

**Environmental Assessment
Determinations and Compliance Findings
for HUD-assisted Projects
24 CFR Part 58**

Project Information

Project Name: Motown-Museum-Expansion-and-Community-Development

HEROS Number: 900000010385902

Responsible Entity (RE): DETROIT, PLANNING AND DEVELOPMENT DEPARTMENT
DETROIT MI, 48226

RE Preparer: City of Detroit

State / Local Identifier: Detroit, MI

Certifying Officer: Julie Schneider

Grant Recipient (if different than Responsible Entity):

Point of Contact:

Consultant (if applicable): PM Environmental

Point of Contact: Jackie Schafer

Project Location: 2648 W Grand Blvd, Detroit, MI

Additional Location Information:

The property is located south of West Grand Boulevard, east of Holden Street, and north of Ferry Park Avenue, in Detroit, Wayne County Michigan. Site maps are included as Attachment 2. Addresses for the site include (portions and full parcels):

2648-2660 and 2666-2670 West Grand Boulevard and 1498-1556 Ferry Park Avenue,
Detroit, Michigan.

Direct Comments to:

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The proposed work includes approximately 35,000 sf of new construction as an expansion to the existing Motown Museum, which the sponsor already owns the property. The new construction/addition is to consist of the following components: Exhibit Galleries, Theatre, Retail Shop, Box Office, Administrative Offices, and Multi-Purpose Areas. These components are augmented by the required circulation, utility, audio/visual, mechanical, electrical, plumbing, and other spaces required to support the facility. The work will include the removal of utility structures, utility lines, curb and gutter, asphalt pavement, and concrete sidewalk and alleyway pavement as well as the removal of some trees/shrubs. Most of this work will occur south of the alleyway that runs parallel to and between West Grand Boulevard. and Ferry Park Street. Current design plans are contained in Attachment 1. This review is for \$1,000,000 in 2023 CPF funding. This review is valid for five years.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The purpose of the project is to expand the existing Motown Museum with the construction of a 35,000 square foot theater, exhibit, shop, box office, office and multi-purpose area building. The existing museum buildings was the location of Hitsville USA, the recording studio Berry Gordy operated from the 1960s to 1972 and was converted to the museum in 1985. The expansion will be a creative hub for entrepreneurship and education designed to offer impactful, community-focused engagement programs in a state of the art development.

Existing Conditions and Trends [24 CFR 58.40(a)]:

The current project only includes the southern portion, which is currently an alley and parking areas. The area is developed with a combination of residential dwellings and commercial buildings, which were developed in the late 1800s through the early 1900s. The character of the area includes a range of style of buildings including several designated as historic. Economics of the City of Detroit have improved over the past several years with increasing jobs and a lower unemployment rate. The project will add additional employment opportunities and resources to the area, which will continue the improvement of the overall condition of the area. If the project is not completed, no additional jobs will be created and tourism could be stagnant, which will impeded the revitalization opportunities the project brings.

Maps, photographs, and other documentation of project location and description:

[Attachment 2 Site Maps.pdf](#)

[Attachment 1 Site Plans.pdf](#)

[Attachment 3 Site photos.pdf](#)

Determination:

✓	Finding of No Significant Impact [24 CFR 58.40(g)(1); 40 CFR 1508.13] The project will not result in a significant impact on the quality of human environment
	Finding of Significant Impact

Approval Documents:

7015.15 certified by Certifying Officer on:

7015.16 certified by Authorizing Officer on:

Funding Information

Grant / Project Identification Number	HUD Program	Program Name	Funding Amount
B-23-CP-MI-0798	Other	Community Project Funding	\$10,000,000.00

Estimated Total HUD Funded, Assisted or Insured Amount: \$10,000,000.00

Estimated Total Project Cost [24 CFR 58.2 (a) (5)]: \$65,000,000.00

Compliance with 24 CFR §50.4, §58.5 and §58.6 Laws and Authorities

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §50.4, §58.5, and §58.6	Are formal compliance steps or mitigation required?	Compliance determination (See Appendix A for source determinations)
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STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 & § 58.6		
<p>Airport Hazards Clear Zones and Accident Potential Zones; 24 CFR Part 51 Subpart D</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The project is located approximately 5.5 miles southeast of Coleman A. Young Airport; 8.4 miles northwest of the Windsor International Airport; and 13.4 mile south of the Oakland/Troy Airport. The project is in compliance with Airport Hazards requirements. Source documentation is included as attachment 4.</p>
<p>Coastal Barrier Resources Act Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Review of the John H. Chafee Coastal Barrier Resources System Map and the U.S. Fish and Wildlife Service online Coastal Barrier Resource Mapper, documents the subject property is not located within a designated coastal barrier boundary. Source documentation is included as attachment 5.</p>
<p>Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>According to the Federal Emergency Management Agency (FEMA) floodplain map, dated February 2, 2012 (Panel Number 26163C0280E), the property is located in "Zone X (Unshaded)", defined as areas of minimal risk outside the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplains. PM did not observe any sensitive ecological areas on the subject property, including potential wetlands, during the site reconnaissance. Furthermore, topographical features present in the subject property area are not representative of a flood plain. Source documentation is included as Attachment 6.</p>
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 & § 58.5		
<p>Air Quality Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>According to the July 2023 Michigan National Ambient Air Quality Standards (NAAQS) Attainment Status Map, published by the Michigan Department</p>

		<p>of Environment, Great Lakes and Energy (EGLE) Air Quality Division (AQD), the entire State of Michigan is currently an attainment area for carbon monoxide, nitrogen dioxide, lead, and particulate matter and Wayne County is in attainment/maintenance status for ozone. Wayne County is currently in non-attainment for sulfur dioxide. The Project was reviewed by Michigan Environment, Great Lakes, and Energy (EGLE) for conformance with the State Implementation Plan (SIP). EGLE determined the Project should not exceed the de minimis levels included in the federal general conformity requirements and therefore, does not require a detailed conformity analysis. Source documentation is included as attachment 7.</p>
<p>Coastal Zone Management Act Coastal Zone Management Act, sections 307(c) & (d)</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Review of the Wayne County Coastal Zone Management map and the Coastal Zone Management Area map documents the subject property is not located within a designated Coastal Zone Management area. Source documentation is included as attachment 8.</p>
<p>Contamination and Toxic Substances 24 CFR 50.3(i) & 58.5(i)(2)]</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>No high pressure buried gas lines (4" diameter or greater and 400 psi or higher) are located within 1,000 feet of the subject property. Radon The property is located within Wayne County, which is within Zone 3 of the EPA Radon Map with low potential risk of indoor radon levels. Additionally. The property is not located within one of the 24 counties designated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) as a county where 25% or more homes tested equal to or above 4 picocuries/liter (pCi/L) of radon exposure. Therefore, no additional investigation is necessary.</p>

		<p>Radon maps are included as attachment 9. Asbestos Containing Materials Based on PM's limited visual observations during the site reconnaissance, suspect ACMs were identified. The building will not be disturbed during construction; therefore, no asbestos survey is required. Review of a 2017 Asbestos and Lead Containing Paint Survey for 2648, 2654, 2656, 2658, and 2660 West Grand Boulevard documented asbestos in floor tiles and associated mastic, woven white paper gap filler, air cell piping, mudded pipe fitting, boiler mortar, window glazing, electric wire wrap, and window caulk. Roofing material was assumed to contain asbestos. These buildings were recently renovated as part of Phase I of the expansion project and asbestos was abated. Therefore, no additional investigation is necessary. A copy of the survey is included as Attachment 10.</p> <p>Lead Based Paint Based on the construction of the building in the 1910s (pre-1978 when Federal regulations banned the use of LBP), there is the potential for existing paint to be lead based or contain lead. However, the painted surfaces were observed to be in generally good condition (with the exception of 2666-2670 West Grand Boulevard), the subject property is not a residential or child-occupied use, and there is no regulatory requirement for the owner to sample suspect painted building components at this time. A lead based paint survey was completed as part of Phase I of the expansion project and the renovation is complete. Therefore, no further action is recommended regarding suspected lead in paint at the subject property. A copy of the survey is included as attachment</p>
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		<p>10. As noted above, the dwelling located at 2666-2670 is not part of the current project and will be completed at a later date under different funding. Therefore a lead based paint survey is not required. Phase I ESA PM completed a Phase I ESA for the property dated August 2, 2023. At the time of the Phase I ESA, the property was occupied by the Motown Museum. The southern portion of the property was developed with multiple dwellings prior to 1910. Additional dwellings and storefront buildings were constructed on the northern portion between 1911 and 1916. Additional dwellings/additions were constructed at various times between 1916 and 1951. Several of the dwellings contained commercial operations (likely on the 1st floor) including sewer contractor, advertising agency, a funeral home, etc. A majority of the dwellings were demolished between 1967 and 2020. Motown Records was established in 1959 at 2648 West Grand Boulevard with a recording studio on the main floor and a residence on the second floor. Operations expanded to 2654-2660 West Grand Boulevard for offices (publishing, personal offices, finance, art department, administrative office etc.) between 1961 and 1966. The recording studio and associated buildings were in operations through the 1970s and was converted into the Motown Historical Museum in 1985. No Recognized Environmental Conditions were identified. A copy of the Phase I ESA is included as Attachment 11.</p>
<p>Endangered Species Act Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The U.S. Fish and Wildlife service provided information on locations of threatened and endangered species for the Project. In addition, a review using</p>

		<p>the U.S. Fish and Wildlife Service IPAC online system was completed. Species listed for Wayne County include: the Indiana Bat, Tricolored Bad, Rufa Red Knot, Eastern Massasauga, Northern Riffleshell, Monarch Butterfly, and the Eastern Prairie Fringed Orchid. None of the state-listed threatened or endangered species were observed at the property. No federally listed threatened or endangered species or unique features are present at the Project and no Critical Habitats are present. The subject property and/or general area have been developed since at least the 1900s. Given this, the Project does not appear to have an adverse effect on an endangered/threatened species or critical habitat. Source documentation is included as attachment 12.</p>
<p>Explosive and Flammable Hazards Above-Ground Tanks[24 CFR Part 51 Subpart C</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Review of reasonably ascertainable standard and other historical sources, and site observations, have not identified the current and historical presence of aboveground storage tanks (ASTs)/55-gallon drum storage on the property. In accordance with HUD's Guidebook entitled "Siting of HUD-Assisted Projects Near Hazardous Facilities" (hereafter "Guidebook"), PM searched a one-mile radius around the subject property for ASTs containing flammable materials. Several nearby ASTs were identified; however, none are within a distance (i.e., greater than 800 feet) that require the calculation of acceptable separation distance (ASD) for thermal radiation and/or blast overpressure. Source documentation included as attachment 13.</p>
<p>Farmlands Protection Farmland Protection Policy Act of</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Review of the USDA Web Soil Survey indicates this Project does not affect any prime or unique farmland. The subject</p>

