



Cutting and Pasting Your Way to **Greener** Buildings:

Introducing~

DRAFT

Model

Green

Construction

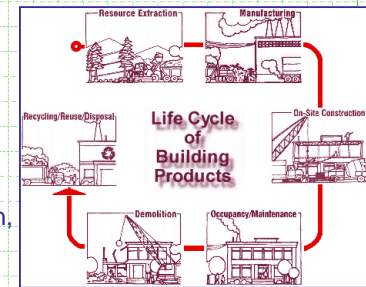
Specifications

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The Federal EPP Program

“products and services [that] have a lesser or reduced effect on human health and the environment...”

This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.



—Executive Order 13101,
September 16, 1998

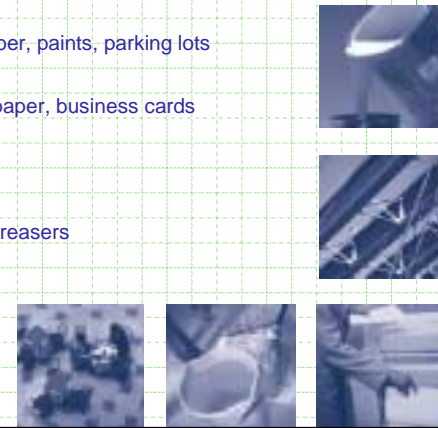
Five Guiding Principles

- ◆ Environment + Price + Performance
- ◆ Pollution Prevention
- ◆ Life Cycle Perspective/Multiple Attributes
- ◆ Comparison of Environmental Impacts
- ◆ Environmental Performance Information



Federal EPP Pilot Projects

- ◆ **Construction-related**
 - Building materials, lumber, paints, parking lots
- ◆ **Office products**
 - Copier paper, printing paper, business cards
- ◆ **Services**
 - Meetings, printing
- ◆ **Solvents**
 - Cleaning products, degreasers
- ◆ **Electronics**
 - computers, copiers
- ◆ **Miscellaneous**
 - Cafeteria serviceware, hospital products



Tool Development: EPP Database

Identify and compare environmental attributes for key products and services from various information sources, both domestic and foreign



Model Green Construction Specifications: Need? Feasibility?

Environmental Programs:

"I don't know how to write specs."

Federal Designers:

"I don't know enough about green issues."



MGCS Objectives:

To help federal design professionals meet their project-specific environmental goals including:

- ◆ EPA's Comprehensive Procurement Guidelines (CPG)
 - ◆ Greening of Government Executive Orders
 - ◆ DOE's Federal Energy Management Program (FEMP) Product Efficiency Recommendations
 - ◆ EPA's Construction Industry Compliance Assistance Center Recommendations
 - ◆ EPA's Waste Minimization Priority Chemicals
 - ◆ EPA's Indoor Environments Program Recommendations
- In addition,*
- ◆ US Green Building Council's LEED™ Rating System
 - ◆ National Technology Transfer & Advancement Act/OMB A119

Resources for Model Language



- ◆ DOD Unified Facilities Criteria Program & UFGS
- ◆ GSA Real Property Sustainable Development Guide
- ◆ EPA Region 10 Interior Remodeling Specifications
- ◆ Triangle J Council of Governments, WasteSpec
- ◆ Commonwealth of Massachusetts
- ◆ King County, Washington
- ◆ and more!



Intro to Specifications: CSI Divisions

- ◆ 1 - General Requirements
- ◆ 2 - Site Construction
- ◆ 3 - Concrete
- ◆ 4 - Masonry
- ◆ 5 - Metals
- ◆ 6 - Wood and Plastics
- ◆ 7 - Thermal and Moisture Protection
- ◆ 8 - Doors and Windows
- ◆ 9 - Finishes
- ◆ 10 - Specialties
- ◆ 11 - Equipment
- ◆ 12 - Furnishings
- ◆ 13 - Special Construction
- ◆ 14 - Conveying Systems
- ◆ 15 - Mechanical
- ◆ 16 - Electrical

SECTION 17010 – Gizmos

SPECIFIER NOTE:

resource management: Mining raw materials for gizmos produces soil erosion, pollutant runoff, and habitat loss. Adhesives for gizmos are typically derived from petrochemicals. Manufacturing of gizmos is considered energy intensive; however, there have been some energy efficiency improvements in recent years. Gizmos containing recycled glass are available.

toxicity/IEQ: VOCs may be emitted from gizmo adhesives during the curing process.

performance: Gizmos are extremely durable and require little maintenance. Performance is comparable for green methods and standard methods.

SECTION 17010 – Gizmos

PART 1 -- GENERAL

1.2 SUBMITTALS

SPECIFIER NOTE:

The **2002 Farm Bill - Section 9002**, Federal Procurement of Biobased Products, requires each Federal Agency to develop a procurement program which will assure that items composed of biobased products will be purchased to the maximum extent practicable and which is consistent with applicable provisions of Federal procurement law.

USGBC-LEED™ v2.1 includes credits for use of rapidly renewable materials, which USGBC describes as plants harvested within a ten-year cycle.

