



FINAL
ASBESTOS SURVEY REPORT
FOR
NATIONAL AIR AND SPACE MUSEUM
VOLUME I

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TABLE OF CONTENTS

	<u>Page</u>
1.0 EXECUTIVE SUMMARY	1
1.1 Overview of Asbestos-Containing Materials in the NASM	2
1.2 ACM by Response Code	3
2.0 DESCRIPTION OF FACILITY	5
3.0 INSPECTION ACTIVITIES	6
3.1 Introduction	6
3.2 Bulk Sampling	6
3.3 Bulk Sample Analysis	7
4.0 EXPLANATION OF RESPONSE CODE AND HAZARD PRIORITY	8
5.0 USER'S GUIDE TO THIS REPORT	10
6.0 CONCLUSIONS AND RECOMMENDATIONS	46
6.1 Surfacing Materials	46
6.1.1 Wall Plaster	46
6.1.2 Troweled on Ceiling Plaster	46
6.1.3 Sprayed on Fireproofing	46
6.2 Thermal System Insulation	46
6.2.1 Pipe Insulation	46
6.2.2 Tank Insulation	47
6.2.3 Duct Insulation Mastic	47
6.3 Miscellaneous Materials	47
6.3.1 Vinyl Floor Tile, Floor Tile Mastic	47
6.3.2 Acoustical Ceiling Tile	48
6.3.3 Roofing Materials	48
6.3.4 Mastic Compounds	49
6.3.5 Gasket Materials	49
6.3.6 Peg Board	50
6.3.7 Drywall and Drywall Joint Compound	50

LIST OF FIGURES

Figure 1	Summary of ACM	14
Figure 2	Drawings	38



TABLE OF CONTENTS (Cont.)

LIST OF TABLES		<u>Page</u>
Table 1	Summary of Bulk Samples Collected	25
Table 2	Summary of Flooring Materials Sampled	29
Table 3	Summary of Drywall Materials Sampled	31
Table 4	Summary of Plaster Materials Sampled	32
Table 5	Summary of Insulating Materials Sampled	33
Table 6	Summary of Fireproofing Materials Sampled	34
Table 7	Summary of Ceiling Tile Sampled	35
Table 8	Summary of Roofing Materials Sampled	36
Table 9	Summary of Mastic and Gasket Materials Sampled	37



1.0 EXECUTIVE SUMMARY

Versar, Inc., conducted an asbestos survey and hazard assessment under contract to the Smithsonian Institution at the National Air and Space Museum (NASM) located at 6th Street and Independence Avenue, SW, Washington, D.C., on April 6, 8, 9, 17, 27, 28, 29 & 30, 1992. Versar inspector Kevin C. Foley conducted the inspection. The survey was performed to document the types, locations, conditions, and extent of asbestos-containing building materials (ACM) in the building and to provide a hazard assessment of these materials as they affect the population of the building.

Recommendations for control measures and estimated removal costs for each asbestos-containing building material are provided from information gathered during the inspection.

The survey was performed in two phases. The first phase involved a thorough visual inspection of the facility to identify suspect ACM. This phase was conducted in December of 1991. All accessible areas of the building were inspected. Typical suspect materials include vinyl floor tile, acoustical ceiling tile, wallboard, drywall joint compound, mastics, pipe and fitting insulation, boiler and breeching insulation, tank insulation, and wall and ceiling plaster. Information gathered during the visual inspection was then used to develop the bulk sampling plan. This plan followed the guidelines of the Asbestos Hazard Emergency Response Act (AHERA) developed by the Environmental Protection Agency (EPA) to address asbestos-containing materials in public schools nationwide. The AHERA sampling protocol includes the following requirements:

- Random sampling based on the number of samples to be collected from each homogeneous suspect material.
- Collection of three samples from each homogeneous surfacing material covering less than 1,000 square feet; collection of five samples from each homogeneous surfacing material covering between 1,000 and 5,000 square feet; collection of seven samples from each homogeneous surfacing material covering more than 5,000 square feet.
- Collection of at least three bulk samples from homogeneous thermal system insulation that is damaged.
- Collection of one or more bulk samples from undamaged homogeneous thermal system insulation.



- Collection of one or more samples from patched insulation on thermal systems.
- Collection of one or more bulk samples from suspect ACM such as vinyl floor tile, mastic, wallboard, vibration dampers, acoustical ceiling tile, etc.

The second phase of the survey included the bulk sampling and a thorough assessment of each suspect material. The assessment included the material's physical description, condition, spatial extent, potential for damage, and friability. Friable materials are those which can be crushed by hand pressure. Friable materials are generally of greater concern than nonfriable materials because they are more likely to release airborne asbestos fibers. Typical friable ACM includes pipe and fitting insulation, spray-on materials, and acoustical ceiling tile. Examples of nonfriable ACM includes vinyl floor tile, mastic, and vibration dampers.

An integral step in the asbestos survey is to provide recommendations for control measures for identified ACM. In general, recommendations include immediate removal, planned removal, repair, encapsulation, partition enclosure, and inclusion in a monitoring program.

1.1 Overview of Asbestos-Containing Materials in the NASM

The ACMs identified in the NASM included:

- Drywall Joint Compound
- Vinyl Floor Tile
- Roofing Materials
- Red Duct Mastic
- Skylight Gaskets
- Pipe Penetrations Rope Gasket

These materials were identified in various locations and quantities throughout the building and are summarized below:

Drywall Joint Compound: Drywall joint compound is found throughout the building where seams and nails are present in the drywall.

Vinyl Asbestos Floor Tile: Vinyl asbestos floor tile is found in rooms P703A, P704, P705, P719A, the loading dock hallway, security offices hallway, employee gym entrance and room 3346.

Roofing Materials: Asbestos-containing perimeter roofing cant is present on the exterior roof platforms over connecting halls labeled 3200, 3400 and 3600. Interior built up roofing material and tar was not sampled due to the destructive nature of this sampling activity.



Red Duct Mastic: Red duct mastic is located in the parking garage, loading dock, above the ceiling of the Langley Theatre, in mechanical spaces (limited use in these rooms) and above the drop ceilings on the mezzanine level and third floor offices/rooms.

Skylight Gasket Material: Skylight gaskets are present in exhibit halls/galleries 100, 102, 106, 108, 110, 114, the library reading room and room 3755.

Rope Gasket Material: Rope gasket is found in pipe penetrations into the walls of rooms P102, P204, P405, P606 and the main Chiller Room. All are located on the parking level.

1.2 ACM by Response Code (Response Codes are defined in Section 4.0)

Response Code A - Materials Requiring Immediate Removal

No materials in the NASM require immediate removal.

Response Code B - Materials To Be Removed As Soon As Possible

Rope gasket found in the pipe penetrations into rooms P204, P405 and P606 have response code B.

Response Code C - Materials for Which Removal Should Be Planned

No materials in the NASM fall into this category.

Response Code D - Materials To Be Encapsulated or Repaired

None of the materials in the NASM have Response Code D.

Response Code E - Materials To Be Monitored For Change In Their Condition

The following ACM have Response Code E: Perimeter roofing cant on the exterior platforms over connecting hallways 3200, 3400 and 3600; red duct mastic in the loading dock and in the parking garage on air handling units 29 and 30 and exhaust unit 11, above the Langley Theatre ceiling and the drop ceilings on the mezzanine level, and 3rd floor offices and in mechanical spaces; floor tile in rooms P703A, P704, P705, P719A, the loading dock hallway area, security offices hallway, employee gym entrance lobby and room 3346; skylight gasket in the ceilings of galleries 100, 102, 106, 108, 110, 114, the library reading room and room 3755; drywall joint compound in stairways 1, 2, 3, 4, 5, 6, 7, rooms



P700, P703A, P703D, P703E, P719B, P719C, P719E, Briefing Room, Briefing Room Office, Education Resource Center, escalator pit/lobby, loading dock hallway area, security hallway area, Galleries 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113 and 114, rooms 1103, 1104, property checkroom, museum store escalator, rooms 2103, 2104, gallery 200 porch, planetarium, planetarium control room, mezzanine offices, theatre projection room, Langley Theatre (interior and exterior), Gallery 213 steps, Gallery 202 steps, Galleries 202, 203, 205, 206, 207, 208, 209, 210, 211, and 213, planetarium porch, rooms 3101-3115, south library stacks, library entrance (includes room 3116), rooms 3117-3119, 3121, 3122, 3123, 3124, 3125, 3126, 3127, 3128, 3129, 3131, 3132, north library stacks, rooms 3134, 3136, 3138, 3140, 3164, 3165, 3166, 3200, 3203, 3204, 3207, 3300, 3301, 3302, 3303, 3306-3324, 3326-3343, computer services area, rooms 3344-3350, 3400-3405, 3500-3503, 3505A, 3505B, 3506-3513, Director's office kitchen, 3514-3537, Space History Department area, 3600, 3604-3608, 3724, 3726, 3727-3735, 3737, 3738, 3740, 3742A, 3742B, 3743-3746, 3748, 3755, 3757, 3758, 3761, 3763-3765, 3767, 3768, 3768A, 3771, 3773-3777, 3779, 3783-3790.

Response Code F - Materials For Which No Action Is Required At This Time

The following ACM has Response Code F: Drywall joint compound in rooms P302, P305C, P703, P704, P705, P719A, Museum Shop, Museum Shop Offices, rooms 1091, 1101, 1102, 1151, 1152, 1157, 1157A, 1157C, 2061-2064, 2071, 2091, 2101 and 2102.



2.0 DESCRIPTION OF FACILITY

The NASM, located at 6th Street and Independence Avenue, SW, Washington, DC is a four level, 600,000 (approximate) square foot building constructed of reinforced concrete walls and decks. Interior finishes include drywall sheeting, masonry block wall in the exhibit galleries, concrete floors with carpet or tile coverings and suspended acoustical ceiling tile in the administrative/office areas as well as gallery 108 (main entrance). The third floor of this museum consists of employee office space, library and an employee dining area. Levels one and two are publicly accessed areas and house aeronautical and space exhibits. The basement level, or garage/parking level, contains some offices as well as utility, storage and gymnasium spaces in addition to the garage and loading dock. The east end of the building has a tourist restaurant addition (1988) that occupies space on level one and the basement level.

Heating is provided by reheating hot water in a series of mechanical rooms (containing large air handling units). Steam enters the building through room P405 where large steam lines are located. The NASM does not have a boiler room. It obtains steam from a central generating plant via an underground tunnel (both exterior). Cooling is provided by a central air conditioning system.



3.0 INSPECTION ACTIVITIES

3.1 Introduction

Versar conducted an asbestos inspection and collected bulk samples in the NASM on April 6, 8, 9, 17, 27, 28, 29 and 30, 1992. The Versar representative was Kevin Foley. The collection of bulk samples followed the bulk sampling plan submitted previously to the Smithsonian Institution as an indication of those materials suspected of containing asbestos. However, additional samples were collected as necessary.

Versar's asbestos inspection was designed to thoroughly examine and sample suspect ACM in the building. Physical aspects of each area of the building were taken into consideration as well as any building use factors that might affect the physical integrity of the suspect ACM.

Versar's asbestos inspection included the collection of bulk samples from suspect friable and nonfriable materials in the building. Representative samples were collected from thermal system insulation, surfacing material, and miscellaneous materials. Factors such as air movement due to thermal draft, supply or exhaust ventilation, vibration, area maintenance, and population were evaluated. The physical condition of the material in terms of damage by impact, maintenance, water leakage, or other damage was assessed in relation to possible air re-entrainment of asbestos fibers. These factors were evaluated during formulation of the risk assessment and remedial alternatives.

3.2 Bulk Sampling

The purpose of collecting bulk samples was to determine if building materials observed during the inspection contained asbestos. Bulk samples were collected from materials commonly known to contain asbestos and from materials used in applications that commonly employ asbestos-containing products.

The bulk sampling procedures required collecting a representative sample of the suspect material. The collection procedure used a small sampling tool to remove a sample of approximately 2 cubic centimeters from the suspect material. The sample material was placed into a clean plastic canister, labeled, and temporarily stored in the sampling personnel's bag. Sample locations of friable materials were sprayed with an aerosol adhesive to prevent future fiber release. At each sampling location, a complete description of the sample and the surrounding area was recorded in the field notebook. Detailed descriptions included physical condition of material, the presence of damage, the type of material, and the potential for human contact. The general location of the materials and the potential for personal exposure were



carefully evaluated for future analyses. As samples were collected, the sample number was entered onto Versar's standard chain of custody forms to accurately reflect all changes in the possession and location of the sample canisters. The samples were delivered to the Versar asbestos laboratory for analysis to determine the presence of asbestos in each sample.

A total of 86 bulk samples were collected from thermal insulation, surfacing materials, and miscellaneous materials. The samples were analyzed by the Versar, Inc., asbestos laboratory using polarized light microscopy with dispersion staining. Sample descriptions and results are listed in Table 1 in Section 5.0.

3.3 Bulk Sample Analysis

Bulk asbestos samples were analyzed by trained microscopists, using polarized light microscopy with dispersion staining. Samples were analyzed using the EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples, EPA-600/M4-82-020. The analyst provided a gross description of the sample by color and appearance, and the percentage asbestos content of each type of asbestos identified. For quality assurance, field information relating to each individual sample was not made available to the laboratory personnel.

The Smithsonian Institution has requested that every 20th sample be sent to an outside laboratory for conformational analysis. Samples were sent to R.J. Lee Group in Manassas, Virginia, for analysis. The results from the two laboratories are consistent and are found in Appendix A. Laboratory and analyst certifications for R.J. Lee Group are included in Appendix D, along with Versar's laboratory and analyst certifications.

The Smithsonian requested that Versar reanalyze each sample found to contain 5% asbestos by weight or less and supply documentation of the reanalysis. For quality control, it is Versar's policy to have each sample slide analyzed by a second Versar analyst. The quality control analysis record sheets, or benchsheets, are included in Appendix A for each sample found to contain 5% asbestos by weight or less.



4.0 EXPLANATION OF RESPONSE CODE AND HAZARD PRIORITY

The hazard priority and response code for each identified asbestos-containing material are significant factors in determining feasible methods for managing and controlling asbestos-containing materials in buildings. Both the hazard priority and response code are related to the likelihood of personnel exposure to asbestos fibers released from these materials. The hazard priority and response codes for ACM are included on Figure 1 of this report. A detailed explanation of the methodology used to derive the concepts of hazard priority and response code is found in Appendix F.

The hazard priority is a numerical system used to rank asbestos-containing building materials in each area of the building based on each material's potential for releasing asbestos fibers. The material having the highest potential for fiber release is numbered one and increases numerically to the material with the lowest potential. This ranking system prioritizes publicly-accessed building areas before non-publicly accessed building areas since the potential personnel exposure is a function of the building area population. In addition to personnel exposure, the parameters on which the hazard priority are determined include current damage, potential for damage, proximity to ventilation systems or direct airstream, presence of physical barriers to accessing material, and the type of activity in the area.

The response code signifies the action recommended for each ACM (i.e., immediate removal, planned removal, encapsulation, etc.). The response code is determined using the Exposure Risk Assessment/Evaluation Forms, found in Appendix C, to numerically rate damage and exposure factors. The numerical summations for damage and exposure are then plotted on the hazard graph, found in Appendix F, to determine the response code. The curves on the hazard graph indicating the response codes are fixed and were determined by Versar asbestos specialists after review of field data for several hundred ACM exposure situations.

Response codes are defined as follows:

- A Immediate Removal - The ACM in this situation is such in terms of both damage and exposure potential to warrant immediate removal.
- B Remove As Soon As Possible - Like the area above, this is a guide to management that the ACM should be removed as soon as possible, not waiting for the normal repair and maintenance cycle. In a museum, for instance, it can be accomplished at night over a period of days. Prior to and during actual removal, it is standard procedure to restrict access to that part of the building.
- C Planned Removal - The hazard involved in these areas is such that removal should take place as part of the normal maintenance.



- D Repair - The most damaged areas should be repaired by proper enclosure or encapsulation.
- E Monitoring - Periodic monitoring of these areas should be undertaken to insure that no further damage or changes to the physical condition of the material occurs.
- F No Immediate Action - These situations exhibit little or no damage to the ACM and minimal exposure potential. In most cases, the ACM is protected so that fiber release is very unlikely. No current action should be undertaken.



5.0 USER'S GUIDE TO THIS REPORT

The Versar asbestos inspection report provides all information necessary to recognize and manage asbestos-containing materials in individual Smithsonian Institution properties. The information is presented in several formats varying in depth from a line item summary to narrative discussions detailing Versar's findings and recommendations. Supporting documentation including field information, assessment criteria, and laboratory data is also included as appendices to the report.