<p>1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p>		<p>property is located within an "urbanized" area. Therefore, the Project is not subject to the statutory or regulatory requirements. Source documentation included as attachment 14.</p>
<p>Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>According to a Federal Emergency Management Agency (FEMA) floodplain map, dated February 2, 2012 (Map number 26163C0280E), the property is located in "Zone X (Unshaded)", defined as areas of minimal risk outside the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplains. PM did not observe any sensitive ecological areas on the subject property, including potential wetlands, during the site reconnaissance. Furthermore, topographical features present in the subject property area are not representative of a flood plain. Source documentation is included as attachment 15.</p>
<p>Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>A Section 106 application was submitted to the City of Detroit to determine if the Project will adversely impact the subject property or area of potential effect (APE). A final determination letter dated March 18, 2024 was received indicating a Conditional Approval of No Adverse Effect if the following conditions are met: The work is conducted in accordance with the specifications submitted to the Preservation Specialist for review; If archaeological materials are encountered during the source of construction activities on the site, work will stop immediately and the Preservation Specialist will be contacted as required by the City's Programmatic Agreement, Stipulation IX; and If there is a change in the scope of work, those changes will be required to undergo additional Section 106 review prior to</p>

		the execution of any work. Source documentation is included as attachment 16.
<p>Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Based on the project description (construction of a non-residential building), this project includes no activities that would require further evaluation under HUD's noise regulation. The project is in compliance with HUD's Noise regulation. A copy of the Partner Worksheet is included as attachment 28.</p>
<p>Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>There are no sole source aquifers located in Detroit or Wayne County. Source documentation is included as Attachment 17.</p>
<p>Wetlands Protection Executive Order 11990, particularly sections 2 and 5</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>PM did not observe any wet areas potentially associated with wetlands on the subject property during the site reconnaissance. In addition, review of the National Wetlands Inventory (NWI) Maps from the U.S. Fish and Wildlife Service and the EGLE Wetlands Map Viewer, did not identify any wetlands on the subject property. Any construction activities proposed in a wetland (regulated or unregulated) or in a 100-year flood plain area or where site contamination cannot be effectively remediated or mitigated are strongly discouraged and may be prohibited from the use of federal funds. Source documentation is included as attachment 18.</p>
<p>Wild and Scenic Rivers Act Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>The National Wild and Scenic Rivers System map (maintained and managed by the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service and U.S. Forest Service) were reviewed to determine if the subject property is within a designated wild and scenic river area. There are no wild or scenic rivers located within the City of Detroit or Wayne County. Source</p>

		documentation is included as attachment 19.
HUD HOUSING ENVIRONMENTAL STANDARDS		
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Project is not anticipated to impact urban design and will be compatible with surrounding land uses. This development is compatible with the City's goals for development and will have a positive impact on the area within which it exists. The proposed development activities are anticipated to help revitalize the area immediately surrounding the project. A copy of the Environmental Justice Report is included as Attachment 20.

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Impact Codes: An impact code from the following list has been used to make the determination of impact for each factor.

- (1) Minor beneficial impact
- (2) No impact anticipated
- (3) Minor Adverse Impact – May require mitigation
- (4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement.

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
LAND DEVELOPMENT			
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The Project is not anticipated to impact urban design and will be compatible with surrounding land uses. This development is compatible with the City's goals for residential development and will have a positive impact on the area within which it exists. The proposed development activities are anticipated to help revitalize the area immediately surrounding the project. The Project is not anticipated to impact the urban impact and be compatible with surrounding land uses. The surrounding land	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		is zoned multi-family, single-family and commercial. The proposed project is compatible with the surrounding land use. A copy of the zoning map is included as Attachment 21.	
Soil Suitability / Slope/ Erosion / Drainage and Storm Water Runoff	2	According to the NRCS website there is one soil types mapped for the site - Shebeon-Urban land complex 0-4 percent slopes. The soil is suitable for new construction based on the project soil survey and the Genesee County Soil Survey. A copy of the soil survey is included as Attachment 22. Land within the project area is generally flat. According to the Detroit Quadrangle 7.5-minute Topographic Map, the site falls into the 625 feet contour. There was no visual evidence of slides or slumps on the subject property. Except for grading during active redevelopment and construction activities, there are no anticipated changes in slope, erosion, or drainage patterns. Storm water runoff at the project site will enter off-site catch basins in the road right-of-way. The Project is not located near an erosion sensitive area and will not create slopes. The proposed grading work at the site will allow for very little erosion.	
Hazards and Nuisances including Site Safety and Site-Generated Noise	2	The Project is not adversely affected by onsite or off-site hazards or nuisances. There will be adequate onsite lighting and parking for visitors. The proposed project is not anticipated to be a noise generator once completed. The proposed project will temporally generate noise during construction hours. No adverse effects are anticipated concerning hazards and nuisances. The area is already served by electrical and gas utilities provided by DTE Energy. There is adequate capacity to serve the new construction buildings. The project site will incorporate energy efficient appliances, building/construction materials,	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		and lighting/fixtures. The Project will meet current state and local codes concerning energy consumption.	
SOCIOECONOMIC			
Employment and Income Patterns	1	The proposed project will have a temporary increase in construction positions. The proposed project is anticipated to generate multiple permanent full time positions in the administration, operations, and maintenance. Otherwise, the proposed project is not anticipated to have an adverse effect on employment or income patterns in the surrounding neighborhoods. The proposed project may be beneficial to local businesses.	
Demographic Character Changes / Displacement	2	The proposed project not will have an increase in population density. Additionally, the proposed project is not anticipated to significantly alter the demographic character of the surrounding communities. No displacement is anticipated to occur through the proposed project.	
Environmental Justice EA Factor	2	This Project will not have a disproportionately high adverse effect on human health or environment of minority populations and/or low-income populations. The buildings will serve the community and beyond. The project is in the City of Detroit, which is made up of 87% ethnic minorities. The project will improve the ascetics of the area and will attract tourists to the community. No persons will be displaced due to this Project. The Project is in compliance with Executive Order 12898. Source documentation is included as attachment 20.	
COMMUNITY FACILITIES AND SERVICES			
Educational and Cultural Facilities (Access and Capacity)	1	There are several schools nearby the property (within 15-20 walking minutes). Northwestern School (2200 West Grand Boulevard) is located within 15 minutes walking to the southwest; Thirkell	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		<p>Elementary/Middle School (7724 14th Street) is located within 15 minutes walking of the property; Detroit Public Schools (3011 West Grand Boulevard) is located within 18 minutes walking of the property; and Henry Ford Academy (485 West Milwaukee Avenue) is located within 19 minutes walking of the property. No educational facilities are anticipated to be adversely affected. There are numerous cultural facilities nearby the property (including the property itself). Some to the nearby cultural centers include The Carr Center (15 East Kirby Street) located 1.6 miles southeast; the N'Namdi Center for Contemporary Art (52 East Forrest Avenue) is located 2.0 miles southeast and the Wayne State University Community Arts Auditorium (450 Reuther Mall) is located approximately 1.4 miles southeast. No cultural facilities are anticipated to be adversely affected by the proposed project. Maps of nearby schools and cultural centers are included as Attachment 23.</p>	
Commercial Facilities (Access and Proximity)	1	<p>There several nearby commercial corridors near the property, mainly located approximately 0.8 miles to the northwest along West Grand Boulevard. Additional corridors are located one to two miles to the southeast. Restaurants, retail shopping, theaters, etc. are present. The proposed development may be beneficial attracting more visitors to the property and surrounding commercial facilities. A map of nearby commercial facilities is included as Attachment 24.</p>	
Health Care / Social Services (Access and Capacity)	2	<p>he nearest hospital to the property is the Henry Ford Hospital (2799 West Grand Boulevard) located 0.3 miles northeast; and DMC (3990 John R Street) is located 2.4 miles southeast. The proposed project is not anticipated to have an adverse effect on</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		healthcare services in the area. There are several social services near the property, including: Urban League of Detroit and Southeastern Michigan (2888 West Grand Boulevard) is located 0.5 miles northeast; United Way for Southeastern Michigan (3011 West Grand Boulevard) is located 0.8 miles northeast; Department of Human Services (3040 West Grand Boulevard) is located 0.7 miles northeast; amongst other facilities located within 1.5 miles of the property. No social services are anticipated to be adversely affected by the proposed project. Maps for nearby hospitals and social services are included as Attachment 25.	
Solid Waste Disposal and Recycling (Feasibility and Capacity)	2	The proposed project will be serviced by a private contractor for solid waste during construction and after completion. No adverse effects are anticipated concerning solid waste and recycling through the proposed project.	
Waste Water and Sanitary Sewers (Feasibility and Capacity)	2	The waste water and sanitary sewers connected to the property are serviced by the City of Detroit: Water and Sewage Department. The existing buildings and proposed building will have the capacity and are or will be connected to the sanitary sewers of the City of Detroit.	
Water Supply (Feasibility and Capacity)	2	The property's water supply is serviced by the City of Detroit: Water and Sewage Department. The existing buildings are connected to municipal water and the proposed building will be connected to the Detroit water system. New water service lines will be installed for the new construction. No adverse effects on the water supply are anticipated through the proposed project.	
Public Safety - Police, Fire and Emergency Medical	2	The 3rd Precinct Detroit Police Department station (2875 West Grand Boulevard) which is located approximately 0.5 miles northeast. The Detroit Fire Department provides fire	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		and emergency medical services to the property with the nearest Fire Department (6100 2nd Avenue; Engine 17 Ladder 7) located approximately 1.0 miles east. No adverse effects are anticipated through the proposed project on public safety services. Maps of nearby police stations and fire departments are included as Attachment 26.	
Parks, Open Space and Recreation (Access and Capacity)	2	Martin Luther King Jr. Memorial Park (2589 West Grand Boulevard) is located 0.1 miles west and Curtis Jones Park (1941 Ferry Park Street) is located 0.3 miles southwest; amongst additional parks located within one mile of the property. No parks are anticipated to experience an adverse effect through the proposed project. A map of nearby parks is included as Attachment 27.	
Transportation and Accessibility (Access and Capacity)	1	Routes 16, 18, and 29 of the City of Detroit: Department of Transportation (DDOT) have stops along West Grand Boulevard, Rosa Parks Boulevard, and Ferry Park Avenue. The proposed development may be beneficial for the DDOT and SMART transit systems. The John C Lodge Freeway (M-10) and I-94 are located within one mile of the property providing main transportation corridors for property access. No adverse effects on transportation are anticipated through the proposed project.	
NATURAL FEATURES			
Unique Natural Features /Water Resources	2	There are no unique natural features or water resources present on the property. The proposed project will add to the attractiveness of the area. There are no anticipated adverse effects on natural features or water resources through the proposed project.	
Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)	2	There is minimal vegetation present on the property. Additionally, the property is located in an urbanized area in the City of Detroit, where there is anticipated low wildlife population. No adverse effects are	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		anticipated on vegetation and wildlife through the proposed project.	
Other Factors 1			
Other Factors 2			
CLIMATE AND ENERGY			
Climate Change	2	The property is located in Zone X, the area of minimal flood hazard and located inland in the City of Detroit, which is not anticipated to experience flood hazards. Due to the Subject Property's location in Michigan, the property is unlikely to experience impacts from sea levels rise, hurricanes, drought, wildfires, landslides, or extreme weather events. The area surrounding the property area is an inland, urbanized neighborhood with relatively flat topography, and is not nearby a contiguous stand of forests. The City of Detroit does experience periods of seasonal extreme heat and cold weather. The proposed project may increase density of the public transportation, which will help encourage more sustainable living situation and lower carbon footprint for Detroit residents. The proposed project is not anticipated to have an adverse impact on climate change.	
Energy Efficiency	2	The property's electrical and gas utilities are serviced by DTE Energy. The project will include energy efficient fixtures, appliances, equipment, etc. The proposed project is not anticipated to have an adverse impact on energy efficiency.	

