# SECTION 01610

# BASIC PRODUCT REQUIREMENTS

## 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. General requirements for products used for the Work, including:
   1. General characteristics of products
   2. Product options
   3. System completeness
   4. Transportation and handling requirements
   5. Storage and protection of products
   6. Installation of products.

### 1.3 RELATED SECTIONS

A. Section 01330 - Submittals Procedures: Requirements applicable to submittals for "or equal" and substitute products.

B. Section 01410 - Regulatory Requirements: Codes and standards applicable to product specifications; minimum requirements.

C. Section 01420 - Reference Standards and Abbreviations: References to various standards, standard specifications, codes, practices and other requirements.

A. Section 01630 - Product Substitution Requirements: Requirements for product substitutions.

B. Section 01640 - Owner-Furnished Products: Requirements for installing products furnished by University.

C. Section 01650 - Product Delivery Requirements: General requirements for delivery of products to Project site.

D. Section 01660 - Product Storage and Handling Requirements: General requirements for storage and handling of products.

### 1.4 GENERAL PRODUCT REQUIREMENTS

A. Products, General: "Products" include items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock, and include materials, equipment, assemblies, fabrications and systems.
   1. Named Products: Items identified by manufacturer's product name, including make or model designations indicated in the manufacturer's published product data.

   2. Materials: Products that are shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the Work.

   3. Equipment: A product with operating parts that are motorized or manually operated and require connections such as wiring or piping.

B. Specific Product Requirements: Refer to requirements of Section 01450 - Quality Control and individual product Specifications Sections in Divisions 2 through 17 for specific requirements for products.

C. Minimum Requirements: Specified requirements for products are minimum requirements. Refer to general requirements for quality of the Work specified in Section 01450 - Quality Control and elsewhere herein.

D. Product Selection: Provide products that fully comply with the Contract Documents, are undamaged and unused at installation. Comply with additional requirements specified herein in Article titled "PRODUCT OPTIONS".

E. Standard Products: Where specific products are not specified, provide standard products of types and kinds that are suitable for the intended purposes and that are usually and customarily used on similar projects under similar conditions. Products shall be as selected by Contractor and subject to review and acceptance by the Architect.

F. Product Completeness: Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect. Comply with additional requirements specified herein in Article titled "SYSTEM COMPLETENESS".

G. Code Compliance: All products, other than commodity products prescribed by Code, shall have a current ICC Evaluation Service (ICC ES) Research Report or National Evaluation, Inc. Report (NER). Refer to additional requirements specified in Section 01410 - Regulatory Requirements.

H. Interchangeability: To the fullest extent possible, provide products of the same kind from a single source. Products required to be supplied in quantity shall be the same product and interchangeable throughout the Work. When options are specified for the selection of any of two or more products, the product selected shall be compatible with products previously selected.

I. Product Nameplates and Instructions:
   1. Except for required Code-compliance labels and operating and safety instructions, locate nameplates on inconspicuous, accessible surfaces. Do not attach manufacturer's identifying nameplates or trademarks on surfaces exposed to view in occupied spaces or to the exterior.

   2. Provide a permanent nameplate on each item of service-connected or power-operated equipment. Nameplates shall contain identifying information and essential operating data such as the following example:
      Name of manufacturer
      Name of product
      Model and serial number
      Capacity
      Operating and Power Characteristics
      Labels of Tested Compliance with Codes and Standards

   3. For each item of service-connected or power-operated equipment, provide operating and safety instructions, permanently affixed and of durable construction, with legible machine lettering. Comply with all applicable requirements of authorities having jurisdiction and listing agencies.

J. Mechanical Product Requirements: Comply with requirements specified in Division 23 - Mechanical.

K. Electrical Product Requirements: Comply with requirements specified in Division 26 - Electrical.

## 1.5 PRODUCT OPTIONS

A. Product Options: Refer to Contract General Conditions, Article 5.04. Provisions of Public Contract Code Section 03400 shall apply, as supplemented by the following general requirements.

B. Products Specified by Description: Where Specifications describe a product, listing characteristics required,

with or without use of a brand name, provide a product that has the specified attributes and otherwise complies with specified requirements.

C. Products Specified by Performance Requirements: Where Specifications require compliance with performance requirements, provide product(s) that comply and are recommended by the manufacturer for the intended application. Verification of manufacturer's recommendations may be by product literature or by certification of performance from manufacturer.

D. Products Specified by Reference to Standards: Where Specifications require compliance with a standard, provided product shall fully comply with the standard specified. Refer to general requirements specified in Section 01420 - Reference Standards and Abbreviations regarding compliance with referenced standards, standard specifications, codes, practices and requirements for products.

E. Products Specified by Identification of Manufacturer and Product Name or Number:
1. Sole, source, no other product shall be accepted: Provide the specified product(s) of the specified manufacturer.

