

REQUEST FOR PROPOSAL (RFP)
Langley AFB Multiple Award Construction Contract (MACC)
Amendment 06

Issued By: 633d Contracting Squadron/LGCB
74 Nealy Avenue
Langley AFB, VA 23665

01 April 2010

Point of Contact: SrA Cody Hancock, (757) 764-4902; 1Lt Brian Chin (757) 764-7681

PROJECT NUMBER: MUHJ 10-4093.

PROJECT TITLE: Repair Nor'Easter Damage, Floors/Walls/Ceiling/Roof, Facility 658

Subject RFP is amended as follows: Remove Specifications Section 09 29 00 Gypsum Board, Section 09 68 00 Carpet, and Section 09 90 00.00 40 Painting and Coating from the RFP and replace with updated Specifications Section 09 29 00 Gypsum Board, Section 09 68 00 Carpet, and Section 09 90 00.00 40 Painting and Coating; Incorporate new Specifications Section 07 92 00 Joint Sealant and 09 65 00 Resilient Flooring; Incorporate new Table of contents to include Division 07; Incorporate questions and answers; and change the proposal due date.

Submission of Proposal has changed to 14 April 2010 at 2:00pm.

Questions and Answers:

- (1) I am being told by my glazing subs that the solar screens over the existing windows are no longer available. We have been instructed to replace missing or damaged screens. Please provide guidance.
Please refer to the guidance provided in the answer to question number 4.
- (2) The abatement of the avian excrement will require the removal of the existing ceiling insulation. There is no direction to replace this insulation. Please provide guidance.
Replace the ceiling insulation with a product that matches or closely resembles the original insulation.
- (3) Based on preliminary feedback, you will be able to replace the windows in the gym for roughly the same price as the repair work described in the S.O.W. and you will have a better product with better insulating characteristics. Right now you have single pane glass and many of the windows are inoperable for a variety of reasons.
Replace the windows with a better product for the same price; try to get something that will perform the same function as the solar panels; then we can just remove them.
- (4) Please clarify - the entire area above the gym and cardio area is to be abated and not just the areas above the where the ceiling repairs are being made, correct?
Correct, the entire area will be abated.

Amendment 06
01 April 2010

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SECTION 07 92 00

JOINT SEALANTS

01/07

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM C 1311	(2002) Standard Specification for Solvent Release Agents
ASTM C 509	(2006) Elastomeric Cellular Preformed Gasket and Sealing Material
ASTM C 734	(2006) Low-Temperature Flexibility of Latex Sealants After Artificial Weathering
ASTM C 834	(2005) Latex Sealants
ASTM C 919	(2008) Use of Sealants in Acoustical Applications
ASTM C 920	(2008) Standard Specification for Elastomeric Joint Sealants
ASTM D 1056	(2007) Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber
ASTM D 1667	(2005) Flexible Cellular Materials - Poly (Vinyl Chloride) Foam (Closed-Cell)
ASTM D 217	(2002; R 2008) Cone Penetration of Lubricating Grease
ASTM D 2452	(2003) Standard Test Method for Extrudability of Oil- and Resin-Base Caulking Compounds
ASTM D 2453	(2003) Standard Test Method for Shrinkage and Tenacity of Oil- and Resin-Base Caulking Compounds
ASTM E 84	(2008a) Standard Test Method for Surface Burning Characteristics of Building Materials

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control

approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Sealants

Manufacturer's descriptive data including storage requirements, shelf life, curing time, instructions for mixing and application, and primer data (if required). Provide a copy of the Material Safety Data Sheet for each solvent, primer or sealant material.

SD-07 Certificates

Sealant

Certificates of compliance stating that the materials conform to the specified requirements.

1.3 ENVIRONMENTAL CONDITIONS

Apply sealant when the ambient temperature is between 40 and 90 degrees F.

1.4 DELIVERY AND STORAGE

Deliver materials to the job site in unopened manufacturers' external shipping containers, with brand names, date of manufacture, color, and material designation clearly marked thereon. Label elastomeric sealant containers to identify type, class, grade, and use. Carefully handle and store materials to prevent inclusion of foreign materials or subjection to sustained temperatures exceeding 90 degrees F or less than 0 degrees F.

1.5 QUALITY ASSURANCE

1.5.1 Compatibility with Substrate

Verify that each of the sealants are compatible for use with joint substrates.

1.5.2 Joint Tolerance

Provide joint tolerances in accordance with manufacturer's printed instructions.

1.5.3 Mock-Up

Project personnel are responsible for installing sealants in mock-up, using materials and techniques approved for use on the project.

1.6 SPECIAL WARRANTY

Guarantee sealant joint against failure of sealant and against water penetration through each sealed joint for five years.

PART 2 PRODUCTS

2.1 SEALANTS

Provide sealant that has been tested and found suitable for the substrates to which it will be applied.

2.1.1 Interior Sealant

Provide **ASTM C 920**, Type S or M, Grade NS, Class 12.5, Use NT. Location(s) and color(s) of sealant for the following:

LOCATION	COLOR
<p>b. Perimeter of frames at doors, windows, and access panels which adjoin exposed interior concrete and masonry surfaces.</p>	<p>To Match Existing</p>
<p>e. Interior locations, not otherwise indicated or specified, where small voids exist between materials specified to be painted.</p>	<p>To Match Existing</p>

2.1.2 Exterior Sealant

For joints in vertical surfaces, provide **ASTM C 920**, Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide **ASTM C 920**, Type S or M, Grade P, Class 25, Use T. Provide location(s) and color(s) of sealant as follows:

LOCATION	COLOR
<p>a. Joints and recesses formed where frames and subsills of windows, doors, louvers, and vents adjoin masonry, concrete, or metal frames. Use sealant at both exterior and interior surfaces of exterior wall penetrations.</p>	<p>Match adjacent surface color</p>

2.2 PRIMERS

Provide a nonstaining, quick-drying type and consistency recommended by the sealant manufacturer for the particular application.

2.3 BOND BREAKERS

Provide the type and consistency recommended by the sealant manufacturer to prevent adhesion of the sealant to backing or to bottom of the joint.

2.4 BACKSTOPS

Provide glass fiber roving or neoprene, butyl, polyurethane, or polyethylene foams free from oil or other staining elements as recommended by sealant manufacturer. Provide 25 to 33 percent oversized backing for closed cell and 40 to 50 percent oversized backing for open cell material, unless otherwise indicated. Make backstop material compatible with sealant. Do not use oakum and other types of absorptive materials as backstops.

2.5 CAULKING

Conform to [ASTM D 2452](#) and [ASTM D 2453](#) Oil- and resin-based caulking.

2.6 CLEANING SOLVENTS

Provide type(s) recommended by the sealant manufacturer [except for aluminum and bronze surfaces that will be in contact with sealant].

PART 3 EXECUTION

3.1 SURFACE PREPARATION

Clean surfaces from dirt frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Remove oil and grease with solvent. Surfaces must be wiped dry with clean cloths. When resealing an existing joint, remove existing caulk or sealant prior to applying new sealant. For surface types not listed below, contact sealant manufacturer for specific recommendations.