The sheer volume of each report may initially intimidate the reader; however, once the reader becomes familiar with the information included in each section, the report will become useful as both a quick reference and a detailed description of ACMs in the facility. Although the individual sections of this report vary in detail, Versar recommends that the user read the entire report before conducting any activities which will directly impact ACM in the facility. Individual sections of this report, in particular the ACM data summary, are not meant to be used independently of the entire report.

Section 1.0 of this report contains the Executive Summary, the synopsis of the inspection activities and results. The results are presented by material type (Section 1.1) and by response code (Section 1.2), and provide the reader with an overview of the locations and control recommendations for each ACM. Section 2.0 is a description of the facility, including the building's layout and mechanical systems. Section 3.0 is an account of the inspection activities, bulk sampling procedure, and laboratory analysis.

Section 4.0 is an introduction to the concepts of hazard rank and response code, which are related to the relative exposure hazard of each ACM. These concepts are described in detail in Appendix F.

Section 5.0, this section, provides information for the report user and contains the ACM data summary (Figure 1), a list of all samples collected in the NASM (Table 1.0), and building floor plans (Figure 2).

Figure 1 is the computer spreadsheet summary of ACMs with removal and replacement costs for the facility. The summary is arranged to show ACMs in each room. The room numbers are arranged alpha-numerically. Rooms with no ACM are included in the summary but are followed only by "no ACM". Not all sample numbers are listed; rather, only representative sample numbers for each material or homogeneous sampling area are used.



The spreadsheet is arranged from the left with the building identification, the room number, and the type of ACM. The summary of quantities follows with the total quantity of material in the room, the exposed quantity in the room (i.e., some material may be enclosed in a pipe chase or covered with carpet, etc.), the quantity of damaged material in the room, and the quantity of exposed, damaged material in the room. The next column indicates the unit of measure for each material.

The ninth and tenth columns list the hazard priority and response code for each material. The response codes A to F signify the designated response action recommended for each ACM. The next two columns list a representative sample number and asbestos content, respectively, associated with the ACM.

The last five columns in the spreadsheet pertain to removal of the ACMs and replacement with nonasbestos materials. This includes the estimated unit removal cost and the estimated total removal cost for the ACM in each room, the unit replacement costs and total replacement costs, and the total cost of removal and replacement of each ACM. These costs do not include the costs for monitoring and oversight during the removal.

The legend on the last page of the summary lists the abbreviations used in the building and room columns for the units of measure and the asbestos contents. Also included are the response codes for each letter designation.

A list of all samples collected in the NASM is shown in Table 1. The table includes the sample number, sample location, material description, and asbestos content of the sample. Each sample location is shown on the building floor plans (Figure 2). The Smithsonian Institution requires that one sample out of 20 be sent to an outside laboratory for Quality Control (QC) analysis. The QC samples are denoted in Table 1 with an asterisk (*), and the outside laboratory results are found in Appendix A. Sample results from the outside laboratory correspond to Versar's laboratory results in relation to each sample collected during the NASM survey.

Reviewing each column for the first entry on the spreadsheet shows that in the NASM, on the parking level, elevators 4 and 5 lobby, there is a total of 225 square feet of floor tile. All 225 feet of the material is exposed, and none of the material is damaged. The unit of measurement is SF, or square feet. The hazard priority is 123 and the response code is E or "Monitor". The representative sample from this homogeneous group is sample 77291A and contains 1-5% chrysotile. The estimated unit removal cost for this ACM is \$11.20 per linear foot. The estimated unit replacement cost is \$2.40. The total removal and replacement cost is \$2,520 plus \$540 or \$3,060.00.



Section 6.0 is an in-depth discussion of the inspection results and includes the type of ACM identified and recommendations for control and management of the ACM in each location. This information is also summarized in the ACM data summary (Figure 1.0) in Section 5.0.

The appendices present supporting documentation for the inspection activities and report preparation. These include:

Appendix A - Chain of Custody Forms, Laboratory Results, Quality Control Results, and Lab Bench Sheets.

Appendix B - Field Assessment Worksheets which are completed during bulk sampling

Appendix C - Laboratory Certifications

Appendix D - Inspector Certifications

Appendix E - Detailed descriptions of hazard ratings, hazard priority, hazard rank, and response code

Appendix F - Costing worksheets used to compute removal and replacement costs

Appendix G - Photographs of sampling sites

As an example of how specific information may be obtained from this report, the following scenarios are provided.

SCENARIO #1

A building wing will be renovated. What spaces and building materials contain asbestos, in what quantity, and how much will removal cost?

Approach: After review of the entire report, the reader should first identify which rooms are located in the wing to be renovated. This is easily accomplished by checking the floor plan (Figure 2) in Section 5.0. The room numbers listed on the floor plan correspond to those in the spreadsheet. Note that these numbers were obtained from ODC floor plans and do not reflect later number changes that may have been made by the facility. Actual room numbers may need to be verified before proceeding. Working with the floor plan and spreadsheet, each room in the wing can then be checked for asbestos-containing materials. The spreadsheet provides the quantities, sample information, response code, and removal and replacement costs. Once the various types of ACM are identified on the spreadsheet, the reader should proceed to the appropriate subsection of Section 6.0 (Conclusions and Recommendations) for more detailed information regarding the material condition, sample information, and recommended control



measures for each type of ACM in each room in the wing. Back-up information for the samples associated with each ACM may be helpful to the reader and is found in Appendices A, B, and C. Back-up information for the costing estimates may also assist the reader, and is found in Appendix G.

SCENARIO #2

Repairs need to be made to a 3-room length of steam pipe and its fittings. The S.I. Plumber wants to know if any of this material contains asbestos. The plumber also wants to know the condition of the material and the surrounding area in the order to best plan protective work measures.

Approach: The reader should first check the floor plan (Figure 2, Section 5.0) to verify that the room numbers on the work order are the same as listed on the official floor plan (the facility may have renumbered the rooms). Once the job location is verified, the reader should first check the computer spreadsheet (Figure 1, Section 5.0) for room numbers on the work order to verify the asbestos content, if any, of pipe and fitting insulation in each room. The spreadsheet also provides an estimated removal cost should removal be required prior to start of work. Next, the appropriate subsections of Section 6.0 (Conclusions and Recommendations) such as "Pipe Insulation" and "Elbow/Fitting Insulation" should be read for more detailed information on the amount and condition of these materials in each room. Based on the condition of the materials, appropriate protection and work procedures will be needed. Obviously, any maintenance activity likely to damage known ACM should be coordinated with Smithsonian OEMS.

Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

Garage Level

BLDG ROOM	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Haz. Prior. Code	Repr. Sample No.	Sample Conc.	Est. Unit Removal Cost	Est. Total Removal Cost	Est. Total Re-insulation	Estimated Cost of Removal and Re-insulation
		Total Exposed Quant.	Damaged Quant.								
NASH ELV 1A3V	FLOOR TILE	225	0	0 SF	123	A 77291	1-5%	\$11.20	\$2,520	\$2,400	\$3,050.00
NASH ELV 1A3V	DRYWALL JOINT COMPOUND	1008	0	0 SF	253	A 57737	1-5%	\$11.20	\$11,200	\$11,200	\$13,708.80
NASH ELV 1A3V	DRYWALL JOINT COMPOUND	615	0	0 SF	255	A 57737	1-5%	\$11.20	\$6,868	\$6,868	\$8,364.00
NASH ELV 1A3V	ROPE GASKET	70	0	0 LF	5	A 57735	65-70%	\$14.00	\$980	\$980	\$1,113.00
NASH EMP GYM	FLOOR TILE	567	0	0 SF	125	A 77291	1-5%	\$11.20	\$6,350	\$6,350	\$7,711.20
NASH EMP GYM	DRYWALL JOINT COMPOUND	275	0	0 SF	35	A 57737	1-5%	\$11.20	\$3,880	\$3,880	\$3,740.00
NASH ESC DPT	DRYWALL JOINT COMPOUND	2400	0	0 SF	201	A 57737	1-5%	\$11.20	\$24,640	\$24,640	\$29,920.00
NASH ELV 1A3V	RED DUCT MASTIC	20	0	0 SF	224	A 57737	1-5%	\$11.20	\$2,240	\$2,240	\$2,920.00
NASH ELV 1A3V	RED DUCT MASTIC	20	0	0 SF	211	A 57736	ED-15%	\$15.40	\$3,080	\$3,080	\$3,456.00
NASH GARAGE	STORAGE	NO ACM	0	0 SF	-	-	-	-	-	-	-
NASH GARAGE	STORAGE	NO ACM	0	0 SF	-	-	-	-	-	-	-
NASH GARAGE	STORAGE	NO ACM	0	0 SF	-	-	-	-	-	-	-
NASH GARAGE	STORAGE	NO ACM	0	0 SF	-	-	-	-	-	-	-
NASH GARAGE	STORAGE	NO ACM	0	0 SF	-	-	-	-	-	-	-
NASH GARAGE	STORAGE	NO ACM	0	0 SF	-	-	-	-	-	-	-
NASH GARAGE	STORAGE	NO ACM	0	0 SF	-	-	-	-	-	-	-
NASH GYM MEN	DRYWALL JOINT COMPOUND	375	0	0 SF	37	A 57737	1-5%	\$11.20	\$4,200	\$4,200	\$5,100.00
NASH GYM WOM	DRYWALL JOINT COMPOUND	315	0	0 SF	191	A 57737	1-5%	\$11.20	\$2,140	\$2,140	\$2,600.00
NASH LD DOCK	RED DUCT MASTIC	50	0	0 SF	212	A 57736	ED-15%	\$15.40	\$770	\$770	\$935.00
NASH LDK HL	DRYWALL JOINT COMPOUND	1550	0	0 SF	31	A 57737	1-5%	\$11.20	\$17,360	\$17,360	\$21,080.00
NASH N RECH RM	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P102	ROPE GASKET	20	0	0 LF	1	A 57735	65-70%	\$14.00	\$280	\$280	\$338.00
NASH P102	ROPE GASKET	15	0	0 LF	2	A 57735	65-70%	\$14.00	\$210	\$210	\$258.50
NASH P204	DRYWALL JOINT COMPOUND	428	0	0 SF	296	A 57737	1-5%	\$11.20	\$4,794	\$4,794	\$5,820.80
NASH P302	DRYWALL JOINT COMPOUND	1620	0	0 SF	268	A 57737	1-5%	\$11.20	\$18,744	\$18,744	\$22,898.00
NASH P305A	DRYWALL JOINT COMPOUND	1220	0	0 SF	298	A 57737	1-5%	\$11.20	\$11,664	\$11,664	\$14,192.00
NASH P305C	DRYWALL JOINT COMPOUND	12	0	0 SF	4	A 57735	65-70%	\$14.00	\$168	\$168	\$190.80
NASH P405	ROPE GASKET	15	0	0 LF	3	A 57735	65-70%	\$14.00	\$210	\$210	\$258.50
NASH P406	DRYWALL JOINT COMPOUND	3150	0	0 SF	215	A 57737	1-5%	\$11.20	\$35,280	\$35,280	\$42,840.00
NASH P407	DRYWALL JOINT COMPOUND	450	0	0 SF	264	A 57737	1-5%	\$11.20	\$5,964	\$5,964	\$7,158.00
NASH P408	DRYWALL JOINT COMPOUND	470	0	0 SF	257	A 57737	1-5%	\$11.20	\$2,864	\$2,864	\$3,438.00
NASH P409	FLOOR TILE	30	0	0 SF	1	A 77291	1-5%	\$11.20	\$112	\$112	\$138.00
NASH P409A	DRYWALL JOINT COMPOUND	168	0	0 SF	259	A 57737	1-5%	\$11.20	\$2,882	\$2,882	\$3,460.00
NASH P409B	DRYWALL JOINT COMPOUND	312	0	0 SF	261	A 57737	1-5%	\$11.20	\$3,494	\$3,494	\$4,243.20
NASH P409C	DRYWALL JOINT COMPOUND	360	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409D	DRYWALL JOINT COMPOUND	680	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409E	DRYWALL JOINT COMPOUND	680	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409F	DRYWALL JOINT COMPOUND	360	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409G	FLOOR TILE	558	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409H	DRYWALL JOINT COMPOUND	558	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409I	DRYWALL JOINT COMPOUND	252	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409J	DRYWALL JOINT COMPOUND	572	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409K	DRYWALL JOINT COMPOUND	720	0	0 SF	216	A 57737	1-5%	\$11.20	\$2,416	\$2,416	\$2,895.00
NASH P409L	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409M	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409N	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409O	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409P	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409Q	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409R	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409S	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409T	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409U	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409V	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409W	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409X	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409Y	NO ACM	-	0	0 SF	-	-	-	-	-	-	-
NASH P409Z	NO ACM	-	0	0 SF	-	-	-	-	-	-	-

Garage Level Smithsonian Institution - Summary of ACM at National Air and Space Museum

BLDG ROOM	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Hazardous Prior Code	Repr. Sample No.	Sample Conc.	Est. Unit Removal Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Removal and Re-insulation
		Total Exposed Quant.	Damaged Quant.									
NASH RM P102	NO ACM	-	-	0 SF	33	A57737	CHRY5 1-5%	\$11.20	\$8,400	\$2.40	\$1,800	\$10,200.00
NASH RM P201	NO ACM	-	-	0 SF	169	A77292	CHRY5 1-5%	\$11.20	\$2,520	\$2.40	\$540	\$3,060.00
NASH RM P201A	NO ACM	-	-	0 SF	161	A57737	CHRY5 1-5%	\$11.20	\$1,800	\$2.40	\$540	\$2,340.00
NASH RM P201B	NO ACM	-	-	0 SF	12	A57737	CHRY5 1-5%	\$11.20	\$135	\$2.40	\$27	\$162.00
NASH RM P202	NO ACM	-	-	0 SF	10	A57737	CHRY5 1-5%	\$11.20	\$112	\$2.40	\$24	\$136.00
NASH RM P203	NO ACM	-	-	0 SF	10	A57737	CHRY5 1-5%	\$11.20	\$112	\$2.40	\$24	\$136.00
NASH RM P204	NO ACM	-	-	0 SF	8	A57737	CHRY5 1-5%	\$11.20	\$89.6	\$2.40	\$192	\$282.00
NASH RM P301	NO ACM	-	-	0 SF	7	A57737	CHRY5 1-5%	\$11.20	\$78.4	\$2.40	\$168	\$246.00
NASH RM P304	NO ACM	-	-	0 SF	11	A57737	CHRY5 1-5%	\$11.20	\$123.2	\$2.40	\$504	\$627.00
NASH RM P304A	NO ACM	-	-	0 SF	13	A57737	CHRY5 1-5%	\$11.20	\$145.6	\$2.40	\$504	\$650.00
NASH RM P305	NO ACM	-	-	0 SF	9	A57737	CHRY5 1-5%	\$11.20	\$100.8	\$2.40	\$432	\$533.00
NASH RM P307	NO ACM	-	-	0 SF	240	A57734	CHRY5 1-5%	\$11.20	\$2,688	\$2.40	\$1,452	\$4,140.00
NASH RM P307A	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P401A	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P401B	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P401C	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P405	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P601	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P602	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P604	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P605	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P714	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH RM P715	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH S MECH RM	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-
NASH SEC HL	DRYWALL JOINT COMPOUND	750	0	0 SF	-	-	-	-	-	-	-	-
NASH SEC HL	FLOOR TILE	225	0	0 SF	-	-	-	-	-	-	-	-
NASH SPCHS1E	DRYWALL JOINT COMPOUND	1220	0	0 SF	-	-	-	-	-	-	-	-
NASH STR1R 1	DRYWALL JOINT COMPOUND	3165	0	0 SF	-	-	-	-	-	-	-	-
NASH STR1R 2	DRYWALL JOINT COMPOUND	3165	0	0 SF	-	-	-	-	-	-	-	-
NASH STR1R 3	DRYWALL JOINT COMPOUND	2110	0	0 SF	-	-	-	-	-	-	-	-
NASH STR1R 4	DRYWALL JOINT COMPOUND	8320	0	0 SF	-	-	-	-	-	-	-	-
NASH STR1R 5	DRYWALL JOINT COMPOUND	3165	0	0 SF	-	-	-	-	-	-	-	-
NASH STR1R 6	DRYWALL JOINT COMPOUND	3165	0	0 SF	-	-	-	-	-	-	-	-
NASH STR1R 7	DRYWALL JOINT COMPOUND	3165	0	0 SF	-	-	-	-	-	-	-	-
NASH STR ESC	DRYWALL JOINT COMPOUND	605	0	0 SF	-	-	-	-	-	-	-	-
NASH FRSH RM	NO ACM	-	-	0 SF	-	-	-	-	-	-	-	-

A This sample was not collected in the room number shown, but is representative of the ACM in the room.
 A Indicates sample taken from floor tile material.
 B Indicates sample taken from floor tile mastic.

