[INCH-POUND]
A-A-59517
17 November, 1999
Superseding
CCC-C-700
15 September, 1986

COMMERCIAL ITEM DESCRIPTION CLOTH, COATED OR LAMINATED, POLYVINYLCHLORIDE (ARTIFICIAL LEATHER)

The General Services Administration has authorized the use of this commercial item description in preference to CCC-C-700.

1. <u>Scope</u>. This document covers 9 classes of coated or laminated cloth, with and without an embossed leather grain or conditions. The cloths are intended for use as upholstery covering, and other special uses (see 7.1).

2. Classification.

1	15.0	OZ	per	sq.	yd
2	18.0	ΟZ	per	sq.	yd
3	20.0	ΟZ	per	sq.	yd
4	25.0	oz	per	sq.	yd
5	29.0	ΟZ	per	sq.	yd
6	40.5	oz	per	sq.	yd
7	18.0	ΟZ	per	sq.	yd
8		Dele	eted		
9	25.0	ΟZ	per	sq.	yd
10	18.0	ΟZ	per	sq.	yd
	3 4 5 6 7 8 9	2 18.0 3 20.0 4 25.0 5 29.0 6 40.5 7 18.0 8 9 25.0	2 18.0 oz 3 20.0 oz 4 25.0 oz 5 29.0 oz 6 40.5 oz 7 18.0 oz 8 Dele 9 25.0 oz	2 18.0 oz per 3 20.0 oz per 4 25.0 oz per 5 29.0 oz per 6 40.5 oz per 7 18.0 oz per 8 Deleted 9 25.0 oz per	2 18.0 oz per sq. 3 20.0 oz per sq. 4 25.0 oz per sq. 5 29.0 oz per sq. 6 40.5 oz per sq. 7 18.0 oz per sq. 8 Deleted 9 25.0 oz per sq.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center Philadelphia, Clothing and Textiles Directorate, Attn: DSCP-FNS, 2800 South 20th Street, Philadelphia, PA 19145-5099.

AMSC N/A FSC 8305

Conditions

- a. Fire resistant
- b. Mildew resistant
- c. Oil resistant
- d. Untreated

3. Salient characteristics.

3.1 <u>Description</u>

- 3.1.1 <u>Base cloth</u>. The base cloths, coated or laminated with polyvinylchloride coating, or film on the face side, for all classes shall be woven cloths except classes 4 and 7 which shall be knitted cloths and classes 9 and 10, which shall be needle punched, non woven cloths.
- 3.2 <u>Physical requirements of finished cloth</u>. The finished cloth shall conform to the physical requirements specified in Table I.

TABLE I. <u>Physical requirements</u> Characteristic Class					Test Method					
Characteristic Clas	1	2	3	4	5	6	7	9	10	rest Method
Weight (oz/sq. yd), (min)	15.0	18.0	20.0	25.0	29.0	40.5	18.0	25.0	18.0	3.4
Coating or film weight (oz/sq. yd), . (min)	7.0	8.0	10.5	18.5	17.5	29.5	12.8	18.5	13.5	3.4
Breaking strength										ASTM-D-
5034 (pounds), (min) <u>1</u> /										(G-E, or G-T)
Warp / Wale Filling / Courses	es	125 100	140 130	120 120	110 100	140 140	140 140	80 70	140 140	90 90
Tearing strength, (grams) 1424 (min): 1/										ASTM –D-
Warp / Wales 2200 Filling / Courses	2200 2400	2200 2400	4500 2400	4400 2500	4700 4400	3700 4700	6000 3700	6000 6000	6000	
Abrasion resistance	<u>2</u> /	<u>2</u> /	3.5							

TABLE I. Physical requirements Continued										
Characteristic Class	s <u>1</u>	2	3	4	5	6	7	9	Test Me 10	ethod
Adhesion of Coating, or Film (lb/2 in. width), (min.)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	12.0	8.0	3.6
Accelerated weathering (200 hours)	<u>3</u> /	3.7								
Blocking scale rating, (max).	No. 3	3 No. 3	3.8							
Colorfastness to crocking, (min	3.5 n)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	AATCC-8 <u>1/9</u> /
Elongation,%, (min)										3.9
Wales Courses	-	-	-	5 25	-	-	5 25	-	-	
Machine	-	- -	-	-	- -	-		25.0	25.0	
Cross machine	-	-	-	-	-	-	-	25.0	25.0	
Hydrostatic resistance (psi.), (min.)	70	100	100	100	100	100	100	150	100	3.10
Cold resistance at -20° F +/- 2°F.	<u>4</u> /	3.11								
Plasticizer loss % (max): Activated carbon extraction	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	3.12
Toxicity	<u>5</u> /	3.13								