3.1.1 Steel Surfaces

Remove loose mill scale by sandblasting or, if sandblasting is impractical or would damage finish work, scraping and wire brushing. Remove protective coatings by sandblasting or using a residue-free solvent.

3.1.2 Aluminum or Bronze Surfaces

Remove temporary protective coatings from surfaces that will be in contact with sealant. When masking tape is used as a protective coating, remove tape and any residual adhesive just prior to sealant application. For removing protective coatings and final cleaning, use nonstaining solvents recommended by the manufacturer of the item(s) containing aluminum or bronze surfaces.

3.1.3 Concrete and Masonry Surfaces

Where surfaces have been treated with curing compounds, oil, or other such materials, remove materials by sandblasting or wire brushing. Remove laitance, efflorescence and loose mortar from the joint cavity.

3.1.4 Wood Surfaces

Keep wood surfaces to be in contact with sealants free of splinters and sawdust or other loose particles.

3.2 SEALANT PREPARATION

Do not add liquids, solvents, or powders to the sealant. Mix multicomponent elastomeric sealants in accordance with manufacturer's instructions.

3.3 APPLICATION

3.3.1 Joint Width-To-Depth Ratios

a. Acceptable Ratios:

<u>JOINT WIDTH</u>	<u>JOINT DEPTH</u>	
	Minimum	Maximum
For metal, glass, or other nonporous surfaces:		
1/4 inch (minimum)	1/4 inch	1/4 inch
over 1/4 inch	1/2 of width	Equal to width
For wood, concrete, masonry, or stone:		
1/4 inch (minimum)	1/4 inch	1/4 inch
Over 1/4 inch to 1/2 inch	1/4 inch	Equal to width
Over 1/2 inch to 2 inch	1/2 inch	5/8 inch
Over 2 inch.	(As recommended by sealant manufacturer)	

b. Unacceptable Ratios: Where joints of acceptable width-to-depth ratios have not been provided, clean out joints to acceptable depths and grind or cut to acceptable widths without damage to the adjoining work. Grinding is not required on metal surfaces.

3.3.2 Masking Tape

Place masking tape on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Remove masking tape within 10 minutes after joint has been filled and tooled.

3.3.3 Backstops

Install backstops dry and free of tears or holes. Tightly pack the back or bottom of joint cavities with backstop material to provide a joint of the depth specified. Install backstops in the following locations:

a. Where indicated.

- b. Where backstop is not indicated but joint cavities exceed the acceptable maximum depths specified in paragraph entitled, "Joint Width-to-Depth Ratios".

3.3.4 Primer

Immediately prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do not apply primer to exposed finish surfaces.

3.3.5 Bond Breaker

Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.

3.3.6 Sealants

Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has jelled and cannot be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's printed instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Make sealant uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Apply sealer over the sealant when and as specified by the sealant manufacturer.

3.4 PROTECTION AND CLEANING

3.4.1 Protection

Protect areas adjacent to joints from sealant smears. Masking tape may be used for this purpose if removed 5 to 10 minutes after the joint is filled.

3.4.2 Final Cleaning

Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean and neat condition.

- a. Masonry and Other Porous Surfaces: Immediately scrape off fresh sealant that has been smeared on masonry and rub clean with a solvent as recommended by the sealant manufacturer. Allow excess sealant to cure for 24 hour then remove by wire brushing or sanding.
- b. Metal and Other Non-Porous Surfaces: Remove excess sealant with a solvent-moistened cloth.

-- End of Section --

SECTION 09 29 00

GYPSUM BOARD
10/06

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- ANSI A108.11 (1992) Interior Installation of Cementitious Backer Units
- ANSI/CTI A108/A118/A136.1 (2005) Specification for the Installation of Ceramic Tile

ASTM INTERNATIONAL (ASTM)

- ASTM C 1002 (2007) Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
- ASTM C 1047 (2005) Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base
- ASTM C 1177/C 1177M (2008) Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
- ASTM C 1178/C 1178M (2008) Standard Specification for Glass Mat Water-Resistant Gypsum Backing Panel
- ASTM C 1396/C 1396M (2006a) Standard Specification for Gypsum Board
- ASTM C 36/C 36M (2003e1) Gypsum Wallboard
- ASTM C 442/C 442M (2004e1) Gypsum Backing Board, Gypsum Coreboard, and Gypsum Shaftliner Board
- ASTM C 475/C 475M (2002; R 2007) Joint Compound and Joint Tape for Finishing Gypsum Board
- ASTM C 514 (2004) Standard Specification for Nails for the Application of Gypsum Board
- ASTM C 557 (2003e1) Adhesives for Fastening Gypsum Wallboard to Wood Framing
- ASTM C 630/C 630M (2003e1) Water-Resistant Gypsum Backing Board

ASTM C 79/C 79M	(2004a) Treated Core and Nontreated Core Gypsum Sheathing Board
ASTM C 840	(2008) Application and Finishing of Gypsum Board
ASTM C 954	(2007) Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness
ASTM C 960/C 960M	(2004) Predecorated Gypsum Board
ASTM D 1037	(2006a) Evaluating Properties of Wood-Base Fiber and Particle Panel Materials
ASTM D 1149	(2007) Standard Test Method for Rubber Deterioration - Surface Ozone Cracking in a Chamber
ASTM D 226	(2006) Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
ASTM D 2394	(2005e1) Simulated Service Testing of Wood and Wood-Base Finish Flooring
ASTM D 412	(2006ae1e2) Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
ASTM D 5420	(2004) Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Strike Impacted by a Falling Weight (Gardner Impact)
ASTM D 624	(2000; R 2007) Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
ASTM E 695	(2003) Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact Loading
ASTM E 84	(2008a) Standard Test Method for Surface Burning Characteristics of Building Materials

GYPSUM ASSOCIATION (GA)

GA 214	(1996) Recommended Levels of Gypsum Board Finish
GA 216	(2004) Application and Finishing of Gypsum Board
GA 224	(1997) Installation of Predecorated Gypsum Board

GA 253 (1999) Application of Gypsum Sheathing

UNDERWRITERS LABORATORIES (UL)

UL Fire Resistance (2008) Fire Resistance Directory

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Water-Resistant Gypsum Backing Board

Impact Resistant Gypsum Board

Accessories

Submit for each type of gypsum board and for cementitious backer units.

SD-04 Samples

SD-07 Certificates

Asbestos Free Materials

Certify that gypsum board types, gypsum backing board types, cementitious backer units, and joint treating materials do not contain asbestos.

SD-08 Manufacturer's Instructions

Material Safety Data Sheets

SD-10 Operation and Maintenance Data

Manufacturer maintenance instructions

Waste Management

1.3 DELIVERY, STORAGE, AND HANDLING

1.3.1 Delivery

Deliver materials in the original packages, containers, or bundles with each bearing the brand name, applicable standard designation, and name of manufacturer, or supplier.

