







this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a RID outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

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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 1308	(2002) Effect of Household Chemicals on Clear and Pigmented Organic Finishes
ASTM D 751	(2000) Coated Fabrics
ASTM E 84	(2005) Standard Test Method for Surface Burning Characteristics of Building Materials

CHEMICAL FABRICS & FILM ASSOCIATION (CFFA)

CFFA-W-101-D	(2000) Vinyl Coated Fabric Wall covering
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NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 286	(2000) Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth
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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD)

SCAQMD Rule #1168	(2003) Adhesive and Sealant Applications
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U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FED-STD 191	(Rev A; Notice 7) Textile Test Methods
FS CCC-W-408	(Rev C) Wallcovering, Vinyl Coated

1.2 SUBMITTALS

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NOTE: Review Submittal Description (SD) definitions in Section 01330 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project. Submittals should be kept to the minimum required for adequate quality control.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

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Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.] [for information only. 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 01330 SUBMITTAL PROCEDURES:

#### SD-03 Product Data

Wall Coverings and Accessories[; G][; G, [\_\_\_\_]]

Wall Covering manufacturer's descriptive data, documentation stating physical characteristics, flame resistance, mildew and germicidal characteristics. Corner guard and wainscot cap manufacturer's descriptive data.

Primer and Adhesive

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

Vinyl Wall Covering

Submit manufacturer's catalog data for vinyl wall covering.

#### SD-04 Samples

Wall Coverings and Accessories[; G][; G, [\_\_\_\_]]

[Three] [\_\_\_\_\_] samples of each indicated type, pattern, and color of wall covering. Provide minimum 125 by 175 mm 5 by 7 inch samples of wall covering to show pattern repeat of sufficient size. [Three] [\_\_\_\_\_] samples of each indicated type corner guard and wainscot cap.

Vinyl Wall Covering Mockup Panels. After vinyl wall covering samples are approved, and prior to starting installation, provide a minimum 2430 by 2430 mm 8 by 8 foot vinyl wall covering mock-up for each color and type of vinyl wall covering, using the proposed primers and adhesives and actual substrate materials. Once approved, use the mock-up samples as a standard of workmanship for installation within the facility. Submit written notification to the Contracting Officer's Representative at least 48 hours prior to mock-up installation.

Wall Covering: Three samples, 3 meter yards long by the width specified, of each color and grain to be installed in the work, as required to illustrate material weight, color, shade, decorative design, and embossing when required.

#### SD-07 Certificates

##### Wall Coverings and Accessories

Manufacturer's statement attesting that the product furnished meets or exceeds specification requirements. The statement must; be dated after the award of the contract, state Contractor's name and address, name the project and location, and list the requirements being certified.

Submit certificates for Vinyl Wall Covering including the following:

Certified laboratory test reports of the physical properties for vinyl wall covering, as specified

Certificates of Compliance for UL fire hazard classification listing, as specified

Certificates of Compliance for contact adhesive

#### SD-08 Manufacturer's Instructions

##### Wall Coverings and Accessories

Preprinted installation instructions for wall covering and accessories, adhesives and primers. Include preparation of the substrate within the instructions.

Submit preventative maintenance and inspection for Vinyl Wall Covering showing the manufacturers recommended cleaning materials and application methods, including precautions in the use of cleaning materials that may be detrimental to the wall covering surface when improperly applied.

#### SD-10 Operation and Maintenance Data

##### Wall Coverings

### 1.3 DELIVERY AND STORAGE

Deliver the material to the site in manufacturer's original wrappings and packages and clearly label with the manufacturer's name, brand name, pattern and color name and number, dye lot number, size, and other related information. Store in a safe, dry, clean, and well-ventilated area at temperatures not less than 10 degrees C 50 degrees F and within a relative humidity range of 30 to 60 percent. Store wall covering material in a flat position and protect from damage, soiling, and moisture. Do not open containers until needed for installation, unless verification inspection is required.

### 1.4 ENVIRONMENTAL REQUIREMENTS

Comply with wall covering manufacturer's printed installation instructions for minimum temperature of area to receive requirements for conditioning adhesive and wall covering. Provide a minimum 10 degrees C 50 degrees F area temperature, 72 hours prior to installation, during installation, and until the adhesive dries. Observe ventilation and safety procedures.