Legend:
 Briefing Office
 Carpet - Chiller Plant
 Elevator Lobby
 Employee - Employee's Gym

Idhook - Loading Dock
 Idhook Hall - Loading Dock Hall
 Mech Hall - North Mechanical Room
 Sechl - Security Hallway

Response Codes:
 A - Remove immediately
 B - Remove as soon as possible
 C - Schedule removal

Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

Garage Level	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Haz. Prior. Code	Repr. Sample No.	Sample Conc.	Est. Removal Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Removal and Re-insulation
		Total Exposed Quant.	Damaged Quantity									
BLDC ROOM	Employee's Gym Entrance			Space History Dept.								
	ERT - Education Resource Center			STRESC - Stair Escalator								
	Escalator pit			Trash Room								
	S Mech Rm - South Mechanical Room			Gym Wom - Womens Gym								

D - Repair or encapsulate
 E - Monitor
 F - No immediate action

Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

Level 1

BLDG ROOM	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Haz. Prior.	Resp. Code	Rept. Sample No.	Sample Conc.	Est. Unit Removal Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Removal and Re-insulation
		Total Exposed Quant.	Damaged Quantity										
NASH CRY100	DRYWALL JOINT COMPOUND	625	0	0 SF	254	B	A57734	1-5%	\$11.20	\$1,000	\$2.40	\$1,500	\$8,500.00
NASH CRY100	DRYWALL JOINT COMPOUND	2850	0	0 SF	290	B	A57734	1-5%	\$11.20	\$1,920	\$2.40	\$1,840	\$38,760.00
NASH CRY100	SKYLIGHT GASKET	2870	0	0 LF	268	B	A57942	5-10%	\$14.28	\$40,994	\$3.20	\$9,184	\$50,167.60
NASH CRY100	SKYLIGHT GASKET	2870	0	0 LF	271	B	A57942	5-10%	\$14.28	\$40,994	\$3.20	\$9,184	\$50,167.60
NASH CRY103	DRYWALL JOINT COMPOUND	5600	0	0 SF	251	B	A57734	1-5%	\$11.20	\$6,272	\$2.40	\$13,440	\$76,024.00
NASH CRY105	DRYWALL JOINT COMPOUND	5500	0	0 SF	249	B	A57734	1-5%	\$11.20	\$6,272	\$2.40	\$13,440	\$76,024.00
NASH CRY106	DRYWALL JOINT COMPOUND	240	0	0 SF	210	B	A57942	5-10%	\$11.20	\$2,280	\$2.40	\$4,195.20	\$4,195.20
NASH CRY106	SKYLIGHT GASKET	8640	0	0 SF	243	B	A57734	1-5%	\$11.20	\$9,076	\$2.40	\$20,726	\$17,504.00
NASH CRY107	DRYWALL JOINT COMPOUND	7860	0	0 SF	241	B	A57734	1-5%	\$11.20	\$26,856	\$2.40	\$61,896.00	\$61,896.00
NASH CRY108	DRYWALL JOINT COMPOUND	4550	0	0 SF	239	B	A57734	1-5%	\$11.20	\$5,060	\$2.40	\$10,920	\$4,195.20
NASH CRY108	SKYLIGHT GASKET	240	0	0 LF	212	B	A57942	5-10%	\$11.20	\$2,327	\$2.40	\$4,864	\$4,864.00
NASH CRY109	DRYWALL JOINT COMPOUND	7860	0	0 SF	266	B	A57942	5-10%	\$11.20	\$8,815	\$2.40	\$19,520	\$17,504.00
NASH CRY110	SKYLIGHT GASKET	240	0	0 LF	233	B	A57942	5-10%	\$11.20	\$2,688	\$2.40	\$5,040	\$5,040.00
NASH CRY110	DRYWALL JOINT COMPOUND	8640	0	0 SF	221	B	A57734	1-5%	\$11.20	\$9,616	\$2.40	\$21,440	\$17,504.00
NASH CRY111	DRYWALL JOINT COMPOUND	5600	0	0 SF	219	B	A57734	1-5%	\$11.20	\$6,272	\$2.40	\$13,440	\$76,024.00
NASH CRY112	DRYWALL JOINT COMPOUND	5500	0	0 SF	217	B	A57734	1-5%	\$11.20	\$6,272	\$2.40	\$13,440	\$76,024.00
NASH CRY113	DRYWALL JOINT COMPOUND	5500	0	0 SF	213	B	A57942	5-10%	\$11.20	\$6,272	\$2.40	\$13,440	\$76,024.00
NASH CRY114	SKYLIGHT GASKET	2870	0	0 LF	273	B	A57942	5-10%	\$14.28	\$40,994	\$3.20	\$9,184	\$50,167.60
NASH MIS SHP	DRYWALL JOINT COMPOUND	1740	0	0 SF	214	B	A57734	1-5%	\$11.20	\$19,488	\$2.40	\$44,544	\$23,664.00
NASH MESSHOP	DRYWALL JOINT COMPOUND	6100	0	0 SF	232	B	A57734	1-5%	\$11.20	\$6,872	\$2.40	\$15,168	\$82,960.00
NASH RESTAURANT	DRYWALL JOINT COMPOUND	5235	0	0 SF	288	B	A57734	1-5%	\$11.20	\$58,296	\$2.40	\$12,492	\$70,788.00
NASH RM 1091	DRYWALL JOINT COMPOUND	572	0	0 SF	286	B	A57734	1-5%	\$11.20	\$6,406	\$2.40	\$13,772	\$7,772.00
NASH RM 1101	DRYWALL JOINT COMPOUND	1365	0	0 SF	284	B	A57734	1-5%	\$11.20	\$15,288	\$2.40	\$33,564.00	\$33,564.00
NASH RM 1102	DRYWALL JOINT COMPOUND	460	0	0 SF	282	B	A57734	1-5%	\$11.20	\$5,152	\$2.40	\$11,104	\$11,104.00
NASH RM 1103	DRYWALL JOINT COMPOUND	845	0	0 SF	263	B	A57734	1-5%	\$11.20	\$9,464	\$2.40	\$20,828	\$20,828.00
NASH RM 1104	DRYWALL JOINT COMPOUND	845	0	0 SF	242	B	A57734	1-5%	\$11.20	\$2,654	\$2.40	\$5,492.00	\$5,492.00
NASH RM 1151	DRYWALL JOINT COMPOUND	990	0	0 SF	280	B	A57734	1-5%	\$11.20	\$11,088	\$2.40	\$24,576	\$24,576.00
NASH RM 1152	DRYWALL JOINT COMPOUND	412	0	0 SF	278	B	A57734	1-5%	\$11.20	\$4,614	\$2.40	\$9,369	\$9,369.00
NASH RM 1157A	DRYWALL JOINT COMPOUND	340	0	0 SF	289	B	A57734	1-5%	\$11.20	\$3,808	\$2.40	\$8,160	\$8,160.00
NASH RM 1157B	DRYWALL JOINT COMPOUND	325	0	0 SF	217	B	A57734	1-5%	\$11.20	\$3,640	\$2.40	\$7,880	\$7,880.00
NASH RM 1157C	DRYWALL JOINT COMPOUND	340	0	0 SF	287	B	A57734	1-5%	\$11.20	\$3,808	\$2.40	\$8,160	\$8,160.00

* This sample was not collected in the room number shown, but is representative of the ACM in the room.
 A Indicates sample taken from filor tile material.
 B Indicates sample taken from filor tile mastic.

Legend:
 Checkroom - Checkroom
 ExhibitShop - Exhibit Shop
 Gallery - Gallery Shop
 MuseumShop - Museum Shop
 MuseumShopOff - Museum Shop Office
 Restaurant - Restaurant

Response Codes:
 A - Remove immediately
 B - Remove as soon as possible
 C - Schedule removal
 D - Repair or encapsulate
 E - Monitor
 F - No immediate action

Level 2 Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

BLDG ROOM	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Haz. prior.	Resp. Code	Repr. Sample No.	Sample Conc.	Est. Unit Removal Cost	Est. Total Removal Cost	Est. Cost of Re-insulation
		Total Exposed Quant.	Damaged Quantity								
NASH CLR202	DRYWALL JOINT COMPOUND	1870	0	0 SE	218	E	A57734	1-5%	\$11.20	\$20,944	\$25,432.00
NASH CLR202ST	DRYWALL JOINT COMPOUND	400	0	0 SE	225	E	A57734	1-5%	\$11.20	\$4,488	\$5,440.00
NASH CLR203	DRYWALL JOINT COMPOUND	7965	0	0 SE	220	E	A57734	1-5%	\$11.20	\$8,960	\$108,324.00
NASH CLR205	DRYWALL JOINT COMPOUND	7965	0	0 SE	227	E	A57734	1-5%	\$11.20	\$8,960	\$108,324.00
NASH CLR206	DRYWALL JOINT COMPOUND	5898	0	0 SE	222	E	78401	1-5%	\$11.20	\$6,155	\$78,000.00
NASH CLR207	DRYWALL JOINT COMPOUND	10611	0	0 SE	229	E	57749	1-5%	\$11.20	\$11,843	\$144,309.60
NASH CLR208	DRYWALL JOINT COMPOUND	5574	0	0 SE	246	E	A57734	1-5%	\$11.20	\$6,249	\$75,806.40
NASH CLR209	DRYWALL JOINT COMPOUND	10611	0	0 SE	226	E	A57734	1-5%	\$11.20	\$11,843	\$144,309.60
NASH CLR210	DRYWALL JOINT COMPOUND	5898	0	0 SE	262	E	A57734	1-5%	\$11.20	\$6,658	\$80,212.80
NASH CLR211	DRYWALL JOINT COMPOUND	5945	0	0 SE	230	E	A57734	1-5%	\$11.20	\$6,658	\$80,212.80
NASH CLR211ST	DRYWALL JOINT COMPOUND	400	0	0 SE	230	E	A57734	1-5%	\$11.20	\$4,488	\$5,440.00
NASH CLR213	DRYWALL JOINT COMPOUND	7965	0	0 SE	248	E	A57734	1-5%	\$11.20	\$8,960	\$108,324.00
NASH CLR214	DRYWALL JOINT COMPOUND	1980	0	0 SF	258	E	A57734	1-5%	\$11.20	\$22,176	\$265,440.00
NASH CLR215	DRYWALL JOINT COMPOUND	4150	0	0 SF	91	E	57748	1-5%	\$11.20	\$4,680	\$55,640.00
NASH CLR216	DRYWALL JOINT COMPOUND	8993	0	0 SF	230	E	A57734	1-5%	\$11.20	\$9,902	\$120,944.80
NASH CLR217	DRYWALL JOINT COMPOUND	1250	0	0 SF	211	E	A57734	1-5%	\$11.20	\$14,000	\$170,000.00
NASH CLR218	DRYWALL JOINT COMPOUND	1100	0	0 SF	234	E	A57734	1-5%	\$11.20	\$12,320	\$149,600.00
NASH CLR219	DRYWALL JOINT COMPOUND	845	0	0 SF	293	E	A57734	1-5%	\$11.20	\$9,464	\$114,920.00
NASH CLR220	DRYWALL JOINT COMPOUND	845	0	0 SF	285	E	A57734	1-5%	\$11.20	\$9,464	\$114,920.00
NASH CLR221	DRYWALL JOINT COMPOUND	425	0	0 SF	207	E	A57734	1-5%	\$11.20	\$4,680	\$55,640.00
NASH CLR222	DRYWALL JOINT COMPOUND	563	0	0 SF	231	E	A57734	1-5%	\$11.20	\$6,406	\$77,880.00
NASH CLR223	DRYWALL JOINT COMPOUND	572	0	0 SF	281	E	A57734	1-5%	\$11.20	\$6,406	\$77,880.00
NASH CLR224	DRYWALL JOINT COMPOUND	630	0	0 SF	295	E	A57734	1-5%	\$11.20	\$7,152	\$85,680.00
NASH CLR225	DRYWALL JOINT COMPOUND	460	0	0 SF	279	E	A57734	1-5%	\$11.20	\$5,956	\$71,880.00
NASH CLR226	DRYWALL JOINT COMPOUND	845	0	0 SF	260	E	A57734	1-5%	\$11.20	\$5,956	\$71,880.00
NASH CLR227	DRYWALL JOINT COMPOUND	845	0	0 SF	238	E	A57734	1-5%	\$11.20	\$5,956	\$71,880.00
NASH CLR228	DRYWALL JOINT COMPOUND	16445	0	0 SF	250	E	A57734	1-5%	\$11.20	\$18,484	\$223,652.00
NASH CLR229	DRYWALL JOINT COMPOUND	2310	0	0 SF	232	E	A57734	1-5%	\$11.20	\$2,872	\$35,544
NASH CLR230	DRYWALL JOINT COMPOUND	1960	0	0 SF	252	E	A57734	1-5%	\$11.20	\$2,872	\$35,544
NASH CLR231	DRYWALL JOINT COMPOUND	1140	0	0 SF	264	E	A57734	1-5%	\$11.20	\$1,704	\$20,656.00
NASH CLR232	DRYWALL JOINT COMPOUND	1140	0	0 SF	264	E	A57734	1-5%	\$11.20	\$1,704	\$20,656.00

^ This sample was not collected in the room number shown, but is representative of the ACM in the room.
 A Indicates sample taken from filler tile material.
 B Indicates sample taken from filler tile mastic.

- Legend:
- Clrly - Gallery Shop
 - Mezz - Mezzanine
 - Platn - Planetarium
 - PlatnCR - Planetarium Control Room
 - PlatnRMP - Planetarium Porch
 - ProjRm - Projection Room
 - TheatExt - Theater Exterior
- RESPONSE CODES
- A - REMOVE IMMEDIATELY
 - B - REMOVE AS SOON AS POSSIBLE
 - C - SCHEDULE REMOVAL
 - D - REPAIR OR ENCAPSULATE
 - E - MONITOR
 - F - NO ACTION REQUIRED

Level 3 Figure 1. Smithsonian Institution - Summary of ACH at National Air and Space Museum