Supporting documentation

- [Attachment 27 Parks.pdf](#)
- [Attachment 26 Police and Fire.pdf](#)
- [Attachment 25 Hospital and Social Service.pdf](#)
- [Attachment 24 Commercial Facilities.pdf](#)
- [Attachment 23 Schools and Cultural.pdf](#)
- [Attachment 22 Soil Survey.pdf](#)
- [Attachment 21 Zoning map.pdf](#)

Additional Studies Performed:

Phase I ESA completed by PM Environmental dated August 2, 2023 (attachment 11)

Field Inspection [Optional]: Date and completed

by:

David Balash

7/12/2023 12:00:00 AM

[Attachment 3 Site photos.pdf](#)

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

1. NEPAassist (<https://www.epa.gov/nepa/nepassist>) 2. John H. Chafee Coastal Barrier Resource System Map 3. U.S. Fish and Wildlife Service (USFW) online Coastal Barrier Resource Mapper 4. Federal Emergency Management (FEMA) 5. Michigan National Ambient Air Quality Standards (NAAQS) Attainment Status Map, published by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) 6. Environmental Protection Agency (EPA) NAAQS Table 7. EGLE AQD State Implementation Plans (SIP) 8. EGLE Coastal Zone Management Map 9. EPA Radon Map 10. USFW IPAC system 11. United States Department of Agriculture (USDA) Web Soil Survey 12. State of Michigan State Historic Preservation Office (SHPO) 13. City of Detroit Housing & Revitalization Department 14. USFW Wetlands Mapper 15. EGLE Wetlands Mapper 16. National Wild and Scenic Rivers System map 17. EPA Environmental Justice Report 13. USFW Wetlands Mapper 14. EGLE Wetlands Mapper 15. National Wild and Scenic Rivers System map 16. EPA Environmental Justice Report

List of Permits Obtained:

Public Outreach [24 CFR 58.43]:

All historical, local, and federal contacts on the City of Detroit 2024 Interest Parties List were sent a copy of the Notice of Intent to Request for Release of Funds to use HUD funding for the proposed project and were asked to comment on the project. Additionally, the EA was published in the Detroit News and the Detroit Free Press for public comment.

Cumulative Impact Analysis [24 CFR 58.32]:

The proposed project is anticipated to provide a state of the art theater, museum, gathering place, and educational center for the City of Detroit and beyond. The project will revitalize the area and attract people to the City for tourism and potentially employment and residence. The proposed project could reverse population decline in the neighborhood through revitalization.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Alternatives were not considered based on the location of the original Motown Museum located on the property and the rich history of the area.

No Action Alternative [24 CFR 58.40(e)]

The No Action Alternative would be to not construct the building. Though the original museum area was recently renovated, the expansion will offer additional employment opportunities, educational opportunities, and tourism to the area.

Summary of Findings and Conclusions:

The proposed work includes approximately 35,000 sf of new construction as an expansion to the existing Museum. The new construction/addition is to consist of the following components: Exhibit Galleries, Theatre, Retail Shop, Box Office, Administrative Offices, and Multi-Purpose Areas. These components are augmented by the required circulation, utility, audio/visual, mechanical, electrical, plumbing, and other spaces required to support the facility. The work will include the removal of utility structures, utility lines, curb and gutter, asphalt pavement, and concrete sidewalk and alleyway pavement as well as the removal of some trees/shrubs. The project will not have a negative impact on the environment or people, rather with the completion of the project, a positive impact on the people will result in additional employment opportunities and a revitalization of tourism to the property and surrounding area.

Mitigation Measures and Conditions [CFR 1505.2(c)]:

Summarized below are all mitigation measures adopted by the Responsible Entity to reduce, avoid or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure or Condition	Comments on Completed Measures	Mitigation Plan	Complete
Historic Preservation	Contact the City Preservation Specialist if any archeological materials are encountered or if the scope of work changes.	N/A	Contact the City Preservation Specialist if any archeological materials are encountered or if the scope of work changes.	
Historic Preservation	The work will be conducted in accordance with the specifications submitted to the Preservation Specialist for review; If archaeological materials are encountered during the source of construction activities on the site, work will stop immediately and the Preservation Specialist will be contacted as required by the City's Programmatic Agreement, Stipulation IX; and If there is a change in the scope of work, those changes will be required to undergo additional Section 106 review prior to the execution of any work.	N/A	Contact the City Preservation Specialist if any archeological materials are encountered or if the scope of work changes.	

Project Mitigation Plan

The Motown Historical Museum Inc. will contact the City Preservation Specialist if any archeological materials are encountered or if the scope of work changes immediately.

[HRD Model Mitigation Plan - Motown Museum Expansion.pdf](#)

Supporting documentation on completed measures

APPENDIX A: Related Federal Laws and Authorities

Airport Hazards

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D

1. To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?

✓ No

Based on the response, the review is in compliance with this section. Document and upload the map showing that the site is not within the applicable distances to a military or civilian airport below

Yes

Screen Summary

Compliance Determination

The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The project is located approximately 5.5 miles southeast of Coleman A. Young Airport; 8.4 miles northwest of the Windsor International Airport; and 13.4 mile south of the Oakland/Troy Airport. The project is in compliance with Airport Hazards requirements. Source documentation is included as attachment 4.

Supporting documentation

[Attachment 4 Airports.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Coastal Barrier Resources

General requirements	Legislation	Regulation
HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS.	Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501)	

1. Is the project located in a CBRS Unit?

No

Document and upload map and documentation below.

Yes

Compliance Determination

Review of the John H. Chafee Coastal Barrier Resources System Map and the U.S. Fish and Wildlife Service online Coastal Barrier Resource Mapper, documents the subject property is not located within a designated coastal barrier boundary. Source documentation is included as attachment 5.

Supporting documentation

[Attachment 5 Coastal Barrier.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

Flood Insurance

General requirements	Legislation	Regulation
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).

1. Does this project involve financial assistance for construction, rehabilitation, or acquisition of a mobile home, building, or insurable personal property?

No. This project does not require flood insurance or is excepted from flood insurance.

✓ Yes

2. Upload a FEMA/FIRM map showing the site here:

[Attachment 6 Flood.pdf](#)

The Federal Emergency Management Agency (FEMA) designates floodplains. The [FEMA Map Service Center](#) provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?

✓ No

Based on the response, the review is in compliance with this section.

Yes

4. While flood insurance is not mandatory for this project, HUD strongly recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). Will flood insurance be required as a mitigation measure or condition?

Yes

✓ No

Screen Summary

Compliance Determination

According to the Federal Emergency Management Agency (FEMA) floodplain map, dated February 2, 2012 (Panel Number 26163C0280E), the property is located in "Zone X (Unshaded)", defined as areas of minimal risk outside the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplains. PM did not observe any sensitive ecological areas on the subject property, including potential wetlands, during the site reconnaissance. Furthermore, topographical features present in the subject property area are not representative of a flood plain. Source documentation is included as Attachment 6.

Supporting documentation

[Attachment 6 Flood\(1\).pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Air Quality

General requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93

1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?

Yes

No

Air Quality Attainment Status of Project's County or Air Quality Management District

2. Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?

No, project's county or air quality management district is in attainment status for all criteria pollutants.

Yes, project's management district or county is in non-attainment or maintenance status for the following criteria pollutants (check all that apply):

Carbon Monoxide

Lead

Nitrogen dioxide

- ✓ Sulfur dioxide
- Ozone
- Particulate Matter, <2.5 microns
- Particulate Matter, <10 microns

3. What are the *de minimis* emissions levels (40 CFR 93.153) or screening levels for the non-attainment or maintenance level pollutants indicated above

Sulfur dioxide 75.00 ppb (parts per billion)

Provide your source used to determine levels here:

<https://epa.gov/criteria-air-pollutants/forms/contact-us-about-criteria-air-pollutants>

4. Determine the estimated emissions levels of your project. Will your project exceed any of the *de minimis* or threshold emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?

- ✓ No, the project will not exceed *de minimis* or threshold emissions levels or screening levels.

Enter the estimate emission levels:

Sulfur dioxide 0.00 ppb (parts per billion)

Based on the response, the review is in compliance with this section.

Yes, the project exceeds *de minimis* emissions levels or screening levels.

Screen Summary

Compliance Determination

According to the July 2023 Michigan National Ambient Air Quality Standards (NAAQS) Attainment Status Map, published by the Michigan Department of Environment, Great Lakes and Energy (EGLE) Air Quality Division (AQD), the entire State of Michigan is currently an attainment area for carbon monoxide, nitrogen dioxide, lead, and

particulate matter and Wayne County is in attainment/maintenance status for ozone. Wayne County is currently in non-attainment for sulfur dioxide. The Project was reviewed by Michigan Environment, Great Lakes, and Energy (EGLE) for conformance with the State Implementation Plan (SIP). EGLE determined the Project should not exceed the de minimis levels included in the federal general conformity requirements and therefore, does not require a detailed conformity analysis. Source documentation is included as attachment 7.

Supporting documentation

[Attachment 7 Air Quality.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Coastal Zone Management Act

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930

1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?

Yes

✓ No

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

Screen Summary

Compliance Determination

Review of the Wayne County Coastal Zone Management map and the Coastal Zone Management Area map documents the subject property is not located within a designated Coastal Zone Management area. Source documentation is included as attachment 8.

Supporting documentation

[Attachment 8 Coastal Zone Management.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Contamination and Toxic Substances

General requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)

1. **How was site contamination evaluated? Select all that apply. Document and upload documentation and reports and evaluation explanation of site contamination below.**

- American Society for Testing and Materials (ASTM) Phase I Environmental Site Assessment (ESA)
ASTM Phase II ESA
Remediation or clean-up plan
ASTM Vapor Encroachment Screening
None of the Above

2. **Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

- No

Explain:

No RECs were identified as part of the completion of the Phase I ESA.

Based on the response, the review is in compliance with this section.