### 1.5 WARRANTY

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

### 1.6 EXTRA MATERIALS

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NOTE: Extra stock of wall covering may be required.  
If not, delete this paragraph. Extra stock should  
be based on anticipated usage. In the absence of  
experience data, a minimum of one linear meter for  
each 100 lineal meters (one linear foot for each 100  
linear feet) installed is suggested.  
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Provide one linear meter one linear foot of full-width wall covering of each pattern and color for each [100] [\_\_\_\_\_] linear meters [100] [\_\_\_\_\_] linear feet of wall covering installed. Provide the same manufacturer, type, pattern, color, and lot number of extra stock as the installed wall covering. Provide full rolls, packed for storage and marked with content, manufacturer's name, pattern and color name and number and dye lot number. Leave extra stock at the site at a location as directed by the Contracting Officer.

## PART 2 PRODUCTS

### 2.1 WALL COVERINGS

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NOTE: If more than one wall covering type is  
required and specifications vary, a separate  
paragraph Vinyl Wall Covering Type, Fabric Wall  
Covering Type, Acoustical Wall Covering Type, and/or  
Wall Covering Border Type will be used for each wall  
covering type. Each wall covering type will be  
designated with a letter or number symbol. Use the  
same symbols to key wall covering types to locations  
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on the drawings and Section 09915 COLOR SCHEDULE.  
Delete reference to type symbol if not used.

As per NFPA 101 for sprinklered buildings, interior walls and ceiling finishes tested in accordance with NFPA 286 shall be permitted to be used in lieu of that required to be Class A in accordance with NFPA 255. NFPA 255 is also known as ASTM E 84.

NOTE: In accordance with NFPA 101, the use of textile materials on walls and ceilings shall comply with one of the following conditions:

a. Textile materials having a Class A rating shall be permitted on the walls or ceilings of rooms or areas protected by an approved automatic sprinkler system.

b. Textile materials having a Class A rating shall be permitted on partitions that do not exceed 3/4 of the floor-to-ceiling height or do not exceed 2440 mm 8 feet in height whichever is less.

c. Textile materials having a Class A rating shall be permitted to extend not more than 1200 mm 4 feet above the finished floor on ceiling-height walls and ceiling-height partitions.

d. Textile materials shall be permitted on walls and partitions where tested in accordance with NFPA 265, Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Wall Coverings. (ICC IBC, UBC 42-2 and UBC 8-2 are equivalent to NFPA 265.)

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Provide wall coverings and accessories material designed for the specified use. Furnish vinyl wall covering and borders with a mercury, cadmium, lead, and chromium free base. Protect wall coverings with bactericides and mildew inhibitors against microbiological and mildew growth.

#### 2.1.1 Vinyl Wall Covering

Provide vinyl wall covering with an integrally pigmented, opaque vinyl film, laminated to, or combined with, a fabric backing.

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NOTE: Delete the following paragraphs when medium-duty type wall covering is not required. Medium-duty type wall covering is suitable for use in vestibules, corridors, lounges, offices, and other areas where there is average traffic and scuffing, and is available in a wide range of colors and grains. Mildew-resistant fabric backing is standard treatment with several wall covering manufacturers.

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Provide a medium-duty type wall covering, finish as specified, conforming to FS CCC-W-408, Type II, and the following modifications:

Supporting material for wall covering may be mildew-resistant treated at the option of the wall covering manufacturer.



Provide the following physical properties:

<u>REQUIREMENT</u>	<u>TEST METHOD</u>	<u>VALUE</u>
Coating weight, exclusive of fabric backing	FED-STD 191, Test 5041	Not less than 240 gram 7 ounces per square meter yard
Adhesion of coating to fabric backing	ASTM D 751	Not less than 13 newton 3 pounds pull per 25 mm inch of width

\*\*\*\*\*  
NOTE: Delete the following paragraphs when  
heavy-duty type wall covering is not required.  
Heavy-duty type vinyl wall covering is recommended  
for use in areas exposed to damage by moving  
equipment and is available in several colors and a  
leather-like grain.  
\*\*\*\*\*

Provide a heavy duty type wall covering, finish as specified, conforming to  
FS CCC-W-408, Type III, and the following modifications:

Supporting material for wall covering may be mildew-resistant treated  
at the option of the wall covering manufacturer.

Provide the following physical properties:

<u>REQUIREMENT</u>	<u>TEST METHOD</u>	<u>VALUE</u>
Coating weight, exclusive of fabric backing	FED-STD 191, Test 5041	Not less than 407 gram 12 ounces per square meter yard
Adhesion of coating to fabric backing	ASTM D 751	Not less than 13 newton 3 pounds pull per 25 mm inch of width

\*\*\*\*\*  
NOTE: Delete the following paragraphs when  
stain-resistant vinyl wall covering is not required.  
Polyvinyl-fluoride (DuPont "Tedlar") top coating, in  
lieu of the standard vinyl coating, increases both  
chemical resistance and stain resistance.  
  