1.3.2 Storage

Keep materials dry by storing inside a sheltered building. Where necessary to store gypsum board and cementitious backer units outside, store off the ground, properly supported on a level platform, and protected from direct exposure to rain, snow, sunlight, and other extreme weather conditions. Provide adequate ventilation to prevent condensation. Store per manufacturer's recommendations for allowable temperature and humidity range. Do not store panels near materials that may offgas or emit harmful fumes, such as kerosene heaters, fresh paint, or adhesives.

1.3.3 Handling

Neatly stack gypsum board and cementitious backer units flat to prevent sagging or damage to the edges, ends, and surfaces.

1.4 ENVIRONMENTAL CONDITIONS

1.4.1 Temperature

Maintain a uniform temperature of not less than 50 degrees F in the structure for at least 48 hours prior to, during, and following the application of gypsum board, cementitious backer units, and joint treatment materials, or the bonding of adhesives.

1.4.2 Exposure to Weather

Protect gypsum board and cementitious backer unit products from direct exposure to rain, snow, sunlight, and other extreme weather conditions.

1.6 QUALIFICATIONS

Furnish type of gypsum board work specialized by the installer with a minimum of 3years of documented successful experience.

PART 2 PRODUCTS

2.1 MATERIALS

Conform to specifications, standards and requirements specified. Provide gypsum board types, gypsum backing board types, cementitious backing units, and joint treating materials manufactured from **asbestos free materials** only.

2.1.1 Gypsum Board

ASTM C 36/C 36M and **ASTM C 1396/C 1396M**. Gypsum board shall contain a minimum of 5percent post-consumer recycled content, or a minimum of 20percent post-industrial recycled content. [Paper facings shall contain 100 percent post-consumer recycled paper content. Gypsum cores shall contain a minimum of 95 percent post-industrial recycled gypsum content.

2.1.3 Regular Water-Resistant Gypsum Backing Board

ASTM C 630/C 630M

2.1.3.1 Regular

48 inch wide, 1/2inch thick, tapered edges.

]]2.1.6 Impact Resistant Gypsum Board

48 inch wide, 5/8 inch thick, tapered edges.

Reinforced gypsum panel with imbedded fiber mesh or lexan backing testing in accordance with the following tests. Provide fasteners that meet manufacturer requirements and specifications stated within this section. Impact resistant gypsum board, when tested in accordance with [ASTM E 84](#), have a flame spread rating of 25 or less and a smoke developed rating of 50 or less.

2.1.6.1 Structural Failure Test

[ASTM E 695](#) or [ASTM D 2394](#) for structural failure (drop penetration). [ASTM E 695](#) using a 60 lb sand filled leather bag, resisting no less than 300 ft. lb. cumulative impact energy before failure or [ASTM D 2394](#) using 5.5 inch hemispherical projectile resisting no less than 264 ft. lb. before failure. Provide test specimen stud spacing a minimum 16 inch on center.

2.1.6.2 Indentation Test

[ASTM D 5420](#) or [ASTM D 1037](#) for indentation resistance. [ASTM D 5420](#) using a 32 oz weight with a 5/8 inch hemispherical impacting head dropped once 3 feet creating not more than 0.137 inch indentation or [ASTM D 1037](#) using no less than 470 lb weight applied to the 0.438 inch diameter ball to create not more than a 0.0197 inch indentation depth.

2.1.9 Joint Treatment Materials

[ASTM C 475/C 475M](#). Use all purpose joint and texturing compound containing inert fillers and natural binders, including lime compound. Pre-mixed compounds shall be free of antifreeze, vinyl adhesives, preservatives, biocides and other slow releasing compounds.

2.1.9.1 Embedding Compound

Specifically formulated and manufactured for use in embedding tape at gypsum board joints and compatible with tape, substrate and fasteners.

2.1.9.2 Finishing or Topping Compound

Specifically formulated and manufactured for use as a finishing compound.

2.1.9.3 All-Purpose Compound

Specifically formulated and manufactured to serve as both a taping and a finishing compound and compatible with tape, substrate and fasteners.

2.1.9.4 Setting or Hardening Type Compound

Specifically formulated and manufactured for use with fiber glass mesh tape.

2.1.9.5 Joint Tape

Use cross-laminated or tapered edge tape recommended by the manufacturer.

2.1.10 Fasteners

2.1.10.1 Nails

2.1.10.2 Screws

ASTM C 1002, Type "G", Type "S" or Type "W" steel drill screws for fastening gypsum board to gypsum board, wood framing members and steel framing members less than 0.033 inch thick. **ASTM C 954** steel drill screws for fastening gypsum board to steel framing members 0.033 to 0.112 inch thick.

2.1.14 Accessories

ASTM C 1047. Fabricate from corrosion protected steel or plastic designed for intended use. Accessories manufactured with paper flanges are not acceptable. Flanges shall be free of dirt, grease, and other materials that may adversely affect bond of joint treatment. Provide prefinished or job decorated materials. .]

2.1.16 Water

Provide clean, fresh, and potable water.

PART 3 EXECUTION

3.1 EXAMINATION

3.1.1 Framing and Furring

Verify that framing and furring are securely attached and of sizes and spacing to provide a suitable substrate to receive gypsum board and cementitious backer units. Verify that all blocking, headers and supports are in place to support plumbing fixtures and to receive soap dishes, grab bars, towel racks, and similar items. Do not proceed with work until framing and furring are acceptable for application of gypsum board and cementitious backer units.

3.2 APPLICATION OF GYPSUM BOARD

Apply gypsum board to framing and furring members in accordance with **ASTM C 840** or **GA 216** and the requirements specified. Apply gypsum board with separate panels in moderate contact; do not force in place. Stagger end joints of adjoining panels. Neatly fit abutting end and edge joints. Use gypsum board of maximum practical length; select panel sizes to minimize waste. Cut out gypsum board to make neat, close, and tight joints around openings. In vertical application of gypsum board, provide panels in

lengths required to reach full height of vertical surfaces in one continuous piece. Lay out panels to minimize waste; reuse cutoffs whenever feasible. Surfaces of gypsum board and substrate members may not be bonded together with an adhesive. Treat edges of cutouts for plumbing pipes, screwheads, and joints with water-resistant compound as recommended by the gypsum board manufacturer. Provide type of gypsum board for use in each system specified herein as indicated.

3.2.1 Application of Single-Ply Gypsum Board to Wood Framing

Apply in accordance with [ASTM C 840](#), System I or [GA 216](#).

3.2.2 Application of Two-Ply Gypsum Board to Wood Framing

Apply in accordance with [ASTM C 840](#), System II or [GA 216](#).

3.2.7 Application of Gypsum Board to Steel Framing and Furring

Apply in accordance with [ASTM C 840](#), System VIII or [GA 216](#).

3.2.12 Floating Interior Angles

Minimize framing by floating corners with single studs and drywall clips. Locate the attachment fasteners adjacent to ceiling and wall intersections in accordance with [ASTM C 840](#), System XII or [GA 216](#), for single-ply and two-ply applications of gypsum board to wood framing.

3.2.13 Control Joints

Install expansion and contraction joints in ceilings and walls in accordance with [ASTM C 840](#), System XIII or [GA 216](#).

