# SECTION 01420

# REFERENCE STANDARDS AND ABBREVIATIONS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Construction Drawings, Technical Specifications, Addenda, and general provisions of the Contract, including Contract General Conditions and Supplementary General Conditions and other Division 1 Specification Sections, apply to this Section.

### 1.2 SECTION INCLUDES

A. Use of references in Drawings and Specifications, including requirements for copies of reference standards at Project site.

B. Definitions of terms used in Specifications and Drawings, including abbreviations, acronyms, names and terms which may be used in Specifications.

### 1.3 RELATED SECTIONS

A. Section 01410 - Regulatory Requirements: Identification of applicable building Code and other codes, ordinances and regulations applicable to performance of the Work.

### 1.4 USE OF REFERENCES

A. References: The Drawings and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual product specification Sections.

1. Wherever term "Agency" occurs in Standard Specifications, it shall be understood to mean the term used for University for purposes of the Contract.

2. Wherever term "Engineer" occurs in Standard Specifications, it shall be understood to mean Architect or other responsible design professional for purposes of the Contract.

3. Where reference is made to Standard Details, such reference shall be to the Standard Details accompanying the Standard Specifications.

B. Relationship to Drawings and Specifications: Such references are incorporated into and made a part of the Drawings and Specifications to the extent applicable.

C. Referenced Grades Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified on the Drawings or in the Specifications, provide the highest, best and greatest of the alternatives or options for the intended use and prevailing conditions.

D. Copies of Reference Standards:

1. Reference standards are not furnished with the Drawings and Specifications because it is presumed that the Contractor, subcontractors, manufacturers, suppliers, trades and crafts are familiar with these generally-recognized standards of the construction industry.

2. Copies of reference standards may be obtained from publishing sources.

E. Jobsite Copies:

1. Contractor shall obtain and maintain at the Project site copies of reference standards identified on the Drawings and in the Specifications in order to properly execute the Work.

2. At a minimum, the following shall be readily available at the site, as applicable to the Work:
   a. State Building Codes: As referenced in Section 01410 - Regulatory Requirements.
   b. Safety Codes: Occupational Safety and Health Act (OSHA) regulations and State of California, California Administrative Code, California Code of Regulations (CCR), Title 8 - Industrial Relations, Chapter 4, Subchapter 7, General Industry Safety Orders (Cal-OSHA), to extent applicable to the Work.
   c. General Standards:
      1) Underwriters Laboratories, Inc. (UL) Building Products Listing.
      2) Factory Mutual Research Organization (FM) Approval Guide.
      3) American Society for Testing and Materials (ASTM) Standards in Building Codes.
      4) American National Standards Institute (ANSI) standards.
   d. Fire and Life Safety Standards: All referenced standards pertaining to fire rated construction and exiting.
   e. Common Materials Standards: American Concrete Institute (ACI), American Institute of Steel Construction (AISC), American Welding Society (AWS), Gypsum Association (GA), National Fire Protection Association (NFPA), Tile Council of America (TCA) and Woodwork Institute of California (WIC) standards to the extent referenced within the Contract Specifications.
   f. Research Reports: ICC Evaluation Service, Inc. (ICC-ES), formerly ICBO Evaluation Service, Inc. (ICBO ES) Research Reports and National Evaluation Service, Inc. Reports (NER), for products not in conformance to prescribed requirements stated in California Building Code (CBC).
   g. Product Listings: Approval documentation, indicating approval of authorities having jurisdiction for use of product within the applicable jurisdiction.

F. Edition Date of References:
   1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of the Contract Drawings and Contract Specifications.

   2. All amendments, changes, errata and supplements as of the effective date shall be included.

G. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is presumed that the Contractor is familiar with and has access to these nationally- and industry-recognized specifications and standards.

## 1.5 DEFINITIONS OF TERMS

A. Basic Contract Definitions: Words and terms governing the Work are defined in the Contract General and Supplementary Conditions, as referenced in the Agreement.

B. Words and Terms Used on Drawings and in Specifications: Additional words and terms may be used in the Drawings and Specifications and are defined as follows:

   1. "Applicable:" As appropriate for the particular condition, circumstance or situation.

   2. "Approve(d):" Approval action shall be limited to the duties and responsibilities of the party giving approval, as stated in the Conditions of the Contract. Approvals shall be valid only if obtained in writing

and shall not apply to matters regarding the means, methods, techniques, sequences and procedures of construction. Approval shall not relieve the Contractor from responsibility to fulfill Contract requirements.

3. "And/or:" If used, shall mean that either or both of the items so joined are required.

4. "Directed:" Limited to duties and responsibilities of the University's Representative or Architect as stated in the Contract General Conditions, meaning "as instructed by the University's Representative or Architect, in writing, regarding matters other than the means, methods, techniques, sequences and procedures of construction. Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by the University's Representative or Architect", "requested by the University's Representative or Architect", and similar phrases. No implied meaning shall be interpreted to extend the responsibility of the University's Representative, Architect or other responsible design professional into the Contractor's supervision of construction.

5. "Equal" or "Equivalent:" As determined by Architect or other responsible design professional as being equivalent, considering such attributes as durability, finish, function, suitability, quality, utility, performance and aesthetic features.