			TABLE I.	Physi	ical requ	<u>irement</u>	s contin	nued		
Characteristic Clas	S				-]	Test Method
	1	2	3	4	5	6	7	9	10	
Conditions: a. Fire resistant clot	h:									
Flame resistance: After flame (sec) (max)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5903 2/ <u>10</u> /
Char length (in), (max)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5903 2/ <u>10</u> /
Breaking strength after accelerated aging	<u>6</u> /	<u>6</u> /	<u>6</u> /	<u>6</u> /	<u>6</u> /	<u>6</u> /	<u>6</u> /	<u>6</u> /	<u>6</u> /	ASTM-D-5427 & ASTM –D-
5034										(G-E or G-T) <u>3</u> /
11/ b. Mildew resistant										\
Mildew Resistance	<u>7</u> /	<u>7</u> /	<u>7</u> /	<u>7</u> /	<u>7</u> /	<u>7</u> /	<u>7</u> /	<u>7</u> /	<u>7</u> /	3.14
c. Oil resistant cloth: Oil resistance	<u>8</u> /	<u>8</u> /	<u>8</u> /	<u>8</u> /	<u>8</u> /	<u>8</u> /	<u>8</u> /	<u>8</u> /	<u>8</u> /	3.15

^{1/} Except for classes 9 and 10, the breaking strength and tearing strength of the fire-resistant treated material shall be not less than 80 percent of the applicable minimum values shown.

 $[\]underline{2}$ / No visual loose fibers of the base cloth shall be exposed in the center 1 inch of abraded portion. Visible loose fibers shall be regarded as fibers from the yarns used to weave the base cloth and not as entire yarns or yarn plies or as fibers from the nonwoven base cloth.

^{3/} The finished cloth shall not exhibit exudation, development of tackiness, or stiffness. The finished cloth shall not show any discoloration or fading of color less than a rating of "3" on the AATCC Gray Scale for Color Change.

^{4/} The coating, or film shall not crack through to the base cloth.

^{5/} The finished cloth shall not present a dermal health hazard.

<u>6</u>/ The breaking strength of the finished, treated cloth after accelerated aging shall be not less than 75 percent of initial breaking strength of the treated coated cloth.

- 7/ The finished cloth material shall retain not less than 50% of the initial breaking strength of the finished cloth and the coating, or film shall show no exudation, softness and tackiness, or stiffness or brittleness. A certificate of compliance will be accepted.
- <u>8/</u> There shall be no indication that the oil has permeated the finished cloth.
- <u>9</u>/ The specimen shall be tested on the coated side using AATCC Chromatic Transference Scale as a reference.
- 10/ FED-STD-191 test method.
- $\underline{11}$ / Except that the test shall be for a period of 7 days at $158^{\circ} \pm 2^{\circ}$ F.
- 3.3 Color and grain. Color and grain shall be as specified in the contract or purchase order.
- 3.3.1 <u>Color</u>. The color shall match the applicable color number of FED-STD-595 or other color standard or shall match the approved standard sample for the color specified where such a standard is applicable.
- 3.3.2 <u>Grain</u>. The grain shall match the approved grain standard where such a standard is applicable (see 7.1).
- 3.4 <u>Total weight and coating weight</u>. The total weight of the finished cloth shall be determined in accordance with ASTM-D-3776 Method C (small swatch of fabric method). The coating, or film weight shall be determined in accordance with the following procedure using the same specimens used in the determination of total weight:

Soak the back of the specimen with cyclohexanone or other suitable solvent to assist in stripping the coating from the cloth (flash coated materials may be totally immersed in a container of solvent prior to stripping). The specimen, as well as any loose fibers or yarns that may have been separated from the piece during stripping, shall be immersed in hot cyclohexanone (approximately 82°C (180°F)) for two to five hours, and then thoroughly rinsed with methyl ethyl ketone, dried, and re-weighed. The loss in weight of the specimen will indicate the weight of the coating.