3.2.16 Application of Impact Resistant Gypsum Board

Apply in accordance with applicable system of [ASTM C 840](#) as specified or [GA 216](#). Follow manufacturers written instructions on how to cut, drill and attach board.

3.4 FINISHING OF GYPSUM BOARD

Tape and finish gypsum board in accordance with [ASTM C 840](#), [GA 214](#) and [GA 216](#). Finish plenum areas above ceilings to Level 1 in accordance with [GA 214](#). Finish water resistant gypsum backing board, [ASTM C 630/C 630M](#), to receive ceramic tile to Level 2 in accordance with [GA 214](#). Finish walls and ceilings to receive a heavy-grade wall covering or heave textured finish before painting to Level 3 in accordance with [GA 214](#). Finish walls and ceilings without critical lighting to receive flat paints, light textures, or wall coverings to Level 4 in accordance with [GA 214](#). Finish all gypsum board walls, partitions and ceilings to Level 5 in accordance with [GA 214](#). Provide joint, fastener depression, and corner treatment. Tool joints as smoothly as possible to minimize sanding and dust. Do not use fiber glass mesh tape with conventional drying type joint compounds; use setting or hardening type compounds only. Provide treatment for water-resistant gypsum board as recommended by the gypsum board manufacturer. Protect workers, building occupants, and HVAC systems from gypsum dust.

3.4.1 Uniform Surface

Wherever gypsum board is to receive eggshell, semigloss or gloss paint finish, or where severe, up or down lighting conditions occur, finish gypsum wall surface in accordance to GA 214 Level 5. In accordance with GA 214 Level 5, apply a thin skim coat of joint compound to the entire gypsum board surface, after the two-coat joint and fastener treatment is complete and dry.

3.5 SEALING

Seal openings around pipes, fixtures, and other items projecting through gypsum board and cementitious backer units as specified in Section 07 92 00 JOINT SEALANTS Apply material with exposed surface flush with gypsum board or cementitious backer units.

3.6 PATCHING

Patch surface defects in gypsum board to a smooth, uniform appearance, ready to receive finishes.

3.7 SHAFTWALL FRAMING

Install the shaftwall system in accordance with the system manufacturer's published instructions. Coordinate bucks, anchors, blocking and other items placed in or behind shaftwall framing with electrical and mechanical work. Patch or replace fireproofing materials which are damaged or removed during shaftwall construction.

3.8 WASTE MANAGEMENT

As specified in Waste Management Plan.

Identify manufacturer's policy for collection or return of remaining construction scrap, unused material, demolition scrap, and packaging material. Institute demolition and construction recycling to take advantage of manufacturer's programs. When such a service is not available, seek local recyclers to reclaim the materials.]

-- End of Section --

SECTION 09 65 00

RESILIENT FLOORING
02/09

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D 4078	(2002; R 2008) Water Emulsion Floor Polish
ASTM E 648	(2009a) Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
ASTM F 1482	(2004e1; R 2009) Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring
ASTM F 1861	(2008) Resilient Wall Base
ASTM F 1869	(2004) Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
ASTM F 2170	(2009) Determining Relative Humidity in Concrete Floor Slabs in situ Probes
ASTM F 710	(2008) Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED	(2002; R 2005) Leadership in Energy and Environmental Design(tm) Green Building Rating System for New Construction (LEED-NC)
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1.2 SYSTEM DESCRIPTION

1.2.1 Local/Regional Materials

Flooring and accessories may contain post-consumer or post-industrial recycled content.

1.2.2 Fire Resistance Requirements

Provide a minimum average critical radiant flux of 0.45 watts per square centimeter for flooring in corridors and exits when tested in accordance with ASTM E 648.

1.3 SUBMITTALS

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SD-03 Product Data

Resilient Flooring and Accessories; G, 633 CES

Manufacturer's descriptive data.

Adhesives

Manufacturer's descriptive data, documentation stating physical characteristics, and mildew and germicidal characteristics. Provide Material Safety Data Sheets (MSDS) for all primers and adhesives to the Contracting Officer. Highlight VOC emissions.

SD-04 Samples

Resilient Flooring and Accessories; G, 633 FSS

Three samples of each indicated color and type of base, mouldings, and accessories. Provide a minimum 2-1/2 by 4 inch sample.

SD-08 Manufacturer's Instructions

Surface Preparation Installation

Manufacturer's printed installation instructions for all flooring materials and accessories, including preparation of substrate, seaming techniques, and recommended adhesives.

SD-10 Operation and Maintenance Data

Resilient Flooring and Accessories

Data Package 1 in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

1.4 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the building site in original unopened containers bearing the manufacturer's name, style name, pattern color name and number, production run, project identification, and handling instructions. Store materials in a clean, dry, secure, and well-ventilated area with ambient air temperature maintained above 68 degrees F and below 85 degrees F, stacked according to manufacturer's recommendations. Protect materials

from the direct flow of heat from hot-air registers, radiators and other heating fixtures and appliances. Observe ventilation and safety procedures specified in the MSDS.

1.5 ENVIRONMENTAL REQUIREMENTS

Maintain areas to receive resilient flooring at a temperature above 68 degrees F and below 85 degrees F for 3 days before application, during application and 2 days after application, unless otherwise directed by the flooring manufacturer for the flooring being installed. Maintain a minimum temperature of 55 degrees F thereafter. Provide adequate ventilation to remove moisture from area and to comply with regulations limiting concentrations of hazardous vapors.

1.6 SCHEDULING

Schedule resilient flooring application after the completion of other work which would damage the finished surface of the flooring.

1.7 WARRANTY

Provide manufacturer's standard performance guarantees or warranties that extend beyond a one year period.

1.8 EXTRA MATERIALS

Provide extra wall base material composed of 20 linear feet of each type, color and pattern. Package all extra materials in original properly marked containers bearing the manufacturer's name, brand name, pattern color name and number, production run, and handling instructions. Provide extra materials from the same lot as those installed. Leave extra stock at the site in location assigned by Contracting Officer.

PART 2 PRODUCTS

2.1 WALL BASE

Conform to **ASTM F 1861**, Type TV (thermoplastic vinyl), Style A (straight - installed with carpet) and Style B (coved - installed with resilient flooring) Provide 4 inch high and a minimum 1/8 inch thick wall base. Provide job formed corners in matching height, shape, and color.

2.2 MOULDING

Provide tapered mouldings of vinyl and types as recommended by flooring manufacturer for both edges and transitions of flooring materials specified. Provide vertical lip on moulding of maximum 1/4 inch. Provide bevel change in level between 1/4 and 1/2 inch with a slope no greater than 1:2.

2.3 ADHESIVES

Provide adhesives for flooring, base and accessories as recommended by the manufacturer and comply with local indoor air quality standards.

2.4 SURFACE PREPARATION MATERIALS

Provide surface preparation materials, such as panel type underlayment, lining felt, and floor crack fillers as recommended by the flooring manufacturer for the subfloor conditions. Comply with [ASTM F 1482](#) for panel type underlayment products.

2.5 POLISH/FINISH

Provide polish finish as recommended by the manufacturer and conform to [ASTM D 4078](#) for polish.