2. "Acceptable Manufacturers": Product(s) of the named manufacturers, if equivalent to the specified product(s) of the specified manufacturer, will be acceptable in accordance with the requirements specified herein in the Article titled "'OR EQUAL' PRODUCTS."

3. Unnamed manufacturers: Products of unnamed manufacturers will be acceptable only as follows:
   a. Unless specifically stated that equals will not be accepted or considered, the phrase "or equal" shall be assumed to be included in the description of specified product(s). Equivalent products of unnamed manufacturers will be accepted in accordance with the "or equal" provision specified herein, below.
   b. If provided, products of unnamed manufacturers shall be subject to the requirements specified herein in the Article titled "'OR EQUAL' PRODUCTS."

4. Quality basis: Specified product(s) of the specified manufacturer shall serve as the basis by which products by named acceptable manufacturers and products of unnamed manufacturers will be evaluated. Where characteristics of the specified product are described, where performance characteristics are identified or where reference is made to industry standards, such characteristics are specified to facilitate evaluation of products by identifying the most significant attributes of the specified product(s).

F. Products Specified by Combination of Methods: Where products are specified by a combination of attributes, including manufacturer's name, product brand name, product catalog or identification number, industry reference standard, or description of product characteristics, provide products conforming to all specified attributes.

G. "Or Equal" Provision: Where the phrase "or equal" or the phrase "or approved equal" is included, product(s) of unnamed manufacturer(s) may be provided as specified above in subparagraph titled "Unnamed manufacturers."
1. The requirements specified herein in the Article titled "'OR EQUAL' PRODUCTS" shall apply to products provided under the "or equal" provision.

2. Use of product(s) under the "or equal" provision shall not result in any delay in completion of the Work, including completion of portions of the Work for use by University or for work under separate contract by University.

3. Use of product(s) under the "or equal" provision shall not result in any costs to University, including design fees and permit and plan check fees.

4. Use of product(s) under the "or equal" provision shall not require substantial change in the intent of the design, in the opinion of the Architect. The intent of the design shall include functional performance and aesthetic qualities.

5. The determination of equivalence will be made by the Architect, and such determination shall be final.

H. Visual Matching: Where Specifications require matching a sample, the decision by the Architect on whether a proposed product matches shall be final. Where no product visually matches, but the product complies with other requirements, comply with provisions for substitutions for selection of a matching product in another category.

I. Selection of Products: Where requirements include the phrase "as selected from manufacturer's standard colors, patterns and textures", or a similar phrase, selections of products will be made by indicated party or, if not indicated, by the Architect. The Architect will select color, pattern and texture from the product line of submitted manufacturer, if all other specified provisions are met.

## 1.6 "OR EQUAL" PRODUCTS

A. "Or Equal" Products: Products are specified typically by indicating a specified manufacturer and specific products of that manufacturer, with acceptable manufacturers identified with reference to this "or equal" provision. If Contractor proposes to provide products other than the specified products of the specified manufacturer, provisions of any relevant Supplementary General Conditions, Contract General Conditions Article 5.04, and Public Contract Code section 3400 shall apply. Contractor shall submit if and when directed by Architect, complete product data, including drawings and descriptions of products, fabrication details and installation procedures. Include samples where applicable or requested.

1. Submit a minimum of four copies. Form and other administrative requirements shall be as directed by the Architect.

2. Include appropriate product data for the specified product(s) of the specified manufacturer, suitable for use in comparison of characteristics of products.
   a. Include a written, point-by-point comparison of characteristics of the proposed equal product with those of the specified product.
   b. If the proposed equal is accepted, Contractor shall include a detailed description in written or graphic form as appropriate, indicating all necessary changes or modifications to other elements of the Work and to construction to be performed by the University and others under separate contract with University.

3. "Or Equal" product submissions shall include a statement indicating the equal's effect on the Construction Schedule. Contractor shall indicate the effect of the proposed products on overall Contract Time and, as applicable, on completion of portions of the Work for use by University or for work under separate contract by University.

4. "Or Equal" product submissions shall include signed certification that the Contractor has reviewed the proposed products and has determined that the products are equivalent or superior in every respect to product requirements indicated or specified in the Contract Documents, and that the proposed products are suited for and can perform the purpose or application of the specified product indicated or specified in the Contract Documents.

5. "Or Equal" product submissions shall include a signed waiver by the Contractor for change in the Contract Time or Contract Sum because of the following:
   a. "Or equal" product failed to perform adequately.
   b. "Or equal" product required changes in on other elements of the Work.
   c. "Or equal" product caused problems in interfacing with other elements of the Work.