3.5 <u>Abrasion resistance</u>. The resistance to abrasion shall be determined as specified in ASTM-D-4157, except as follows:

The long dimension of the specimen shall be parallel to the lengthwise direction of the sample. The tension on the specimen shall be 6 pounds and the load shall be 3 pounds. The abradant shall be silicon-carbide cloth 240 grit. The face, coated, or film side of the cloth shall be abraded. Three specimens shall be tested from each sample unit. The results shall be reported as pass or fail. The specimen shall fail if visible loose fibers are exposed in the center one inch of the abraded portion.

For the class 1 cloth, the wear on the coating shall be observed after 300 double rubs.

For all other classes, the abradant shall be changed after each 250 double rubs and the test continued. Classes 2, 3, 7 and 10 cloth shall be subjected to 500 double rubs;

Classes 4, 5 and 9 cloth shall be subjected to 1500 double rubs; Class 6 cloth shall be subjected to 2500 double rubs.

3.6 Adhesion of Coating, or Film. The specimen shall be 2 inches wide by 8 inches long. The specimen shall be prepared for test by cutting the coating, or film through to the cloth on two parallel cuts one inch apart with the cuts running the length of the specimen; the cuts shall be approximately 1/2 inch from each edge of the specimen. At one end of the specimen, a bias cut of the coating, or film through to the cloth shall be made from one of the parallel cuts to the other. The coating, or film shall then be separated by hand for a distance of 2 inches starting at the point formed by the cuts; the coating strip shall be 1 inch wide.

Clamp the bias cut end of the test specimen in one clamp of the testing machine and the one inch strip of separated coating in the other clamp. Separate the coating, or film from the cloth for a distance of 3 inches in accordance with ASTM-D-751, Adhesion of Coating to Fabric, using a pulling clamp speed of 5 mm/sec (12 inches/min). The adhesion shall be the average of the five highest peaks of force for the one inch wide strip of coating, or film separation; the result reported shall be the coating strip adhesion mathematically corrected to express the coating adhesion as the force per two-inch wide specimen.

If the coating, or film cannot be removed as specified in 5.7, the coating adhesion shall be determined in accordance with ASTM-D-751, Adhesion of Coating to Fabric except that Cyanoacrylate adhesive shall be used, the pulling clamp speed shall be 5mm/sec (12 in/min), the adhesion shall be the average of the five highest peaks of force and three specimens shall be tested.

- 3.7 <u>Accelerated weathering</u>. AATCC-111A, Option 4, with the coated, or film side of the 3-inch by 6-inch specimen exposed for a period of 200 hours.
- 3.8 <u>Blocking</u>. ASTM D 751, Blocking Resistance at Elevated Temperatures, except that the test shall be performed at a temperature of $180^{0} \pm 2^{\circ}$ F for 30 minutes. Evaluate the resistance of the specimen to blocking by the scale given below:
 - 1 -- *No Blocking*. Cloth surfaces are free and separate without any evidence of cohesion or adhesion.
 - 2 -- Trace Blocking. Cloth surfaces show slight cohesion or adhesion.
 - 3 -- Slight Blocking. Cloth surfaces must be lightly peeled to separate.
 - 4 -- *Blocking*. Cloth surfaces separate with difficulty or coating, or film is removed during separation.
- 3.9 <u>Elongation (applicable to classes 4, 7, 9 and 10 only</u>). The elongation test shall be conducted in the following manner:

Cut a 3 by 9-inch specimen from the center section of the finished cloth with the long dimension of the specimen parallel to the direction of the finished cloth being tested. Mark off a 3-inch long

section in the center of the specimen. Clamp one end of the specimen in a fixed clamp such that the specimen will hang vertically. Clamp a 27-pound weight to the other end of the specimen and suspend it vertically for 10 minutes. Before removing the weight, measure the increase in length of the 3-inch section and calculate the percent elongation based on the original 3-inch section. One specimen shall be tested unless it fails to meet the specification requirement; in this case, three additional specimens from the sample unit shall be tested and the percent elongation of the sample unit shall then be computed as the average value obtained from testing the four specimens.