BLDG ROOM	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Hazard Prior.	Resp. Code	Rept. Sample No.	Sample Conc.	Est. Unit Removal Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Removal and Re-insulation
		Total Exposed Quant.	Damaged Quant.										
NASH CONFESSRY	DRYWALL JOINT COMPOUND	540	0	0 SF	172	B	57737	CHRS 1-5%	\$11.20	\$6,048	\$2.40	\$1,296	\$7,344.00
NASH DIR KIT	DRYWALL JOINT COMPOUND	270	0	0 SF	103	B	57737	CHRS 1-5%	\$11.20	\$3,024	\$2.40	\$648	\$3,672.00
NASH LIB ENT	DRYWALL JOINT COMPOUND	780	0	0 SF	30	B	57734	CHRS 1-5%	\$11.20	\$8,736	\$2.40	\$872	\$9,608.00
NASH LIBSTAIRS	DRYWALL JOINT COMPOUND	1850	0	0 SF	64	B	57737	CHRS 1-5%	\$11.20	\$20,720	\$2.40	\$1,440	\$22,160.00
NASH LIBSTAIRS	SKYLIGHT GASKET	380	0	0 LF	267	B	57492	CHRS 1-10%	\$11.20	\$3,526	\$2.20	\$1,216	\$4,742.00
NASH LIBSTAIRS	DRYWALL JOINT COMPOUND	1360	0	0 SF	28	B	57734	CHRS 1-5%	\$11.20	\$3,232	\$2.40	\$860	\$3,892.00
NASH RM 3101	DRYWALL JOINT COMPOUND	780	0	0 SF	109	B	57734	CHRS 1-5%	\$11.20	\$8,736	\$2.40	\$872	\$9,608.00
NASH RM 3102	DRYWALL JOINT COMPOUND	400	0	0 SF	187	B	57734	CHRS 1-5%	\$11.20	\$4,480	\$2.40	\$460	\$4,940.00
NASH RM 3103	DRYWALL JOINT COMPOUND	260	0	0 SF	111	B	57734	CHRS 1-5%	\$11.20	\$2,704	\$2.40	\$264	\$2,968.00
NASH RM 3106	DRYWALL JOINT COMPOUND	420	0	0 SF	153	B	57734	CHRS 1-5%	\$11.20	\$4,704	\$2.40	\$324	\$5,028.00
NASH RM 3107	DRYWALL JOINT COMPOUND	450	0	0 SF	113	B	57734	CHRS 1-5%	\$11.20	\$3,090	\$2.40	\$308	\$3,398.00
NASH RM 3108	DRYWALL JOINT COMPOUND	270	0	0 SF	208	B	57734	CHRS 1-5%	\$11.20	\$3,024	\$2.40	\$648	\$3,672.00
NASH RM 3109	DRYWALL JOINT COMPOUND	270	0	0 SF	115	B	57734	CHRS 1-5%	\$11.20	\$3,024	\$2.40	\$648	\$3,672.00
NASH RM 3110	DRYWALL JOINT COMPOUND	270	0	0 SF	165	B	57734	CHRS 1-5%	\$11.20	\$3,870	\$2.40	\$758	\$4,328.00
NASH RM 3111	DRYWALL JOINT COMPOUND	320	0	0 SF	117	B	57734	CHRS 1-5%	\$11.20	\$3,584	\$2.40	\$540	\$4,124.00
NASH RM 3112	DRYWALL JOINT COMPOUND	600	0	0 SF	22	B	57734	CHRS 1-5%	\$11.20	\$1,672	\$2.40	\$440	\$2,112.00
NASH RM 3113	DRYWALL JOINT COMPOUND	600	0	0 SF	22	B	57734	CHRS 1-5%	\$11.20	\$1,672	\$2.40	\$440	\$2,112.00
NASH RM 3114	DRYWALL JOINT COMPOUND	470	0	0 SF	24	B	57734	CHRS 1-5%	\$11.20	\$2,704	\$2.40	\$440	\$3,144.00
NASH RM 3115	DRYWALL JOINT COMPOUND	600	0	0 SF	26	B	57734	CHRS 1-5%	\$11.20	\$3,024	\$2.40	\$440	\$3,464.00
NASH RM 3117	DRYWALL JOINT COMPOUND	1030	0	0 SF	32	B	57734	CHRS 1-5%	\$11.20	\$3,584	\$2.40	\$540	\$4,124.00
NASH RM 3118	DRYWALL JOINT COMPOUND	130	0	0 SF	34	B	57734	CHRS 1-5%	\$11.20	\$3,584	\$2.40	\$540	\$4,124.00
NASH RM 3119	DRYWALL JOINT COMPOUND	430	0	0 SF	36	B	57734	CHRS 1-5%	\$11.20	\$4,124	\$2.40	\$608	\$4,732.00
NASH RM 3121	DRYWALL JOINT COMPOUND	570	0	0 SF	40	B	57734	CHRS 1-5%	\$11.20	\$4,568	\$2.40	\$668	\$5,236.00
NASH RM 3122	DRYWALL JOINT COMPOUND	350	0	0 SF	42	B	57734	CHRS 1-5%	\$11.20	\$4,568	\$2.40	\$668	\$5,236.00
NASH RM 3123	DRYWALL JOINT COMPOUND	310	0	0 SF	46	B	57734	CHRS 1-5%	\$11.20	\$4,568	\$2.40	\$668	\$5,236.00
NASH RM 3124	DRYWALL JOINT COMPOUND	270	0	0 SF	48	B	57734	CHRS 1-5%	\$11.20	\$4,568	\$2.40	\$668	\$5,236.00
NASH RM 3125	DRYWALL JOINT COMPOUND	270	0	0 SF	50	B	57734	CHRS 1-5%	\$11.20	\$4,568	\$2.40	\$668	\$5,236.00
NASH RM 3126	DRYWALL JOINT COMPOUND	740	0	0 SF	52	B	57734	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3127	DRYWALL JOINT COMPOUND	410	0	0 SF	54	B	57734	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3128	DRYWALL JOINT COMPOUND	270	0	0 SF	56	B	57734	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3129	DRYWALL JOINT COMPOUND	420	0	0 SF	58	B	57734	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3131	DRYWALL JOINT COMPOUND	410	0	0 SF	60	B	57734	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3132	DRYWALL JOINT COMPOUND	390	0	0 SF	66	B	57737	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3134	DRYWALL JOINT COMPOUND	500	0	0 SF	68	B	57737	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3136	DRYWALL JOINT COMPOUND	330	0	0 SF	70	B	57737	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3138	DRYWALL JOINT COMPOUND	430	0	0 SF	72	B	57737	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3140	DRYWALL JOINT COMPOUND	360	0	0 SF	74	B	57737	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3164	DRYWALL JOINT COMPOUND	330	0	0 SF	76	B	57737	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3165	DRYWALL JOINT COMPOUND	430	0	0 SF	76	B	57737	CHRS 1-5%	\$11.20	\$5,236	\$2.40	\$776	\$5,912.00
NASH RM 3166	DRYWALL JOINT COMPOUND	330	0	0 SF	17	B	57737	CHRS 1-5%	\$11.20	\$3,024	\$2.40	\$608	\$3,632.00
NASH RM 3200	DRYWALL JOINT COMPOUND	1000	0	0 SF	19	B	57737	CHRS 1-5%	\$11.20	\$11,200	\$2.40	\$2,400	\$13,600.00
NASH RM 3201	INACCESSIBLE	-	-	-	-	-	-	-	-	-	-	-	-
NASH RM 3202	INACCESSIBLE	-	-	-	-	-	-	-	-	-	-	-	-
NASH RM 3203	DRYWALL JOINT COMPOUND	872	0	0 SF	15	B	57737	CHRS 1-5%	\$11.20	\$9,766	\$2.40	\$2,093	\$11,859.20
NASH RM 3204	DRYWALL JOINT COMPOUND	872	0	0 SF	84	B	57737	CHRS 1-5%	\$11.20	\$9,766	\$2.40	\$2,093	\$11,859.20
NASH RM 3204B	INACCESSIBLE	-	-	-	-	-	-	-	-	-	-	-	-
NASH RM 3205	INACCESSIBLE	-	-	-	-	-	-	-	-	-	-	-	-
NASH RM 3206	INACCESSIBLE	-	-	-	-	-	-	-	-	-	-	-	-
NASH RM 3207	DRYWALL JOINT COMPOUND	350	0	0 SF	86	B	57737	CHRS 1-5%	\$11.20	\$3,920	\$2.40	\$940	\$4,760.00
NASH RM 3300	DRYWALL JOINT COMPOUND	2500	0	0 SF	88	B	57737	CHRS 1-5%	\$11.20	\$28,000	\$2.40	\$6,000	\$34,000.00
NASH RM 3301	DRYWALL JOINT COMPOUND	740	0	0 SF	90	B	57737	CHRS 1-5%	\$11.20	\$8,288	\$2.40	\$1,776	\$10,064.00

Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

Level 3

SUMMARY OF QUANTITIES

BLDG ROOM	Material Type	Total Exposed Quant.	Damaged Quant.	Unit of Measure	Haz. Prior.	Resp. Code	Repr. Sample No.	Sample Conc.	Est. Removal Unit Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Re-insulation
NASH RM 3302	DRYWALL JOINT COMPOUND	640	0	0 SF	92	B	557737	1-15%	\$1.120	\$7,168	\$2.40	\$1,536	\$8,704.00
NASH RM 3303	DRYWALL JOINT COMPOUND	370	0	0 SF	94	B	557737	1-15%	\$1.200	\$4,440	\$2.40	\$888	\$5,328.00
NASH RM 3306	DRYWALL JOINT COMPOUND	370	0	0 SF	96	B	557737	1-15%	\$1.200	\$4,440	\$2.40	\$888	\$5,328.00
NASH RM 3308	DRYWALL JOINT COMPOUND	370	0	0 SF	98	B	557737	1-15%	\$1.200	\$4,440	\$2.40	\$888	\$5,328.00
NASH RM 3309	DRYWALL JOINT COMPOUND	370	0	0 SF	100	B	557737	1-15%	\$1.200	\$4,440	\$2.40	\$888	\$5,328.00
NASH RM 3310	DRYWALL JOINT COMPOUND	395	0	0 SF	104	B	557737	1-15%	\$1.144	\$4,518	\$2.40	\$898	\$5,418.00
NASH RM 3311	DRYWALL JOINT COMPOUND	730	0	0 SF	106	B	557737	1-15%	\$1.176	\$8,588	\$2.40	\$1,752	\$10,340.00
NASH RM 3312	DRYWALL JOINT COMPOUND	420	0	0 SF	110	B	557737	1-15%	\$1.120	\$4,704	\$2.40	\$588	\$5,292.00
NASH RM 3313	DRYWALL JOINT COMPOUND	200	0	0 SF	112	B	557737	1-15%	\$1.120	\$2,240	\$2.40	\$480	\$2,720.00
NASH RM 3314	DRYWALL JOINT COMPOUND	300	0	0 SF	114	B	557737	1-15%	\$1.120	\$3,360	\$2.40	\$480	\$3,840.00
NASH RM 3315	DRYWALL JOINT COMPOUND	300	0	0 SF	116	B	557737	1-15%	\$1.120	\$3,360	\$2.40	\$480	\$3,840.00
NASH RM 3316	DRYWALL JOINT COMPOUND	200	0	0 SF	118	B	557737	1-15%	\$1.120	\$2,240	\$2.40	\$480	\$2,720.00
NASH RM 3318	DRYWALL JOINT COMPOUND	420	0	0 SF	120	B	557737	1-15%	\$1.120	\$4,704	\$2.40	\$588	\$5,292.00
NASH RM 3319	DRYWALL JOINT COMPOUND	370	0	0 SF	122	B	557737	1-15%	\$1.120	\$4,144	\$2.40	\$588	\$4,732.00
NASH RM 3320	DRYWALL JOINT COMPOUND	370	0	0 SF	124	B	557737	1-15%	\$1.120	\$4,144	\$2.40	\$588	\$4,732.00
NASH RM 3321	DRYWALL JOINT COMPOUND	370	0	0 SF	126	B	557737	1-15%	\$1.120	\$4,144	\$2.40	\$588	\$4,732.00
NASH RM 3322	DRYWALL JOINT COMPOUND	370	0	0 SF	128	B	557737	1-15%	\$1.120	\$4,144	\$2.40	\$588	\$4,732.00
NASH RM 3323	DRYWALL JOINT COMPOUND	150	0	0 SF	130	B	557737	1-15%	\$1.120	\$1,680	\$2.40	\$360	\$1,940.00
NASH RM 3324	DRYWALL JOINT COMPOUND	410	0	0 SF	132	B	557737	1-15%	\$1.120	\$4,592	\$2.40	\$584	\$5,176.00
NASH RM 3325	DRYWALL JOINT COMPOUND	520	0	0 SF	134	B	557737	1-15%	\$1.120	\$5,824	\$2.40	\$720	\$6,544.00
NASH RM 3326	DRYWALL JOINT COMPOUND	1060	0	0 SF	136	B	557737	1-15%	\$1.144	\$12,112	\$2.40	\$2,544	\$14,656.00
NASH RM 3327	DRYWALL JOINT COMPOUND	370	0	0 SF	138	B	557737	1-15%	\$1.120	\$4,144	\$2.40	\$588	\$4,732.00
NASH RM 3328	DRYWALL JOINT COMPOUND	520	0	0 SF	140	B	557737	1-15%	\$1.120	\$5,824	\$2.40	\$720	\$6,544.00
NASH RM 3329	DRYWALL JOINT COMPOUND	550	0	0 SF	142	B	557737	1-15%	\$1.120	\$6,160	\$2.40	\$768	\$6,928.00
NASH RM 3330	DRYWALL JOINT COMPOUND	520	0	0 SF	144	B	557737	1-15%	\$1.120	\$5,824	\$2.40	\$720	\$6,544.00
NASH RM 3331	DRYWALL JOINT COMPOUND	550	0	0 SF	146	B	557737	1-15%	\$1.120	\$6,160	\$2.40	\$768	\$6,928.00
NASH RM 3332	DRYWALL JOINT COMPOUND	520	0	0 SF	148	B	557737	1-15%	\$1.120	\$5,824	\$2.40	\$720	\$6,544.00
NASH RM 3333	DRYWALL JOINT COMPOUND	370	0	0 SF	150	B	557737	1-15%	\$1.120	\$4,144	\$2.40	\$588	\$4,732.00
NASH RM 3334	DRYWALL JOINT COMPOUND	510	0	0 SF	152	B	557737	1-15%	\$1.120	\$5,712	\$2.40	\$720	\$6,432.00
NASH RM 3335	DRYWALL JOINT COMPOUND	250	0	0 SF	154	B	557737	1-15%	\$1.120	\$2,800	\$2.40	\$480	\$3,280.00
NASH RM 3336	DRYWALL JOINT COMPOUND	340	0	0 SF	156	B	557737	1-15%	\$1.120	\$3,808	\$2.40	\$576	\$4,384.00
NASH RM 3337	DRYWALL JOINT COMPOUND	340	0	0 SF	160	B	557737	1-15%	\$1.120	\$3,808	\$2.40	\$576	\$4,384.00
NASH RM 3338	DRYWALL JOINT COMPOUND	340	0	0 SF	162	B	557737	1-15%	\$1.120	\$3,808	\$2.40	\$576	\$4,384.00
NASH RM 3339	DRYWALL JOINT COMPOUND	3110	0	0 SF	164	B	557737	1-15%	\$1.120	\$34,832	\$2.40	\$7,416	\$41,248.00
NASH RM 3340	DRYWALL JOINT COMPOUND	480	0	0 SF	166	B	557737	1-15%	\$1.120	\$5,376	\$2.40	\$1,152	\$6,528.00
NASH RM 3341	DRYWALL JOINT COMPOUND	440	0	0 SF	168	B	557737	1-15%	\$1.120	\$4,928	\$2.40	\$1,056	\$5,984.00
NASH RM 3342	DRYWALL JOINT COMPOUND	440	0	0 SF	170	B	557737	1-15%	\$1.120	\$4,928	\$2.40	\$1,056	\$5,984.00
NASH RM 3343	DRYWALL JOINT COMPOUND	460	0	0 SF	174	B	557737	1-15%	\$1.120	\$5,152	\$2.40	\$1,104	\$6,256.00
NASH RM 3344	DRYWALL JOINT COMPOUND	340	0	0 SF	176	B	557737	1-15%	\$1.120	\$3,808	\$2.40	\$576	\$4,384.00
NASH RM 3345	DRYWALL JOINT COMPOUND	620	0	0 SF	180	B	557737	1-15%	\$1.120	\$6,944	\$2.40	\$1,488	\$8,432.00
NASH RM 3346	DRYWALL JOINT COMPOUND	100	100	0 SF	184	B	557737	1-15%	\$1.120	\$1,120	\$2.40	\$240	\$1,360.00
NASH RM 3347	FLOOR TILES COMPOUND	280	0	0 SF	186	B	557737	1-15%	\$1.120	\$3,136	\$2.40	\$672	\$3,808.00
NASH RM 3348	DRYWALL JOINT COMPOUND	350	0	0 SF	188	B	557737	1-15%	\$1.120	\$3,920	\$2.40	\$840	\$4,760.00
NASH RM 3349	DRYWALL JOINT COMPOUND	410	0	0 SF	188	B	557737	1-15%	\$1.120	\$4,592	\$2.40	\$984	\$5,576.00
NASH RM 3350	DRYWALL JOINT COMPOUND	430	0	0 SF	188	B	557737	1-15%	\$1.120	\$4,816	\$2.40	\$1,032	\$5,848.00
NASH RM 3352	INACCESSIBLE COMPOUND	200	0	0 SF	190	B	557737	1-15%	\$11.20	\$2,240	\$2.40	\$480	\$2,720.00
NASH RM 3400	RED DUCT MASTIC	175	0	0 SF	192	E	557336	10-15%	\$11.20	\$1,960	\$2.40	\$420	\$2,380.00
NASH RM 3401	DRYWALL JOINT COMPOUND	140	0	0 SF	194	E	557737	1-15%	\$11.20	\$1,568	\$2.40	\$336	\$1,904.00
NASH RM 3402	DRYWALL JOINT COMPOUND	140	0	0 SF	194	E	557737	1-15%	\$11.20	\$1,568	\$2.40	\$336	\$1,904.00

Level 3 Smithsonian Institution - Summary of ACM at National Air and Space Museum

