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| **~~~~ SPECIFIER NOTES ~~~~~**This specification guidelines, its sections, and text included, is intended to be used in the preparation of Contract Documents. It contains **Specifier Notes** which shall guide editing by the A/E consultant for the uniqueness of each project during the preparation of the Project Manual. Where **[Optional]** appears in this document, it indicates requirements which may/may not be relevant to the subject project depending upon the project complexity, scope, and unique conditions. For **DRAFT** specifications prepared during the design process, use Microsoft Word, Track Changes. Set Criteria so that deletion show as strikethrough. Deletions and additions are to be in red text.Notes unique to this section:*1. The content of this entire section, whether a major capital project or a project of limited scope, it highly dependent on the project scope. A/E shall edit this entire section as appropriate.**2.* Goal is to achieve required LEED format according to 01 3329 Sustainable Design Reporting on all applicable projects.***~~~ END OF SPECIFIER NOTES ~~~~*** |

SECTION 01 6000 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements

B. Sustainable design-related product requirements

C. Re-use of existing products

D. Transportation, handling, storage and protection

E. Product option requirements

F. Substitution limitations

G. Procedures for Owner-supplied products

H. Maintenance materials, including extra materials, spare parts, tools, and software

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including the General Conditions for Washington State Facilities Construction and other Division 01 specification sections, apply to this section.

B. Section 01 1000 - Summary: Lists of products to be removed from existing building and for Owner-supplied products

C. Section 01 2500 - Substitution Procedures: Substitutions proposed during procurement and/or construction phases.

D. Section 01 3329 - Sustainable Design Reporting - LEED

E. Section 01 4000 - Quality Requirements: Product quality monitoring

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| **~~~~ SPECIFIER NOTES ~~~~~***A/E shall edit the following paragraphs as appropriate for the project’s sustainability goals. Delete all paragraphs included elsewhere in the Contract Documents.* ***~~~ END OF SPECIFIER NOTES ~~~~*** |

1.03 REFERENCE STANDARDS

A. [16 CFR 260.13](http://www.ecfr.gov) - Guides for the Use of Environmental Marketing Claims; Federal Trade Commission; Recycled Content; Current Edition.

B. [ASTM D6866](https://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ASTM%20D6866) - Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis; 2016.

C. [C2C (DIR)](http://www.c2ccertified.org/products/registry) - C2C Certified Products Registry; Cradle to Cradle Products Innovation Institute; www.c2ccertified.org/products/registry.

D. [CAL (CDPH SM)](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions From Indoor Sources Using Environmental Chambers; 2017, v1.2.

E. [EN 15804](https://www.en-standard.eu/en-standards-engineering-standards/) - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products; 2013.

F. [GreenScreen (LIST)](http://www.greenscreenchemicals.org) - GreenScreen for Safer Chemicals List Translator; Clean Production Action; www.greenscreenchemicals.org.

G. [GreenScreen (METH)](http://www.greenscreenchemicals.org) - GreenScreen for Safer Chemicals Method v1.2; Clean Production Action; www.greenscreenchemicals.org.

H. [ISO 14025](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014025) - Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures; 2006.

I. [ISO 14040](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014040) - Environmental management -- Life cycle assessment -- Principles and framework; 2006.

J. [ISO 14044](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014044) - Environmental management -- Life cycle assessment -- Requirements and guidelines; 2006.

K. [ISO 21930](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2021930) - Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services; 2017.

1.04 SUBMITTALS

A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

1. Submit within 14 days after date of Notice to Proceed.

2. For products specified only by reference standards, list applicable reference standards.

B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

2. New product presentations to Owner or provide Mock-ups or pre-installations information.

3. Inform Owner of material/product origins and provide a list of proposed products.

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| **~~~~ SPECIFIER NOTES ~~~~~***A/E shall edit the following paragraphs for appropriate Sustainability reporting process.****~~~ END OF SPECIFIER NOTES ~~~~*** |

E. Sustainable Design Submittals: Items necessary to document use of sustainable construction materials, products, and practices.

1. See Section 01 3329 for Contractor's reporting necessary for achievement of targeted LEED certification level.

1.05 QUALITY ASSURANCE (DEFINITIONS AND CERTIFICATIONS REFERENCED THROUGHOUT THE CONTRACT DOCUMENTS)

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| **~~~~ SPECIFIER NOTES ~~~~~***A/E shall edit the following paragraphs for appropriate Sustainability standards relevant to project scope.****~~~ END OF SPECIFIER NOTES ~~~~*** |

A. Bio-Based Content: Of vegetable or animal origin, not including products made by killing the animal.

1. Determine percentage of bio-based content in accordance with [ASTM D6866](https://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ASTM%20D6866).