- 3.10 <u>Hydrostatic resistance</u>. ASTM D 751, Hydrostatic Resistance, Procedure A (Mullen Type Tester), Procedure 1 with water pressure applied to the coated, or film side of the cloth.
- 3.11 <u>Cold resistance.</u> The test specimen of finished cloth shall be 8-inches by 8-inches with edges oriented parallel to the warp and filling directions of the finished coated cloth. The specimen shall be exposed in a low temperature chamber at a temperature of minus $20^{\circ} \pm 2^{\circ}$ F for two hours. Without removal from the chamber, the specimen shall be creased 180° in the center in the warp and filling directions respectively by folding slightly on a flat, smooth surface and running the center of a steel roller over the fold a single time. The steel roller shall be approximately 2 inches wide and shall weigh 10 pounds except for coated cloth Classes 1,2,3 and 7, which shall weigh 5 pounds. The specimen shall be opened between the two creasing operations. The pressure on the specimen shall be the weight of the roller. The temperature of the roller shall be the same as that of the specimen. The specimen shall be handled with gloves and care taken that its temperature remains uniform throughout the test. The specimen shall be so folded, in both warpwise and fillingwise directions that the coating or film shall be on the outside of the fold. The specimen shall be removed from the chamber and visually examined for signs of coating, or film cracking or flaking. One specimen shall be tested per sample unit.
- 3.12 <u>Plasticizer loss</u>.. ASTM D-1203, Test Method A, except that the test temperature shall be $104^{\circ}\text{C} + 2^{\circ}\text{C}$.
- 3.13 <u>Toxicity assessment</u>. The contractor must furnish information which certifies that the finished product is composed of materials which have been safely used commercially or provide sufficient toxicity data to show compatibility with prolonged, direct skin contact. At a minimum, toxicity data should include results from a primary dermal irritation study in laboratory animals and a repeated insult human patch test (Modified Draize Procedure). The latter must be conducted under the supervision of a qualified dermatologist using at least 100 free living individuals.
- 3.14 <u>Mildew resistance</u>. AATCC 30, Test 1, shall be performed for a 12-week exposure time. A minimum of five specimens shall be tested. As an alternate AATCC 30, Test III may be used. The soil shall be made of an equal blend of good topsoil, well-rotted and shredded manure and coarse sand. Determination of the breaking strength after mildew exposure shall be in accordance with ASTM D 5034 (G-E or G-T).
- 3.15 Oil resistance. Place an 8 by 8-inch specimen of the finished cloth, with coated, or film side up, on a wood frame with inside dimensions of 6 inches by 6 inches by 1 inch deep. Force the specimen into the frame using a wooden block of dimensions 5-3/4 inches by 5-3/4 inches by 3/4 inch thick with rounded corners to form a basin of uniform depth. Tack the edges of the

specimen to the frame and remove the block. Pour oil conforming to Oil No. 1 of ASTM D 471 into the basin to a depth of ½ inch. After the oil has been in the basin for 4 hours, the outside bottom of the specimen forming the basin shall feel dry and there shall be no indication that the oil has permeated the finished cloth.

- 3.16 <u>Color matching</u>. The color of the cloth shall match the standard sample when viewed under filtered tungsten lamps that approximate artificial daylight and that have a correlated color temperature of $7500 \pm 200^{\circ}$ K, with illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at $2300 \pm 200^{\circ}$ K.
- 3.18 <u>Width</u>. All selvages of the finished cloth shall be trimmed. After trimming, the width of the finished coated cloth shall be as specified in the contract or order.
- 3.19 Length and put-up. The cloth shall be put up on rolls as follows:

Class	Linear	Yards
	<u>Minimum</u>	Maximum
1	70	90
2	50	73
3	50	67
4	40	53
5	35	46
6	25	32
7	50	73
9	35	55
10	40	60

4. REGULATORY REQUIREMENTS.

4.1 <u>Recycled, recovered, or environmentally preferable materials</u>. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements and promotes economically advantageous life cycle costs.

