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Client Name:	ADR Consultants – State of Michigan Fast Track Authority
Project Name:	Pre-Demolition Asbestos Inspections
Project Number:	39.43929.1310
Project Site Address (Subject Property):	16148 Indiana, Detroit, Michigan
Parcel #	16035623.
Date of Site Visit:	7/30/2013
Site Contact Name:	Barry Ellentuck
Site Contact Phone Number:	248-318-9424
Asbestos Inspection Performed by:	Andrew Ketchum (A37593), Andrew Rauser (A40568)
Areas Not Accessible:	All areas accessed.
Number of Floors	2 plus basement and attic.
Asbestos Present (Yes/No/Other)	Yes

On the date indicated above, State of Michigan Asbestos Inspectors Andrew Ketchum (A37593), Andrew Rauser (A40568) from Cardno ATC conducted a pre-demolition Asbestos Containing Material Survey of the unoccupied residential building at 16148 Indiana Detroit, MI (Site). The purpose of this survey was to task an accredited asbestos inspector to complete a pre-demolition asbestos survey of the Site and provide recommendation options for removal and disposal of asbestos containing materials prior to demolition of the building.

Laboratory reports are included in Appendix A. Photographs of the Site are included in Appendix B. The following sections summarize Cardno ATC's findings:

Table I below identifies materials that were found to contain asbestos in concentrations greater than 1% and therefore are regulated under the rules of asbestos in the State of Michigan. Table II identifies materials that were suspect for asbestos and found to either not contain asbestos or contain asbestos in concentrations of 1% or less.

**TABLE I
(Asbestos Containing Materials)**

ID#	MATERIAL	LOCATION	APPROXIMATE QUANTITY	RESULT
1-WG-A, B, C	Window Glaze	All windows	256 LF (16 old windows)	1.75% Chrysotile Point Count

**TABLE II
(Non-ACM Suspect Materials)**

ID#	MATERIAL	LOCATION	APPROXIMATE QUANTITY	RESULT
2-EC-A, B, C	Exterior Caulk	Edges of windows, doors	467 LF (3 doors, 26 windows)	ND
3-PL-A, B, C, D, E	Plaster, smooth	Living Room, Hall, Kitchen, Bath, Bedroom	3500 SF	ND-both layers
4-SC-A	Stack Cement	Basement	2 SF	ND
5-FT-A, B, C	12x12" Floor Tile, Green	Kitchen 2	196 SF	ND
6-MLF-A, B, C	Multi-Layer Floor	Kitchen 1	196 SF	ND Chrysotile-Trace
7-MLF-A, B, C	Multi-Layer Floor	Stairs to basement	35 SF	ND-both layers
8-TPL-A, B, C	Textured Plaster	Living Room and Dining Room Ceilings both floors, Hall	2500 SF	ND

ND=No asbestos detected

NA=Not applicable

No other suspect ACMs were observed on the Site. Although not anticipated based on surface observations, underground structures that could contain ACM may be present and should be managed accordingly if encountered during Site redevelopment.

Asbestos is a hazardous substance. Its condition, handling and disposal are regulated by federal, state, and local agencies. ACMs generally do not pose a health threat unless the asbestos fibers are disturbed, become airborne and are inhaled.

Contractors working in an area where asbestos is present must be informed of the type and location of ACMs. Abatement of ACMs, including non-friable ACMs, must be performed by a Michigan licensed, certified and registered asbestos abatement contractor in accordance with state and federal Occupational Safety and Health Administration (OSHA) and local air quality management regulations.

Lead-based paint may be present on the Site and is a hazardous substance. Its condition, handling and disposal are regulated by federal, state, and local agencies. LBP generally does not pose a health threat unless particles are disturbed, become airborne and are inhaled or ingested. Contractors and their employers that will be disturbing the building during demolition should follow all applicable requirements in the OSHA Lead in Construction Standard.

Further testing may be required of debris generated from demolition activities to determine whether the debris should be disposed as hazardous waste under the Resource Conservation and Recovery Act (RCRA) in accordance with 40-CFR Part 261 Subpart C.