Yes

Screen Summary

Compliance Determination

No high pressure buried gas lines (4" diameter or greater and 400 psi or higher) are located within 1,000 feet of the subject property. Radon The property is located

within Wayne County, which is within Zone 3 of the EPA Radon Map with low potential risk of indoor radon levels. Additionally. The property is not located within one of the 24 counties designated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) as a county where 25% or more homes tested equal to or above 4 picocuries/liter (pCi/L) of radon exposure. Therefore, no additional investigation is necessary. Radon maps are included as attachment 9. Asbestos Containing Materials Based on PM's limited visual observations during the site reconnaissance, suspect ACMs were identified. The building will not be disturbed during construction; therefore, no asbestos survey is required. Review of a 2017 Asbestos and Lead Containing Paint Survey for 2648, 2654, 2656, 2658, and 2660 West Grand Boulevard documented asbestos in floor tiles and associated mastic, woven white paper gap filler, air cell piping, mudded pipe fitting, boiler mortar, window glazing, electric wire wrap, and window caulk. Roofing material was assumed to contain asbestos. These buildings were recently renovated as part of Phase I of the expansion project and asbestos was abated. Therefore, no additional investigation is necessary. A copy of the survey is included as Attachment 10. Lead Based Paint Based on the construction of the building in the 1910s (pre-1978 when Federal regulations banned the use of LBP), there is the potential for existing paint to be lead based or contain lead. However, the painted surfaces were observed to be in generally good condition (with the exception of 2666-2670 West Grand Boulevard), the subject property is not a residential or child-occupied use, and there is no regulatory requirement for the owner to sample suspect painted building components at this time. A lead based paint survey was completed as part of Phase I of the expansion project and the renovation is complete. Therefore, no further action is recommended regarding suspected lead in paint at the subject property. A copy of the survey is included as attachment 10. As noted above, the dwelling located at 2666-2670 is not part of the current project and will be completed at a later date under different funding. Therefore a lead based paint survey is not required. Phase I ESA PM completed a Phase I ESA for the property dated August 2, 2023. At the time of the Phase I ESA, the property was occupied by the Motown Museum. The southern portion of the property was developed with multiple dwellings prior to 1910. Additional dwellings and storefront buildings were constructed on the northern portion between 1911 and 1916. Additional dwellings/additions were constructed at various times between 1916 and 1951. Several of the dwellings contained commercial operations (likely on the 1st floor) including sewer contractor, advertising agency, a funeral home, etc. A majority of the dwellings were demolished between 1967 and 2020. Motown Records was established in 1959 at 2648 West Grand Boulevard with a recording studio on the main floor and a residence on the second floor. Operations expanded to 2654-2660 West Grand Boulevard for offices (publishing, personal offices, finance, art department, administrative office etc.) between 1961 and 1966. The recording studio and associated buildings were in operations through the 1970s and was converted into the Motown

Historical Museum in 1985. No Recognized Environmental Conditions were identified.
A copy of the Phase I ESA is included as Attachment 11.

Supporting documentation

[Attachment 11 Phase I ESA 2023.pdf](#)

[Attachment 10 ACM-LBP Survey.pdf](#)

[Attachment 9 Radon.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

Endangered Species

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service (“FWS” and “NMFS” or “the Services”).	The Endangered Species Act of 1973 (16 U.S.C. 1531 <i>et seq.</i>); particularly section 7 (16 USC 1536).	50 CFR Part 402

1. Does the project involve any activities that have the potential to affect species or habitats?

No, the project will have No Effect due to the nature of the activities involved in the project.

- ✓ No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office

Explain your determination:

The subject property and/or general area have been developed since at least the 1900s. Given this, the Project does not appear to have an adverse effect on an endangered/threatened species or critical habitat.

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

Yes, the activities involved in the project have the potential to affect species and/or habitats.

Screen Summary

Compliance Determination

The U.S. Fish and Wildlife service provided information on locations of threatened and endangered species for the Project. In addition, a review using the U.S. Fish and

Wildlife Service IPAC online system was completed. Species listed for Wayne County include: the Indiana Bat, Tricolored Bad, Rufa Red Knot, Eastern Massasauga, Northern Riffleshell, Monarch Butterfly, and the Eastern Prairie Fringed Orchid. None of the state-listed threatened or endangered species were observed at the property. No federally listed threatened or endangered species or unique features are present at the Project and no Critical Habitats are present. The subject property and/or general area have been developed since at least the 1900s. Given this, the Project does not appear to have an adverse effect on an endangered/threatened species or critical habitat. Source documentation is included as attachment 12.

Supporting documentation

[Attachment 12 Threatened and Endangered Species.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Explosive and Flammable Hazards

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C

1. Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?

No

Yes

2. Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?

No

Yes

3. Within 1 mile of the project site, are there any current or planned stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:

- Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR

- Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 or later version of National Fire Protection Association (NFPA) Code 58.

If all containers within the search area fit the above criteria, answer "No." For any other type of aboveground storage container within the search area that holds one of the flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer "Yes."

No

Yes

4. Based on the analysis, is the proposed HUD-assisted project located at or beyond the required separation distance from all covered tanks?

Yes

Based on the response, the review is in compliance with this section.

No

Screen Summary

Compliance Determination

Review of reasonably ascertainable standard and other historical sources, and site observations, have not identified the current and historical presence of aboveground storage tanks (ASTs)/55-gallon drum storage on the property. In accordance with HUD's Guidebook entitled "Siting of HUD-Assisted Projects Near Hazardous Facilities" (hereafter "Guidebook"), PM searched a one-mile radius around the subject property for ASTs containing flammable materials. Several nearby ASTs were identified; however, none are within a distance (i.e., greater than 800 feet) that require the calculation of acceptable separation distance (ASD) for thermal radiation and/or blast overpressure. Source documentation included as attachment 13.

Supporting documentation

[Attachment 13 Blast Map.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

Farmlands Protection

General requirements	Legislation	Regulation
The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes.	Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.)	7 CFR Part 658

1. Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?

Yes

No

2. Does your project meet one of the following exemptions?

- Construction limited to on-farm structures needed for farm operations.
- Construction limited to new minor secondary (accessory) structures such as a garage or storage shed
- Project on land already in or committed to urban development or used for water storage. (7 CFR 658.2(a))

Yes

No

3. Does “important farmland,” including prime farmland, unique farmland, or farmland of statewide or local importance regulated under the Farmland Protection Policy Act, occur on the project site?

- Utilize USDA Natural Resources Conservation Service’s (NRCS) Web Soil Survey <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>
- Check with your city or county’s planning department and ask them to document if the project is on land regulated by the FPPA (zoning important farmland as non-agricultural does not exempt it from FPPA requirements)
- Contact NRCS at the local USDA service center <http://offices.sc.egov.usda.gov/locator/app?agency=nrcs> or your NRCS state soil scientist <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/states/> for

assistance

No

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

Yes

Screen Summary

Compliance Determination

Review of the USDA Web Soil Survey indicates this Project does not affect any prime or unique farmland. The subject property is located within an "urbanized" area. Therefore, the Project is not subject to the statutory or regulatory requirements. Source documentation included as attachment 14.

Supporting documentation

[Attachment 14 Farmland Protection.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

Floodplain Management

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988	24 CFR 55

1. Do any of the following exemptions apply? Select the applicable citation? [only one selection possible]

55.12(c)(3)

55.12(c)(4)

55.12(c)(5)

55.12(c)(6)

55.12(c)(7)

55.12(c)(8)

55.12(c)(9)

55.12(c)(10)

55.12(c)(11)

None of the above

2. Upload a FEMA/FIRM map showing the site here:

[Attachment 6 Flood.pdf](#)

The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use **the best available information** to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site.

Does your project occur in a floodplain?

No

Based on the response, the review is in compliance with this section.

Yes

Screen Summary

Compliance Determination

According to a Federal Emergency Management Agency (FEMA) floodplain map, dated February 2, 2012 (Map number 26163C0280E), the property is located in "Zone X (Unshaded)", defined as areas of minimal risk outside the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplains. PM did not observe any sensitive ecological areas on the subject property, including potential wetlands, during the site reconnaissance. Furthermore, topographical features present in the subject property area are not representative of a flood plain. Source documentation is included as attachment 15.

Supporting documentation

[Attachment 15 Flood.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Historic Preservation

General requirements	Legislation	Regulation
Regulations under Section 106 of the National Historic Preservation Act (NHPA) require a consultative process to identify historic properties, assess project impacts on them, and avoid, minimize, or mitigate adverse effects	Section 106 of the National Historic Preservation Act (16 U.S.C. 470f)	36 CFR 800 "Protection of Historic Properties" https://www.govinfo.gov/content/pkg/CFR-2012-title36-vol3/pdf/CFR-2012-title36-vol3-part800.pdf

Threshold

Is Section 106 review required for your project?

No, because the project consists solely of activities listed as exempt in a Programmatic Agreement (PA). (See the PA Database to find applicable PAs.)

No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].

- ✓ Yes, because the project includes activities with potential to cause effects (direct or indirect).

Step 1 – Initiate Consultation

Select all consulting parties below (check all that apply):

- ✓ State Historic Preservation Offer (SHPO) Completed

- ✓ Indian Tribes, including Tribal Historic Preservation Officers (THPOs) or Native Hawaiian Organizations (NHOs)

- ✓ Band of Pottawatomi Indians Completed
- ✓ Bay Mills Indian Community Completed

✓ Forrest County Potawatomi Community of Wisconsin	Completed
✓ Grand Traverse Band of Ottawa and Chippewa Indians	Completed
✓ Hannahville Indian Community	Completed
✓ Ketegitigaaning Ojibwe Nation	Completed
✓ Keweenaw Bay Indian Community	Completed
✓ Lac du Flambeau Band of	Completed
✓ Lac Vieux Dst Band of Lk Spr Chippewa Indians	Completed
✓ Lake Superior Band of Chippewa Indians	Completed
✓ Lake Superior Chippewa Indians	Completed
✓ Little River Band of Ottawa Indians	Completed
✓ Little Traverse Bay Bands of Odawa Indians	Completed
✓ Match-E-Be-Nash-She-Wish (Gun Lake)	Completed
✓ Menominee Indian Tribe of Wisconsin	Completed
✓ Miami Tribe of Oklahoma	Completed
✓ Michigan and Indiana	Completed
✓ Michigan Anishinaabek Cultural	Completed
✓ Nottawaseppi Huron Band of the Potawatomi	Completed
✓ Pokagon Band of Potawatomi	Completed
✓ Preservation and Repatriation Alliance	Completed
✓ Saginaw Chippewa Indian Tribe of Michigan	Completed
✓ Sault Ste. Marie Tribe of Chippewa Indians	Completed

Other Consulting Parties

Describe the process of selecting consulting parties and initiating consultation here:

A Section 106 application was submitted to the City of Detroit to determine if the Project will adversely impact the subject property or area of potential effect (APE).

Document and upload all correspondence, notices and notes (including comments and objections received below).

Was the Section 106 Lender Delegation Memo used for Section 106 consultation?

