereof is sufficiently complete, in accordance with the contract documents, so the owner may occupy the work or designated portion thereof for the use for which it is intended.

Deferred Maintenance

Maintenance projects not included in the maintenance process nor in the capital repair process due to a lack of funding

Division of the State Architect (DSA)

The state architect and subordinates typically form an organizational unit named the Division of the State Architect. This entity oversees the design and/or construction of public building within the state.

Estimate

An approximation of the expected cost to complete the work/project as outlined in the scope of work

Facilities Services

The organization that is responsible for overseeing the planning, development, operation, and maintenance of university buildings, structures and grounds

General Conditions

A written portion of the contract documents set forth by the owner stipulating the contractor's minimum acceptable performance requirements including the rights, responsibilities and relationships of the parties involved in the performance of the contract. General conditions are usually included in the book of specifications but are sometimes found in the architectural drawings.

Guaranteed Maximum Price (GMP)

The agreed upon maximum price between the Contractor and Owner to build a project per the drawings and specifications developed.

Hazardous Waste

A waste substance that may cause severe illness, death, or may cause a substantial hazard to health or the environment when improperly managed

JOC

Job Ordering Contracting (JOC) is a way for organizations to get numerous, commonly encountered construction projects done quickly and easily through multi-year contracts. JOC reduces unnecessary levels of engineering, design, and contract procurement time along with construction project procurement costs by awarding long-term contracts for a wide variety of renovation, repair and construction projects.

Minor Construction Project

Minor Capital Outlay (construction) projects are limited to those projects that correct deficiencies, provide new or improved facilities, add access or provide equipment for a minor capital outlay project whose estimated total cost is \$632,000 or less. Minor construction does not include any work classified as maintenance or repair. Projects may not be grouped unless they are for similar work within one building or complex.

Move Budget Estimate

As opposed to a Small Project Approval Form (SPAF), a Move Budget Estimate is for any small furniture reconfiguration, new furniture order and/or furniture or box move. The move budget estimate can also include small electrical and cable work, patching/painting and carpeting of an office or small area.

Notice of Completion (NOC)

Written notice issued by the owner of a project (or his or her agent) to notify concerned parties that all work on the project has been completed. This notice also sets the period within which concerned parties may exercise their lien rights against one another.

Plan Check

A process in which your building plans are reviewed to make sure they comply with basic safety, engineering and planning rules.

Project Architect

The person, firm or corporation appointed by the Owner to provide a design, contract documents, and contract administration of construction work

Project Manager

The person that coordinates and facilitates the project and project sponsors' goals in accordance with the Project Review Team's recommendations and requirements

Project Review Team

A group of representatives involved in the project coordination effort, that cooperatively reviews and develops the scope of work as it relates to the planning, development, long-term operation, and maintenance of campus buildings and structures.

Punch List

A list of deficiencies, incomplete, or unacceptable work items compiled by the project manager during the final inspection of a project

Renovation

Total or partial upgrading of a facility to higher standards of quality or efficiency. Under certain conditions a renovation may also be classified as an improvement.

Request for Information (R.F.I.)

A written request from a contractor to the owner or architect for clarification or information about the contract documents following contract award.

Request for Proposal (RFP)

A request for proposal (RFP) is a solicitation made, often through a bidding process, by an agency or company interested in procurement of a commodity, service or valuable asset, to potential suppliers to submit business proposals.

Rough Order of Magnitude (ROM)

Estimate of costs and time when requirements aren't specified in early stages of project

Schedule of Values

A statement furnished by the contractor to the architect or engineer reflecting the 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.

Scope Changes

A change to the written and agreed upon scope of work requested by the customer resulting from unanticipated occurrences during the project. Scope changes may or may not involve a change in project cost or time on a change order.

Scope of Work

A written statement or list of tasks, reached through consultation with department personnel and defines the actual work to be done. It is presented to the department either on a drawing or as a separate document.

Small Project Approval Form (SPAF)

A set of documents used by PDC to confirm funding for a small project from the initiating department and their VP/Provost.

State Fire Marshal (SFM)

The Office of the State Fire Marshal supports the mission of the CAL FIRE by focusing on fire prevention. The Office of the State Fire Marshal provides support through a wide variety of fire safety responsibilities including: regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death and destruction by fire; by providing statewide direction for fire prevention within wildland areas; by regulation hazardous liquid pipelines; by developing and reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

Strategic Plan

A plan that projects programs five to ten years for most business functions. Some strategic facility management plans project three to five years.

Time and Materials (T&M)

A written agreement between the owner and the contractor wherein payment is based on the contractor's actual cost for labor, equipment, materials, and services plus a fixed add-on amount to cover the contractor's overhead and profit.

Value Engineering

Evaluation of construction methods and/or materials to determine which have the net result of reducing costs, consistent with specified performance, reliability, maintainability, aesthetic, safety, and security criteria.

