

PART – 1 GENERAL**1.1 SUMMARY**

This Section includes general requirements and procedures for compliance with Airport Green Building Standards (GBS) prerequisites and credits needed for the Project to comply with Airport Sustainability Report.

1. Other GBS prerequisites and credits needed to obtain GBS certification are dependent on material selections and may not be specifically identified as GBS requirements. Compliance with requirements needed to obtain GBS prerequisites and credits may be used as one criterion to evaluate substitution requests.
2. Additional GBS prerequisites and credits needed to obtain the indicated GBS certification are dependent on the Architect/Engineer's design and other aspects of the Project that are not part of the Work of the Contract.
3. The GBS Project Checklist is included in Section 3 of the GBS.

1.2 RELATED REQUIREMENTS

- A. Section 01 50 00, Temporary Facilities and Controls
- B. Section 01 74 19, Construction Waste

1.3 DEFINITIONS

- A. Regionally Manufactured Materials: Materials that are manufactured within a radius of 500 miles from the Project location. Manufacturing refers to the final assembly of components into the building product that is installed at the Project site.
- B. Regionally Extracted, Harvested, or Recovered Materials: Materials that are extracted, harvested, or recovered and manufactured within a radius of 500 miles from the Project site.
- C. Recycled Content: The percentage by weight of constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer.)
 1. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product are not recycled materials.
 2. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process are pre-consumer recycled materials.

1.4 SUBMITTALS

The Contractor shall provide the following:

- A. Submit any additional GBS submittal requirements included in other Sections.
- B. GBS submittals are in addition to other submittals. If the submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated the GBS and Airport Sustainability Report requirements.
- C. Sustainability Action Plans: Provide preliminary submittals within fourteen (14) Calendar Days of the Notice to Proceed (NTP) indicating how the following requirements will be met:

SUSTAINABLE DESIGN REQUIREMENTS

Section: 01 81 13

1. Materials and Resource (MR) Credit MR 1.1, 1.2, and 1.3: Building Reuse - Maintain Existing Walls, Floors, and Roof.
 2. MR Credit 1.4: Building Reuse - Maintain 50% of Interior Non-Structural Partitions
 3. MR Credit 2.1 and 2.2: Construction Waste Management - Waste management plan complying with Section 01 74 19.
 4. MR Credit 4.1 and 4.2: Recycled Content - List of proposed materials with recycled content.

Indicate the cost, post-consumer recycled content, and pre-consumer recycled content for each product having recycled content.
 5. MR Credit 5.1 and 5.2: Regional Materials - Provide a list of all proposed regionally manufactured materials and regionally extracted, harvested, or recovered materials.
 - a. Identify each regionally manufactured material, its source, and cost.
 - b. Identify each regionally extracted, harvested or recovered material, its source, and cost.
 6. Indoor Environmental Quality Credit 3.1 and 3.2: Construction Indoor Air Quality (IAQ) Management Plan – During Construction and Before Occupancy - Provide a construction IAQ management plan.
- D. Sustainable Progress Reports: The reports shall be concurrent with each Payment Application. Submit reports comparing actual construction and purchasing activities with sustainability action plans for the following:
1. MR Credit 1.1, 1.2, and 1.3: Building Reuse - Maintain Existing Walls, Floors, and Roof.
 2. MR Credit 1.4: Building Reuse - Maintain 50% of Interior Non-Structural Partitions
 3. MR Credit 2.1 and 2.2: Construction Waste Management - Waste reduction progress reports shall be included along with the Waste Management Report (WMR) described in Section 01 74 19.
 4. MR Credit 4.1 and 4.2: Recycled Content.
 5. MR Credit 5.1 and 5.2: Regional Materials - Regionally manufactured materials and regionally extracted, harvested, or recovered materials.
- E. Sustainability Documentation Submittals:
1. Sustainable Sites (SS) Credit 8: Light Pollution Reduction – Submit the product data for interior and exterior lighting fixtures that stop direct-beam illumination from leaving the building site.
 2. Water Efficiency (WE) Credit 3.1 and 3.2: Water Use Reduction – Submit the product data for plumbing fixtures indicating water consumption.
 3. Energy and Atmosphere (EA) Prerequisite 3.0: Fundamental Commissioning of Building Energy Systems – Submit the product data for new HVAC equipment indicating absence of CFC refrigerants.

