This is a guidance document with sample specification language intended to be inserted into project specifications on this subject as appropriate to the agency's environmental goals. Certain provisions, where indicated, are required for U.S. federal agency projects. Sample specification language is numbered to clearly distinguish it from advisory or discussion material. Each sample is preceded by identification of the typical location in a specification section where it would appear using the SectionFormat™ of the Construction Specifications Institute; the six digit section number cited is per CSI Masterformat™ 2004 and the five digit section number cited parenthetically is per CSI Masterformat™ 1995.

SECTION 09 68 00 (SECTION 09680) - CARPETING

SPECIFIER NOTE:

resource management: Carpet is a composite product made from face fibers that are bonded to primary and secondary backing material, usually with an adhesive. Manufacturers make carpet from different face fibers, which makes carpet recycling programs more challenging, as most carpet recyclers only accept carpet made from a particular type of face fiber. The most common face fibers (and their respective percentage of the carpet market) are: nylon (57 percent), polypropylene "Olefin" (36 percent), polyester "PET" (7 percent), and wool (0.4 percent).
Wool, cotton, jute, hemp, seagrass and sisal rugs and carpets are available; however, most natural fiber carpets do not meet accepted performance requirements of commercial carpet
Many synthetic carpets contain recycled content. Some carpet manufacturers offer a close-the-loop reclamation program.
Starch-based plastic fibers (polylactic acid or 'PLA' fibers) are in development.
Carpet pads manufactured from recycled textiles and waste carpets are available.

toxicity/IEQ: Synthetic carpet fiber, backing, pad, adhesive, seam sealants, and floor preparation chemicals are all potential sources of VOC in indoor air. Carpet treatment for natural and synthetic carpet fibers (mothproofing, anti-microbial, etc.) are potential sources of VOCs in indoor air.
VOCs may be emitted from adhesives and from interaction of adhesive and carpet backing during the curing process. However, since the inception of the Carpet and Rug Institute's (CRI) Green Label Program in 1992, the industry has made substantial reductions in the levels of TVOCs, as well as reductions in 4-phenylcyclohexene (4-PC), the compound most associated with "new carpet odor." CRI has established Green Label criteria for carpet, cushion, adhesive, and vacuum cleaners.
Installation with tack strips (stretch in method) over pads can avoid potential adhesive interaction with carpet backing. Provisions can be made for carpet with self-adhesive.
Carpeting also provide a sink for adsorbing VOCs emitted from other sources and home for a variety of bacteria, microbes, dust mites, etc. Area rugs are a possible alternative because they can be removed and cleaned outdoors by beating and letting the sun bake them.
Refer to Section 09 65 00 (09650) – Resilient Flooring for additional, related information.

performance: Carpeting provides improved thermal and acoustic performance.
In addition to the close-the-loop recycling programs developing in the carpet industry, a few manufacturers also have green lease programs. CRI has introduced a Carpet Component Identification Code labeling system to make component identification easier for future recycling collection and sorting. This labeling system is currently being used by many CRI member companies. Carpet America Recovery Effort℠ (CARE) is a voluntary initiative of the carpet industry and government to develop market-based solutions for the recycling and reuse of post-consumer carpet. CARE was established in January 2002 as a result of a Memorandum of Understanding for Carpet Stewardship (MOU), a national agreement signed by members of the carpet industry, representatives of government agencies at the federal, state and local levels, and non-governmental organizations. The MOU establishes an ambitious ten-year schedule to reduce the amount of waste carpet going to landfills. Refer to http://www.carpetrecovery.org/

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes:
1. Carpet, adhesive installation.
2. Carpet, stretch-in installation.
3. Carpet tile.

1.2 QUALITY ASSURANCE

A. VOC emissions: Provide low VOC products. **[Comply with California Department of Health Services Standard Practice for the Testing of Volatile Organic emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda] [and] [or]**
1. Adhesives and sealants: Comply with California's South Coast Air Quality Management District (SCAQMD) #1168
2. Aerosol adhesives: Comply with Green Seal GS-36
3. Carpet: Comply with the Carpet and Rug Institute (CRI) Green Label Plus
4. Carpet cushion: Comply with CRI Green Label program

SPECIFIER NOTE:
NSF-ISR has a standard for multi-attribute evaluation of environmental preferability:
NSF 140 – Sustainability Carpet Assessment
The standard compares and assesses sustainable product characteristics of carpet. Assessment is implemented through a point system that addresses: materials, water efficiency, energy conservation, air quality, and social issues. Four levels of achievement or compliance are attainable to reflect increasing movement toward sustainability: Conformant, Silver, Gold, and Platinum.
Edit below to suit project and to reflect latest published standard.