BLDG ROOM	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Haz Prior.	Resp. Code	Repr. Sample No.	Sample Conc.	Est. Unit Removal Cost	Est. Total Removal Cost	Estimated Cost of Removal and Re-insulation
		Total Exposed Quant.	Damaged Quant.								
NASH RM 3403	DRYWALL JOINT COMPOUND	200	0	0 SF	196	E	A57737	1-5%	\$2,240	\$480	\$2,720.00
NASH RM 3404	DRYWALL JOINT COMPOUND	130	0	0 SF	198	E	A57737	1-5%	\$1,456	\$312	\$1,768.00
NASH RM 3405	DRYWALL JOINT COMPOUND	120	0	0 SF	200	E	A57737	1-5%	\$1,244	\$288	\$1,532.00
NASH RM 3500	DRYWALL JOINT COMPOUND	4000	0	0 SF	202	E	A57737	1-5%	\$4,800	\$960	\$5,760.00
NASH RM 3501	DRYWALL JOINT COMPOUND	900	0	0 SF	204	E	A57737	1-5%	\$1,080	\$240	\$1,320.00
NASH RM 3502	DRYWALL JOINT COMPOUND	310	0	0 SF	206	E	A57737	1-5%	\$3,474	\$744	\$4,218.00
NASH RM 3503	DRYWALL JOINT COMPOUND	280	0	0 SF	210	E	A57737	1-5%	\$3,136	\$672	\$3,808.00
NASH RM 3504	TRACCESSIBLE										
NASH RM 3505A	DRYWALL JOINT COMPOUND	555	0	0 SF	193	E	A57737	1-5%	\$6,216	\$1,332	\$7,548.00
NASH RM 3505B	DRYWALL JOINT COMPOUND	450	0	0 SF	178	E	A57737	1-5%	\$5,488	\$1,176	\$6,664.00
NASH RM 3505C	DRYWALL JOINT COMPOUND	400	0	0 SF	21	E	A57737	1-5%	\$4,480	\$960	\$5,440.00
NASH RM 3506	DRYWALL JOINT COMPOUND	350	0	0 SF	156	E	A57737	1-5%	\$4,368	\$936	\$5,304.00
NASH RM 3507	DRYWALL JOINT COMPOUND	380	0	0 SF	162	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3508	DRYWALL JOINT COMPOUND	390	0	0 SF	62	E	A57737	1-5%	\$4,568	\$936	\$5,504.00
NASH RM 3509	DRYWALL JOINT COMPOUND	540	0	0 SF	161	E	A57737	1-5%	\$6,048	\$1,296	\$7,344.00
NASH RM 3510	DRYWALL JOINT COMPOUND	660	0	0 SF	199	E	A57737	1-5%	\$7,992	\$1,584	\$9,576.00
NASH RM 3511	DRYWALL JOINT COMPOUND	490	0	0 SF	105	E	A57737	1-5%	\$4,480	\$960	\$5,440.00
NASH RM 3512	DRYWALL JOINT COMPOUND	280	0	0 SF	159	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3513	DRYWALL JOINT COMPOUND	190	0	0 SF	159	E	A57737	1-5%	\$5,680	\$1,160	\$6,840.00
NASH RM 3514	DRYWALL JOINT COMPOUND	470	0	0 SF	185	E	A57737	1-5%	\$5,264	\$1,128	\$6,392.00
NASH RM 3515	DRYWALL JOINT COMPOUND	1200	0	0 SF	101	E	A57737	1-5%	\$13,440	\$2,880	\$16,320.00
NASH RM 3516	DRYWALL JOINT COMPOUND	550	0	0 SF	157	E	A57737	1-5%	\$6,160	\$1,320	\$7,480.00
NASH RM 3517	DRYWALL JOINT COMPOUND	375	0	0 SF	159	E	A57737	1-5%	\$4,280	\$960	\$5,240.00
NASH RM 3518	DRYWALL JOINT COMPOUND	400	0	0 SF	205	E	A57737	1-5%	\$4,800	\$1,000	\$5,800.00
NASH RM 3519	DRYWALL JOINT COMPOUND	375	0	0 SF	97	E	A57737	1-5%	\$4,200	\$900	\$5,100.00
NASH RM 3520	DRYWALL JOINT COMPOUND	500	0	0 SF	155	E	A57737	1-5%	\$5,600	\$1,200	\$6,800.00
NASH RM 3521	DRYWALL JOINT COMPOUND	380	0	0 SF	95	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3522	DRYWALL JOINT COMPOUND	280	0	0 SF	183	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3523	DRYWALL JOINT COMPOUND	380	0	0 SF	193	E	A57737	1-5%	\$4,520	\$912	\$5,432.00
NASH RM 3524	DRYWALL JOINT COMPOUND	380	0	0 SF	153	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3525	DRYWALL JOINT COMPOUND	380	0	0 SF	197	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3526	DRYWALL JOINT COMPOUND	430	0	0 SF	89	E	A57737	1-5%	\$4,816	\$1,032	\$5,848.00
NASH RM 3527	DRYWALL JOINT COMPOUND	280	0	0 SF	151	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3528	DRYWALL JOINT COMPOUND	280	0	0 SF	187	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3529	DRYWALL JOINT COMPOUND	280	0	0 SF	184	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3530	DRYWALL JOINT COMPOUND	280	0	0 SF	77	E	A57737	1-5%	\$3,336	\$672	\$4,008.00
NASH RM 3531	DRYWALL JOINT COMPOUND	430	0	0 SF	145	E	A57737	1-5%	\$4,816	\$1,032	\$5,848.00
NASH RM 3532	DRYWALL JOINT COMPOUND	380	0	0 SF	177	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3533	DRYWALL JOINT COMPOUND	380	0	0 SF	69	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3534	DRYWALL JOINT COMPOUND	380	0	0 SF	65	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3535	DRYWALL JOINT COMPOUND	380	0	0 SF	139	E	A57737	1-5%	\$4,256	\$912	\$5,168.00
NASH RM 3536	DRYWALL JOINT COMPOUND	980	0	0 SF	63	E	A57737	1-5%	\$10,916	\$2,352	\$13,268.00
NASH RM 3537	DRYWALL JOINT COMPOUND	700	0	0 SF	175	E	A57737	1-5%	\$8,400	\$1,680	\$10,080.00
NASH RM 3538	DRYWALL JOINT COMPOUND	1050	0	0 SF	137	E	A57737	1-5%	\$11,760	\$2,520	\$14,280.00
NASH RM 3601	TRACCESSIBLE										
NASH RM 3602	TRACCESSIBLE										
NASH RM 3603	TRACCESSIBLE										
NASH RM 3604	DRYWALL JOINT COMPOUND	950	0	0 SF	59	E	A57737	1-5%	\$10,640	\$2,280	\$12,920.00
NASH RM 3605	DRYWALL JOINT COMPOUND	862	0	0 SF	126	E	A57737	1-5%	\$9,888	\$2,112	\$11,999.20
NASH RM 3606	DRYWALL JOINT COMPOUND	665	0	0 SF	57	E	A57737	1-5%	\$7,488	\$1,596	\$9,084.00
NASH RM 3607	DRYWALL JOINT COMPOUND	356	0	0 SF	55	E	A57737	1-5%	\$3,920	\$840	\$4,760.00

Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

Level 3

SUMMARY OF QUANTITIES

BLDG ROOM	Material Type	Total Exposed		Unit of Measure	Haz. Prior.	Resp. Code	Repr. Sample No.	Sample Conc.	Est. Unit Removal Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Removal and Re-insulation
		Quant.	Damaged Quant.										
NASH RM 3608	DRYWALL JOINT COMPOUND	150	0	SE	135	E	57737	CHRYS 1-5%	\$11.20	\$1,680	\$2.40	\$360	\$2,040.00
NASH RM 3724	DRYWALL JOINT COMPOUND	350	0	SE	53	E	57737	CHRYS 1-5%	\$11.20	\$3,920	\$2.40	\$840	\$4,760.00
NASH RM 3725	DRYWALL JOINT COMPOUND	380	0	SE	133	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$912	\$5,168.00
NASH RM 3726	DRYWALL JOINT COMPOUND	340	0	SE	173	E	57737	CHRYS 1-5%	\$11.20	\$3,808	\$2.40	\$816	\$4,624.00
NASH RM 3728	DRYWALL JOINT COMPOUND	340	0	SE	49	E	57737	CHRYS 1-5%	\$11.20	\$3,808	\$2.40	\$816	\$4,624.00
NASH RM 3729	DRYWALL JOINT COMPOUND	340	0	SE	131	E	57737	CHRYS 1-5%	\$11.20	\$3,808	\$2.40	\$816	\$4,624.00
NASH RM 3730	DRYWALL JOINT COMPOUND	340	0	SE	129	E	57737	CHRYS 1-5%	\$11.20	\$3,808	\$2.40	\$816	\$4,624.00
NASH RM 3731	DRYWALL JOINT COMPOUND	790	0	SE	171	E	57737	CHRYS 1-5%	\$11.20	\$8,832	\$2.40	\$596	\$9,428.00
NASH RM 3732	DRYWALL JOINT COMPOUND	380	0	SE	41	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$912	\$5,168.00
NASH RM 3734	DRYWALL JOINT COMPOUND	380	0	SE	127	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$912	\$5,168.00
NASH RM 3735	DRYWALL JOINT COMPOUND	380	0	SE	39	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$912	\$5,168.00
NASH RM 3738	DRYWALL JOINT COMPOUND	650	0	SE	29	E	57737	CHRYS 1-5%	\$11.20	\$7,280	\$2.40	\$660	\$7,940.00
NASH RM 3740	DRYWALL JOINT COMPOUND	410	0	SE	121	E	57737	CHRYS 1-5%	\$11.20	\$4,592	\$2.40	\$584	\$5,176.00
NASH RM 3742A	DRYWALL JOINT COMPOUND	440	0	SE	27	E	57737	CHRYS 1-5%	\$11.20	\$4,928	\$2.40	\$584	\$5,512.00
NASH RM 3742B	DRYWALL JOINT COMPOUND	440	0	SE	21	E	57737	CHRYS 1-5%	\$11.20	\$4,928	\$2.40	\$584	\$5,512.00
NASH RM 3743	DRYWALL JOINT COMPOUND	380	0	SE	167	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$584	\$5,176.00
NASH RM 3744	DRYWALL JOINT COMPOUND	380	0	SE	119	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$584	\$5,176.00
NASH RM 3745	DRYWALL JOINT COMPOUND	380	0	SE	25	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$584	\$5,176.00
NASH RM 3746	DRYWALL JOINT COMPOUND	380	0	SE	179	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$584	\$5,176.00
NASH RM 3748	DRYWALL JOINT COMPOUND	310	0	SE	23	E	57737	CHRYS 1-5%	\$11.20	\$3,472	\$2.40	\$512	\$4,224.00
NASH RM 3755	DRYWALL JOINT COMPOUND	850	0	SE	189	E	57737	CHRYS 1-5%	\$11.20	\$9,504	\$2.40	\$640	\$10,144.00
NASH RM 3757	DRYWALL JOINT COMPOUND	1850	0	SE	82	E	57737	CHRYS 1-5%	\$11.20	\$20,160	\$2.40	\$1,440	\$21,600.00
NASH RM 3759	DRYWALL JOINT COMPOUND	180	380	SE	209	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$584	\$5,176.00
NASH RM 3757	DRYWALL JOINT COMPOUND	1780	0	SE	44	E	57737	CHRYS 1-5%	\$11.20	\$4,256	\$2.40	\$584	\$5,176.00
NASH RM 3758	DRYWALL JOINT COMPOUND	1880	0	SE	85	E	57737	CHRYS 1-5%	\$11.20	\$9,040	\$2.40	\$660	\$9,700.00
NASH RM 3763	DRYWALL JOINT COMPOUND	400	0	SE	149	E	57737	CHRYS 1-5%	\$11.20	\$4,880	\$2.40	\$660	\$5,540.00
NASH RM 3764	DRYWALL JOINT COMPOUND	300	0	SE	83	E	57737	CHRYS 1-5%	\$11.20	\$3,600	\$2.40	\$520	\$4,120.00
NASH RM 3765	DRYWALL JOINT COMPOUND	420	0	SE	209	E	57737	CHRYS 1-5%	\$11.20	\$4,880	\$2.40	\$660	\$5,540.00
NASH RM 3767	DRYWALL JOINT COMPOUND	950	0	SE	147	E	57737	CHRYS 1-5%	\$11.20	\$10,784	\$2.40	\$816	\$11,600.00
NASH RM 3768	DRYWALL JOINT COMPOUND	620	0	SE	81	E	57737	CHRYS 1-5%	\$11.20	\$6,840	\$2.40	\$512	\$7,352.00
NASH RM 3771	DRYWALL JOINT COMPOUND	565	0	SE	179	E	57737	CHRYS 1-5%	\$11.20	\$6,240	\$2.40	\$512	\$6,752.00
NASH RM 3773	DRYWALL JOINT COMPOUND	340	0	SE	175	E	57737	CHRYS 1-5%	\$11.20	\$3,808	\$2.40	\$512	\$4,320.00
NASH RM 3774	DRYWALL JOINT COMPOUND	300	0	SE	195	E	57737	CHRYS 1-5%	\$11.20	\$3,600	\$2.40	\$512	\$4,112.00
NASH RM 3775	DRYWALL JOINT COMPOUND	360	0	SE	73	E	57737	CHRYS 1-5%	\$11.20	\$4,080	\$2.40	\$512	\$4,592.00
NASH RM 3777	DRYWALL JOINT COMPOUND	1510	0	SE	143	E	57737	CHRYS 1-5%	\$11.20	\$16,944	\$2.40	\$1,440	\$18,384.00
NASH RM 3779	DRYWALL JOINT COMPOUND	640	0	SE	141	E	57737	CHRYS 1-5%	\$11.20	\$7,112	\$2.40	\$512	\$7,624.00
NASH RM 3783	DRYWALL JOINT COMPOUND	640	0	SE	141	E	57737	CHRYS 1-5%	\$11.20	\$7,112	\$2.40	\$512	\$7,624.00
NASH RM 3784	DRYWALL JOINT COMPOUND	650	0	SE	167	E	57737	CHRYS 1-5%	\$11.20	\$7,680	\$2.40	\$512	\$8,192.00
NASH RM 3785	DRYWALL JOINT COMPOUND	350	0	SE	203	E	57737	CHRYS 1-5%	\$11.20	\$3,920	\$2.40	\$584	\$4,504.00
NASH RM 3786	DRYWALL JOINT COMPOUND	350	0	SE	47	E	57737	CHRYS 1-5%	\$11.20	\$3,920	\$2.40	\$584	\$4,504.00
NASH RM 3787	DRYWALL JOINT COMPOUND	350	0	SE	207	E	57737	CHRYS 1-5%	\$11.20	\$3,920	\$2.40	\$584	\$4,504.00
NASH RM 3788	DRYWALL JOINT COMPOUND	350	0	SE	45	E	57737	CHRYS 1-5%	\$11.20	\$3,920	\$2.40	\$584	\$4,504.00
NASH RM 3789	DRYWALL JOINT COMPOUND	350	0	SE	43	E	57737	CHRYS 1-5%	\$11.20	\$3,920	\$2.40	\$584	\$4,504.00
NASH RM 3790	DRYWALL JOINT COMPOUND	400	0	SE	80	E	57737	CHRYS 1-5%	\$11.20	\$4,760	\$2.40	\$660	\$5,420.00
NASH RM 3794	DRYWALL JOINT COMPOUND	1365	0	SE	283	E	57734	CHRYS 1-5%	\$11.20	\$15,288	\$2.40	\$960	\$16,248.00

Level 3 Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

BLDG ROOM	Material Type	SUMMARY OF QUANTITIES		Unit of Measure	Haz. Prior. Code	Repr. Sample No.	Sample Cntc.	Est. Removal Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Removal and Re-insulation
		Total Exposed Quant.	Damaged Quant.									

^ This sample was not collected in the room number shown, but is representative of the ACM in the room.
 A Indicates sample taken from floor tile material.
 B Indicates sample taken from floor tile mastic.

- Legend:
- CompSrv - Computer Services
 - DirKit - Director's Office Kitchen
 - LibEnt - Library Entrance
 - LibRdka - Library Reading Room
 - LibSSck - Library South Stacks
 - LibNSck - Library North Stacks

- Response Codes:
- A - Remove immediately
 - B - Remove as soon as possible
 - C - Schedule removal
 - D - Repair or encapsulate
 - E - Monitor
 - F - No immediate action

nasalev3.

Roof Figure 1. Smithsonian Institution - Summary of ACM at National Air and Space Museum

Material Type	Total Exposed Damaged Quant. Quant.	SUMMARY OF QUANTITIES		Unit of Measure	Hazardous Prior Measure	Resp. Code	Repr. Sample No.	Sample Conc.	Est. Removal Cost	Est. Total Removal Cost	Est. Unit Repl. Cost	Est. Total Repl. Cost	Estimated Cost of Removal and Re-insulation
		Quant.	Quant.										
BLDG ROOM	792	792	0	LF	6	E	78409	CHYS 10-15%	\$8.40	\$6,653	\$1.80	\$1,426	\$8,078.40
WASH ROOF													

^ This sample was not collected in the room number shown, but is representative of the ACM in the room.
 A Indicates sample taken from floor tile mastic.
 B Indicates sample taken from floor tile mastic.

Response Codes:
 A - Remove immediately
 B - Remove as soon as possible
 C - Schedule removal
 D - Repair or encapsulate
 E - Monitor
 F - No immediate action

baseroof.