2.6 CAULKING AND SEALANTS

Provide caulking and sealants in accordance with Section [07 92 00 JOINT SEALANTS](#).

2.7 MANUFACTURER'S COLOR, PATTERN AND TEXTURE

Provide color, pattern and texture for [resilient flooring and accessories](#) as selected from manufacturer's standard colors.

PART 3 EXECUTION

3.1 EXAMINATION

Examine and verify that site conditions are in agreement with the design package. Report all conditions that will prevent a proper [installation](#). Do not take any corrective action without written permission from the Government. Work will proceed only when conditions have been corrected and accepted by the installer.

3.4 PLACING MOULDING

Provide moulding where flooring termination is higher than the adjacent finished flooring and at transitions between different flooring materials. When required, locate moulding under door centerline. Moulding is not required at doorways where thresholds are provided. Secure moulding with adhesive as recommended by the manufacturer. Prepare and apply adhesives in accordance with manufacturer's printed directions.

3.5 PLACING WALL BASE

Install wall base in accordance with manufacturer's printed installation instructions. Prepare and apply adhesives in accordance with manufacturer's printed directions. Tighten base joints and make even with adjacent resilient flooring. Fill voids along the top edge of base at masonry walls with caulk. Roll entire vertical surface of base with hand roller, and press toe of base with a straight piece of wood to ensure proper alignment. Avoid excess adhesive in corners.

3.6 CLEANING

Immediately upon completion of installation of flooring in a room or an area, dry/clean the flooring and adjacent surfaces to remove all surplus adhesive. Clean flooring as recommended in accordance with manufacturer's printed maintenance instructions. No sooner than 5 days after installation,

wash flooring with a nonalkaline cleaning solution, rinse thoroughly with clear cold water, and, except for rubber flooring and stair treads, risers and stringers, vinyl and other flooring not requiring polish finish by manufacturer, apply the number of coats of polish in accordance with manufacturer's written instructions. Clean and maintain all other flooring as recommended by the manufacturer.

3.7 WASTE MANAGEMENT

Separate offcuts and waste materials and reuse or recycle in accordance with the Waste Management Plan, keeping sheet materials larger than 2 square feet and tiles larger than 1/2 tiles separate for reuse. Identify manufacturer's policy for collection or return of construction scrap, unused material, demolition scrap, and/or packaging material. [Shred scrap cork and linoleum for composting on site.]Place materials defined as hazardous or toxic waste in designated containers and dispose of properly. Close and seal tightly partly used sealant and adhesive containers and store protected in a well ventilated fire-safe area at moderate temperature.

3.8 PROTECTION

From the time of installation until acceptance, protect flooring from damage as recommended by the flooring manufacturer. Remove and replace flooring which becomes damaged, loose, broken, or curled and wall base which is not tight to wall or securely adhered.

-- End of Section --

SECTION 09 68 00

CARPET
01/07

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

- AATCC 107 (2002; R 2007) Colorfastness to Water
- AATCC 134 (2006; E 2007) Standard Test Method for Electrostatic Propensity of Carpets
- AATCC 16 (2004) Colorfastness to Light
- AATCC 174 (1998; R 2007) Antimicrobial Activity Assessment of Carpets

ASTM INTERNATIONAL (ASTM)

- ASTM D 297 (1993; R 2006) Rubber Products - Chemical Analysis
- ASTM D 3278 (1996; R 2004e1) Flash Point of Liquids by Small Scale Closed-Cup Apparatus
- ASTM D 3676 (2007) Rubber Cellular Cushion Used for Carpet or Rug Underlay
- ASTM D 5793 (2005) Binding Sites Per Unit Length or Width of Pile Yarn Floor Coverings
- ASTM D 5848 (2007) Mass Per Unit Area of Pile Yarn Floor Coverings
- ASTM E 2129 (2005) Standard Practice for Data Collection for Sustainability Assessment of Building Products
- ASTM E 648 (2008a) Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

CARPET AND RUG INSTITUTE (CRI)

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CRI 104 (2002) Standard for Installation
Specification of Commercial Carpet

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 2551 (1981) Machine-made Textile Floor Coverings -
Determination of Dimensional Changes Due to
the Effects of Varied Water and Heat
Conditions

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 253 (2005) Test for Critical Radiant Flux of
Floor Covering Systems Using a Radiant Heat
Energy Source

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FS SS-W-40 (Rev A; Int Am 1, Notice 1) Wall Base:
Rubber, and Vinyl Plastic

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED (2002; R 2005) Leadership in Energy and
Environmental Design(tm) Green Building
Rating System for New Construction (LEED-NC)

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

16 CFR 1630 Standard for the Surface Flammability of
Carpets and Rugs (FF 1-70)

40 CFR 247 Comprehensive Procurement Guideline for
Products Containing Recovered Materials

1.2 SUBMITTALS

Submit the following in accordance with Section 01 11 00 Special Conditions:

SD-02 Shop Drawings

Installation Molding

Three copies of drawings indicating areas receiving carpet, carpet types, textures and patterns, direction of pile, location of seams, and locations of edge molding. Installation drawings for the following items diagramming the location of seams, edge moldings, and carpet direction for approval prior to installation.

- 1) Carpet Pads
- 2) Carpet Moldings
- 3) Base

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SD-03 Product Data

Carpet
Carpet Pads
Carpet Moldings
Base

Manufacturer's catalog data and printed documentation stating physical characteristics, durability, resistance to fading, and flame resistance characteristics for each type of carpet material and installation accessory. Submit manufacturer's catalog data for the following items:

- 1) Carpet Pads
- 2) Carpet Moldings
- 3) Base

Surface Preparation
Installation

Three copies of the manufacturer's printed installation instructions for the carpet, including preparation of substrate, seaming techniques, and recommended adhesives and tapes.

Regulatory Requirements

Three copies of report stating that carpet and carpet components contain recycled materials and/or involvement in a recycling or reuse program. Include in the report percentage of post-industrial and post-consumer recycled material and relative dollar value of recycled content products to total dollar value of products included in project. Include manufacturer's certification of compliance with Carpet and Rug Institute's Green Label Indoor Air Quality program

Environmental Data

Documentation indicating type of biobased material in product and biobased content. Indicate relative dollar value of biobased content products to total dollar value of products included in project.

SD-04 Samples

Carpet
Molding

a. Carpet: Two "Production Quality" samples 18 by 18 inches of each carpet proposed for use, showing quality, pattern, and color specified.

b. Vinyl or Aluminum Moldings: Two pieces of each type at least 12 inches long.

c. Special Treatment Materials: Two samples showing system and installation method.

SD-06 Test Reports

Moisture and Alkalinity Tests

Three copies of test reports of moisture and alkalinity content of concrete slab stating date of test, person conducting the test, and the area tested.

SD-07 Certificates

Carpet

Certificates of compliance from a laboratory accredited by the National Laboratory Accreditation Program of the National Institute of Standards and Technology attesting that each type of carpet and carpet with cushion material conforms to the standards specified.