B. Provide carpet compliant with NSF 140 **[Conformant] [Silver] [Gold] [Platinum]** level.

1.3 SUBMITTALS

A. Product data. Unless otherwise indicated, submit the following for each type of product provided under work of this Section:

SPECIFIER NOTE:
Green building rating systems often include credit for materials of recycled content. USGBC-LEED™ v3, for example, includes credit for materials with recycled content, calculated on the basis of pre-consumer and post-consumer percentage content, and it includes credit for use of salvaged/recovered materials.
Green Globes US also provides points for reused building materials and components and for building materials with recycled content.

1. Recycled Content:
a. Indicate recycled content; indicate percentage of pre-consumer and post-consumer recycled content per unit of product.
b. Indicate relative dollar value of recycled content product to total dollar value of product included in project.
c. If recycled content product is part of an assembly, indicate the percentage of recycled content product in the assembly by weight.
d. If recycled content product is part of an assembly, indicate relative dollar value of recycled content product to total dollar value of assembly.
e. Salvaged/Refurbished: Indicate percentage of salvaged/refurbished content per unit of product.

SPECIFIER NOTE:

Specifying local materials may help minimize transportation impacts; however it may not have a significant impact on reducing the overall embodied energy of a building material because of efficiencies of scale in some modes of transportation.
Green building rating systems frequently include credit for local materials. Transportation impacts include: fossil fuel consumption, air pollution, and labor.
USGBC-LEED™ v3 includes credits for materials extracted/harvested and manufactured within a 500 mile radius from the project site. Green Globes US also provides points for materials that are locally manufactured.

2. Local/Regional Materials:
   a. Sourcing location(s): Indicate location of extraction, harvesting, and recovery; indicate distance between extraction, harvesting, and recovery and the project site.
   b. Manufacturing location(s): Indicate location of manufacturing facility; indicate distance between manufacturing facility and the project site.
   c. Product Value: Indicate dollar value of product containing local/regional materials; include materials cost only.
   d. Product Component(s) Value: Where product components are sourced or manufactured in separate locations, provide location information for each component. Indicate the percentage by weight of each component per unit of product.

SPECIFIER NOTE:
Green building rating systems may include credit for low emitting materials. USGBC-LEED™ v3, for example, includes credits for low-emitting materials, including: adhesives and sealants, paints and coatings, carpets, and composite wood and agrifiber products. Under LEED™ v3, adhesives and sealants are to comply with California's South Coast Air Quality Management District (SCAQMD) #1168; aerosol adhesives are to comply with Green Seal GS-36; interior architectural paints are to comply with Green Seal GS-11; anti-corrosive paints are to comply with Green Seal GS-03 (note – Green Seal has withdrawn GS-03; as of November 2008, anti-corrosive paints are included in a revised GS-11); clear wood finishes are to comply with SCAQMD #1113; carpet with the Carpet and Rug Institute (CRI) Green Label Plus; carpet cushion with CRI Green Label program; hard surface flooring with FloorScore; tile setting adhesives and grout with SCAQMD #1168; and, composite wood and agrifiber products are to contain no added urea-formaldehyde.
As per USGBC published Credit Interpretations, the credits for low-emitting materials are directed towards interior, site-installed (i.e. not prefabricated) products. Verify project requirements for low VOC roofing products.
Both the Adhesive and Sealant Council (ASC) and the SCAQMD have indicated that low VOC adhesives may have performance difficulties in extreme temperature and humidity conditions.
Green Seal, an independent, non-profit organization, certifies low-emitting products using internationally recognized methods and procedures. Green Seal certification meets the criteria of ISO 14020 and 14024, the environmental standards for ecolabeling set by the International Organization for Standardization (ISO); the U.S. Environmental Protection Agency's criteria for third-party certifiers of environmentally preferable products; and the criteria for bona fide ecolabeling bodies of the Global Ecolabeling Network.
The CRI Green Label program includes a testing program to identify low-VOC floor covering adhesives. The program tests for chemical emissions using an independent laboratory that specializes in indoor air quality testing. Adhesives that meet the emissions criteria are allowed to display the program's green and white label.