TABLE 1

SUMMARY OF BULK SAMPLES COLLECTED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
77281*	Parking Garage	Sprayed on Fireproofing	ND (None Detected)
77282	Parking Garage	Sprayed on Fireproofing	ND
77283	Parking Garage	Sprayed on Fireproofing	ND
77284	Parking Garage	Sprayed on Fireproofing	ND
77285	Parking Garage	Sprayed on Fireproofing	ND
77286	Parking Garage	Sprayed on Fireproofing	ND
77287	Parking Garage	Sprayed on Fireproofing	ND
77288A	Garage/Employee Break Area	Floor Tile	ND
77288B	Garage/Employee Break Area	Floor Tile Mastic	ND
77289A	Garage/Employee Break Area	Floor Tile	ND
77289B	Garage/Employee Break Area	Floor Tile Mastic	ND
77290A	Garage/Employee Break Area	Floor Tile	ND
77290B	Garage Employee Break Area	Floor Tile Mastic	ND
77291A	Garage/Gym Entrance	Floor Tile	1-5% Chrysotile
77291B	Garage/Gym Entrance	Floor Tile Mastic	ND
77292A	Garage/Security Office Hallway	Floor Tile	1-5% Chrysotile
77292B	Garage/Security Office Hallway	Floor Tile Mastic	ND
77293A	Garage/Loading Dock Hallway	Floor Tile	ND
77293B	Garage/Loading Dock Hallway	Floor Tile Mastic	ND
77294	Room P302	Ceiling Tile	ND
77295*	Room P302	Ceiling Tile	ND
77296	Stair #6/Level 2	Drywall	ND
77297	Stair #6/Level 2	Drywall	ND
72298	Room 3133/Library	Ceiling Tile	ND
57924	Room 3133/Library	Ceiling Tile	ND

* QC Samples



TABLE 1 (Cont.)

SUMMARY OF BULK SAMPLES COLLECTED IN THE
AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
57925	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57926	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57927	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57928*	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57929	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57930	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57931	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57932	Stair #6/Level 1	Drywall Joint Compound	1-2% Chrysotile
57933	Stair #5/level 3	Drywall	ND
57934	Roof/Above Stair #5	Flashing	ND
57935	Roof/South Perimeter Wall	Roofing Cant	ND
57936	Stair #2/Level 1	Drywall Joint Comp.	< 1% Chrysotile
57937	Stair #1/Level 1	Drywall	ND
57938	Gallery #104/Level 1	Tread Mastic	ND
57939	Gallery #104/Level 1	Tread Mastic	ND
57940	Gallery #104/Level 1	Cove Mastic	ND
57941	Gallery #100/Wall Penetration	Truss Gasket	ND
57942	Gallery #100/Ceiling	Skylight Gasket	5-10% Chrysotile
57943	Gallery #108/Ceiling	Ceiling Tile	ND
57994	Gallery #108/Ceiling	Ceiling Tile	ND
57995	Langley Theatre/ Level 1	Peg Board	ND
57996	Langley Theatre Proj. Booth	Wall Plaster	ND
57997	Langley Theater Proj. Booth	Wall Plaster	ND
57998	Langley Theater Proj. Booth	Wall Plaster	ND
57734	Gallery 209/Level 2	Drywall Joint Compound	1-5% Chrysotile

* QC Samples



TABLE 1 (Cont.)

SUMMARY OF BULK SAMPLES COLLECTED IN THE
AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
57735	Rm P402/Parking Garage Chiller Room	Pipe Penetration Gasket	65-70% Chrysotile
57736	Corridor 3400 Above Ceiling	Red Duct Mastic	10-15% Chrysotile
57737	Corridor 3300	Drywall Joint Compound	1-5% Chrysotile
57738	Rm 3748	Drywall Joint Compound	ND
57739	Rm 3774	Ceiling Tile	ND
57740	Library/Rm 3120	Drywall Joint Compound	ND
57741	Parking Garage	Pipe Hangar Support Pad	ND
57742	Parking Garage	Pipe Hangar Support Pad	ND
57743	Parking Garage	Pipe Hangar Support Pad	ND
57744	Parking Garage/Rm P301	H ₂ O Tank Insulation	ND
57745	Parking Garage/Rm P301	H ₂ O Tank Insulation	Void
57746*	Parking Garage	Grey Pipe Mastic	ND
57747A	Rm P719	Floor Tile	1-3% Chrysotile
57747B	Rm P719	Floor Tile Mastic	ND
57748	Mezzanine Level Offices	Drywall Joint Compound	1-5% Chrysotile
57749	Gallery #207/SW Corner	Drywall Joint Compound	1-5% Chrysotile
78401	Gallery #206/Entrance	Drywall Joint Compound	1-5% Chrysotile
78402	Rm P405	Pipe Insulation/Straight	ND
78403	Rm P405	Pipe Insulation/Valve	ND
78404	Rm P405	Pipe Insulation/Elbow	ND
78405	Rm P405	Pipe Insulation/Straight	ND
78406A	Parking Level Kitchen Addition	Floor Tile	ND
78406B	Parking Level Kitchen Addition	Floor Tile Mastic	ND
78407	Parking Level Kitchen Addition	Ceiling Tile	ND
78408	Roof/Cooling Tower Well	Flashing	ND
78409	Roof/Over Connecting Hall	Roofing Cant	10-15% Chrysotile
78410	Museum Shop	Ceiling Plaster	ND
78411	Museum Shop	Ceiling Plaster	ND
78412	Museum Shop	Ceiling Plaster	ND
78413	Planetarium	Partition Plaster	ND

* QC Samples



TABLE 1 (Cont.)

SUMMARY OF BULK SAMPLES COLLECTED IN THE
AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
78414A	Rm 3346	Floor Tile	1-5% Chrysotile
78414B	Rm 3346	Floor Tile Mastic	ND
78415A	Level 3 Kitchen/ Rm 3757	Grey Floor Tile	ND
78415B	Level 3 Kitchen/ Rm 3757	Grey Floor Tile Mastic	ND
78416A	Level 3 Kitchen/ Rm 3757	White Floor Tile	ND
78416B	Level 3 Kitchen/ Rm 3757	White Floor Tile	ND

* QC Samples



TABLE 2

SUMMARY OF FLOORING MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
77288A	Garage/Employee Break Area	Floor Tile	ND
77288B	Garage/Employee Break Area	Floor Tile Mastic	ND
77289A	Garage/Employee Break Area	Floor Tile	ND
77289B	Garage/Employee Break Area	Floor Tile Mastic	ND
77290A	Garage/Employee Break Area	Floor Tile	ND
77290B	Garage Employee Break Area	Floor Tile Mastic	ND
77291A	Garage/Gym Entrance	Floor Tile	1-5% Chrysotile
77291B	Garage/Gym Entrance	Floor Tile Mastic	ND
77292A	Garage/Security Office Hallway	Floor Tile	1-5% Chrysotile
77292B	Garage/Security Office Hallway	Floor Tile Mastic	ND
77293A	Garage/Loading Dock Hallway	Floor Tile	ND
77293B	Garage/Loading Dock Hallway	Floor Tile Mastic	ND
57938	Gallery #104/Level 1	Tread Mastic	ND
57939	Gallery #104/Level 1	Tread Mastic	ND
57747A	Rm P719	Floor Tile	1-3% Chrysotile
57747B	Rm P719	Floor Tile Mastic	ND
78406A	Parking Level Kitchen Addition	Floor Tile	ND
78406B	Parking Level Kitchen Addition	Floor Tile Mastic	ND
78414A	Rm 3346	Floor Tile	1-5% Chrysotile
78414B	Rm 3346	Floor Tile Mastic	ND
78415A	Level 3 Kitchen/ Rm 3757	Grey Floor Tile	ND
78415B	Level 3 Kitchen/ Rm 3757	Grey Floor Tile Mastic	ND

* QC Samples



TABLE 2 (Cont.)

SUMMARY OF FLOORING MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
78416A	Level 3 Kitchen/ Rm 3757	White Floor Tile	ND
78416B	Level 3 Kitchen/ Rm 3757	White Floor Tile	ND

* QC Samples



TABLE 3

SUMMARY OF DRYWALL MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
77296	Stair #6/Level 2	Drywall	ND
77297	Stair #6/Level 2	Drywall	ND
57932	Stair #6/Level 1	Drywall Joint Compound	1-2% Chrysotile
57933	Stair #5/level 3	Drywall	ND
57936	Stair #2/Level 1	Drywall Joint Comp.	< 1% Chrysotile
57937	Stair #1/Level 1	Drywall	ND
57734	Gallery 209/Level 2	Drywall Joint Compound	1-5% Chrysotile
57737	Corridor 3300	Drywall Joint Compound	1-5% Chrysotile
57738	Rm 3748	Drywall Joint Compound	ND
57740	Library/Rm 3120	Drywall Joint Compound	ND
57748	Mezzanine Level Offices	Drywall Joint Compound	1-5% Chrysotile
57749	Gallery #207/SW Corner	Drywall Joint Compound	1-5% Chrysotile
78401	Gallery #206/Entrance	Drywall Joint Compound	1-5% Chrysotile

* QC Samples



TABLE 4

SUMMARY OF PLASTER MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
57996	Langley Theatre Proj. Booth	Wall Plaster	ND
57997	Langley Theater Proj. Booth	Wall Plaster	ND
57998	Langley Theater Proj. Booth	Wall Plaster	ND
78410	Museum Shop	Ceiling Plaster	ND
78411	Museum Shop	Ceiling Plaster	ND
78412	Museum Shop	Ceiling Plaster	ND
78413	Planetarium	Partition Plaster	ND

* QC Samples



TABLE 5

SUMMARY OF INSULATING MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
57741	Parking Garage	Pipe Hangar Support Pad	ND
57742	Parking Garage	Pipe Hangar Support Pad	ND
57743	Parking Garage	Pipe Hangar Support Pad	ND
57744	Parking Garage/Rm P301	H ₂ O Tank Insulation	ND
57745	Parking Garage/Rm P301	H ₂ O Tank Insulation	Void
78402	Rm P405	Pipe Insulation/Straight	ND
78403	Rm P405	Pipe Insulation/Valve	ND
78404	Rm P405	Pipe Insulation/Elbow	ND
78405	Rm P405	Pipe insulation/Straight	ND

* QC Samples



TABLE 6

SUMMARY OF FIREPROOFING MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
77281*	Parking Garage	Sprayed on Fireproofing	ND (None Detected)
77282	Parking Garage	Sprayed on Fireproofing	ND
77283	Parking Garage	Sprayed on Fireproofing	ND
77284	Parking Garage	Sprayed on Fireproofing	ND
77285	Parking Garage	Sprayed on Fireproofing	ND
77286	Parking Garage	Sprayed on Fireproofing	ND
77287	Parking Garage	Sprayed on Fireproofing	ND
57925	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57926	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57927	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57928*	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57929	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57930	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND
57931	Vertical Shaft/ Adjacent to Rm 3537	Sprayed on Fireproofing	ND

* QC Samples



TABLE 7

SUMMARY OF CEILING TILE SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
77294	Room P302	Ceiling Tile	ND
77295*	Room P302	Ceiling Tile	ND
72298	Room 3133/Library	Ceiling Tile	ND
57924	Room 3133/Library	Ceiling Tile	ND
57943	Gallery #108/Ceiling	Ceiling Tile	ND
57994	Gallery #108/Ceiling	Ceiling Tile	ND
57739	Room 3774	Ceiling Tile	ND
78407	Parking Level Kitchen Addition	Ceiling Tile	ND

* QC Samples



TABLE 8

SUMMARY OF ROOFING MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

Sample Number	Sample Location	Material Description	Asbestos Content
57934	Roof/Above Stair #5	Flashing	ND
57935	Roof/South Perimeter Wall	Roofing Cant	ND
78408	Roof/Cooling Tower Well	Flashing	ND
78409	Roof/Over Connecting Hall	Roofing Cant	10-15% Chrysotile

* QC Samples



TABLE 9

SUMMARY OF MASTIC AND GASKET MATERIALS SAMPLED IN THE
NATIONAL AIR AND SPACE MUSEUM

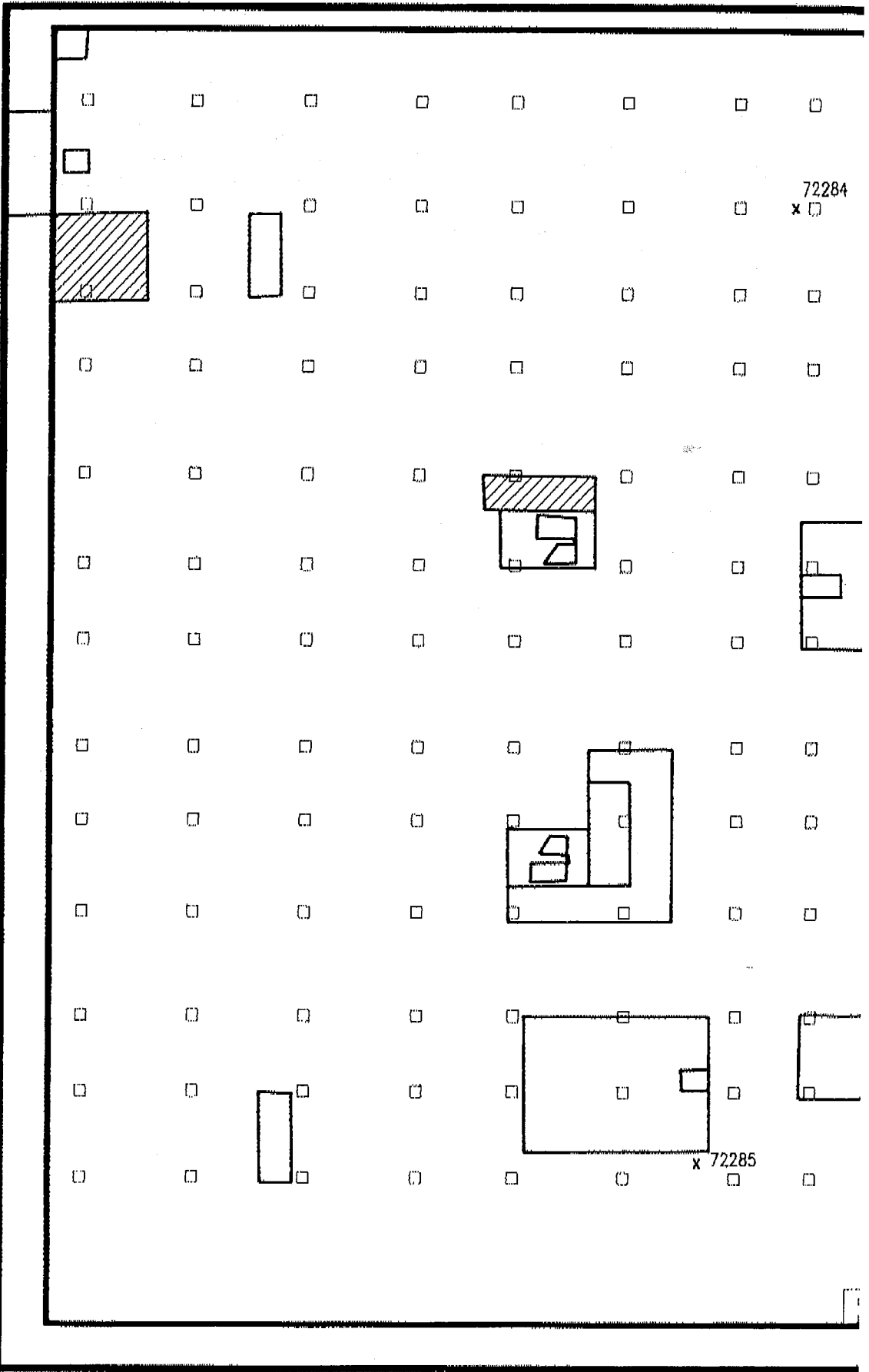
Sample Number	Sample Location	Material Description	Asbestos Content
57940	Gallery #104/Level 1	Cove Mastic	ND
57941	Gallery #100/Wall Penetration	Truss Gasket	ND
57735	Rm P402/Parking Garage	Pipe Penetration Gasket	65-70% Chrysotile
57736	Corridor 3400 Above Ceiling	Red Duct Mastic	10-15% Chrysotile
57746*	Parking Garage	Grey Pipe Mastic	ND