Yes
No

Step 2 – Identify and Evaluate Historic Properties

- 1. Define the Area of Potential Effect (APE), either by entering the address(es) or uploading a map depicting the APE below:**

The APE is irregularly shaped. Beginning at the intersection of W. Grand Blvd. and Churchill St., the boundary of the APE runs northwest along Churchill St. to the first alleyway parallel to and north of W. Grand Blvd., then northeast along the alleyway to the first parcel on the west side of Kipling Ave. It then runs south to Ferry Park Ave., where it jogs to the east to include a residential parcel on the south side of Ferry Park Ave. It then runs back west along a tree line for approximately 45 meters before turning south and running to a point approximately 35 meters south of Holden St. It then runs northwest, paralleling Holden St., to a commercial parking lot located south of the intersection of Holden St. and W. Grand Blvd. From this point it runs north back to the point of beginning at W. Grand Blvd. and Churchill St. The APE encompasses 13.5 acres, and includes both residential and commercial properties, parking lots, and vacant lots.

In the chart below, list historic properties identified and evaluated in the APE. Every historic property that may be affected by the project should be included in the chart.

Upload the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination below.

Address / Location / District	National Register Status	SHPO Concurrence	Sensitive Information
--	-------------------------------------	-------------------------	----------------------------------

Additional Notes:

- 2. Was a survey of historic buildings and/or archeological sites done as part of the project?**

✓ Yes

Document and upload surveys and report(s) below.
For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

Additional Notes:

No

Step 3 –Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5)] Consider direct and indirect effects as applicable as per guidance on direct and indirect effects.

Choose one of the findings below - No Historic Properties Affected, No Adverse Effect, or Adverse Effect; and seek concurrence from consulting parties.

No Historic Properties Affected

✓ No Adverse Effect

Based on the response, the review is in compliance with this section.

Document reason for finding:

The proposed development was determined was to have no significant people or events and the former buildings were not historically eligible. Refer to Section 106 report attachment for additional information.

Does the No Adverse Effect finding contain conditions?

✓ Yes (check all that apply)

Avoidance

Modification of project

Other

Describe conditions here:

Contact the City Preservation Specialist if any archeological materials are encountered or if the scope of work changes.

No

Adverse Effect

Screen Summary

Compliance Determination

A Section 106 application was submitted to the City of Detroit to determine if the Project will adversely impact the subject property or area of potential effect (APE). A final determination letter dated March 18, 2024 was received indicating a Conditional Approval of No Adverse Effect if the following conditions are met: The work is conducted in accordance with the specifications submitted to the Preservation Specialist for review; If archaeological materials are encountered during the source of construction activities on the site, work will stop immediately and the Preservation Specialist will be contacted as required by the City's Programmatic Agreement, Stipulation IX; and If there is a change in the scope of work, those changes will be required to undergo additional Section 106 review prior to the execution of any work. Source documentation is included as attachment 16.

Supporting documentation

[Attachment 16 Section 106 Application.pdf](#)

[Attachment 16 B Triabl Responses.pdf](#)

[Attachment 16 Motown CNAE Section 106 Letter.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

Noise Abatement and Control

General requirements	Legislation	Regulation
HUD's noise regulations protect residential properties from excessive noise exposure. HUD encourages mitigation as appropriate.	Noise Control Act of 1972 General Services Administration Federal Management Circular 75-2: "Compatible Land Uses at Federal Airfields"	Title 24 CFR 51 Subpart B

1. What activities does your project involve? Check all that apply:

New construction for residential use

Rehabilitation of an existing residential property

A research demonstration project which does not result in new construction or reconstruction

An interstate land sales registration

Any timely emergency assistance under disaster assistance provision or appropriations which are provided to save lives, protect property, protect public health and safety, remove debris and wreckage, or assistance that has the effect of restoring facilities substantially as they existed prior to the disaster

None of the above

Screen Summary

Compliance Determination

Based on the project description (construction of a non-residential building), this project includes no activities that would require further evaluation under HUD's noise regulation. The project is in compliance with HUD's Noise regulation. A copy of the Partner Worksheet is included as attachment 28.

Supporting documentation

[Attachment 28 Noise - Partner Worksheet.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Sole Source Aquifers

General requirements	Legislation	Regulation
The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.	Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)	40 CFR Part 149

1. Does the project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?

Yes

✓ No

2. Is the project located on a sole source aquifer (SSA)?

A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

✓ No

Based on the response, the review is in compliance with this section. Document and upload documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area, below.

Yes

Screen Summary

Compliance Determination

There are no sole source aquifers located in Detroit or Wayne County. Source documentation is included as Attachment 17.

Supporting documentation

[Attachment 17 Sole Source Aquifer.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

Wetlands Protection

General requirements	Legislation	Regulation
Executive Order 11990 discourages direct or indirect support of new construction impacting wetlands wherever there is a practicable alternative. The Fish and Wildlife Service's National Wetlands Inventory can be used as a primary screening tool, but observed or known wetlands not indicated on NWI maps must also be processed Off-site impacts that result in draining, impounding, or destroying wetlands must also be processed.	Executive Order 11990	24 CFR 55.20 can be used for general guidance regarding the 8 Step Process.

1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance? The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of the Order

No

Yes

2. Will the new construction or other ground disturbance impact an on- or off-site wetland? The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

"Wetlands under E.O. 11990 include isolated and non-jurisdictional wetlands."

No, a wetland will not be impacted in terms of E.O. 11990's definition of new construction.

Based on the response, the review is in compliance with this section. Document and upload a map or any other relevant documentation below which explains your determination

Yes, there is a wetland that be impacted in terms of E.O. 11990's definition of new construction.

Screen Summary

Compliance Determination

PM did not observe any wet areas potentially associated with wetlands on the subject property during the site reconnaissance. In addition, review of the National Wetlands Inventory (NWI) Maps from the U.S. Fish and Wildlife Service and the EGLE Wetlands Map Viewer, did not identify any wetlands on the subject property. Any construction activities proposed in a wetland (regulated or unregulated) or in a 100-year flood plain area or where site contamination cannot be effectively remediated or mitigated are strongly discouraged and may be prohibited from the use of federal funds. Source documentation is included as attachment 18.

Supporting documentation

[Attachment 18 Wetland.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Wild and Scenic Rivers Act

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297

1. Is your project within proximity of a NWSRS river?

No

Yes, the project is in proximity of a Designated Wild and Scenic River or Study Wild and Scenic River.

Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.

Screen Summary

Compliance Determination

The National Wild and Scenic Rivers System map (maintained and managed by the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service and U.S. Forest Service) were reviewed to determine if the subject property is within a designated wild and scenic river area. There are no wild or scenic rivers located within the City of Detroit or Wayne County. Source documentation is included as attachment 19.

Supporting documentation

[Attachment 19 Wild and Scenic Rivers.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No

Environmental Justice

General requirements	Legislation	Regulation
Determine if the project creates adverse environmental impacts upon a low-income or minority community. If it does, engage the community in meaningful participation about mitigating the impacts or move the project.	Executive Order 12898	

HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.

1. Were any adverse environmental impacts identified in any other compliance review portion of this project's total environmental review?

Yes

No

Based on the response, the review is in compliance with this section.

Screen Summary

Compliance Determination

The Project is not anticipated to impact urban design and will be compatible with surrounding land uses. This development is compatible with the City's goals for development and will have a positive impact on the area within which it exists. The proposed development activities are anticipated to help revitalize the area immediately surrounding the project. A copy of the Environmental Justice Report is included as Attachment 20.

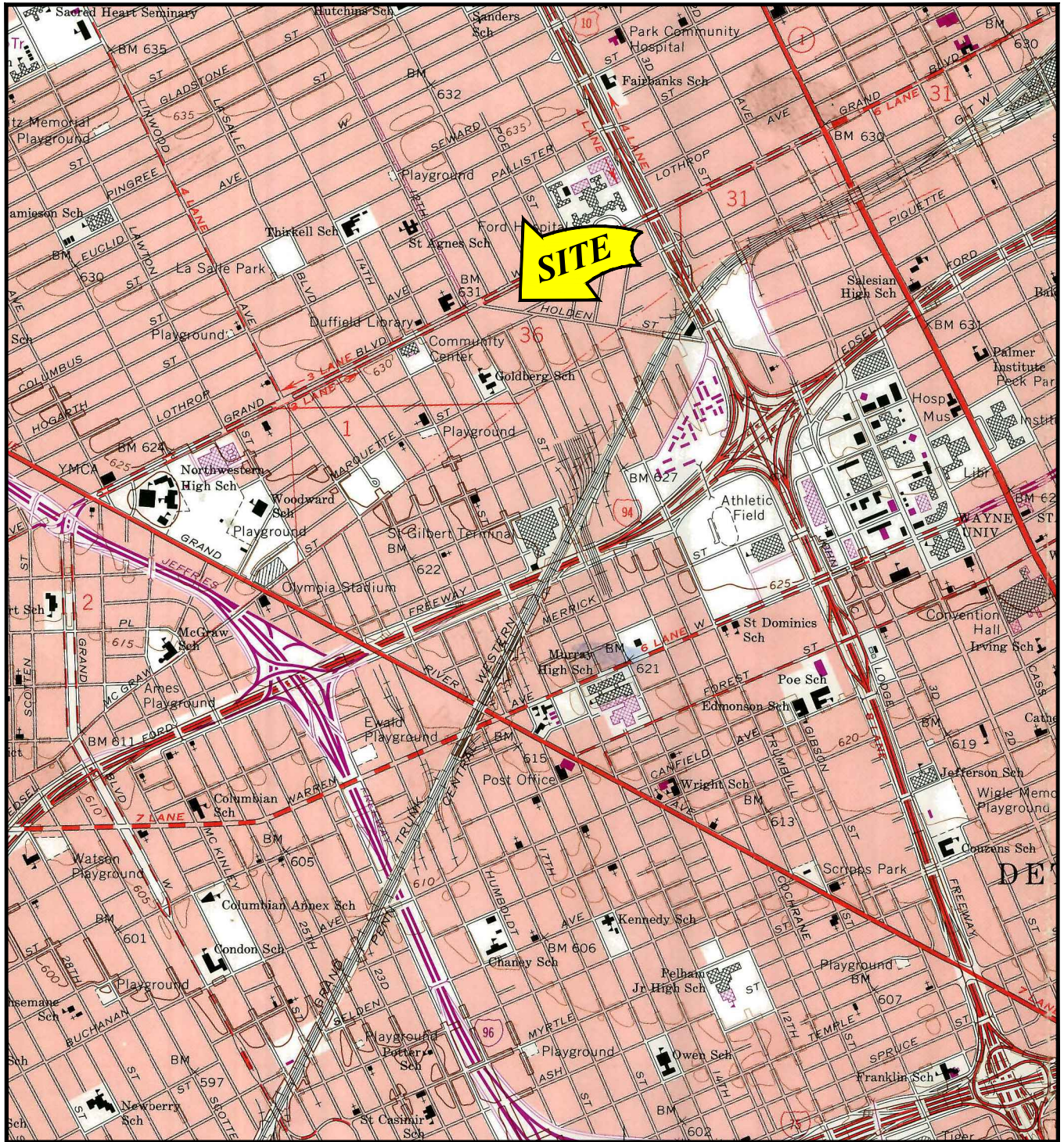
Supporting documentation

[Attachment 20 Environmental Justice.pdf](#)

Are formal compliance steps or mitigation required?