3. VOC data:
   a. Adhesives:
      1) Submit manufacturer's product data for adhesives. Indicate VOC limits of the product. Submit MSDS highlighting VOC limits.
      2) Submit Green Seal Certification to GS-36 and description of the basis for certification.

3) **[Submit manufacturer's certification that products comply with SCAQMD #1168.] [Submit manufacturer's certification that products comply with SCAQMD Rule 1168 in areas where exposure to freeze/thaw conditions and direct exposure to moisture will not occur. In areas where freeze/thaw conditions do exist or direct exposure to moisture can occur, submit manufacturer's certification that products comply with Bay Area AQMD Reg. 8, Rule 51 for containers larger than 16 oz and with California Air Resources Board (CARB) for containers 16 oz or less.]**

4) Submit verification that product is an Approved Adhesive Product under the Carpet and Rug Institute's Green Label Program.

SPECIFIER NOTE:
The CRI Green Label test methodology was developed by consensus during an official dialogue with the EPA and has been adopted by the American Society for Testing and Materials (ASTM) as D 5116 – Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products.
Green Label Plus, an enhancement to the CRI Green Label, incorporates additional requirements to meet California's Collaborative for High Performance Schools (CHPS) low-emitting materials criteria.
NSF International standard 140, Sustainable Carpet Assessment, is a multi-attribute performance standards with various levels of achievement by which carpet materials and products can be measured with respect to sustainability. While this Standard can be used on any carpet product, it is intended to be used for evaluation of commercial carpet products by providing a product evaluation methodology that is additive to emerging commercial green building standards.

b. Carpet: Submit **[manufacturer's] [independent, third party]** certification of compliance with **[Carpet and Rug Institute's Green Label Indoor Air Quality program] [Carpet and Rug Institute's Green Label Plus Indoor Air Quality program] [NSF/ANSI 140 Sustainable Carpet Assessment for level xxxx]**

SPECIFIER NOTE:
USGBC LEED v3 allows an alternative approach to credit for low emitting flooring materials. It allows credit if all interior flooring elements comply with the California Department of Health Services Standard Practice for the Testing of Volatile Organic emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.

[c. Finish Flooring Systems: Submit verification that all interior flooring products, including adhesives and floor finish materials, comply with California Department of Health Services Standard Practice for the Testing of Volatile Organic emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda].

SPECIFIER NOTE:
The Food, Conservation, and Energy Act of 2008 (also known as the 2008 U.S. Farm Bill) largely continues programs of the Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) http://www.usda.gov/farmbill/ Section 9002 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. USDA designates biobased products for preferred Federal procurement and recommends biobased content levels for each designated product.
USGBC-LEED™ v3 includes credits for use of rapidly renewable materials, which USGBC describes as plants harvested within a ten-year cycle.
Green Globes – US, provides credit for integration of materials from renewable sources that have been selected based on life-cycle assessment.

4. Biobased materials:
   a. Indicate type of biobased material in product.
   b. Indicate the percentage of biobased content per unit of product.
   c. Indicate relative dollar value of biobased content product to total dollar value of product included in project.

B. Submit environmental data in accordance with Table 1 of ASTM E2129 for products provided under work of this Section.

SPECIFIER NOTE:
Identify special maintenance agreements. Maintenance agreements are standard practice in the building industry. Take-back programs refer to programs in which the product manufacturer "takes-back" scrap material and/or packaging associated with its product. Green leasing is a new, but dramatic shift in the traditional perspective of leased equipment. Under a green lease, the product manufacturer is responsible for the disposition of the product at all times. Thus, when the customer no longer requires the use of the particular product or requires an updated model, the manufacturer is obligated to reclaim it and refurbish it or disassemble it for recycling as appropriate. This approach necessitates a revision of administrative services. It also requires a basic redesign of products in order to allow for future disassembly and upgrade. This has the potential to be cost effective for manufacturers and customers alike. It is also extremely resource efficient.