Universal wastes not listed in this ACM report may be encountered prior to demolition that require disposal. Contractors should identify universal wastes that may exist on the premises and dispose according to all applicable Local, State, and Federal Requirements.

RECOMMENDATIONS:

Except for the following items listed below, Section 61.145(c) of the Asbestos NESHAP requires that each owner or operator of a demolition or renovation activity involving RACM remove all such material from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal.

ACM need not be removed before demolition if it:

(i) Is a Category I non-friable ACM that is not friable.

(ii) Is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition.

(iii) Was not accessible for testing and therefore was not discovered until after demolition began and, as a result of the demolition, cannot be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and kept adequately wet at all times until disposed of.

(iv) Is a Category II non-friable ACM and the probability is low that the material will become crumbled, pulverized, or reduced to powder during demolition.

Demolition with Roofing Materials in Place is covered under the NESHAP regulations (40 CFR Part 61 Subpart M). Roofing materials were generally not tested during this inspection and therefore the roofing material should be assumed to be Category I asbestos-containing roofing materials.

Since demolition activities do not include sanding, grinding, cutting, or abrading, Category I asbestos-containing roofing materials not in poor condition and not friable are not considered RACM and are allowed to remain in place during demolition.

If the asbestos-containing roofing material is not in poor condition and is not friable, it may be disposed of in a landfill which accepts ordinary demolition waste.

The asbestos-containing roofing material may not be ground up for recycling into other products.

In addition, contractors should ensure they follow all OSHA regulations pertaining to demolition of Category I ACM materials. Category I or II nonfriable ACM that is not subject to 61.150(a)(3) would still have to be disposed of in a landfill that accepts building debris, in a landfill that operates in accordance with 61.154, or at a facility that operates in accordance with 61.155.

Cardno ATC recommends:

A licensed asbestos abatement company in the State of Michigan should remove the following materials according to the NESHAP standard prior to demolition:

1. All material identified in Table 1.

LIMITATIONS:

The results, findings, conclusions, and recommendations expressed in the report are based only on conditions that were noted during Cardno ATC's Asbestos Containing Material Survey of the vacant above-referenced property located in Detroit, Michigan.

Any conditions or materials that could not be visually identified through limited destructive sampling were not inspected and may differ from those conditions or materials noted. The user of this report should keep in mind that conditions may change with time and observations made by Cardno ATC at the time of the Site reconnaissance may not be consistent with future observations made by others. Additional materials may be encountered during the demolition process and may require further sampling to determine disposal criteria.

The report is designed to aid the building owner, architect, construction manager, general contractors, and potential asbestos abatement contractors in locating asbestos building materials to be removed prior to demolition activities.

Under ***no*** circumstances is the report to be utilized as a bidding document or as a project specification document. Contractors bidding the demolition of this Site should field verify project information.

Cardno ATC appreciates the opportunity to be of service to ADR Consultants on this project. In the meantime, if you have questions regarding the information in this report or if we can be of further assistance do not hesitate to contact our office at (248) 669-5140.

APPENDIX A
LABORATORY CUSTODY FORMS



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 1310 ADR House's 16148 Indiana
Project # 39.43929.1310