5. QUALITY ASSURANCE PROVISIONS

5.1 <u>Product conformance</u>. The products provided shall meet the salient characteristics of this commercial item description and conform to the producer's own drawings, specifications, standards and quality assurance practices. The Government reserves the right to require proof of such conformance.

- 5.2 Acceptance criteria. Acceptance criteria shall be as specified in the contract or purchase order.
- 5.3 End item testing End items shall be inspected in accordance with all the requirements of referenced documents, unless otherwise excluded, amended, modified or qualified in this document or applicable purchase document. In addition, testing shall be performed for the characteristics specified in Table II. The physical values specified apply to the average of determinations made on a sample unit for test purposes as specified in the applicable test methods. For the characteristics "abrasion resistance" and "blocking," the requirement shall apply to each determination separately. All test reports shall contain the individual values utilized in expressing the final result. The sample unit shall be 3 yards full width of the cloth.
- 5.4 <u>Yard-by-yard examination</u>. The required yardage of each roll in the sample shall be examined on one side only for the defects listed below, however the side shall be alternated for every other roll examined. The same yardage shall be given a through-light inspection for pinholes and thin areas. The through-lighting inspection shall be performed in accordance with paragraph 5.4.1. The defects found shall be counted regardless of their proximity to each other, except where two or more defects represent a single local condition of the cloth, in which case only the more serious defect shall be counted. A continuous defect shall be counted as one defect for each warpwise yard or fraction thereof in which it occurs. The sample unit shall be 1 linear yard. The number of yards from which the sample yardage shall be selected shall be as follows:

Lot Size (yards)	Sample Size (Rolls)
Up to 1,200 inclusive <u>1</u> /	3
1,201 to 3,200 inclusive	5
3,201 to 10,000 inclusive	8
10,001 to 35,000 inclusive	13
35,001 to 150,000 inclusive	20
150,001 and over	32

1/ if a lot contains less than 3 rolls, each roll shall be examined.

- 5.4.1 <u>Through-light inspection</u>. The through-light inspection shall be performed in a darkened area using the lighting table described as follows: The light table shall have a clear glass top and shall be illuminated with a minimum of two 25-watt fluorescent tubes. The tubes shall be positioned 9 to 10 inches below the glass top and 6 to 8 inches from the sides of the light housing. The spacing between the tubes shall be 5 to 6 inches and the interior of the light housing shall be white. During the examination when the surface of the coated cloth is in contact with the light table, the illumination in the darkened room shall be 20, +/- 5 foot candles of natural or artificial light.
- 5.5 <u>Defects</u> The cloth shall be examined for the following defects: Any uncoated, or unlaminated area Any thin area evidenced by light area or window. Any separation of coating, or film from base cloth. Any evidence of a splice or any impression in coating, or film resulting from splicing. Cracked or checked coating, or film. Any blister, tunnel, foreign matter, or lump. Nonuniform coating, or film lamination. Any wrinkle or crease on coated, or film surface. Any cut, hole, tear.

Any scratch or abrasion of the coated or film surface. Curled, folded, doubled, or rolled edge. Dirt, spot, or stain. Any transfer of marking to the face side of the cloth. Width less than minimum specified. Color not as specified. Color off shade, not uniform, mottled, blotchy, or spotted. Grain not as specified. Grain indistinct or not uniform. Tackiness (coating, or film adheres to opposite surfaces upon unrolling). Dimensional distortion and waviness (cloth does not lie uniformly flat along its entire width when no tension is applied). Objectionable odor.

5.6 <u>Length examination</u>. Each individual roll in the sample shall be examined for the defects listed below. If the total number of defects in the sample roll exceeds the maximum number of defects specified below, the lot shall be rejected.

Any roll containing more than two pieces.

Any piece in roll less than 25 yards.

Length of roll any more or less than specified(see 5.4).

Any roll with a total length more than two yards less than that marked on ticket.

End of pieces in roll not overlapped.

End of pieces in roll joined by a seam.

6. PACKAGING

6.1 <u>Preservation, packing and marking</u>. The preservation, packing and marking shall be as specified in the contract or order.