6. "Furnish:" Means "supply and deliver, to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

7. "Indicated:" The term indicated refers to graphic representations, notes, or schedules on the Drawings, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown", "noted", "scheduled", and "specified" are used to help the reader locate the reference. There is no limitation on location.

8. "Install:" Describes operations at the Project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.

9. "Installer:"
   a. "Installer" refers to the Contractor or an entity engaged by the Contractor, such as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
   b. "Experienced Installer:" The term "experienced," when used with "installer" means having a minimum of 5 previous Projects similar in size to this Project, knowing the precautions necessary to perform the Work, and being familiar with requirements of authorities having jurisdiction over the Work.

10. "Jobsite:" Same as site.

11. "Necessary:" With due considerations of the conditions of the Project and as determined in the professional judgment of the Architect or other responsible design professional as being necessary for performance of the Work in conformance with the requirements of the Contract Documents, but excluding matters regarding the means, methods, techniques, sequences and procedures of construction.

12. "Noted:" Same as "Indicated."

13. "Per:" Same as "in accordance with," "according to" or "in compliance with."

14. "Products:" Material, system or equipment.

15. "Project Site:" Same as "Site."

16. "Proper:" As determined by the Architect or other responsible design professional as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, which are solely the Contractor's responsibility to determine.

17. "Provide:" Means "furnish and install, complete and ready for the intended use."

18. "Regulation:" Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as and rules, conventions and agreements within the construction industry that control performance of the Work.

19. "Required:" Necessary for performance of the Work in conformance with the requirements of the Contract Documents, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, such as:
    a. Regulatory requirements of authorities having jurisdiction.
    b. Requirements of referenced standards.
    c. Requirements generally recognized as accepted construction practices of the locale.
    d. Notes, schedules and graphic representations on the Drawings.
    e. Requirements specified or referenced in the Specifications.
    f. Duties and responsibilities stated in the Bidding and Contract Requirements.

20. "Scheduled:" Same as "Indicated."

21. "Selected:" As selected by the University's Representative, Architect or other responsible design professional from the full selection of the manufacturer's products, unless specifically limited in the Contract Documents to a particular quality, color, texture or price range.

22. "Shown:" Same as "Indicated."

23. "Site:" Same as "Site of the Work" or "Project Site;" the area or areas or spaces occupied by the Project and including adjacent areas and other related areas occupied or used by the Contractor for construction activities, either exclusively or with others performing other construction on the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.

24. "Supply:" See "Furnish."

25. "Testing Laboratory" or "Testing Laboratories:" An independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests. Refer to Section 01458 - Testing Laboratory Services.

26. "Testing and Inspection Agency:" Same as "Testing Laboratory."

## 1.6 ABBREVIATIONS, ACRONYMS, NAMES AND TERMS, GENERAL

A. Abbreviations, Acronyms, Names and Terms: Where acronyms, abbreviations, names and terms are used in the Drawings, Specifications or other Contract Documents, they shall mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable.

B. Abbreviations, General: The following are commonly-used abbreviations which may be found on the Drawings or in the Specifications:

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| AC or ac | Alternating current or air conditioning (depending upon context) |
| AMP or amp | Ampere |

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|---|---|
| C | Celsius |
| CFM or cfm | Cubic feet per minute |
| CM or cm | Centimeter |
| CY or cy | Cubic yard |
| DC or dc | Direct current |
| DEG or deg | Degrees |
| F | Fahrenheit |
| FPM or fpm | Feet per minute |
| FPS or fps | Feet per second |
| FT or ft | Foot or feet |
| Gal or gal | Gallons |
| GPM or gpm | Gallons per minute |
| IN or in | Inch or inches |
| Kip or kip | Thousand pounds |
| KSI or ksi | Thousand pounds per square inch |
| KSF or ksf | Thousand pounds per square foot |
| KV or kv | Kilovolt |
| KVA or kva | Kilovolt amperes |
| KW or kw | Kilowatt |
| KWH or kwh | Kilowatt hour |
| LBF or lbf | Pounds force |
| LF or lf | Lineal foot |
| M or m | Meter |
| MPH or mph | Miles per hour |
| MM or mm | Millimeter |
| PCF or pcf | Pounds per cubic foot |
| PSF or psf | Pounds per square foot |
| PSI or psi | Pounds per square inch |
| PSY or psy | Per square yard |
| SF or sf | Square foot |
| SY or sy | Square yard |
| V or v | Volts |

C. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

D. Undefined Abbreviations, Acronyms, Names and Terms: Words and terms not otherwise specifically defined in this Section, in the Instructions to Bidders, in the Contract General Conditions, on the Drawings or elsewhere in the Specifications, shall be as customarily defined by trade or industry practice, by reference standard and by specialty dictionaries such as the following:

1. Dictionary of Architecture and Construction, Third Edition (Cyril M. Harris, McGraw-Hill Book Company, 2000).

2. The American Institute of Architects (AIA) Document M101, "Glossary of Construction Industry Terms."

3. Encyclopedia of Associations, published by Gale Research Co., commonly available in public libraries.

**PART 2 - PRODUCTS**

Not Applicable to this Section.

## PART 3 - EXECUTION

Not Applicable to this Section.

**END OF SECTION**