This wall covering is recommended for use in dining  
rooms, waiting rooms, and other areas exposed to  
chemical reagents and staining agents and is  
available, at increased cost, in most standard vinyl  
wall covering colors and grains.  
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Provide a stain-resistant wall covering of medium duty type, finish as

specified, with a polyvinylfluoride film top coating, conforming to FS CCC-W-408, Type II, and the following modifications:

Supporting material for wall covering may be mildew-resistant treated at the option of the wall covering manufacturer.

Use a clear polyvinylfluoride film, not less than 0.13 millimeter 0.005-inch thick as a top coating.

Provide the following physical properties:

<u>REQUIREMENT</u>	<u>TEST METHOD</u>	<u>VALUE</u>
Coating weight, exclusive of fabric backing	FED-STD 191, Test 5041	Not less than 240 gram 7 ounces per square meter yard
Adhesion of coating to fabric backing	ASTM D 751	Not less than 13 newton 3 pounds pull per 25 mm inch of width
Stain-resistance, covered spot test, 24-hour exposure, using the household chemical reagents and staining agents specified in ASTM D 1308 and the following:  ballpoint pen ink lipstick nicotine shoe polish stamp-pad ink rubber scuff marks crayon merthiolate	ASTM D 1308	No perceptible staining or bleaching of coating; stains readily removed with solvent or cleaning agent

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NOTE: Since the color and grain of wall coverings are the factors that determine the cost of the material, it is recommended that a sample of the required color and grain be on display where it may be seen by bidders during the bidding period.  
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Match color and grain of wall covering of the sample approved.

Provide a 1350 to 1370 millimeter 53 to 54 inch width wall covering.

#### 2.1.2 Vinyl Wall covering [Type [A] [\_\_\_\_\_]]

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NOTE: Select the appropriate vinyl Type designation for each wall covering specified and delete inapplicable Types. Type selection should be based

on abuse conditions and the following recommendations:

Type I (Light Duty) is satisfactory for use on ceilings and light duty walls not subjected to scuffing and abrasion. This type is rarely used.

Type II (Medium Duty) is satisfactory for areas subject to average traffic wear and scuffing. It may be used full height on walls or as a wainscot. Type II should be used for most vinyl wall covering installations.

Type III (Heavy Duty) is slightly more resistant to scuffing than Type II but is difficult to install and clean, and is not available from most manufacturers. Type III wall covering is expensive and should be used only where specifically requested.

Some manufacturer's Type I, Type II and/or Type III wall covering will overlap or vary slightly from the weights shown in the following paragraphs.

Conversion Table:

	Type I	Type II	Type III
ozs/sq yd	7 (10)	13	22
ozs/linear yd	10.5 (15)	20	33
g/sq meter	237 (339)	441	746
g/linear meter	325 (465)	620	1023

CFFA minimum requirements are listed in the above table, with the exception of the number shown in parenthesis. The measurements in parenthesis reflect what is currently used in the industry for Type I. The heavier weight provides a more durable product.

The following formulas can be used for English to metric conversions:

- a. Ounces per square yard to ounces per linear yard-  
Multiply number ounces per square yard by 1872 for 52 inches wide or 1908 for 53 inches wide or 1944 for 54 inches wide. Divide the total by 1296 to obtain per linear yard.
- b. Ounces per square yard to grams per square meter-  
Divide the number ounces per square yard by 144. Multiple total by 4882 to obtain grams per square meter measurement.
- c. Ounces per linear yard to grams per linear meter-  
Multiply number ounces per linear yard by 28.35. Multiply total by 1.0936 to obtain grams per linear meter measurement.

Polyvinyl-fluoride (PVF) film is an extra cost. The film is designed to provide additional resistance to staining and soiling from exposure to staining

reagents or chemicals, and resistance from abuse. Generally the PVF coated vinyl wall coverings have a slightly different appearance from the standard noncoated vinyl wall covering. The film is available in 3 thicknesses with the thin gauge material being much less expensive. Various thicknesses represent moderate (thinnest), heavy, and extreme wear (thicker) in the installation area. Consider PVF film top coating for heavy-use areas; such as dormitories, dining halls, cafeterias, medical facilities, and clubs.

Delete PVF film when not required.