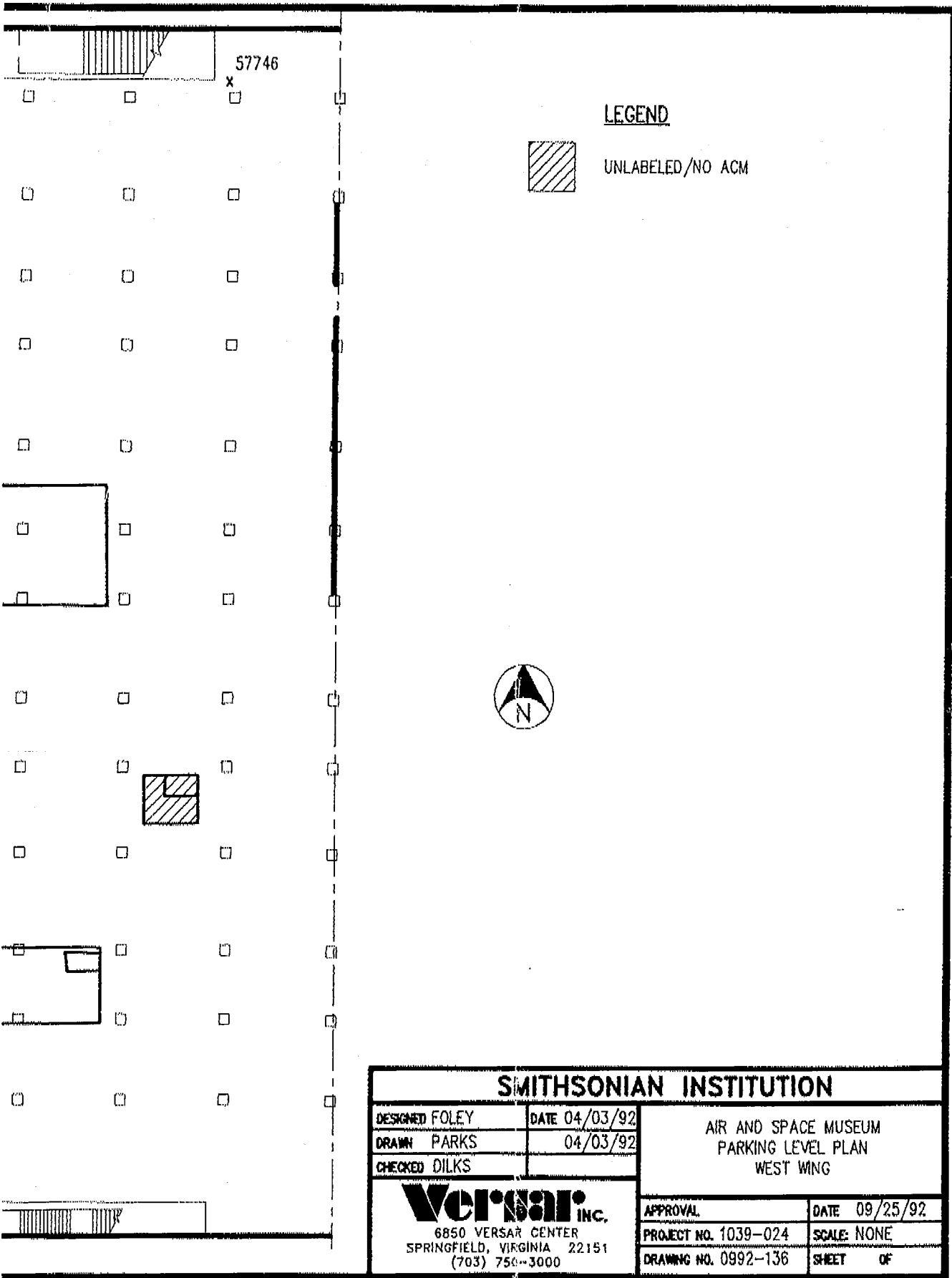
* QC Samples



FIGURE 2
DRAWINGS

DRAWING: \SMT\1009\0992-13E.DWG PLOT DATE: 09-25-92





57746

LEGEND



UNLABELED/NO ACM



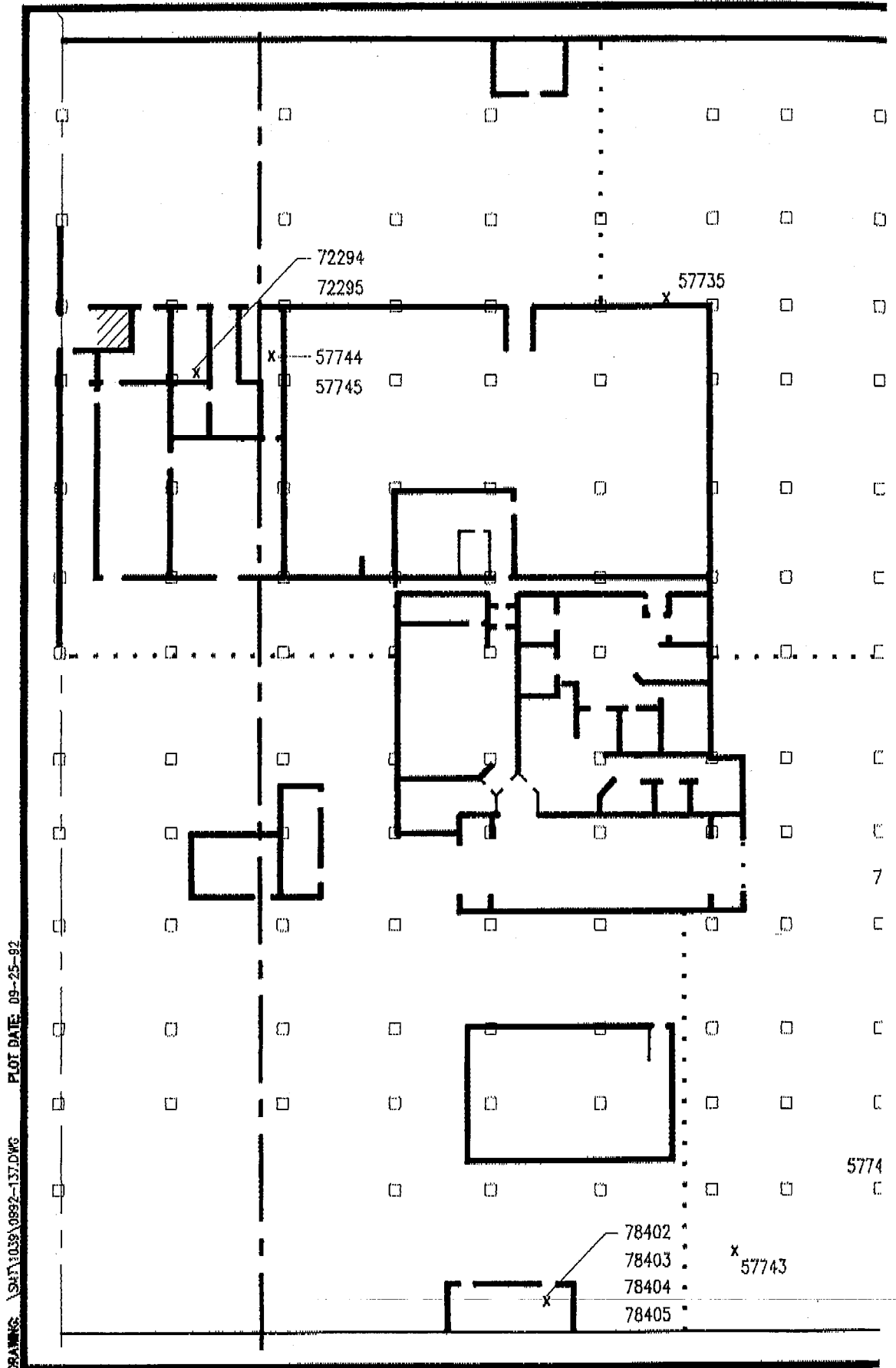
SMITHSONIAN INSTITUTION

DESIGNED FOLEY	DATE 04/03/92
DRAWN PARKS	04/03/92
CHECKED DILKS	

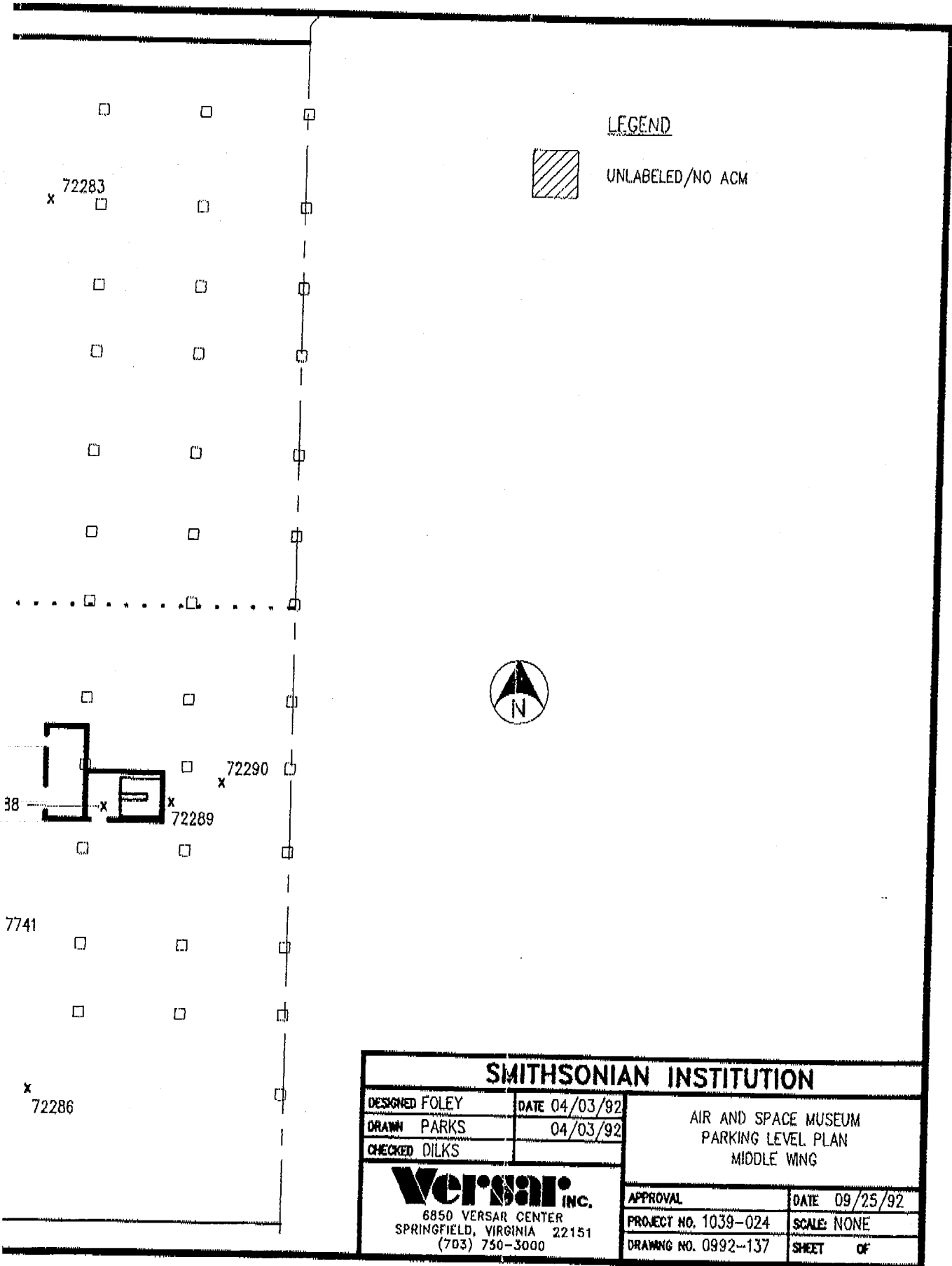
AIR AND SPACE MUSEUM
PARKING LEVEL PLAN
WEST WING

Vernal INC.
6850 VERSAR CENTER
SPRINGFIELD, VIRGINIA 22151
(703) 750-3000

APPROVAL	DATE 09/25/92
PROJECT NO. 1039-024	SCALE: NONE
DRAWING NO. 0992-136	SHEET OF



DRAWING: \SFT\1039\0892-137.DWG PLOT DATE: 09-25-92



LEGEND

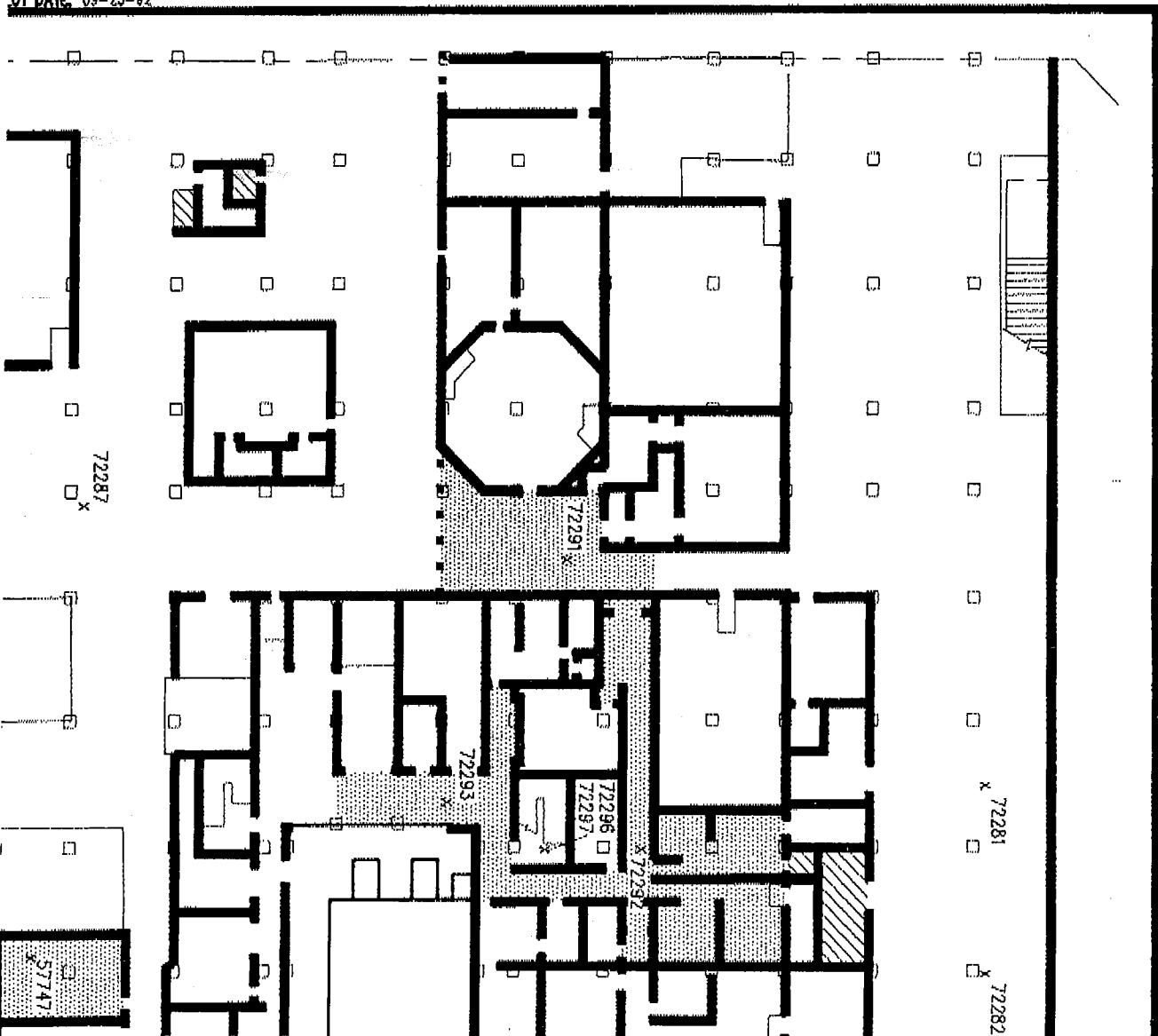


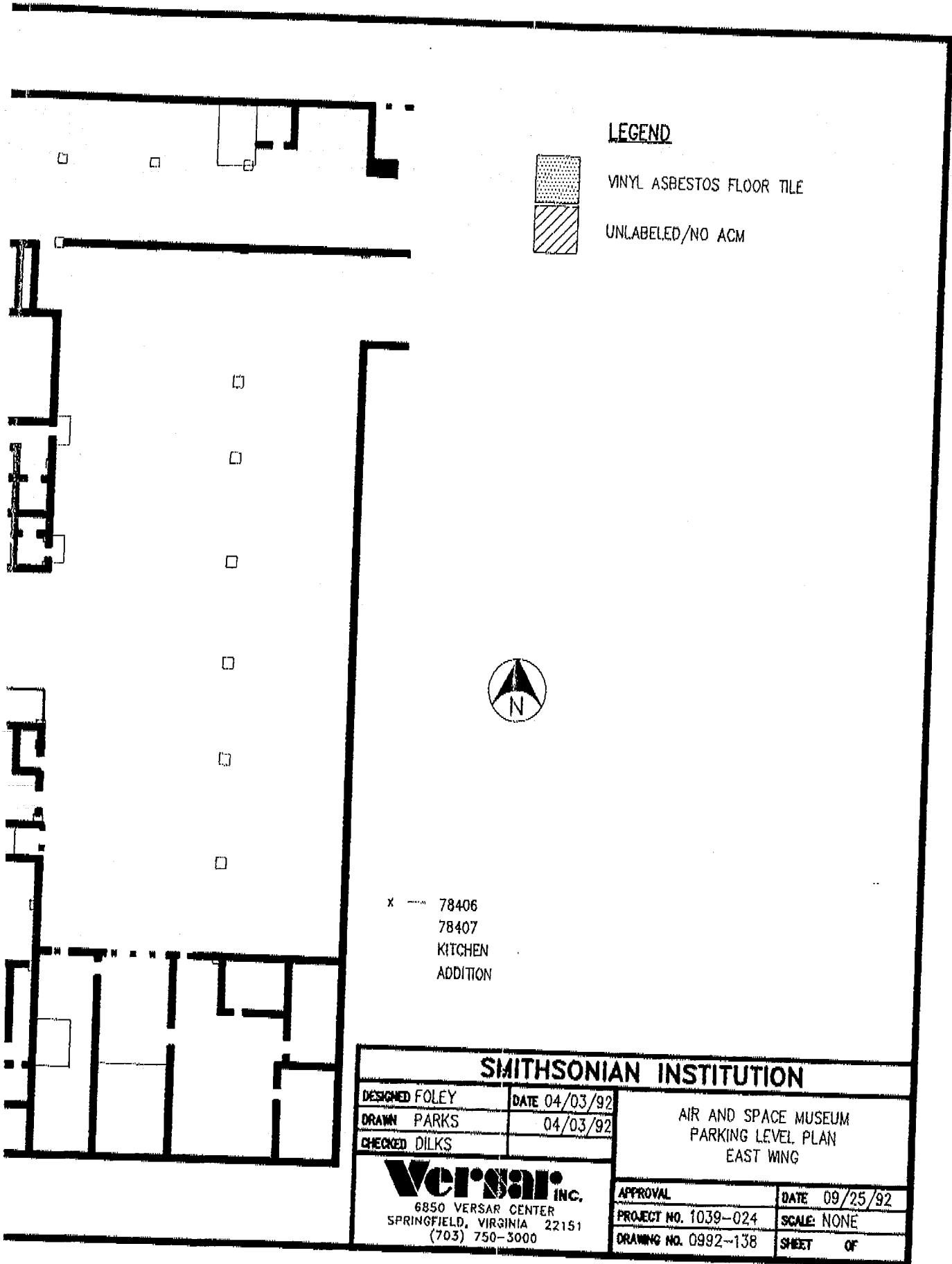
UNLABELED/NO ACM



SMITHSONIAN INSTITUTION			
DESIGNED FOLEY	DATE 04/03/92	AIR AND SPACE MUSEUM PARKING LEVEL PLAN MIDDLE WING	
DRAWN PARKS	04/03/92		
CHECKED DILKS			
Versar INC. 6850 VERSAR CENTER SPRINGFIELD, VIRGINIA 22151 (703) 750-3000		APPROVAL	DATE 09/25/92
		PROJECT NO. 1039-024	SCALE: NONE
		DRAWING NO. 0992-137	SHEET OF