1. Biobased materials: Indicate type of biobased material in product and biobased content.

SECTION 17010 – Gizmos

PART 2 – PRODUCTS

2.1 MATERIALS

SPECIFIER NOTE:

US EPA Comprehensive Procurement Guidelines (CPG) 2002 recommends **10 percent** post-consumer content for gizmos.

USGBC-LEED™ v2.0/2.1 include credit for materials with recycled content, calculated on the basis of pre-consumer and post-consumer percentage content. In version 2.0, yada... **20 percent** yada... **40 percent** In version 2.1, yada... **5 percent** yada... **10 percent**

1. Recycled Content: Minimum **[10] [xxxx]** percent post-consumer recycled content, or minimum **[20] [40] [xxxx]** percent pre-consumer recycled content at contractor's option.

SECTION 17010 – Gizmos

PART 3 – EXECUTION

3.1 SITE ENVIRONMENTAL PROCEDURES

A. Indoor Air Quality:

1. **Temporary ventilation:** As specified in Section 01352 – Indoor Air Quality (IAQ) Management and as follows:

a. Ventilate gizmos prior to installation.

2. **Final cleaning:** As specified in Section 01740 – Cleaning

B. Resource Management:

1. **Energy Efficiency:** Verify gizmo is properly installed, connected, and adjusted. Verify that gizmo is operating as specified.

2. Coordinate with manufacturer for **[maintenance agreement] [take-back program] [green lease]** of gizmo.

Division 1 - General Requirements

- ◆ 01100 - Summary
- ◆ 01300 - Administrative Requirements
- ◆ 01351 - Waste Management
- ◆ 01352 – Indoor Air Quality (IAQ) Management
- ◆ 01353 - Noise & Acoustics Management
- ◆ 01354 – Environmental Management
- ◆ 01400 - Quality Control
- ◆ 01411 – Environmental Regulatory Requirements
- ◆ 01421 – Environmental References
- ◆ 01500 – Construction Facilities & Temporary Controls
- ◆ 01611 - Environmental Requirements for Products
- ◆ 01740 - Cleaning
- ◆ 01780 – Project Closeout
- ◆ 01810 - Commissioning
- ◆ 01821 – Environmental Demonstration & Training
- ◆ 01830 - Operation & Maintenance Requirements

Division 2 - Site Construction

- ◆02220 - Site Demolition
- ◆02230 - Site Clearing
- ◆02360 - Soil Treatment
- ◆02700 - Bases, Ballasts, Pavements
- ◆02780 - Pervious Paving Systems
- ◆02872 - Bat Houses
- ◆02900 - Landscaping

Divisions 3, 4, and 5

- ◆03300 - Cast-in-Place Concrete
- ◆04200 - Masonry
- ◆05050 - Basic Metal Materials & Methods

Division 6 - Wood and Plastics

- ◆ 06070 - Wood Treatment
- ◆ 06100 - Rough Carpentry
- ◆ 06160 - Sheathing
- ◆ 06200 - Finish Carpentry
- ◆ 06600 - Plastic Fabrications
- ◆ 06700 - Alternative Agricultural Products



Divisions 7 & 8

- ◆ 7 Thermal and Moisture Protection
 - 07100 - Dampproofing & Waterproofing
 - 07200 - Thermal Protection
 - 07300 - Shingles & Tiles
 - 07500 - Membrane Roofing
 - 07900 - Joint Sealers
- ◆ 8 Doors and Windows
 - 08210 - Wood Doors
 - 08500 - Windows



Division 9 - Finishes

- ◆ 09250 - Gypsum Board
- ◆ 09300 - Tile
- ◆ 09510 - Acoustical Ceilings
- ◆ 09650 - Resilient Flooring
- ◆ 09654 - Linoleum
- ◆ 09680 - Carpet
- ◆ 09720 - Wallcovering
- ◆ 09900 - Paints & Coatings



Divisions 10, 11, 12, 13 and 14

- ◆ 10 Specialties
 - 10170 - Plastic Toilet Compartments
 - 10400 - Signage
- ◆ 11 Equipment
 - 11160 - Loading Dock Equipment
 - 11450 - Residential Equipment
 - 11680 - Office Equipment
- ◆ 12 Furnishings
 - 12100 - Artwork
 - 12700 - Systems Furniture
- ◆ 13 Special Construction
 - 13600 - Renewable Energy Systems
- ◆ 14 Conveying Systems
 - 14200 - Elevators



The Whole Building Design Guide



- ◆ *A federal building professional's gateway to holistic design techniques and technologies*
- ◆ Sponsored by: DOE, DOD, EPA, FEMA, GSA, NASA, NIH, VA

Process for Roll-Out . . .



- ◆ Initial Federal Review - Dec. '02 - Jan. '03
- ◆ Pre-review for Key Stakeholders
- ◆ Public Review
- ◆ Federal Advisory Team for continual improvement

Contact Information

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Let me know if you are interested in getting involved!