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Provide a vinyl coated woven or nonwoven wall covering fabric. Conform to CFFA-W-101-D for vinyl wall covering, [Type I (Light Duty) with a minimum total weight of [237] [339] grams per square meter [7] [10] ounces per square yard and [325] [465] grams per linear meter [10] [15] ounces per linear yard] [Type II (Medium Duty) with a minimum total weight of 441 grams per square meter 13 ounces per square yard and 620 grams per linear meter 20 ounces per linear yard] [Type III (Heavy Duty) with a minimum total weight of 746 grams per square meter 22 ounces per square yard and 1023 grams per linear meter 33 ounces per linear yard]. Provide width of [1320/1371 mm 52/54 inch] [\_\_\_\_]. Test vinyl wall covering in accordance with NFPA 286 or have a Class A flame spread rating of 0-25 and smoke development rating of 0-450 when tested in accordance with ASTM E 84. Apply [a polyvinyl fluoride (PVF) film, [0.00889 mm 0.00035 inch] [0.0127 mm 0.0005 inch] [0.0254 mm 0.0010 inch] thick over the face of the wall covering. Provide a transparent (clear) film, medium gloss.]

#### 2.1.3 Fabric Wall covering [Type [A] [\_\_\_\_]]

Provide fabric wall covering with a woven fabric with paper or acrylic backing of colorfast, stain, and soil resistant. Meet or exceed the following for fabric wall covering:

- a. Face fiber content: [\_\_\_\_]
- b. Weave: [Plain] [\_\_\_\_]
- c. Total weight: [\_\_\_\_] g/square meter ounces per square yard
- d. Width: [\_\_\_\_] mm inch

#### 2.1.4 Wallcovering Border [Type [A] [\_\_\_\_]]

Provide wall covering border of nonwoven vinyl cellulose/polyester blend or vinyl coated strippable paper back.

- a. Total weight: [\_\_\_\_] g per linear meter ounces per linear yard
- b. Width: [\_\_\_\_] mm inch

#### 2.2 WALL LINER

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NOTE: Wall lining should be specified where wall covering will be installed over masonry walls.

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Provide a non-woven polyester cellulose blend wall liner having a minimum weight of 125 g/square meter 3.7 ounces per square yard and a total minimum thickness of 0.33 mm 0.013 inch. Test wall liner in accordance with NFPA 286 or have a Class A flame spread rating of 0-25 and smoke development rating of 0-450 when tested in accordance with ASTM E 84.

## 2.3 CORNER GUARDS

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NOTE: Delete references to corner guards in this specification if they are to be of the type specified in Section 10260 WALL AND CORNER GUARDS. Some projects may require both types. Coordinate locations when this occurs.

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Furnish [1 mm 0.040 inch thick corner guards and cover 19 mm 3/4 inch] [1.9 mm 0.075 inch thick corner guards 28 mm 1 1/8 inch] [2.2 mm 0.085 inch thick and cover 63 mm 2 1/2 inch] [\_\_\_\_\_] each side of corner at right angles. Provide [clear] [\_\_\_\_\_] [polycarbonate] [vinyl] [rubber] corner guards from the same color lot.

## 2.4 WAINSCOT CAP

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NOTE: A metal, vinyl, or wood wainscot cap molding will normally be required for all wainscot installations. The specification should include whether metal, vinyl, or wood molding is required. If metal or vinyl cap moldings are shown on the drawings, provisions in this paragraph should be modified accordingly. Delete inapplicable text if wainscot doesn't apply.

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Provide [[satin-finished extruded aluminum] [\_\_\_\_\_] wainscot cap [19] [\_\_\_\_\_] mm [3/4] [\_\_\_\_\_] inch high, feathered at bottom edge, with 5 mm 3/16 inch exposed face on top edge, and grooved to receive the covering] [\_\_\_\_\_] .

## 2.5 PRIMER AND ADHESIVE

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NOTE: Conformance with South Coast Air Quality Management District (SCAQMD) Rule #1168 as noted complies with LEED and SPiRiT requirements.

When mold is a problem in the area consider specifying mold proof primers and adhesives.

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Provide a recommended type primer and adhesive by the wall covering manufacturer, containing a non-mercury based mildewcide, and complying with local indoor air quality standards.[ VOC content must be less than the current VOC content limits of SCAQMD Rule #1168.] Primer must permit removal of the wall covering and protect the wall surface during removal. Do not damage gypsum wallboard facing paper during removal of wall

covering. Provide a strippable type adhesive. When substrate color variations show through vinyl wall covering, provide a white pigmented primer as recommended by the wall covering manufacturer used to conceal the variations. Provide a recommended type adhesive to install corner guards and wainscot cap by the manufacturer of the corner guards and wainscot cap.