Yes

No



MICHIGAN QUADRANGLE LOCATION

WAYNE COUNTY

FIGURE 1

PROPERTY VICINITY MAP

UNITED STATES GEOLOGICAL SURVEY, 7.5 MINUTE SERIES
DETROIT, MI QUADRANGLE, 1968. PHOTO REVISED 1973 AND 1980.



**Environmental
& Engineering
Services**

PROJ:
MOTOWN HISTORICAL MUSEUM, VACANT
RESIDENTIAL PROPERTY, AND PARKING LOTS
2648-2660 AND 2666-2670 WEST GRAND
BOULEVARD AND 1480-1486 AND 1898-1556 FERRY
PARK STREET, DETROIT, MI

**THIS IS NOT A LEGAL
SURVEY**

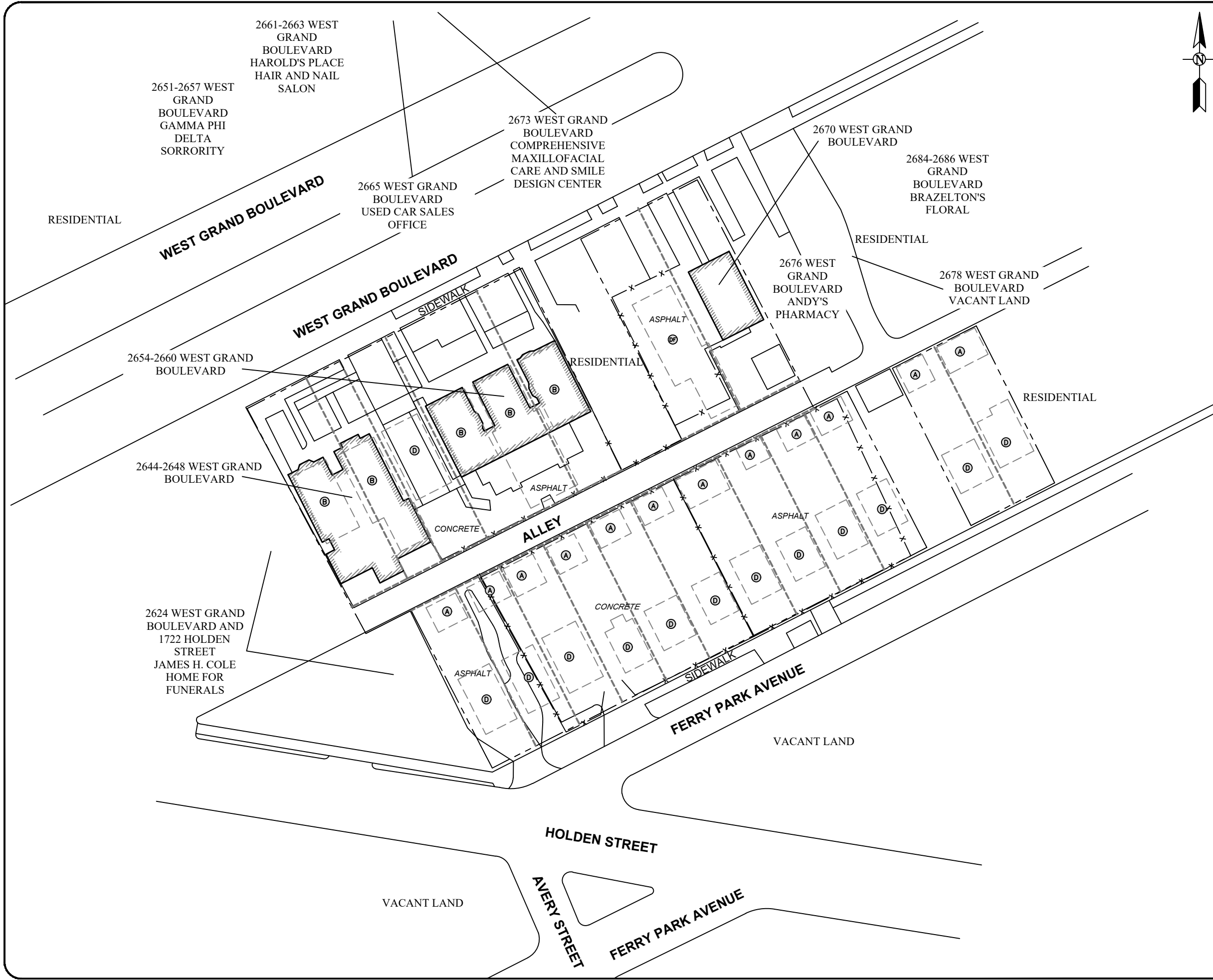


IF NOT 1" ON THIS
SHEET, ADJUST
SCALES ACCORDINGLY.

DRN BY: CS DATE: 7/26/2023

CHKD BY: DB DATE REVISED: NA

FILE NAME:
01-14828-0-001F00R00



LEGEND:

- SUBJECT PROPERTY
- PARCEL / LOT BOUNDARIES
- APPROXIMATE FORMER/HISTORICAL SITE FEATURES
- FENCE
- FORMER BUILDING NOW CONNECTED
- FORMER DWELLING
- FORMER GARAGE
- FORMER DWELLING / FUNERAL HOME

NOTE:
 1. LOCATION OF HISTORICAL SITE FEATURES ARE APPROXIMATE ONLY.
 2. REFERENCES: AERIAL PHOTOGRAPH FROM GOOGLE EARTH, IMAGERY DATE 8/1/2022



FIGURE 2
 SUBJECT PROPERTY AND ADJOINING PROPERTIES

PROJECT: MOTOWN HISTORICAL MUSEUM, VACANT RESIDENTIAL PROPERTY, AND PARKING LOTS
 2648-2660 AND 2666-2670 WEST GRAND BOULEVARD AND 1480-1486 AND 1898-1556 FERRY PARK STREET, DETROIT, MI

THIS IS NOT A LEGAL SURVEY VERIFY SCALE 0 60' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DRAWN BY: CS	DATE: 7/26/2023
	CHECKED BY: DB	DATE REVISED: NA
FILE NAME: 01-14828-0-001F00R00		



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 1



Front faces of 2648 West Grand Boulevard

Photograph 2



Western face of 2648 West Grand Boulevard



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 3



Front faces of 2650-2666 West Grand Boulevard

Photograph 4



Western face of 2666 West Grand Boulevard



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 5



Rear face of 2648 West Grand Boulevard

Photograph 6



Rear face of 2650-2666 West Grand Boulevard



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 7



Rear face of the vacant dwelling

Photograph 8



Northern face of the vacant dwelling



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 9



Southern portion of the property

Photograph 10



Southern portion of the property



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 11



Museum area

Photograph 12



Museum area



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 13



Museum area

Photograph 14



Museum area



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 15



Museum area

Photograph 16



Museum area



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 17



Sump in basement

Photograph 18



Basement area



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 19



Interior of the vacant dwelling

Photograph 20



Interior of the vacant dwelling



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 21



Interior of the vacant dwelling

Photograph 22



The north adjoining properties



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 23



The north adjoining properties

Photograph 24



The north adjoining property



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 25



The east adjoining properties

Photograph 26



The east adjoining properties



Photographs From Site Reconnaissance
PM Project No. 01-14828-0-0001
Location: West Grand Boulevard and Ferry Park Avenue
Detroit, Michigan