6. If, in the opinion of the Architect, the "or equal" product request is incomplete or has insufficient data to enable a full and thorough review of the proposed products, the proposed products may be summarily refused and determined to be unacceptable.

B. Product Substitutions: For products not governed by the "or equal" provision, comply with substitution provisions of the Contract General Conditions (Article 5.04-d, Substitutions) and requirements specified in

Section 01630 - Product Substitution Procedures.

## 1.7 SYSTEM COMPLETENESS

A. System Completeness
   1. The Contract Drawings and Specifications are not intended to be comprehensive directions on how to produce the Work. Rather, the Drawings and Specifications are instruments of service prepared to describe the design intent for the completed Work.
   2. It is intended that all equipment, systems and assemblies be complete and fully functional even though not fully described. Provide all products and operations necessary to achieve the design intent described in the Contract Documents.
   3. Refer to related general requirements specified in Section 01410 - Regulatory Requirements regarding compliance with minimum requirements of applicable codes, ordinances and standards.

B. Omissions and Misdescriptions: Contractor shall report to Architect immediately when elements essential to proper execution of the Work are discovered to be missing or misdescribed in the Drawings and Specifications or if the design intent is unclear.
   1. Should an essential element be discovered as missing or misdescribed prior to receipt of Bids, an Addendum will be issued so that all costs may be accounted for in the Contract Sum.
   2. Should an obvious omission or misdescription of a necessary element be discovered and reported after execution of the Agreement, Contractor shall provide the element as though fully and correctly described, and a no-cost Change Order shall be executed.
   3. Refer to related general requirements specified in Section 01310 - Coordination regarding construction interfacing and coordination.

## 1.8 TRANSPORTATION, DELIVERY AND HANDLING

A. Transportation, Delivery and Handling, General: Contractor shall comply with manufacturer's instructions and recommendations for transportation, delivery and handling, in addition to the following.

B. Transportation: Contractor shall transport products by methods to avoid product damage.

C. Delivery:
   1. Contractor shall schedule delivery to minimize long-term storage and prevent overcrowding construction spaces. Contractor shall coordinate with installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
   2. Contractor shall deliver products in undamaged condition in manufacturer's original sealed container or packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.

D. Handling:
   1. Contractor shall provide equipment and personnel to handle products by methods to prevent soiling, marring or other damage.
   2. Contractor shall promptly inspect products on delivery to ensure that products comply with Contract Documents, quantities are correct, and to ensure that products are undamaged and properly protected.

## 1.9 STORAGE AND PROTECTION

A. Storage and Protection, General: Contractor shall store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible.
   1. Contractor shall periodically inspect to ensure products are undamaged, and are maintained under required conditions.
   2. Contractor shall remove and replace products damaged by improper storage or protection with new products at no change in Contract Sum or Contract Time.
   3. Contractor shall store sensitive products in weather tight enclosures.

B. Inspection Provisions: Contractor shall arrange storage to provide access for inspection and measurement of quantity or counting of units.

C. Structural Considerations: Contractor shall store heavy materials away from the structure in a manner that will not endanger supporting construction.

D. Weather-Resistant Storage:
   1. Contractor shall store moisture-sensitive products above ground, under cover in a weather tight enclosure or covered with an impervious sheet covering. Contractor shall provide adequate ventilation to avoid condensation.

   2. Contractor shall maintain storage within temperature and humidity ranges required by manufacturer's instructions.

   3. For exterior storage of fabricated products, Contractor shall place products on raised blocks, pallets or other supports, above ground and in a manner to not create ponding or misdirection of runoff. Contractor shall place on sloped supports above ground.

   4. Contractor shall store loose granular materials on solid surfaces in a well-drained area. Contractor shall prevent mixing with foreign matter.

E. Protection of Completed Work:
   1. Contractor shall provide barriers, substantial coverings and notices to protect installed Work from traffic and subsequent construction operations.

   2. Contractor shall remove protective measures when no longer required and prior to Contract Completion review of the Work.

   3. Contractor shall comply with additional requirements specified in Section 01560 - Temporary Barriers and Enclosures.

## PART 2 - PRODUCTS

Not Applicable to this Section.

## PART 3 - EXECUTION

### 3.1 INSTALLATION OF PRODUCTS

A. Installation of Products:
   1. Contractor shall comply with manufacturer's instructions and recommendations for installation of products, except where more stringent requirements are specifiedand necessary due to Project conditions or are required by authorities having jurisdiction.
   2. Contractor shall anchor each product securely in place, accurately located and aligned with other Work.
   3. Contractor shall clean exposed surfaces and provide protection to ensure freedom from damage and deterioration at time of Contract Completion review. Contractor shall refer to additional requirements specified in Section 01740 - Cleaning Requirements and Section 01560 - Temporary Barriers and Enclosures.

**END OF SECTION**