Report To:
Mr. Rob Smith
Cardno ATC
46555 Humboldt, Ste. 100
Novi, MI 48377

ARI Report # 13-46960
Date Collected: 07/30/13
Date Received: 07/31/13
Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 01 Cust. #: 1-WG-A Material: Window Glaze Location: All Windows Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.75% POINT COUNT RESULT	Other - 98.25%
Lab ID #: 46960 - 02 Cust. #: 1-WG-B Material: Window Glaze Location: All Windows Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 46960 - 03 Cust. #: 1-WG-C Material: Window Glaze Location: All Windows Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 04 Cust. #: 2-EC-A Material: Exterior Caulk Location: Edges of Windows, Doors Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Synthetic - 10% Other - 90%
Lab ID #: 46960 - 05 Cust. #: 2-EC-B Material: Exterior Caulk Location: Edges of Windows, Doors Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 46960 - 06 Cust. #: 2-EC-C Material: Exterior Caulk Location: Edges of Windows, Doors Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 07 Cust. #: 3-PL-A Material: Plaster, Smooth Location: Living Room Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 46960 - 07a Cust. #: 3-PL-A Material: Mortar Location: Living Room Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 46960 - 08 Cust. #: 3-PL-B Material: Plaster, Smooth Location: Hall Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 08a Cust. #: 3-PL-B Material: Mortar Location: Hall Appearance: grey, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 46960 - 09 Cust. #: 3-PL-C Material: Plaster, Smooth Location: Kitchen Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 46960 - 09a Cust. #: 3-PL-C Material: Mortar Location: Kitchen Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 10 Cust. #: 3-PL-D Material: Plaster, Smooth Location: Bath Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 46960 - 11 Cust. #: 3-PL-E Material: Plaster, Smooth Location: Bedroom Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 46960 - 12 Cust. #: 4-SC-A Material: Stack Cement Location: Basement Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 13 Cust. #: 5-FT-A Material: 12x12" Floor Tile, Green Location: Kitchen 2 Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 46960 - 14 Cust. #: 5-FT-B Material: 12x12" Floor Tile, Green Location: Kitchen 2 Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 46960 - 15 Cust. #: 5-FT-C Material: 12x12" Floor Tile, Green Location: Kitchen 2 Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 16 Cust. #: 6-MLF-A Material: Multi-Layer Floor (Linoleum) Location: Kitchen 1 Appearance: grey, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 46960 - 16a Cust. #: 6-MLF-A Material: Multi-Layer Floor (Linoleum) Location: Kitchen 1 Appearance: beige, fibrous, nonhomogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 46960 - 16b Cust. #: 6-MLF-A Material: Multi-Layer Floor (Floor Tile) Location: Kitchen 1 Appearance: brown, fibrous, nonhomogenous Layer: 3 of 3	Asbestos Present: NO Chrysotile - Trace POINT COUNT RESULT	Other - 100%

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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 17 Cust. #: 6-MLF-B Material: Multi-Layer Floor (Linoleum) Location: Kitchen 1 Appearance: grey, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 46960 - 17a Cust. #: 6-MLF-B Material: Multi-Layer Floor (Linoleum) Location: Kitchen 1 Appearance: beige, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 46960 - 17b Cust. #: 6-MLF-B Material: Multi-Layer Floor (Floor Tile) Location: Kitchen 1 Appearance: beige, fibrous, homogenous Layer: 3 of 3	Asbestos Present: NO Chrysotile - Trace POINT COUNT RESULT	Other - 100%

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Date Received: 07/31/13
Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 18 Cust. #: 6-MLF-C Material: Multi-Layer Floor (Linoleum) Location: Kitchen 1 Appearance: grey, fibrous, homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 46960 - 18a Cust. #: 6-MLF-C Material: Multi-Layer Floor (Linoleum) Location: Kitchen 1 Appearance: beige, fibrous, homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 46960 - 18b Cust. #: 6-MLF-C Material: Multi-Layer Floor (Floor Tile) Location: Kitchen 1 Appearance: brown, fibrous, homogenous Layer: 3 of 3	Asbestos Present: YES Chrysotile - Trace POINT COUNT RESULT	Other - 100%

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Date Collected: 07/30/13
Date Received: 07/31/13
Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 19 Cust. #: 7-MLF-A Material: Multi-Layer Floor (Linoleum) Location: Stairs to Basement Appearance: blue, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 46960 - 19a Cust. #: 7-MLF-A Material: Multi-Layer Floor (Linoleum) Location: Stairs to Basement Appearance: blue, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 46960 - 20 Cust. #: 7-MLF-B Material: Multi-Layer Floor (Linoleum) Location: Stairs to Basement Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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ARI Report # 13-46960
Date Collected: 07/30/13
Date Received: 07/31/13
Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 20a Cust. #: 7-MLF-B Material: Multi-Layer Floor (Linoleum) Location: Stairs to Basement Appearance: blue, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 46960 - 21 Cust. #: 7-MLF-C Material: Multi-Layer Floor (Linoleum) Location: Stairs to Basement Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 46960 - 21a Cust. #: 7-MLF-C Material: Multi-Layer Floor (Linoleum) Location: Stairs to Basement Appearance: blue, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 22 Cust. #: 8-TPL-A Material: Textured Plaster Location: Living RM & Dining RM Ceilings, Hall Appearance: grey, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 46960 - 23 Cust. #: 8-TPL-B Material: Textured Plaster Location: Living RM & Dining RM Ceilings, Hall Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 46960 - 24 Cust. #: 8-TPL-C Material: Textured Plaster Location: Living RM & Dining RM Ceilings, Hall Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: 1310 ADR House's 16148 Indiana
Project # 39.43929.1310