C. Documentation of manufacturer's **[maintenance agreement] [take-back program] [green lease]** for carpet. Include the following:
   1. Appropriate contact information.
   2. Overview of procedures.
      a. Indicate manufacturer's commitment to reclaim materials for recycling and/or reuse.
   3. Limitations and conditions, if any, applicable to the project.

1.4 MAINTENANCE

A. Operational Service: Provide manufacturer's **[maintenance agreement] [take-back program] [green lease]** service for carpet installed in project. Service shall reclaim materials for recycling and/or reuse. Service shall not landfill or burn reclaimed materials.

PART 2 - PRODUCTS

SPECIFIER NOTE:
EO 13423 includes requirements for Federal Agencies to use "sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products"

Specifically, under the Sustainable Building requirements per Guiding Principle #5 Reduce Environmental Impact of Materials, EO13423 directs Federal agencies to "use products meeting or exceeding EPA's recycled content recommendations" for EPA-designated products and for other products to "use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project."

Executive Order 13514; *Federal Leadership in Environmental, Energy, and Economic Performance*; was signed on October 5, 2009. http://www.ofee.gov/execorders.asp It expands upon the environmental performance requirements of EO 13423.
http://www1.eere.energy.gov/femp/regulations/printable_versions/eo13423.html

EO 13514 sets numerous federal requirements in several areas, including sustainable buildings and communities. Federal agencies must implement high performance sustainable federal building design, construction, operation and management, maintenance, and deconstruction, including:

- Ensuring all new Federal buildings, entering the design phase in 2020 or later, are designed to achieve zero net energy by 2030.
- Ensuring all new construction, major renovations, or repair or alteration of Federal buildings comply with the Guiding Principles of Federal Leadership in High Performance and Sustainable Buildings http://www1.eere.energy.gov/femp/pdfs/mouhighperfsustainfedfacs.pdf
- Ensuring at least 15% of existing agency buildings and leases (above 5,000 gross square feet) meet the Guiding Principles by fiscal year 2015 and that the agency makes annual progress towards 100% compliance across its building inventory.

Additionally, for USDA-designated biobased products, Federal agencies must use products meeting or exceeding USDA's biobased content recommendations; and for other products, biobased products made from rapidly renewable resources and certified sustainable wood products.

And, under the Sustainable Building requirements per Guiding Principle #4 Enhance Indoor Environmental Quality, EO13423 directs Federal agencies to use “materials and products with low pollutant emissions, including adhesives, sealants, paints, carpet systems, and furnishings.”

2.1 CARPET

SPECIFIER NOTE:
Nylon fiber is typically abrasion resistant and durable in all pile configurations using filament fiber, has good stain removal characteristics, and is recommended for the majority of commercial installations.
Polyethylene terephthalate (PET) recycled polyester fiber is stain resistance. PET type carpet is not recommended for severe wear level areas such as corridors, elevators, or lobbies, but can perform well in light to moderate wear areas.
Wool is a natural fiber, which is inherently flame resistant, forming a char that will neither melt nor drip. Wool is also resilient and due to the scaly character of its fiber it scatters optical light, thus reducing soiling visibility. Wool is recommended for the majority of commercial installations and highly recommended for shipboard use due to it being inherently flame resistant. Carpet made of wool is usually more expensive.
Carpet manufactured from bio-based materials (primarily soy resin) is being developed rapidly. Anticipate availability in Europe by 2003 and in USA by 2004. Biobased carpet components currently available include a soy-based polyurethane backing and a bonding adhesive derived from a tall oil byproduct.
Choice of pile fiber will be governed by the prospective use of the carpet and should be determined by careful evaluation of texture retention, soil hiding, cleanability, abrasion resistance, desired appearance, cost and other factors applicable to the project.
Edit below to suit project.

A. Carpet Systems:
   1. Toxicity/IEQ: Carpet systems must meet or exceed the Carpet and Rug Institute **[Green Label] [Green Label Plus]** Indoor Air Quality Test Program. System components include the following:
      a. Carpet.
      b. Cushion.
      c. Adhesive.