Regulatory Requirements

Report stating that the carpet contains recycled materials and indicating the actual percentage of recycled material. Certificates, showing conformance with the referenced standards contained in this section, for the following:

- 1) Carpet Pads
- 2) Carpet Moldings
- 3) Base

SD-10 Operation and Maintenance Data

Carpet

Cleaning and Protection

Three copies of carpet manufacturer's maintenance instructions describing recommended type of cleaning equipment and material, spotting and cleaning methods, and cleaning cycles.

Operational Service

Documentation of manufacturer's take-back program for carpet. Include contact information, summary of procedures, and the limitations and conditions applicable to the project. Indicate manufacturer's commitment to reclaim materials for recycling and/or reuse.

1.3 REGULATORY REQUIREMENTS

Provide the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) label for carpet, carpet cushion, and adhesives or demonstrate compliance with testing criteria and frequencies through independent laboratory test results. Carpet, carpet cushion, and adhesives bearing the label will

indicate that the carpet has been tested and meets the criteria of the CRI IAQ Carpet Testing Program, and minimizes the impact on indoor air quality. Procure carpet in accordance with 40 CFR 247, and where possible, purchased locally to reduce emissions of fossil fuels from transporting. Conform to EPA requirements in accordance with Section 01 62 35 RECYCLED / RECOVERED MATERIALS for carpet.

1.4 DELIVERY AND STORAGE

Deliver materials to the site in the manufacturer's original wrappings and packages clearly labeled with the manufacturer's name, brand name, size, dye lot number, and related information. Remove materials from packaging and store them in a clean, dry, well ventilated area (100 percent outside air supply, minimum of 1.5 air changes per hour, and no recirculation), protected from damage, soiling, and moisture, and strong contaminant sources and residues, and maintain at a temperature above 60 degrees F for 2 days prior to installation. Carpet or carpet tiles shall not be stored with materials which have high emissions of volatile organic compounds (VOCs) or other contaminants. Do not store carpet near materials that may off gas or emit harmful fumes, such as kerosene heaters, fresh paint, or adhesives.

1.5 ENVIRONMENTAL REQUIREMENTS

Maintain areas in which carpeting is to be installed at a temperature above 60 degrees F and below 90 degrees F for 2 days before installation, during installation, and for 2 days after installation. Provide temporary ventilation during work of this section. Maintain a minimum temperature of 55 degrees F thereafter for the duration of the contract. Do not permit traffic or movement of furniture or equipment in carpeted area for 24 hours after installation. Complete other work which would damage the carpet prior to installation of carpet.

1.7 SCHEDULING

Install carpet systems after the installation and ventilation period of materials or finishes which have high short-term emissions of VOCs, formaldehyde, particulates, or other air-borne compounds which may be absorbed by or settle on the carpet tiles.

1.8 WARRANTY

Provide manufacturer's standard performance guarantees or warranties including minimum ten (10) year wear warranty, two (2) year material and workmanship and ten (10) year tuft bind and delamination.

1.9 OPERATIONAL SERVICE

Collect information from the manufacturer about take back options and submit to Contracting Officer. Service shall reclaim materials for recycling and/or reuse. Service shall not landfill or burn reclaimed materials. When such a service is not available, local recyclers shall be sought after to reclaim the materials.

1.10 EXTRA MATERIAL

Provide extra material from same dye lot consisting of full width continuous broadloom for future maintenance. Provide a minimum of 1 percent of total square yards of each carpet type, pattern, and color.

PART 2 PRODUCTS

2.1 CARPET

Furnish first quality carpet; free of visual blemishes, streaks, poorly dyed areas, fuzzing of pile yarn, spots or stains, and other physical and manufacturing defects. Provide carpet materials and treatments as reasonably nonallergenic and free of other recognized health hazards. Provide a static control construction on all grade carpets which gives adequate durability and performance. Provide the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) Label. Carpet type bearing the label will indicate that carpet has been tested and meets the criteria of the CRI Green Label Requirements for Indoor Air Quality Test Criteria. [Carpet tiles shall have Carpet Component Identification Codes as established by the CRI for future recycling. The labels shall be permanently printed or attached to the carpet backing. The codes shall identify, at minimum, the carpet's face fiber, primary backing, and secondary backing.]

2.1.1 Polyester Carpet Face Fibers

For informational purposes, a list of sources known to recycle polyester carpet face fibers is provided below. Note that the Contractor is not limited to these sources. An approved product from other sources may be submitted for the Government's approval during construction. Acceptable manufacturer's include, but are not limited to:

Bretlin, Inc.
LaFayette, Georgia

Central Vermont Carpet
Barre, Vermont

Environmental Building Supplies
Portland, Oregon

Image Industries
Amuchee, Georgia

Martin Color-FI
Edgefield, South Carolina

Talisman Mills, Inc.
Mequon, Wisconsin

2.1.2 Physical Characteristics

2.1.2.1 Broadloom Carpet [A]

Carpet shall comply with the following:

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- a. Carpet Construction: Tufted.
- b. Type: Broadloom 12 feet minimum usable carpet width with exception of corridors.
- c. Pile Type: Level-loop.
- d. Pile Fiber: Commercial 100 percent branded (federally registered trademark) nylon continuous filament, minimum 5 percent post-consumer or 20 percent post-industrial recycled content with 25 percent minimum total combined recycled content. Chemical treatments, including moth treatment, are permitted with written approval from the Contracting Officer. Carpet pile fiber may contain post-consumer or post-industrial recycled content.
- e. Yarn Ply: Minimum 2.
- f. Gauge or Pitch: Minimum 1/8 inch in accordance with [ASTM D 5793](#).
- g. Stitches or Rows/Wires: Minimum 40 per square inch.
- h. Finished Pile Yarn Weight: Minimum 36 ounces per square yard. This does not include weight of backings. Determine weight in accordance with [ASTM D 5848](#).
- i. Pile Density: Minimum 160,000.
- j. Dye Method: Solution dyed
- k. Backing Materials: Provide primary backing materials like those customarily used and accepted by the trade for each type of carpet. Provide secondary backing to suit project requirements of those customarily used and accepted by the trade for each type of carpet, except when a special unitary back designed for gluedown is needed. Backing system shall contain an overall minimum of 85 percent natural latex, jute, or cotton and contain a minimum of 5 percent post-consumer recycled content, or minimum 20 percent post-industrial recycled content.
- l. Attached Cushion: Provide an attached cushion chemically frothed polyurethane with minimum weight of 18 oz/sq. yard, minimum density of 11 lb/cubic foot, minimum 15 percent post-consumer recycled content. Do not exceed the maximum ash content of 50 percent when tested in accordance with [ASTM D 297](#). Pass the accelerated aging test in accordance with [ASTM D 3676](#) for the cushion.
- m. Recycle Efforts: Use of nylon fiber with 25 per cent minimum recycled content.