SUSTAINABLE DESIGN REQUIREMENTS

Section: 01 81 13

4. EA Credit 4.0: Enhanced Refrigerant Management – Submit the product data for new HVAC equipment indicating absence of hydrochlorofluorocarbon (HCFC) refrigerants, and for clean-agent fire-extinguishing systems indicating absence of HCFC and Halon.
5. MR Credit 2.1 and 2.2: Construction Waste Management - Comply with the requirements of Section 01 74 19.
6. MR Credit 4.1 and 4.2: Recycled Content – Submit the product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
7. MR Credit 5.1 and 5.2: Regional Materials – Submit the product data indicating location of material manufacturer for regionally manufactured materials.
 - a. Include statement indicating cost and distance from manufacturer to the Project for each regionally manufactured material.
 - b. Include statement indicating cost and distance from point of extraction, harvest, or recovery to Project for each raw material used in regionally manufactured materials.
8. EQ Credit 1.0: Outdoor Air Delivery Monitoring – Submit the product data and shop drawings for carbon dioxide monitoring system.
9. EQ Credit 3.1: Construction IAQ Management Plan
 - a. Submit a Construction IAQ Management Plan.
 - b. Submit the product data for temporary filtration media and filtration media used during occupancy.
 - c. Construction Documentation: Six photographs at three (3) different occasions during construction along with a brief description of the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) approach employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.
10. EQ Credit 3.2: Construction IAQ Management–Before Occupancy
 - a. Signed statement describing the building air flush-out procedures including the dates when flush-out was begun and completed and statement that filtration media was replaced after flush-out.
 - b. Submit the product data for filtration media used during flush-out and during occupancy.
 - c. Report from testing and inspecting agency indicating results of IAQ testing and documentation showing conformance with IAQ testing procedures and requirements.
11. EQ Credit 4.1: Low-Emitting Materials-Adhesives and Sealants – Submit the product data for adhesives and sealants used on the interior of the building indicating the volatile organic compound (VOC) content of each product used. Indicate the VOC content in gallons per liter calculated according to 40 CFR 59, Subpart D (EPA method 24).

12. EQ Credit 4.2: Low-Emitting Materials—Paints and Coatings – Submit the product data for paints and coatings used on the interior of the building indicating chemical composition and VOC content of each product used. Indicate the VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA method 24).
13. EQ Credit 4.3: Low-Emitting Materials—Flooring Systems – Submit the product data for carpet products indicating the VOC content of each product used.
14. EQ Credit 7.1: Thermal Comfort—Design – Submit the product data and shop drawings for sensors and control system used to monitor and control room temperature and humidity.

PART – 2 PRODUCTS

2.1 RECYCLED CONTENT OF MATERIALS

- A. MR Credit 4.1: Recycled Content - Provide building materials with recycled content such that post-consumer recycled content constitutes a minimum of five percent of the cost of materials used for the Project or such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 10 percent of the cost of materials used for the Project.
- B. MR Credits 4.1 and 4.2: Recycled Content - Provide building materials with recycled content such that post-consumer recycled content constitutes a minimum of 10 percent of the cost of materials used for the Project or such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 20 percent of the cost of materials used for the Project.
 1. The cost of post-consumer recycled content of an item shall be determined by dividing the weight of post-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.
 2. The cost of post consumer recycled content plus one-half of pre-consumer recycled content of an item shall be determined by dividing the weight of post-consumer recycled content plus one-half of pre-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.
 3. Do not include mechanical and electrical components in the calculation.
 4. Recycled content of materials shall be defined according to the Federal Trade Commission's "Guide for the Use of Environmental Marketing Claims," 16 CFR 260.7 (e).

2.2 REGIONAL MATERIALS

- A. MR Credit 5.1: Regional Materials - Provide minimum 20 percent of building materials (by cost) that are regionally manufactured materials.
- B. MR Credit 5.2: Regional Materials – Provide regionally manufactured materials as required by subparagraph "MR Credit 5.1" above, provide at least 50 percent (by cost) that are regionally extracted, harvested, or recovered materials.