SPECIFIER NOTE:
For current designations under the Federal Biobased Products Preferred Procurement Program (FB4P), refer to www.biobased.oce.usda.gov. As of January 4, 2010, the Federal Register includes designations for approximately 60 product types. The requirements for purchasing biobased items apply to those items directly purchased by the federal agency. Under a construction contract, the contractor's use of hydraulic fluid in its bulldozers and backhoes is incidental to the purpose of its contract, so the contractor is not

required to use biobased hydraulic fluids. The Office of the Federal Environmental Executive (OFEE) recommends that agencies encourage the use of these items, however.
Currently designated items that affect construction include:

- Roof Coatings
- Water Tank Coatings
- Adhesive and Mastic Removers
- Composite Panels
- Fertilizers
- Plastic Insulating Foam
- Carpet and Upholstery Cleaners
- Carpets
- Dust Suppressants
- Packaging Films
- Glass Cleaners
- Hydraulic Fluids – Stationary Equipment
- Wood and Concrete Sealers
- Cleaners

The USDA currently has identified about 150 items for which it is collecting test data needed for the additional designations of items that will extend preferred procurement status to include all qualifying biobased products.

2. Biobased content:
   a. Carpet systems: Floor coverings composed of woven, tufted, or knitted fiber and a backing system. Provide minimum 7% biobased content.

SPECIFIER NOTE:
USGBC-LEED™ v3 includes credit for reuse of salvaged materials. Salvaged materials typically require some additional material in order to refurbish for reuse. Refinishing millwork, for example requires "new" coating materials.
Verify acceptable percentages for material to be classified as "salvaged" with USGBC.

3. Salvaged/refurbished: Carpet system fabricated from minimum **[90] [100] [xxxx]** percent salvaged carpet or carpet tile.

B. Polyester Carpet Face Fiber:

SPECIFIER NOTE:
US-EPA Comprehensive Procurement Guidelines (CPG) 2002 recommends 25-100 percent post-consumer content for polyester carpet face fiber.
Green building rating systems often include credit for materials of recycled content and may distinguish allowable credit for post-consumer and post-industrial (or pre-consumer) recycled content. USGBC-LEED™ v3, for example, factors 100 percent of post-consumer recycled content but only 50 percent of pre-consumer (post-industrial) recycled content into calculations for its recycled content materials credit. LEED v3 grants one credit to a project for using materials with recycled content such that the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 10 percent of the total value of the materials in the project; 10% (post-consumer + 1/2 post-industrial). It grants an additional point for 20% (post-consumer + 1/2 post-industrial).
Green Globes US also provides points for reused building materials and components and for building materials with recycled content.
Recycled content is typically determined by calculating the weight of the recycled material divided by the total weight of the product and expressed as a percentage by weight. (The recycled content "value" of a product as assessed under LEED is determined by multiplying the recycled content percentage and the cost of the product.)
Verify with manufacturer for product availability and recycled content.

1. Recycled content: Minimum **[25] [xxxx]** percent post-consumer recycled content.

C. Nylon Carpet Face Fiber:

SPECIFIER NOTE:
EPA is considering a proposal for nylon carpet and nylon carpet containing recovered content backing in the next CPG.

1. Recycled Content: Minimum **[5] [10] [xxxx]** percent post-consumer recycled content, or minimum **[20] [40] [xxxx]** percent pre-consumer recycled content at contractor's option.

D. Natural Carpet Face Fiber:
1. Toxicity/IEQ: Chemical treatments, including moth treatment, are **[permitted with written approval from the Owner.] [not permitted.]**
2. Biobased content: Provide fiber manufactured from minimum **[7] [xxxx]** percent biobased materials.
   a. Cotton
   b. Jute
   c. Sisal
   d. Hemp
   e. Wool
   f. Polylactic acid (PLA) fiber

E. Carpet Backing:
1. Biobased Content: Minimum **[7] [xxxx]** percent natural latex, jute, biobased polyurethane, or cotton.
2. Recycled Content: Minimum **[5] [10] [xxxx]** percent post-consumer recycled content, or minimum **[20] [40] [xxxx]** percent pre-consumer recycled content at contractor's option.

2.2 CARPET ACCESSORIES

A. Cushion:

SPECIFIER NOTE:
Most of the substances commonly used in carpet cushion (some of which are also used in carpet backing) can be obtained from recovered materials, e.g. polyurethane, synthetic rubber, PVC, polyvinyl butryal, jute, other synthetic fibers.
US-EPA Comprehensive Procurement Guidelines (CPG) 2002 recommends 40 percent post-consumer content for jute (burlap) carpet cushion; 60-90 percent post-consumer content for rubber (tire) carpet cushion; 100 percent recycled content for synthetic fibers; and, 15-50 post-consumer recycled content for bonded polyurethane.