## 2.6 COLOR, TEXTURE, AND PATTERN

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NOTE: Avoid selection of a deeply embossed pattern where frequent cleaning of wall covering is required.

Editing of color reference sentence(s) shall be coordinated with the Government. Generally the 09915 Color Schedule or drawing is used when the project is designed by an Architect or Interior designer. Color shall be selected from manufacturers standard colors or identified in this specification only when the project has minimal finishes.

When the government directs that color be located in the drawings a note shall be added that states: "Where color is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors from other manufacturers. The word "color" as used herein includes surface color and pattern."

When more than one type, pattern or color is specified identify location and extent of work for each.

When a manufacturer's name, stock number, pattern, and color is used, be certain that the product conforms to this specification, as edited.

Prior to specifying a custom color finish, research to determine if additional cost is feasible. Note there is often a minimum order requirement; this requirement will also affect future orders.

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Provide color [as indicated on the drawings] [selected from manufacturers standard colors] [[\_\_\_\_\_]. Color listed is not intended to limit the selection of equal colors from other manufacturers].

## PART 3 EXECUTION

### 3.1 EXAMINATION

Contractor shall inspect all areas and conditions under which wall coverings are to be installed. Contractor shall notify the Contracting Officer in writing of any conditions detrimental to the proper and timely completion of the installation. Work will proceed only when conditions have been corrected and accepted by the installer.

### 3.2 SURFACE PREPARATION

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NOTE: When applying wall covering over concrete or masonry surfaces, Section 03300A CAST-IN-PLACE STRUCTURAL CONCRETE, will be coordinated to require, as applicable: (1) smooth concrete finish (2) masonry surfaces that are level and plumb with flush joints and square openings and (3) no variations in the surfaces exceeding 1 mm in 1000 mm 1/8 inch in 10 feet with no abrupt irregularities.

When mold is a problem in an existing building that is being renovated add verbiage to specification to cover removal of mold and appropriate surface preparation necessary to install new wall covering. In addition, the source of the moisture needs to be located and fixed prior to installation of the wall covering.

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Do not apply wall covering to surfaces that are rough, that contain stains which will bleed through the wall covering, or that are otherwise unsuitable for proper installation. Fill cracks and holes. Sand rough spots smooth. Thoroughly dry surfaces at least 30 days prior to installation of vinyl wall covering. Provide interior surfaces of new and existing gypsum wallboard with a wall covering primer in accordance with the manufacturer's printed instructions. As required, use white primer when substrate color variations are visible through thin or light color wall covering. Seal interior surfaces of exterior walls to prevent moisture penetration then prime with a wall covering primer in accordance with the manufacturer's printed instructions. Test moisture content of plaster, concrete, and masonry with an electric moisture meter of a maximum five percent reading. Provide masonry walls with flush joints. Apply a thin coat of joint compound or cement plaster and recommended by the wall covering manufacturer to the concrete and masonry walls as a substrate preparation. To promote adequate adhesion of wall lining over masonry walls, prime the walls as recommended by the wall lining manufacturer. Prime the surfaces of walls as required by the manufacturer's printed instructions to permit ultimate removal of wall covering from the wall surfaces. Allow primer to completely dry before adhesive application.

### 3.3 INSTALLATION

#### 3.3.1 Wall Liner

Install wall liner over masonry walls that are to receive wall covering. Install liner in accordance with the manufacturer's printed installation instructions. Install liner perpendicular to wall covering to prevent overlapping of seams between liner and wall covering.

#### 3.3.2 Wall Covering

Install wall covering in accordance with the manufacturer's printed installation instructions. Remove glue and adhesive spillage from wall covering face and seams with a remover recommended by the manufacturer. After the installation is complete, vacuum the fabric and acoustical wall covering with a ceiling to floor motion.

### 3.3.3 Corner Guards and Wainscot Cap

Install corner guards and wainscot cap [where shown on drawings] sheet [\_\_\_\_\_] [on all exposed corners with [wall covering] [\_\_\_\_\_]] and in accordance with the manufacturer's printed instructions. Run corner guards from top of base to [wainscot cap] [ceiling] [\_\_\_\_\_] in a continuous length.

### 3.4 CLEAN-UP

Upon completion of the work, clean wall covering free of dirt, soiling, stain, or residual film. Remove and clean surplus materials, rubbish, and debris resulting from the wall covering installation.

-- End of Section --