2.3 LOW-EMITTING MATERIALS

- A. EQ Credit 4.1: Low-Emitting Materials-Adhesives and Sealants - For interior applications use adhesives and sealants that comply with the following limits for the VOC content when calculated according to 40 CFR 59, Subpart D (EPA method 24):

SUSTAINABLE DESIGN REQUIREMENTS

Section: 01 81 13

1. Wood Glues: 30 g/L.
 2. Metal to Metal Adhesives: 30 g/L.
 3. Adhesives for Porous Materials (Except Wood): 50 g/L.
 4. Subfloor Adhesives: 50 g/L.
 5. Plastic Foam Adhesives: 50 g/L.
 6. Carpet Adhesives: 50 g/L.
 7. Carpet Pad Adhesives: 50 g/L.
 8. VCT and Asphalt Tile Adhesives: 50 g/L.
 9. Cove Base Adhesives: 50 g/L.
 10. Gypsum Board and Panel Adhesives: 50 g/L.
 11. Rubber Floor Adhesives: 60 g/L.
 12. Ceramic Tile Adhesives: 65 g/L.
 13. Multipurpose Construction Adhesives: 70 g/L.
 14. Fiberglass Adhesives: 80 g/L.
 15. Structural Glazing Adhesives: 100 g/L.
 16. Wood Flooring Adhesive: 100 g/L.
 17. Contact Adhesive: 250 g/L.
 18. Plastic Cement Welding Compounds: 350 g/L.
 19. ABS Welding Compounds: 400 g/L.
 20. CPVC Welding Compounds: 490 g/L.
 21. PVC Welding Compounds: 510 g/L.
 22. Adhesive Primer for Plastic: 650 g/L.
 23. Sealants: 250 g/L.
 24. Sealant Primers for Nonporous Substrates: 250 g/L.
 25. Sealant Primers for Porous Substrates: 775 g/L.
- B. EQ Credit 4.2: Low Emitting Materials-Paints and Coatings - For interior applications use paints and coatings that comply with the following limits for the VOC content when calculated according to 40 CFR 59, Subpart D (EPA method 24) and the following chemical restrictions:
1. Flat Paints and Coatings: VOC not more than 50 g/L.
 2. Non-Flat Paints and Coatings: VOC not more than 150 g/L.
 3. Anti-Corrosive Coatings: VOC not more than 250 g/L.
 4. Varnishes and Sanding Sealers: VOC not more than 350 g/L.
 5. Stains: VOC not more than 250 g/L.

6. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
7. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.
 - g. Di (2-ethylhexyl) phthalate.
 - h. Di-n-butyl phthalate.
 - i. Di-n-octyl phthalate.
 - j. 1,2-dichlorobenzene.
 - k. Diethyl phthalate.
 - l. Dimethyl phthalate.
 - m. Ethylbenzene.
 - n. Formaldehyde.
 - o. Hexavalent chromium.
 - p. Isophorone.
 - q. Lead.
 - r. Mercury.
 - s. Methyl ethyl ketone.
 - t. Methyl isobutyl ketone.
 - u. Methylene chloride.
 - v. Naphthalene.
 - w. Toluene (methylbenzene).
 - x. 1,1,1-trichloroethane.
 - y. Vinyl chloride.

PART – 3 EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

MR Credit 2.1 and 2.2: Construction Waste Management – Perform activities in compliance with Section 01 74 19.

3.2 CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT

- A. EQ Credit 3.1: Construction IAQ management Plans-During Construction – Perform construction activities in compliance with SMACNA IAQ Guideline for Occupied Buildings under Construction.

1. If the Owner authorizes the use of permanent heating, cooling, and ventilating systems during construction period as specified in Section 01 50 00, Temporary Facilities and Controls, install filter media having a Minimum Efficiency Reporting Value (MERV) of 8 according to ASHRAE 52.2 at each return-air inlet for the air-handling system used during construction.
2. Replace all air filters immediately prior to occupancy. Replacement air filters shall have a MERV 13 according to ASHRAE 52.2.

- B. EQ Credit 3.2: Construction IAQ Management-Before Occupancy

Engage an independent testing and inspecting agency to conduct a baseline indoor air quality testing program according to the EPA Protocol for Environmental Requirements, Baseline IAQ and Materials.

PART 4 – MEASUREMENT AND PAYMENT

Not Used.

- END OF SECTION -