7. NOTES

7.1 Intended use.

- 7.1.1 <u>Classes</u>. Class 1 is primarily intended for applications where there is no great stress on the finished cloth, such as for flat upholstery (slip seats and other padded applications), headlinings, slipcovers, door panels, weather stripping, welting, and miscellaneous applications in which the properties of the coating and decorative values are the principal considerations; classes 2 and 10 are intended for medium spring upholstery applications; classes 3, 4, 5, 7, and 9 are intended for deep spring construction; class 6 is intended for exceptionally heavy-duty rugged service such as that used in buses. (Deep spring construction is spring construction on a depth greater than 3 inches.)
- 7.1.2 <u>Special performance properties</u>. Fire-resistant, mildew-resistant, and oil-resistant treated cloths are intended for use in special installations, in unusually damp climates, or where exposed to solvents and oil, respectively.
- 7.1.3 <u>Standard samples</u>. For military requirements, standard samples for grain and for patterns containing more than one color are available from the procuring agency. The grain requirements for military agencies are limited to the following:

- a. Smooth surface
- b. Fine grain
- c. Pebble grain
- d. Colonial grain
- e. Spanish grain
- 7.2 <u>Source of Government Documents</u>. Copies of Military and Federal documents are available from:

Standardization Documents Order Desk Bldg. 4D 700 Robbins Avenue Philadelphia, PA 19111-5094

FED-STD-191 - Federal Standard for Textile Test Methods

FED-STD-595 - Colors Used in Government Procurement

- 7.2.1 <u>Code of Federal Regulations</u>. Title 40, part 798.4470 (Primary Dermal Irritation) (This reference may be found on the Internet at www.access.gpo.gov/nara/cfr/cfr-table-search.html.)
- 7.3 Sources of Nongovernment Documents.

AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM-D-751	-	Standard Test Methods for Coated Fabrics
ASTM-D-1203	-	Volatile Loss From Plastics Using Activated Carbon Methods
ASTM-D-1424	-	Tear Resistance of Woven Fabrics by Falling Pendulum (Elmendorf) Apparatus
ASTM-D-3776	-	Mass Per Unit Area (Weight) of Fabric
ASTM-D-4157	-	Abrasion Resistance of Textile Fabrics (Oscillatory Cylinder Method)
ASTM-D-5034	-	Breaking Force, and Elongation of Textile Fabrics
ASTM -D-5427	-	Accelerated Aging of Inflatable Restraint Fabrics

(Applications for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19426-2959.)

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)TECHNICAL MANUAL

AATCC Gray Scale For Color Change

AATCC Chromatic Transference Scale

AATCC – 8 - Colorfastness to Crocking

AATCC-30 - Antifungal Activity, Assessment on Textile Materials

Mildew and Rot Resistance of Textile Materials

AATCC-111 - Weather Resistance: Sunshine Arc Lamp Exposure with

Wetting

(Applications for copies of referenced documents should be addressed to the American Association of Textile Chemists and Colorists, PO Box 12215, Research Triangle Park, NC 27709-2215.)

MISCELLANEOUS

Principles and Methods of Toxicology, A. Wallace Hayes (editor), 1989, pp 394-396.

(Applications for copies of referenced documents should be addressed to Raven Press, 1185 Avenue of the Americas, New York, NY 10036)

- 7.4 <u>Acquisition requirements</u>. Acquisition documents must specify the following:
- a. Title, number, and date of this document
- b. Type, and if a condition is required (see 2)
- c. Color, and grain
- d. Selection of packaging, preservation, and marking (see 6.1)
- e. Acceptance criteria (see 5.2)
- 7.5 <u>Sources of Supply.</u> Manufactures Whose Products are know to meet the requirements of this CID are listed below, but these manufactures may not produce all types; however, competition is not limited to these companies.

Athol Manufacturing Corporation PO Box 105 100 22ND Street Bunter, NC 27509`

Diversitech General INC. Coated Fabrics Division 3927 Twining Street PO Box 875 Toledo OH 43695

Durcote Corporation 350 N. Diamond Street Ravenna OH 44266-2155

Civil Agency Coordinating

Activity:

GSA - FSS

Custodians: Preparing activity

Army – GL DLA-CT

Navy - NU

Project Number 8305-0740

Review activities:

Air Force - 99

Army – MD

Navy – SH, MC, CG

Air Force – 45, 82