2.2 PERFORMANCE REQUIREMENTS

- a. ARR (Appearance Retention Rating): Test carpet with the minimum 3.0-3.5 (Heavy) ARR in accordance with either the [ASTM D](#)

5252(Hexapod) or ASTM D 5417 (Vettermann) test methods using the number of cycles for short and long term tests as specified.

b. Static Control: Provide static control to permanently regulate static buildup to less than 2.0 kV when tested at 20 percent relative humidity and 70 degrees F in accordance with AATCC 134.

c. Flammability and Critical Radiant Flux Requirements: Comply carpet with 16 CFR 1630. Provide carpet in corridors and exits with a minimum average critical radiant flux of 0.22 watts per square centimeter when tested in accordance with ASTM E 648.

d. Tuft Bind: Provide tuft bind force required to pull a tuft or loop free from carpet backing with a minimum 10 pound average force for loop pile.

e. Colorfastness to Crocking: Comply dry and wet crocking with AATCC 165 and with a Class 4 minimum rating on the AATCC Color Transference Chart for all colors.

f. Colorfastness to Light: Comply colorfastness to light with AATCC 16, Test Option E "Water-Cooled Xenon-Arc Lamp, Continuous Light" and with a minimum 4 grey scale rating after 40 hours.

g. Colorfastness to Water: Comply colorfastness to water with AATCC 107 and with a minimum 4.0 gray scale rating and a minimum 4.0 transfer scale rating.

h. Delamination Strength: Provide delamination strength for tufted carpet with a secondary back of minimum 2.5 lbs/inch.

i. Antimicrobial: Nontoxic antimicrobial treatment in accordance with AATCC 174 Part I (qualitative), guaranteed by the carpet manufacturer to last the life of the carpet.

2.3 CARPET PADS

Provide a sponge rubber pad, 64-ounce flame spread in accordance with NFPA 253.

2.3.1 Carpet Cushion

For informational purposes, a list of sources known to recycle carpet cushions is provided below. Note that the Contractor is not limited to these sources. An approved product from other sources may be submitted for the Government's approval during construction. Acceptable manufacturer's include, but are not limited to:

Collins & Aikman Floor Coverings
Dalton, Georgia

Chris Craft International Products
Waterford, New York

Carpenter Company
Richmond, Virginia

Dixie Manufacturing Corporation
Norfolk, Virginia

2.3.2 Recycling Requirements

Provide bonded polyurethane carpet cushions be made from 15-50 percent of postconsumer content and 15-50 percent of total recovered materials content.

2.4 CARPET MOLDINGS

Install carpet moldings, either vinyl or aluminum, where floor covering material changes or carpet edge does not abut a vertical surface.

2.5 BASE

Conform to **FS SS-W-40** for vinyl base. Provide minimum overall thickness of base not less than 0.125 inch, color as selected from manufacturer's full line. Straight style, 4 inch high. Furnish base in rolls not less than 96 feet long. Premold corners with wings not less than 2 inch long.

2.6 ADHESIVES AND CONCRETE PRIMER

Adhesives and concrete primers shall comply with applicable regulations regarding toxic and hazardous materials. Use wet adhesive with a maximum VOC content of 50 grams/liter. Provide waterproof, nonflammable, and nonstaining adhesives and concrete primers for carpet installation to meet local air-quality standards, and as required by the carpet manufacturer. Provide release adhesive for modular tile carpet as recommended by the carpet manufacturer. Provide adhesives flashpoint of minimum 140 degrees F in accordance with **ASTM D 3278**.

2.7 MOLDING

Provide natural color anodized finish. Provide a floor flange of a minimum 1-1/2 inch wide and face a minimum 5/8 inch wide.

2.8 TAPE

Provide tape for seams as recommended by the carpet manufacturer for the type of seam used in installation. Any seam sealant shall have a maximum VOC content of 50 grams/liter. Do not use sealants that contain 1,1,1-trichloroethane or toluene.

2.9 COLOR, TEXTURE, AND PATTERN

Provide color, texture, and pattern in accordance with Section **01 11 00** Special Conditions.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

Do not install carpet on surfaces that are unsuitable and will prevent a proper installation. Repair holes, cracks, depressions, or rough areas

using material recommended by the carpet or adhesive manufacturer. Free floor of any foreign materials and sweep clean. Before beginning work, test subfloor with glue and carpet to determine "open time" and bond.

3.2 MOISTURE AND ALKALINITY TESTS

Test concrete slab shall for moisture content and excessive alkalinity in accordance with [CRI 104](#).

3.3 PREPARATION OF CONCRETE SUBFLOOR

Do not commence installation of the carpeting shall until concrete substrate is at least 90 days old. Prepare the concrete surfaces in accordance with instructions of the carpet manufacturer. Match carpet, when required, and adhesives to prevent off-gassing to a type of curing compounds, leveling agents, and concrete sealer.

3.4 INSTALLATION

Isolate area of installation from rest of building. Perform all work by installers who are CFI certified (International Certified Floorcovering Installer Association), or manufacturer's approved installers. Conduct installation in accordance with the manufacturer's printed instructions and [CRI 104](#). Protect edges of carpet meeting hard surface flooring with molding and install in accordance with the molding manufacturer's printed instructions. Mothproofing for wool carpets shall use autofoam mothproofing system. Follow ventilation, personal protection, and other safety precautions recommended by the adhesive manufacturer. Continue ventilation during installation and for at least 72 hours following installation.

3.4.1 Broadloom Installation

Install broadloom carpet direct glue down and smooth, uniform, and secure, with a minimum of seams. Apply regular, unnoticeable, and treated seams with a seam adhesive. Run side seams toward the light, where practical, and where such layout does not increase the number of seams. Install breadths parallel, with carpet pile in the same direction. Match patterns accurately. Neatly cut and fit cutouts, at door jambs, columns and ducts securely. Locate seams at doorways parallel to and centered directly under doors. Do not make seams perpendicular to doors or at pivot points. Provide seams at changes in directions of corridors to follow the wall line parallel to the carpet direction. Lay the carpet lengthwise down the corridors with widths less than 6 feet.

3.4.2 Modular Tile Installation

Install modular tiles with permanent vinyl-compatible adhesive and snugly jointed together. Lay tiles in an alternating pattern with accessibility to the subfloor where required.

3.4.3 Entrance Carpet Installation

Install tiles with adhesive and shall be snugly jointed together. Lay tiles in an alternating pattern. Prepare regular, unnoticeable, and treated seams with a seam adhesive. Install breadths parallel, with carpet pile in the

same direction. Match patterns accurately. Neatly cut and fit, securely, cutouts at door jambs, columns, and ducts. Locate seams at doorways parallel to and centered directly under doors. Do not make seams perpendicular to doors or at pivot points.

[3.4.4 Stretch-in Installation

Provide carpet anchors wherever carpeting abuts vertical surfaces. Install tackless carpet stripping by nailing. Place carpet cushion face-up, as recommended by cushion manufacturer, over entire floor area to be carpeted with joints butted. Do not use adhesives to attach carpet, pad, or substrate. Comply with carpet manufacturer's instructions for installation. Attach rubber or metal edge strip to substrate with adhesive.

]3.5 CLEANING AND PROTECTION

3.5.1 Cleaning

After installation of the carpet, remove debris, scraps, and other foreign matter. Remove soiled spots and adhesive from the face of the carpet with appropriate spot remover. Cut off and remove protruding face yarn. Vacuum carpet clean with a high-efficiency particulate air (HEPA) filtration vacuum.