Computer Programs**ArcMap**

ArcMap is the main component of ESRI's ArcGIS suite of geospatial processing programs, and is used primarily to view, edit, create, and analyze geospatial data. ArcMap allows the user to explore data within a data set, symbolize features accordingly, and create maps.

AutoCAD

AutoCAD is a commercial software application for 2D and 3D computer-aided design (CAD) and drafting, available since 1982 as a desktop application and since 2010 as a mobile web- and cloud-based app marketed as AutoCAD 360.

Building Information Modeling (BIM)

A process involving the generation and management of digital representations of physical and functional characteristics of places

DWG

DWG (from *drawing*) is a binary file format used for storing two- and three- dimensional design data and metadata. It is the native format for several CAD packages including DraftSight, AutoCAD, IntelliCAD (and its variants) and Caddie. In addition, DWG is supported non-natively by many other CAD applications.

ESRI

Environmental Systems Research Institute (aka ESRI) is an international supplier of Geographic Information System (GIS) software, web GIS and geodatabase management applications. The company is headquartered in Redlands, California.

Geographic Information System (GIS)

A computer system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data.

Global Positioning System (GPS)

The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites. The system provides critical capabilities to military, civil and commercial users around the world. It is maintained by the United States government and is freely accessible to anyone with a GPS receiver.

MEP

Mechanical, electrical and plumbing (MEP) drawings are part of the standard drawings within the construction set of blueprints.

Redlines

A red-line drawing is essentially an intermediate drawing that shows corrections or changes to a previous drawing. The term red line literally comes from the (typically) red pen used to amend the drawings by hand. These changes mark-ups show changes made to the drawing subject matter during the manufacture or construction of the product

Revit

Autodesk Revit is Building information modeling (BIM) software for architects, structural engineers, MEP engineers, designers and contractors. It 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 models database. Revit is 4D BIM capable with tools to plan and track various stages in the building's lifecycle, from concept to construction and later demolition.

Budget and Accounting Terms**Allocation**

The distribution of funds from one account to one or more accounts or appropriations.

Bond

A method of financing capital projects through long-term borrowing.

Budget Transfer

The movement of budget dollars from one financial unit to another.

Cash Flow

The pattern of income and expenditures, as of a company or person, and the resulting availability of cash.

Chargeback

An expenditure made for or on behalf of another governmental unit, fund, or department, or for a private individual, firm, or corporation which will subsequently be recovered in cash or its equivalent.

Chartfield String

A unique financial code used to identify where funds are to be deposited or removed, it should consist of Department/Fund/Account/Program/Class/Project/Chargeback Code

Claim Schedule

A schedule of invoices prepared and submitted by a state department to the Controller for payment to the named claimants.

Expenditure Transfer

An after-the-fact reallocation of an expense.

General Fund

The state fund into which non-dedicated revenues are deposited and from which the majority of state expenditures are made.

Project Cost

Funds spent on completing a project. Project cost includes construction costs.

Purchase Order (PO)

Request required when purchasing materials, equipment or supplies from a vendor.

Purchase Order Amendment (POA)

Form required when the final invoice amount differs from the Purchase Order (PO) amount

Revenue Bond

A bond payable from a specific source of revenue and to which the full faith and credit of an issuer with taxing power is not pledged. Pledged revenues may be derived from operation of the financed project, grants and excise or other specified taxes. Generally, no voter approval is required prior to issuance.

CSUSM Campus Acronyms

AA - Academic Affairs <http://www.csusm.edu/aa/>

AAFSA - African American Faculty & Staff Association <http://www.csusm.edu/aafsa/>

AALC - Academic Affairs Leadership Council http://www.csusm.edu/aa/committees_councils/aalc.html

ACD - Academic Hall http://www.csusm.edu/pdc/Projects_Completed/AcademicHall_Complete.html

APC - Academic Policy Committee <http://community.csusm.edu/course/view.php?id=380>

ARF - Application Rating Form www.csusm.edu/uarsc/documents/hr/applicationratingform.doc

ASI - Associated Students, Inc. <http://www.csusm.edu/asi/>

AVP- Associate Vice President

BFS- Business and Financial Services <http://www.csusm.edu/fab/>

BLP- Budget and Long Range Planning Committee <http://community.csusm.edu/course/view.php?id=381>

BOT- Board of Trustees

CAMP - College Academic Master Plan
http://www.csusm.edu/policies/active/documents/university_academic_master_planning_process.html

CCF- Center for Children & Families <http://www.csusm.edu/ccf/>

CE- Community Engagement <http://www.csusm.edu/community/>

CFA- California Faculty Association <http://www.calfac.org/csu-san-marcos>

CHABSS- College of Humanities, Arts, Behavioral & Social Sciences <http://www.csusm.edu/chabss/>

CMS- Common Management System <http://www.csusm.edu/cms/>

CO-Chancellor's Office <http://www.csusm.edu/accessibility/policies/ChancellorPolicies/>