Photograph 27



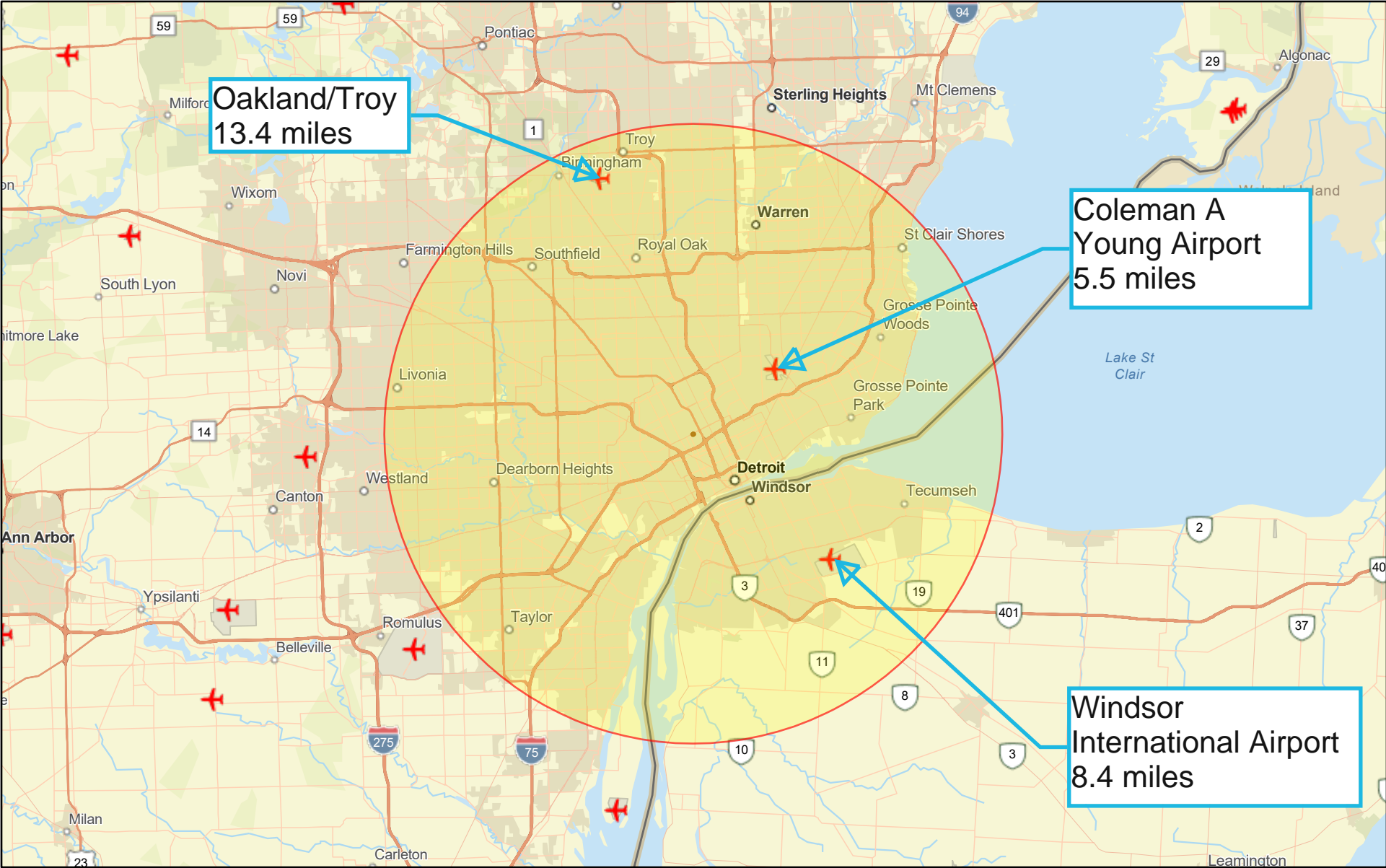
The southwest adjoining property

Photograph 28



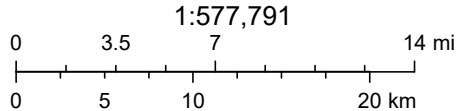
The west adjoining property

Letter ANSI A Landscape



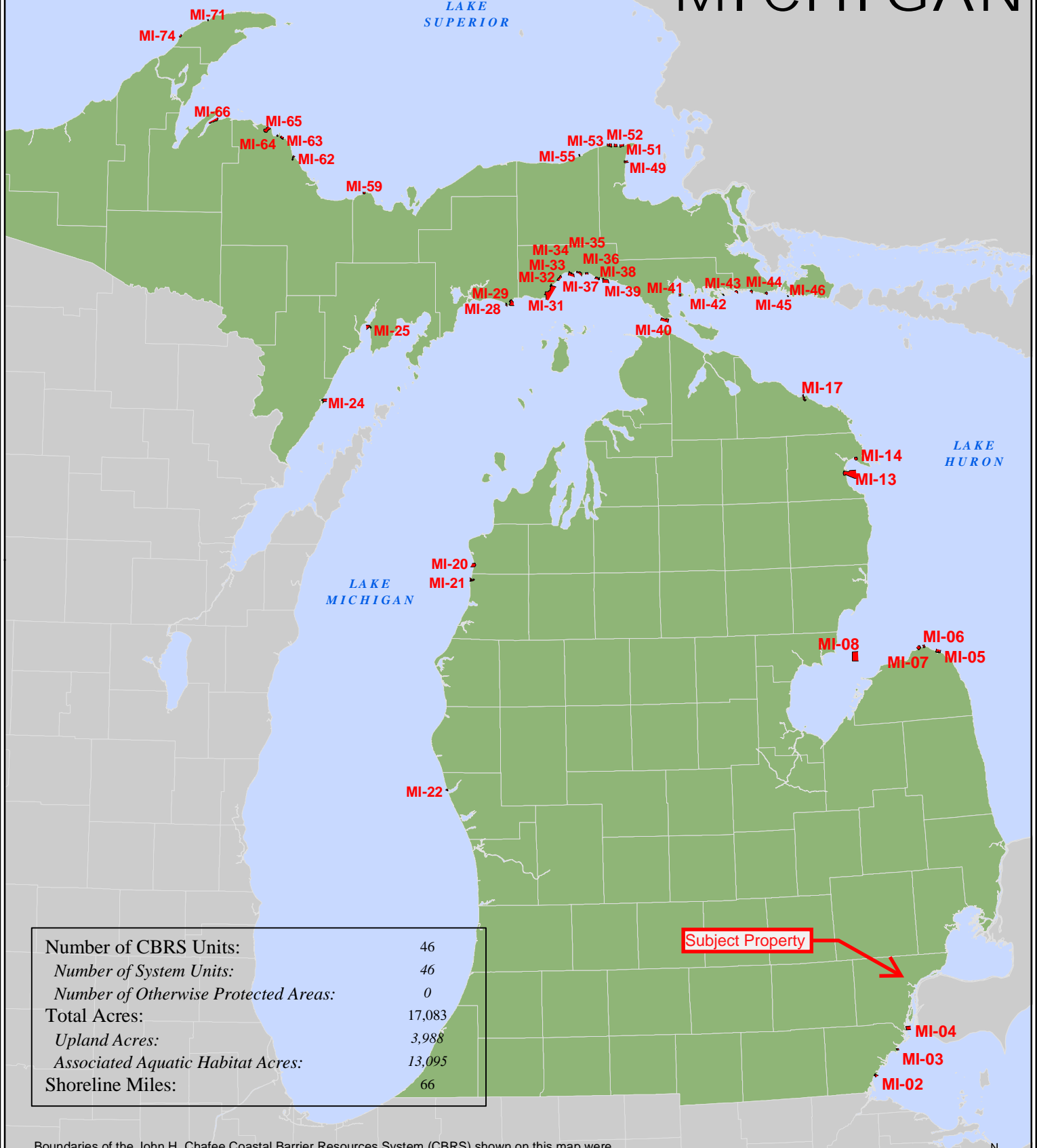
October 24, 2023

- Project Buffer
- Airport Points
- Project 1



Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, NRCan, Parks Canada, EPA OEI

JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM MICHIGAN



Number of CBRS Units:	46
Number of System Units:	46
Number of Otherwise Protected Areas:	0
Total Acres:	17,083
Upland Acres:	3,988
Associated Aquatic Habitat Acres:	13,095
Shoreline Miles:	66

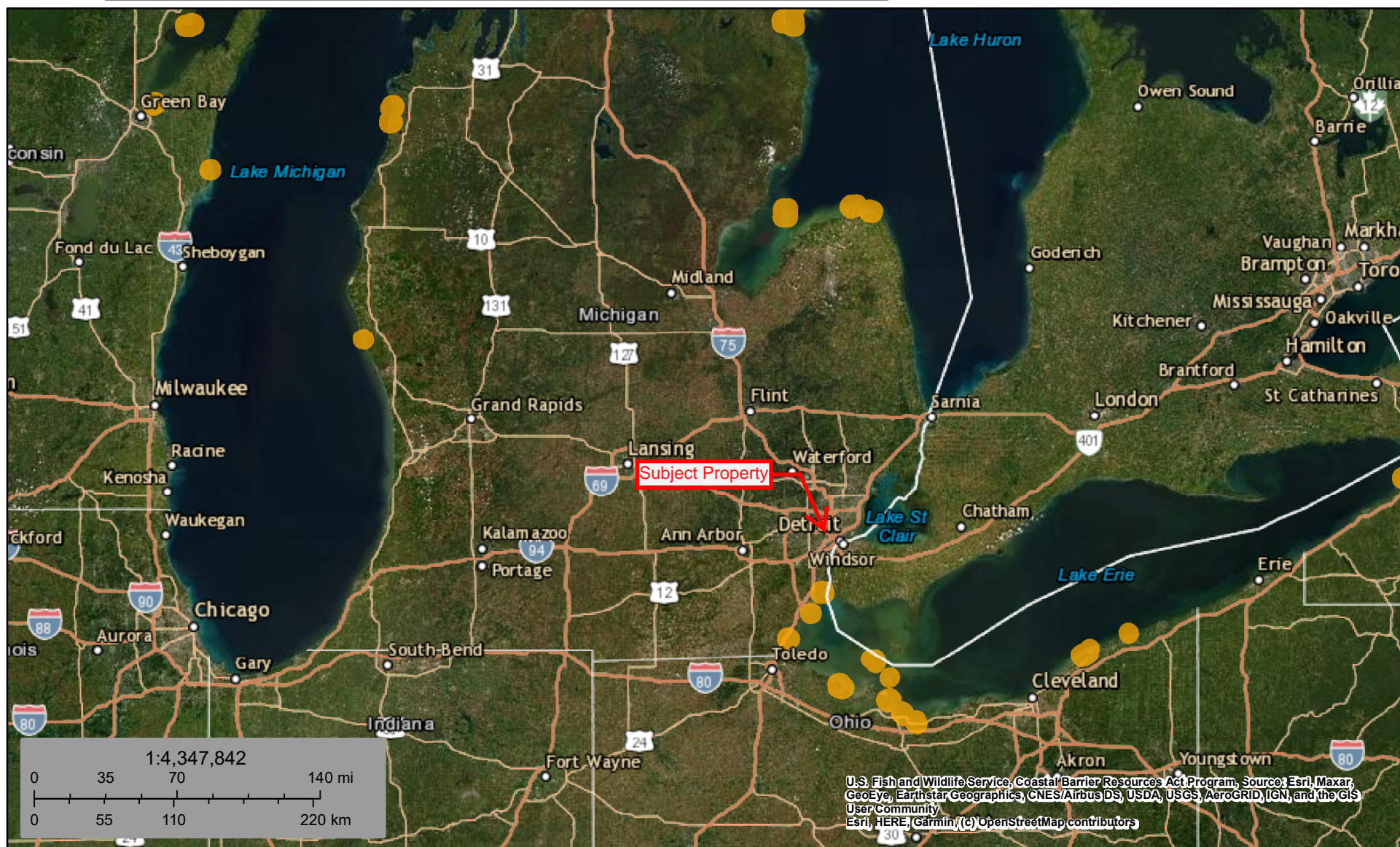
Boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) shown on this map were transferred from the official CBRS maps for this area and are depicted on this map (in red) for informational purposes only. The official CBRS maps are enacted by Congress via the Coastal Barrier Resources Act, as amended, and are maintained by the U.S. Fish and Wildlife Service. The official CBRS maps are available for download at <http://www.fws.gov/CBRA>.