3.5.2 Protection

Protect the installed carpet from soiling and damage with heavy, reinforced, nonstaining kraft paper, plywood, or hardboard sheets. Lap and secure edges of kraft paper protection to provide a continuous cover. Restrict traffic for at least 48 hours. Remove protective covering when directed by the Contracting Officer.

3.6 REMNANTS

Collect information from manufacturer about maintenance agreement and take-back program options, and provide to Contracting Officer. Manage waste as specified in the Waste Management Plan. Provide remnants remaining from the installation, consisting of scrap pieces more than 2 feet in dimension with more than 6 square feet total to the Government. Remove non-retained scraps from site and recycle appropriately.

-- End of Section --

SECTION 09 90 00.00 40

PAINTING AND COATING
06/06

PART 1 GENERAL

1.1 SUBMITTALS

Submit the following in accordance with Section 01 11 00 Special Conditions:

SD-03 Product Data

Manufacturer's catalog data shall be submitted for the following items. Data shall include detailed analysis of each coating material required, with constituents measured as percentages of the total weight of coating.

Inhibitive Metal Primer
Pigmented Sealer
Latex Block Filler
Alkali Resistant Primer
Enamel Undercoat
Exterior Wood Primer
Acrylic Latex
Acrylic Epoxy

SD-04 Samples

Manufacturer's Standard Color Charts shall be submitted in accordance with paragraph entitled, "Manufacturer's and Materials," of this section.

SD-07 Certificates

A Safety Plan shall be submitted in accordance with paragraph entitled, "General," of this section.

SD-08 Manufacturer's Instructions

Manufacturer's instructions shall be submitted for architectural coatings including details of thinning, mixing, handling, and application, in accordance with paragraph entitled, "General," of this section.

1.2 CONTRACTOR PERSONNEL QUALIFICATION

Personnel assigned to the work shall be certified by the Contractor to have had adequate previous experience in the successful application of paints and coatings similar to those specified.

1.3 DELIVERY, HANDLING, AND STORAGE

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Materials shall be delivered in their original, unbroken containers bearing the manufacturer's name and product identification. Containers breached by rough handling shall be removed from the site, together with their contents.

Paint materials, thinners, and cleaners shall be stored in tightly closed containers in a covered, well-ventilated area where they will not be exposed to excessive heat, sparks, flame, or direct sunlight. Water-based materials shall be protected against freezing.

PART 2 PRODUCTS

2.1 MANUFACTURER'S AND MATERIALS

Manufacturer's Standard Color Charts shall be submitted showing manufacturer's recommended finish colors. Three color chips of each color and gloss scheduled shall also be submitted.

The following are suggested paint manufacturers and their products. Other paint manufacturers' products of equal quality will be considered when submitted and approved by the Contracting Officer.

<u>COATING</u>	<u>PITTSBURGH</u>	<u>SHERWIN WILLIAMS</u>	<u>GLIDDEN</u>
Inhibitive Metal Primer	6-712	B50WZ1	6970
Pigmented Sealer	6-2	B28W200	5111
Latex Block Filler	6-7	B25W25	5317
Alkali Resistant Primer	6-3	A5V2	5212H
Enamel Undercoat	6-755	B49W2	[300] [310]
Exterior Wood Primer	6-809	Y24W20	3651
Acrylic latex, flat	72 line	A6 SERIES	6500
Acrylic Latex, gloss	78 line	A8 SERIES	6600
Water base Acrylic Epoxy	16 line	B70 SERIES	5277/5278

PART 3 EXECUTION

3.1 GENERAL

A **Safety Plan** shall be submitted for architectural coating systems in accordance with OSHA regulations.

Manufacturer's recommendations for surface preparation, thinning, mixing, handling, and application shall be considered a part of this specification.

3.2 PROTECTION OF FACILITIES

Contractor shall remove and reinstall or provide acceptable protection for hardware, accessories, lighting and electrical components, factory-finished materials, plumbing fixtures and fittings, and any other materials that may become splattered or damaged by the painting work.

3.3 SURFACE PREPARATION

3.3.1 General Requirements

Surfaces shall be clean, dry, and free from contaminants and foreign matter. Mildew and chalking shall be removed and the surface thoroughly sterilized. Chipped, peeling, or blistered paint shall be removed and the surface spot primed. Hard glossy surfaces shall be dulled and roughened to ensure proper adhesion.

3.3.5 Wood

Surfaces shall be clean, dry, smooth, and free from oil, grease, and dirt. Knots shall be sealed with a mixture of equal parts of shellac and alcohol. Nail holes, cracks, and other defects shall be filled with plastic wood or putty. Concealed surfaces shall be back-primed before installation.

3.3.7 Plaster and Drywall

Surfaces shall be clean and dry. Cracks and other surface imperfections shall be filled with spackling compound and sanded smooth.

3.4 MIXING AND APPLICATION

3.4.1 General Procedures

No exterior painting shall be allowed in rainy weather or when rain is imminent. No paints or coatings shall be applied when the temperature or humidity is outside the limits recommended by the manufacturer.

Paints and coatings shall be applied by brush, roller, or airless spray.

Each coat of material applied shall be free from runs, sags, bubbles, foreign contaminants, variations in color, gloss, and texture, dry

overspray, brush and roller marks, holidays (missed areas), or other evidence of poor application.

Paints and coatings shall be thoroughly worked into corners and crevices.

Newly painted surfaces shall be adequately protected from damage.

3.4.2 Procedures

There shall be at least 2 coats of paint applied in accordance with the manufacturer's instructions.

Coatings shall be applied as follows:

Material shall be thoroughly stirred to produce a uniform mixture.

Material shall be thinned for workability and improved spray characteristics, but only according to the manufacturer's instructions.

Each coat shall be applied uniformly at the minimum wet-film thickness specified by the manufacturer.

Special attention shall be given when coating sharp edges, corners, and crevices to ensure complete coverage.

Finish coats shall show good hiding characteristics and uniform appearance.

3.5 ACCEPTANCE PROVISIONS

3.5.1 Inspection

Contractor shall provide qualified personnel for inspection of his work to ensure that the requirements of this section have been fulfilled.

3.5.2 Correction

Spot-painting to correct damaged surfaces will be allowed only when touchup area blends into the surrounding finish. Otherwise, the entire area shall be recoated. Touchup shall be accomplished using the same method of application as was used to apply the original material.

3.6 PROTECTION

"WET PAINT" signs shall be posted to indicate newly painted surfaces.

3.7 PAINT SCHEDULE

<u>SURFACE</u>	<u>PRIMER</u>	<u>UNDERCOAT AND FINISH COAT</u>	<u>FINISH COLOR AND SHEEN</u>
Interior plaster	Pigmented sealer	Water-base acrylic enamel	white gloss

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Interior
drywall

Pigmented
sealer

Water-base
acrylic enamel

white gloss

Interior
wood

Water-base
enamel
undercoat

Water-base
acrylic enamel

white gloss

-- End of Section --