CoBA- College of Business Administration <http://www.csusm.edu/coba/>

CoEHHS- College of Education, Health and Human Services <http://www.csusm.edu/cehhs/>

CoSM- College of Science & Math <http://www.csusm.edu/csm/index.html>

CSUEU- California State University Employees Union <http://www.csusm.edu/csm/index.html>

DSS- Disabled Student Services <http://www.csusm.edu/dss/>

EAP- Employee Assistance Program <http://www.csusm.edu/hr/benefits/employeeassistanceprogram.html>

EC- Executive Council <http://www.csusm.edu/president/organization/executive-council.html>

ECS- Events and Conference Services <http://www.csusm.edu/events/>

EMS- Enrollment Management Services <http://www.csusm.edu/studentaffairs/organization/index.html>

EO-Executive Order <http://www.csusm.edu/rms/rm/csueo.html>

EOC- Emergency Operations Center <http://www.csusm.edu/rms/rm/csueo.html>

ESP- Employee Status Pages <http://www.csusm.edu/iits/support/tsadmin/esp.html>

FAS- Finance and Administrative Services <http://www.csusm.edu/fas/index.html>

FASLC- Finance and Administrative Services Leadership Council <http://www.csusm.edu/fas/expectations/faslc.html>

FDM- Facilities Development and Management <http://www.csusm.edu/fdm/>

FTE- Full Time Equivalent <http://www.csusm.edu/pdc/campus-master-plan/SUAM9045-9050.pdf>

HSI- Hispanic Serving Institutions <http://www.csusm.edu/hsi/index.html>

HRPS- Human Resources and Payroll Services <http://www.csusm.edu/hrps/>

IITS -Instructional and Information Technology Services <http://www.csusm.edu/iits/>

LAFS- Latino Association of Faculty & Staff <http://www.csusm.edu/lafs/>

LATAC- Library & Academic Technology Committee <http://community.csusm.edu/course/view.php?id=63>

LGBTA- Lesbian, Gay, Bisexual, Transgender, Ally <http://www.csusm.edu/orgs/lgbta.html>

MOU-Memorandum of Understanding
<http://www.csusm.edu/fa/ttfacultyresources/ttdocumentfiles/MOU%20for%20Joint%20Appointment.pdf>

MPP- Management Personnel Plan http://www.csusm.edu/policies/active/documents/management_personnel_plan_mpp.html

PAN- Personnel Action Notice www.csusm.edu/hr/docs/panguidelines.doc

PCBO- Partners in Campus Business Operations <http://www.csusm.edu/fab/pcbo/index.html>

PO- Purchase Order <http://www.csusm.edu/uarsc/documents/procedures/purchasing.html>

QI- Quality Improvement <http://www.csusm.edu/qi/>

SA- Student Affairs <http://www.csusm.edu/studentaffairs/>

SAND- Staff Appreciation and Development Committee <http://www.csusm.edu/sand/index.html>

SCO- State Controller's Office <http://www.sco.ca.gov/>

SDSU- San Diego State University <http://www.sdsu.edu/>

SETC- Service Employee Trades Council-United <http://www.setc-united.org/>

SLL- Student Life and Leadership <http://www.csusm.edu/sll/index.html>

SOAR- Student Outreach and Referral <http://www.csusm.edu/soar/index.html>

SUPA- Statewide University Police Association <http://supapolice.org/>

UA -University Advancement <http://www.csusm.edu/advancement/>

UAPD- Union of American Physicians and Dentists <http://www.uapd.com/>

UARSC- University Auxiliary and Research Services Corporation <http://www.csusm.edu/uarsc/>

UAW- United Auto Workers Union <http://uaw.org/>

UBC-University Budget Committee http://www.csusm.edu/aa/committees_councils/ubc.html

UVA- University Village Apartments <http://www.uvasanmarcos.com/index.php/prop/home>

WASC-Western Association of Schools and Colleges <http://www.acswasc.org/>

WACUBO- Western Association of College & University Business Officers <http://www.wacubo.org/>

Capital Planning, Design and Construction (CPCD)

CSU Facilities and Planning Forms

http://www.calstate.edu/cpdc/Facilities_Planning/forms.shtml

CPDC- Capital Planning, Design and Construction <http://www.calstate.edu/cpdc>

CPDC 1-1 (Document) Five Year Improvement Program

CPDC 1-4 (Document) Project Description

CPDC 1-4 (Document) Outyear Concept Project Description-Outyear

CPDC 2-3 Calculation of Space Requirements for Instructional Projects, State Funded

CPDC 2-4 Summary of Space Requirements for a Building, State Funded

CPDC 2-7 (Excel) Capital Outlay Estimate, State and Non-State Funded 2014-2015

CPDC 2-7.5 (Excel) Summary of Cost Components, State Funded

CPDC 2-8 (Document) Energy and Utilities Planning Checklist (included on 2-7)