Report To:
Mr. Rob Smith
Cardno ATC
46555 Humboldt, Ste. 100
Novi, MI 48377

ARI Report # 13-46960
Date Collected: 07/30/13
Date Received: 07/31/13
Date Analyzed: 08/01/13
Date Reported: 08/01/13

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 46960 - 25 Cust. #: 8-TPL-D Material: Textured Plaster Location: Living RM & Dining RM Ceilings, Hall Appearance: Layer: of	Asbestos Present: NO SAMPLE RECEIVED	
Lab ID #: 46960 - 26 Cust. #: 8-TPL-E Material: Textured Plaster Location: Living RM & Dining RM Ceilings, Hall Appearance: Layer: of	Asbestos Present: NO SAMPLE RECEIVED	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples tested and to insure the integrity of the results, may only be reproduced in full. This certificate may not be used by the customer to claim product endorsement by NVLAP or any agency of the US Government. APEX Research Inc. is not responsible for the accuracy of the results for layered samples or samples comprising multiple materials. Liability limited to cost of analysis.



NVLAP Lab Code 102118-0

46960

Apex Research, Inc.

1054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449-9990, Fax: (734) 449-9991.

Web Site: <http://apexresearch-inc.com>



1 of 1

Client Name: **Cardno ATC**
 Address: **46555 Humboldt Drive, Suite 100**
 City, St., Zip: **Novi, MI 48377**
 Phone: **(248) 669-5140**
 Fax: **(248)-669-5147**

Date of Survey: 7/30/13
 Project: 1310 ADR House's 16148 Indiana
 Project #: 39.43929.1310
 Contact Person: Rob Smith

Relinquished By: Andrew Ketchum
 Date: **RECEIVED**
 Received By: JUL 31 2013
 Date: JUL 31 2013

APEX RESEARCH
***First Positive Stop**
****Test All Plasters**
***** If 5% or less, then point count**

Turn Around Time: (Circle One)	Rush	24 Hour	48 Hour	72 Hour	Other: _____	TTP (Test Till Positive) _____
Asbestos	Bulk <input type="checkbox"/> X <input type="checkbox"/>		Point Count _____		PCM _____	

Lab ID #	Client ID #	Material	Location	Quantity	Area	Results
1-3	1-WG-A-C	Window Glaze	All windows	16 old windows/256 LF		
4-6	2-EC-A-C	Exterior Caulk	Edges of windows, doors	3 doors, 26 windows/467 LF		
7-11	3-PL-A-E	Plaster, smooth	Living Room, Hall, Kitchen, Bath, Bedroom	3500 SF		
12	4-SC-A	Stack Cement	Basement	2 SF		
13-15	5-FT-A-C	12x12" Floor Tile, Green	Kitchen 2	196 SF		
16-18	6-MLF-A-C	Multi-Layer Floor	Kitchen 1	196 SF		
19-21	7-MLF-A-C	Multi-Layer Floor	Stairs to basement	35 SF		
22-26	8-TPL-A-E	Textured Plaster	Living Room and Dining Room Ceilings both floors, Hall	2500 SF		

APPENDIX B
SITE PHOTOGRAPHS



Street view of the house at 16148 Indiana.



Side view of house.



View of south side of house.



View of the kitchen.



View of the living room into dining room.



View of foyer.



View of the southeast bedroom.



View of basement.



View of bedroom.



View of the 2nd floor living room.