2. Bio-based content must be sourced from a Sustainable Agriculture Network certified farm.

B. [CAL (CDPH SM)](https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx) v1.1: California Department of Public Health (CDPH) Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, v. 1.1–2010, for the emissions testing and requirements of products and materials.

C. Chain-of-Custody (COC): A procedure that tracks a product from the point of harvest or extraction to its end use, including successive stages of processing, transformation, manufacturing, and distribution.

D. Chain-of-Custody Certificates: Certificates signed by manufacturers and fabricators certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001.

E. Composite Wood and Agrifiber: Products made of wood particles and/or plant material pressed and bonded with adhesive or resin such as particleboard, medium density fiberboard (MDF), plywood, wheatboard, strawboard, panel substrates, and door cores.

F. Corporate Sustainability Report: A third-party verified report that outlines the environmental impacts of extraction operations and activities associated with the manufacturer’s product and the product’s supply chain.

G. Cradle-to-Cradle Certified: End use product certified Cradle-to-Cradle v2 Basic or Cradle-to-Cradle v3 Bronze, minimum, as evidenced by [C2C (DIR)](http://www.c2ccertified.org/products/registry).

H. Environmental Product Declaration (EPD): Publicly available, critically reviewed life cycle analysis having at least a cradle-to-gate scope.

1. Good: Product-specific; compliant with [ISO 14044](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014044).

2. Better: Industry-wide, generic; compliant with [ISO 21930](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2021930), or with [ISO 14044](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014044), [ISO 14040](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014040), [ISO 14025](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014025), and [EN 15804](https://www.en-standard.eu/en-standards-engineering-standards/); Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.

3. Best: Commercial-product-specific; compliant with [ISO 21930](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2021930), or with [ISO 14044](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014044), [ISO 14040](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014040), [ISO 14025](http://global.ihs.com/doc_detail.cfm?rid=BSD&document_name=ISO%2014025), and [EN 15804](https://www.en-standard.eu/en-standards-engineering-standards/); Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.

4. Where demonstration of impact reduction below industry average is required, submit both industry-wide and commercial-product-specific declarations; or submit at least 5 declarations for products of the same type by other manufacturers in the same industry.

I. GreenScreen Chemical Hazard Analysis: Ingredients of 100 parts-per-million or greater evaluated using [GreenScreen (METH)](http://www.greenscreenchemicals.org).

1. Good: [GreenScreen (LIST)](http://www.greenscreenchemicals.org) evaluation to identify Benchmark 1 hazards; a Health Product Declaration includes this information.

2. Better: GreenScreen Full Assessment.

3. Best: GreenScreen Full Assessment by GreenScreen Licensed Profiler.

4. Acceptable Evidence: GreenScreen report.

J. Health Product Declarations (HPD): Complete, published declaration with full disclosure of known hazards, prepared using one of the [HPDC (HPD-OLT)](http://www.hpd-collaborative.org/) online tools.

K. Leadership Extraction Practices: Products that meet at least one of the responsible extraction criteria, which include: extended producer responsibility; bio-based materials; FSC wood products; materials reuse; recycled content; and other programs approved by sustainability certification system used for the project.

L. Manufacturer's Inventory of Product Content: Publicly available inventory of every ingredient identified by name and Chemical Abstract Service Registration Number (CAS RN).

1. For ingredients considered a trade secret or intellectual property, the name and CAS RN may be omitted, provided the ingredient's role, amount, and GreenScreen Benchmark are given.

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| **~~~~ SPECIFIER NOTES ~~~~~***A/E shall provide list of appropriate Third-party certifications necessary for project scope.****~~~ END OF SPECIFIER NOTES ~~~~*** |

M. Multi-Attribute Certifications: Lifecycle-based environmental certifications that indicate that a product has undergone rigorous scientific testing, exhaustive auditing, or both, to prove its compliance with stringent, third-party, environmental performance standards. Third-party certifications include the following:

1. \_\_\_\_\_\_\_\_\_\_.

N. Rapidly Renewable Materials: Made from agricultural products that are typically harvested within a 10-year or shorter cycle.

O. Recycled Content: Determine percentage of post-consumer and pre-consumer (post-industrial) content separately, using the guidelines contained in [16 CFR 260.13](http://www.ecfr.gov).

1. Previously used, reused, refurbished, and salvaged products are not considered recycled.

2. Wood fabricated from timber abandoned in transit to original mill is considered reused, not recycled.

3. Determine percentage of recycled content of any item by dividing the weight of recycled content in the item by the total weight of materials in the item.

4. Determine value of recycled content of each item separately, by multiplying the content percentage by the value of the item.

5. Acceptable Evidence:

a. For percentage of recycled content, information from manufacturer.

b. For cost, Contractor's cost data.

P. Regional Materials: Materials that are extracted, harvested, recovered, and manufactured within a radius of 100 miles from the Project site.

Q. Reused Products: Materials and equipment previously used in this or other construction, salvaged and refurbished as specified.