1. Jute:
   a. Recycled content: Minimum **[40] [xxxx]** percent post-consumer recycled content.
2. Rubber:
   a. Recycled content: Minimum **[60] [xxxx]** percent post-consumer recycled content.
3. Synthetic fibers:
   a. Recycled content: Minimum **[100] [xxxx] percent** recycled content from carpet scraps.
4. Bonded polyurethane:
   a. Recycled Content: Minimum **[15] [xxxx]** percent post-consumer recycled content.

B. Adhesive:
1. Toxicity/IEQ: Comply with applicable regulations regarding toxic and hazardous materials, GS-36 for Commercial Adhesive, CRI Green Label program, **[South**

Coast Air Quality Management District Rule 1168] [Bay Area AQMD Reg. 8, Rule 51 for containers larger than 16 oz and with California Air Resources Board (CARB) for containers 16 oz or less], and as specified.

C. Underlayment:
1. Fiberboard: As specified in Section 06 16 00 (06160) - Sheathing.
2. Strawboard panels: As specified in Section 06 90 00 (06700) – Alternative Agricultural Products.
3. Cork:
   a. Recycled Content: Minimum **[5] [10] [xxxx]** percent post-consumer recycled content, or minimum **[20] [40] [xxxx]** percent pre-consumer recycled content at contractor's option.
   b. Biobased Content: Minimum **[26] [xxxx]** percent.

D. Flame Retardant Additives:

SPECIFIER NOTE:
EO 13423 includes requirements for Federal Agencies to reduce "the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency"

Most of the polybrominated diphenyl ethers (PBDEs) that have been used as flame retardants have been phased out of production and are subject to a Significant New Use Rule under the Toxic Substances Control Act. In order to evaluate chemical alternatives for flame retarding foam, many factors must be considered, including toxicology, exposure, type of flame-retardant chemical, efficacy of use within existing manufacturing systems, availability and viability of non-chemical alternatives, cost and performance. Be sure to specify an alternative flame retardant that is appropriate to the application.

For more information on alternative flame retardants, refer to EPA Design for the Environment Program's report "Environmental Profiles of Chemical Flame-Retardant Alternatives for Low-Density Polyurethane Foam." This report contains a summary of the environmental and human health attributes of selected flame retardants as alternatives to pentabromodiphenyl ether (pentaBDE).

1. Toxicity/IEQ: Free of pentabromodiphenyl ether (pentaBDE).

PART 3 - EXECUTION

3.X SITE ENVIRONMENTAL PROCEDURES

A. Indoor Air Quality:
1. Temporary ventilation: Provide temporary ventilation as specified in Section 01 57 19.11 (01352) – Indoor Air Quality (IAQ) Management, and as follows:
   a. Ventilate products prior to installation. Remove from packaging and ventilate in a secure, dry, well-ventilated space free from strong contaminant sources and residues. Provide a temperature range of 60 degrees F minimum to 90 degree F maximum continuously for minimum 72 hours. Do not ventilate within limits of Work unless otherwise approved by Architect.
2. Immediately after installation, clean carpet thoroughly with a **[high-efficiency particulate air (HEPA) filtration vacuum] [certified CRI Green Label vacuum cleaner]**.
3. Final cleaning: As specified in Section 01 74 13 (01740) – Progress Cleaning.

B. Waste Management: As specified in Section 01 74 19 (01351) – Construction Waste Management and as follows:
1. Coordinate with manufacturer for **[maintenance agreement] [take-back program] [green lease]**. Set aside scrap to be returned to manufacturer for recycling into new product.

2. Remodeling and renovation: Remove existing carpet for reclamation in accordance with manufacturer recommendations and as follows:
   a. Remove used carpet in large pieces, roll tightly, and pack neatly in container.
   b. Remove adhesive according to recommendations of the Carpet and Rug Institute (CRI).
      1) Adhesive Removal Solvents: Comply with Carpet and Rug Institute Publication 104.

END OF SECTION