DT DATE: 09-25-02





LEGEND



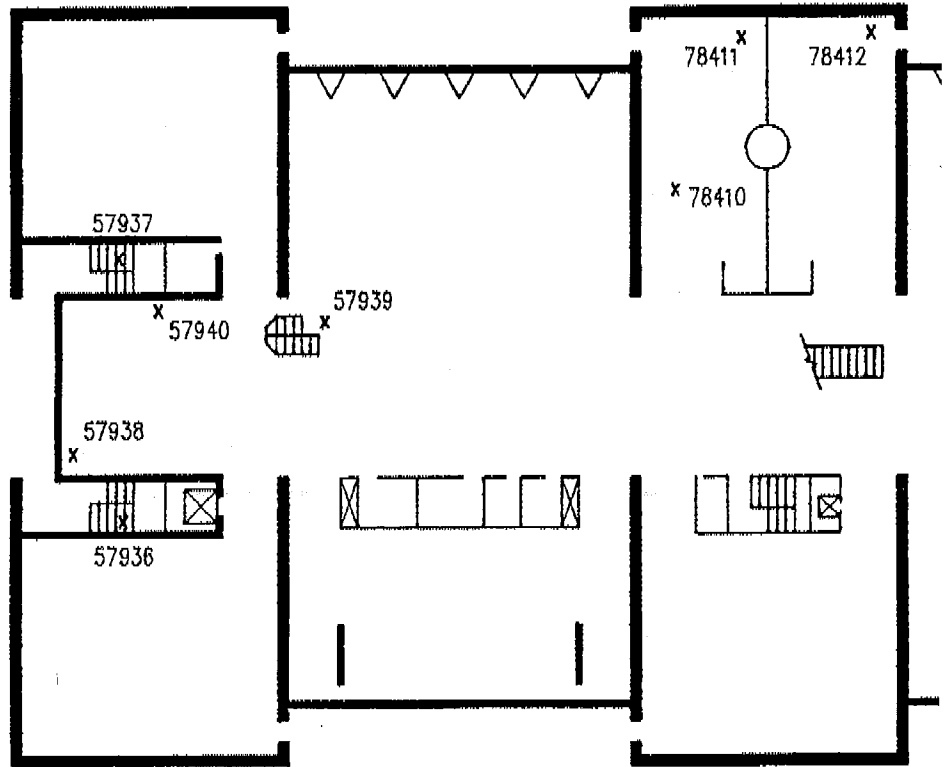
VINYL ASBESTOS FLOOR TILE

UNLABELED/NO ACM

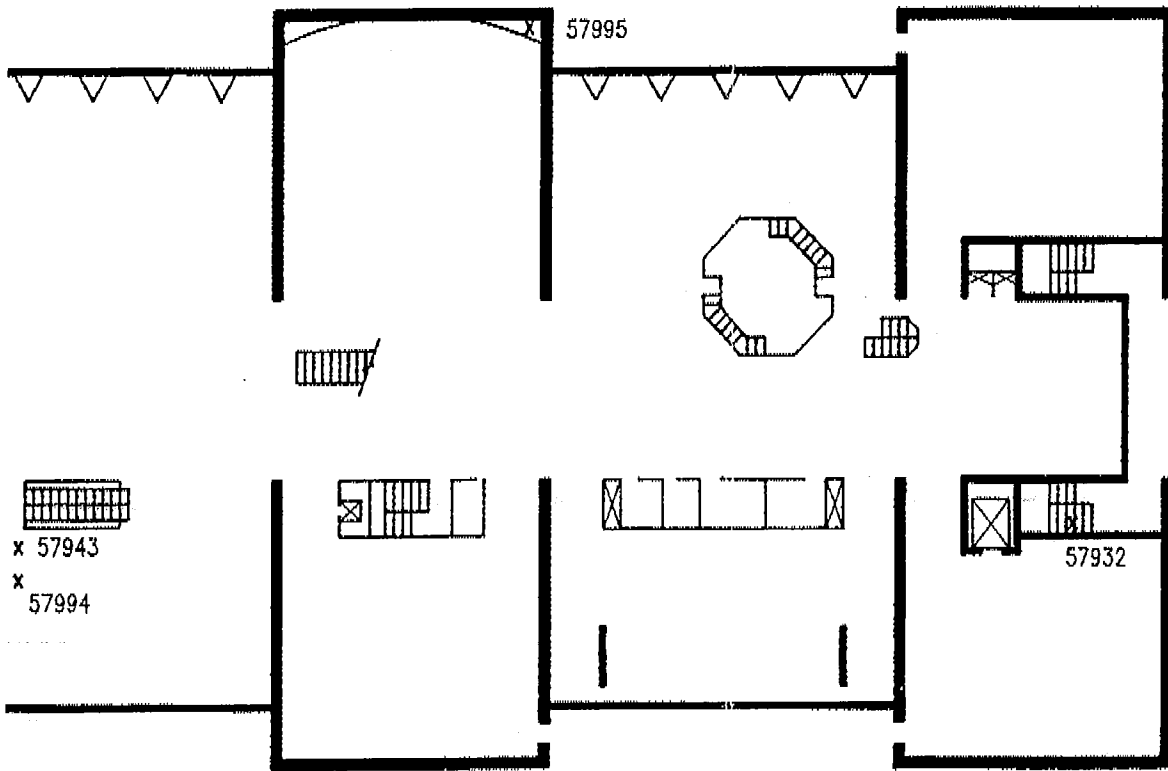


x 78406
78407
KITCHEN
ADDITION

SMITHSONIAN INSTITUTION			
DESIGNED FOLEY	DATE 04/03/92	AIR AND SPACE MUSEUM PARKING LEVEL PLAN EAST WING	
DRAWN PARKS	04/03/92		
CHECKED DILKS			
Versar INC. 6850 VERSAR CENTER SPRINGFIELD, VIRGINIA 22151 (703) 750-3000		APPROVAL	DATE 09/25/92
		PROJECT NO. 1039-024	SCALE: NONE
		DRAWING NO. 0992-138	SHEET OF



DRAWING: C:\5265\024\ASH-1.DWG PROJECT: 5265.024 PLOT DATE: 05-28-92

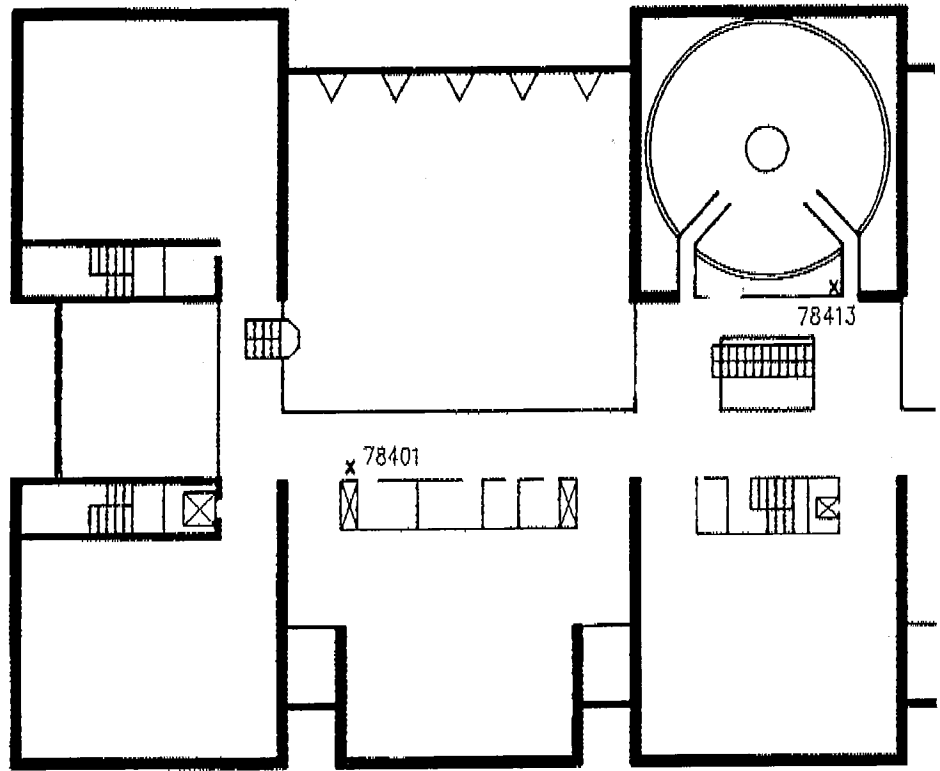


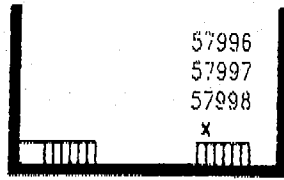
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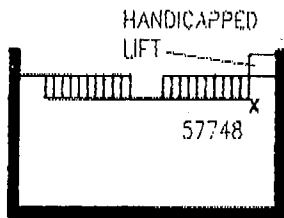
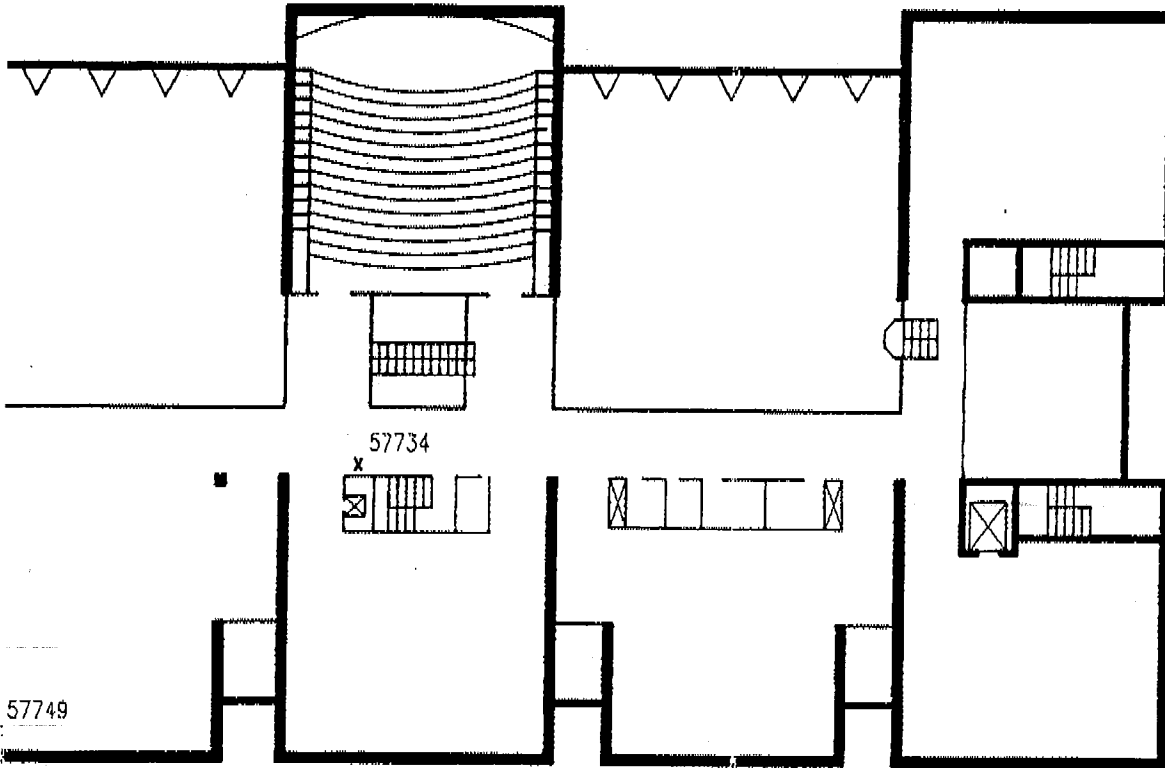
SMITHSONIAN INSTITUTION			
DESIGNED FOLEY	DATE 04/03/92	AIR AND SPACE MUSEUM FIRST FLOOR PLAN	
DRAWN PARKS	04/03/92		
CHECKED DILKS			
Versar INC. 6850 VERSAR CENTER SPRINGFIELD, VIRGINIA 22151 (703) 750-3000		APPROVAL	DATE 05/26/92
		PROJECT NO. 5265.024	SCALE NONE
		DRAWING NO. ASM-1	SHEET OF

DRAWING C:\9265\024\ASH-2.DWG PROJECT# 5265.024 PLOT DATE: 05-26-92



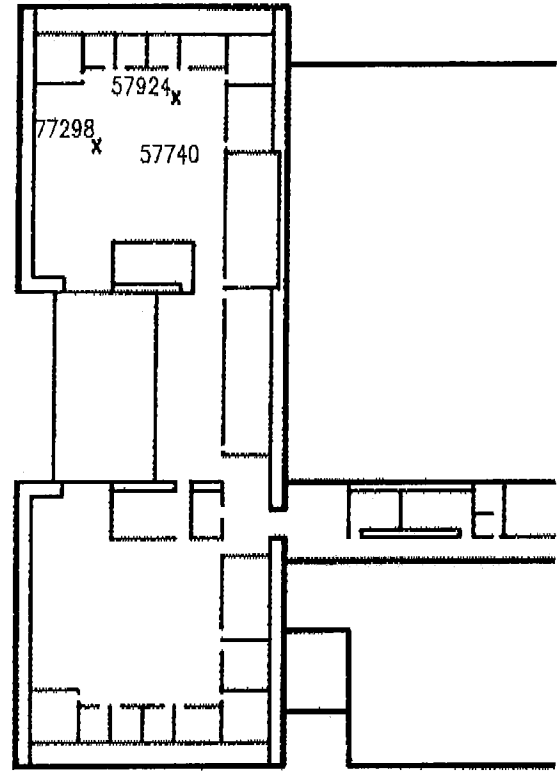


PROJECTION ROOM



MEZZANINE LEVEL

SMITHSONIAN INSTITUTION			
DESIGNED FOLEY	DATE 04/03/92	AIR AND SPACE MUSEUM SECOND FLOOR PLAN	
DRAWN PARKS	04/03/92		
CHECKED DILKS			
Versar INC. 6850 VERSAR CENTER SPRINGFIELD, VIRGINIA 22151 (703) 750-3000		APPROVAL	DATE 05/26/92
		PROJECT NO. 5265.024	SCALE: NONE
		DRAWING NO. ASM-2	SHEET OF



DRAWING: \SM\1039\0992-139.DWG PLOT DATE: 09-25-92