1. Wood fabricated from timber abandoned in transit after harvesting is considered reused, not recycled.

2. Acceptable Evidence: Information about the origin or source, from Contractor or supplier.

R. Source Location: Location of harvest, extraction, recovery, or manufacture; where information about source location is required to be submitted, give the postal address:

1. In every case, indicate the location of final assembly.

2. For harvested products, indicate location of harvest.

3. For extracted (i.e., mined) products, indicate location of extraction.

4. For recovered products, indicate location of recovery.

5. For products involving multiple manufacturing steps, provide a description of the process at each step, with location.

6. Acceptable Evidence:

a. Manufacturer's certification.

b. Life Cycle Snalysis (LCA) performed by third-party.

S. Sustainably Harvested Wood: Solid wood, wood chips, and wood fiber certified or labeled by an organization accredited by one of the following:

1. The Forest Stewardship Council, The Principles for Natural Forest Management; for Canada visit http://www.fsccanada.org, for the USA visit http://www.fscus.org.

2. Acceptable Evidence: Copies of invoices bearing the certifying organization's certification numbers.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.

B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner and follow procedures as per Dept. of Archaeology & Historic Preservation, <https://dahp.wa.gov>.

C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

D. Specific Products to be Reused: The reuse of certain materials and equipment already existing on the project site is noted in the Contract Documents.

1. See Section 01 1000 – Summary for list of items required to be salvaged for reuse and relocation.

2. If reuse of other existing materials or equipment is desired, submit [substitution request form](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.des.wa.gov%2Fsites%2Fdefault%2Ffiles%2Fpublic%2Fdocuments%2FFacilities%2FEAS%2FForms%2FDivision01%2F01-Template_SubstitutionRequest_Final_8-1-2022.docx%3F%3D626d2&wdOrigin=BROWSELINK).

2.02 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by Contract Documents.

B. See Section 01 4000 - Quality Requirements, for additional source quality control requirements.

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| **~~~~ SPECIFIER NOTES ~~~~~***A/E shall edit the following paragraph as appropriate. Conditions which may be noted in section 00 7400 Special Conditions may impact the following paragraph. Edit as appropriate. Confirm all with DES Project Manager.****~~~ END OF SPECIFIER NOTES ~~~~*** |

C. Use of products having any of the following characteristics is not permitted:

1. Made using or containing CFC's or HCFC's

2. Made of wood from newly cut old growth timber

3. Containing lead, cadmium, or asbestos

D. Where other criteria are met, Contractor shall give preference to products that:

1. Are extracted, harvested, and/or manufactured closer to the location of the project.

2. Have longer documented life span under normal use.

3. Result in less construction waste. See Section 01 7419 - Construction Waste Management and Disposal.

4. Are made of vegetable materials that are rapidly renewable.

5. Are made of recycled materials.

6. If made of wood, are made of sustainably harvested wood, wood chips, or wood fiber.

7. If bio-based, other than wood, are or are made of Sustainable Agriculture Network certified products.

8. Are Cradle-to-Cradle Certified.

9. Have a published Environmental Product Declaration (EPD).

10. Have a published Health Product Declaration (HPD).

11. Have a published GreenScreen Chemical Hazard Analysis.

12. Have a published Manufacturer's Inventory of Chemical Content.

2.03 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.04 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

A. See Section 01 2500 - Substitution Procedures

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| **~~~~ SPECIFIER NOTES ~~~~~***A/E to include/exclude/edit the following paragraphs as appropriate for project scope.****~~~ END OF SPECIFIER NOTES ~~~~*** |

3.02 OWNER-SUPPLIED PRODUCTS

A. See Section 01 1000 1.08D - Summary for identification of Owner-supplied products.

B. Owner's Responsibilities:

1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.

2. Arrange and pay for product delivery to site.

3. On delivery, inspect products jointly with Contractor.

4. Submit claims for transportation damage and replace damaged, defective, or deficient items.

5. Arrange for manufacturers' warranties, inspections, and service.

C. Contractor's Responsibilities:

1. Review Owner reviewed shop drawings, product data, and samples.

2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.

3. Handle, store, install and finish products.

4. Repair or replace items damaged after receipt.

3.03 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

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| **~~~~ SPECIFIER NOTES ~~~~~***A/E to edit the following paragraphs as appropriate for project scope.****~~~ END OF SPECIFIER NOTES ~~~~*** |

3.04 STORAGE AND PROTECTION

A. Provide protection of stored materials and products against theft, casualty, or deterioration.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

G. Comply with manufacturer's warranty conditions, if any.

H. Do not store products directly on the ground.

I. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

J. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

K. Prevent contact with material that may cause corrosion, discoloration, or staining.

L. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

M. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION 01 6000 - PRODUCT REQUIREMENTS