U.S. Fish and Wildlife Service Coastal Barrier Resources System

CBRS



August 23, 2021

 CBRS Units

This map is for general reference only. The Coastal Barrier Resources System (CBRS) boundaries depicted on this map are representations of the controlling CBRS boundaries, which are shown on the official maps, accessible at <https://www.fws.gov/cbra/maps/index.html>. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

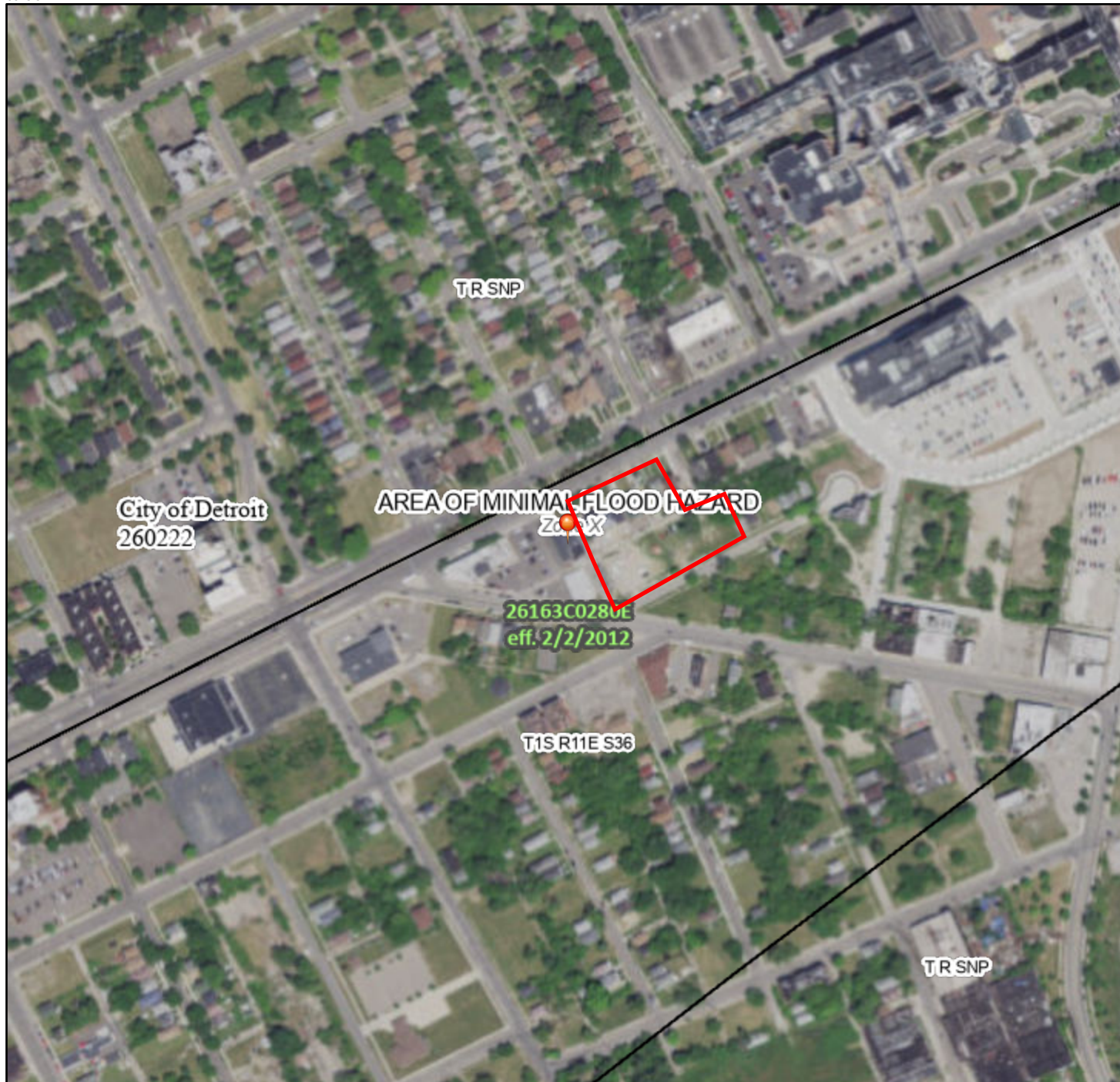
The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (<http://www.fws.gov/cbra/Determinations.html>) as to whether the property or project site is located "in" or "out" of the CBRS.

CBRS Units normally extend seaward out to the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS mapper.

National Flood Hazard Layer FIRMette



83°5'37"W 42°22'4"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **10/24/2023 at 11:51 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

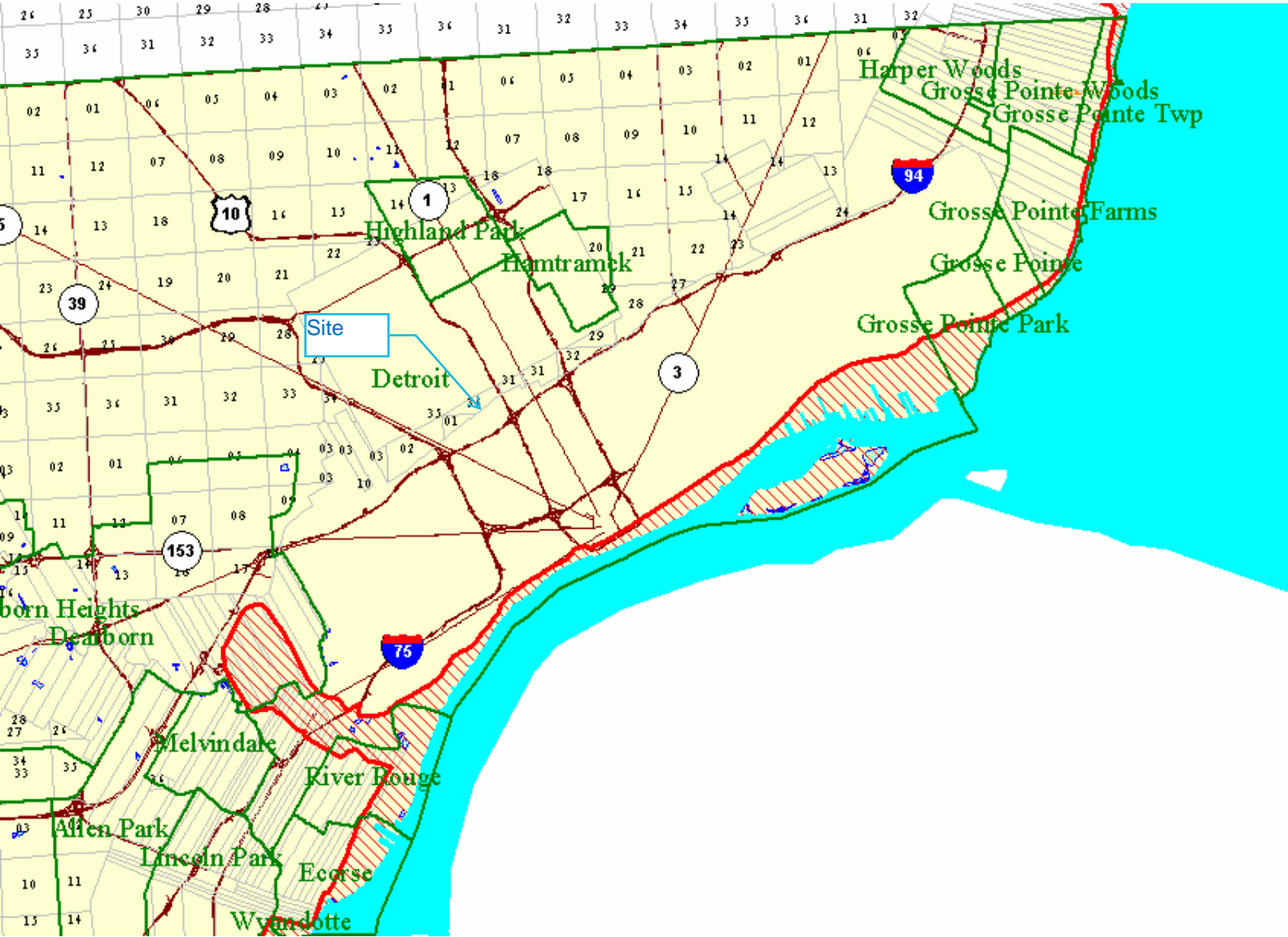
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

83°5'W 42°21'37"N

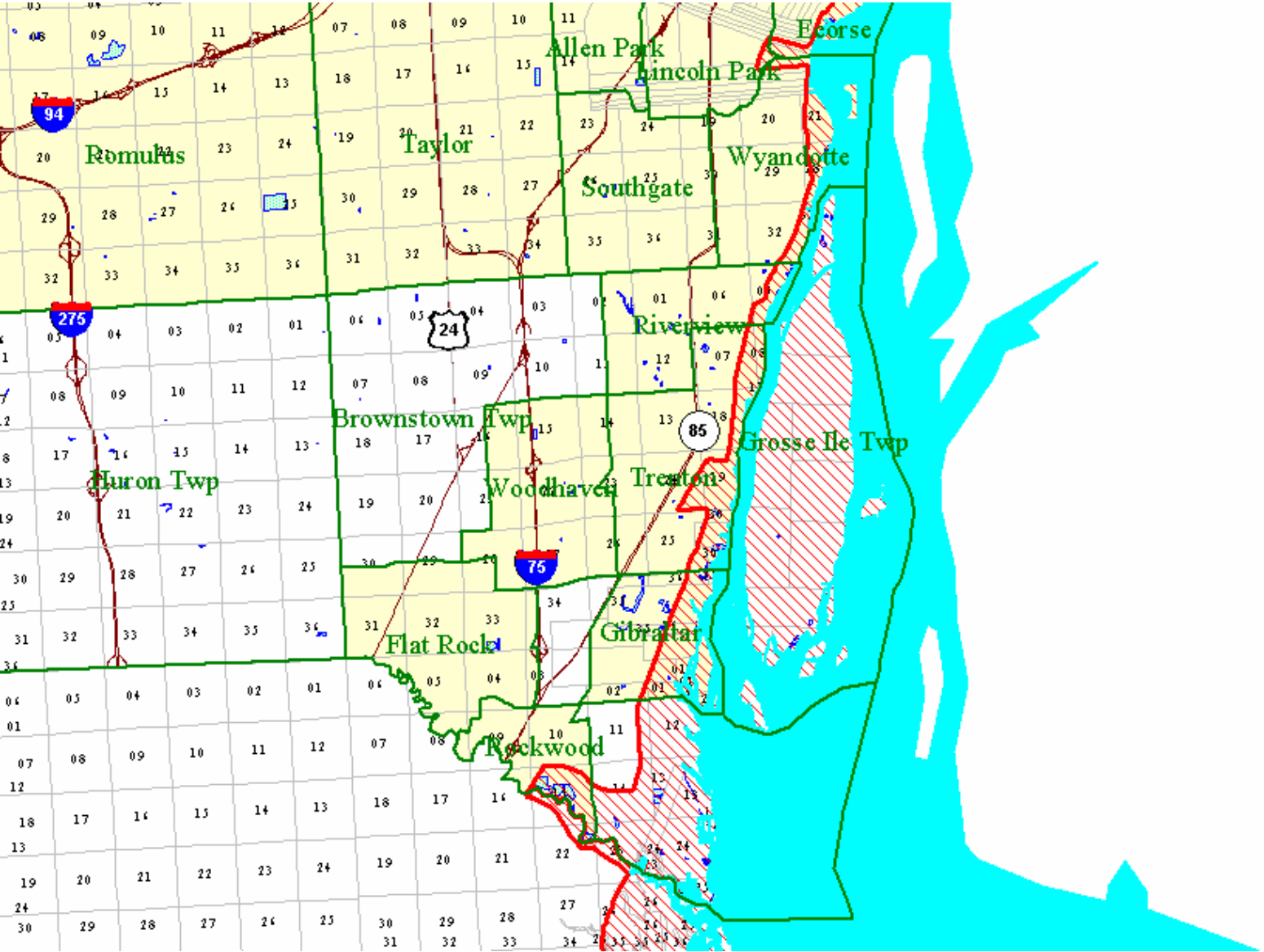
Wayne County
Grosse Pointe Township, Grosse Pointe Woods, Grosse Pointe Farms
Grosse Pointe, Grosse Pointe Park, and Detroit, T1S R14E
Detroit, T1S R14E, T2S R13E, and T2S R12E
River Rouge, T2S R11E

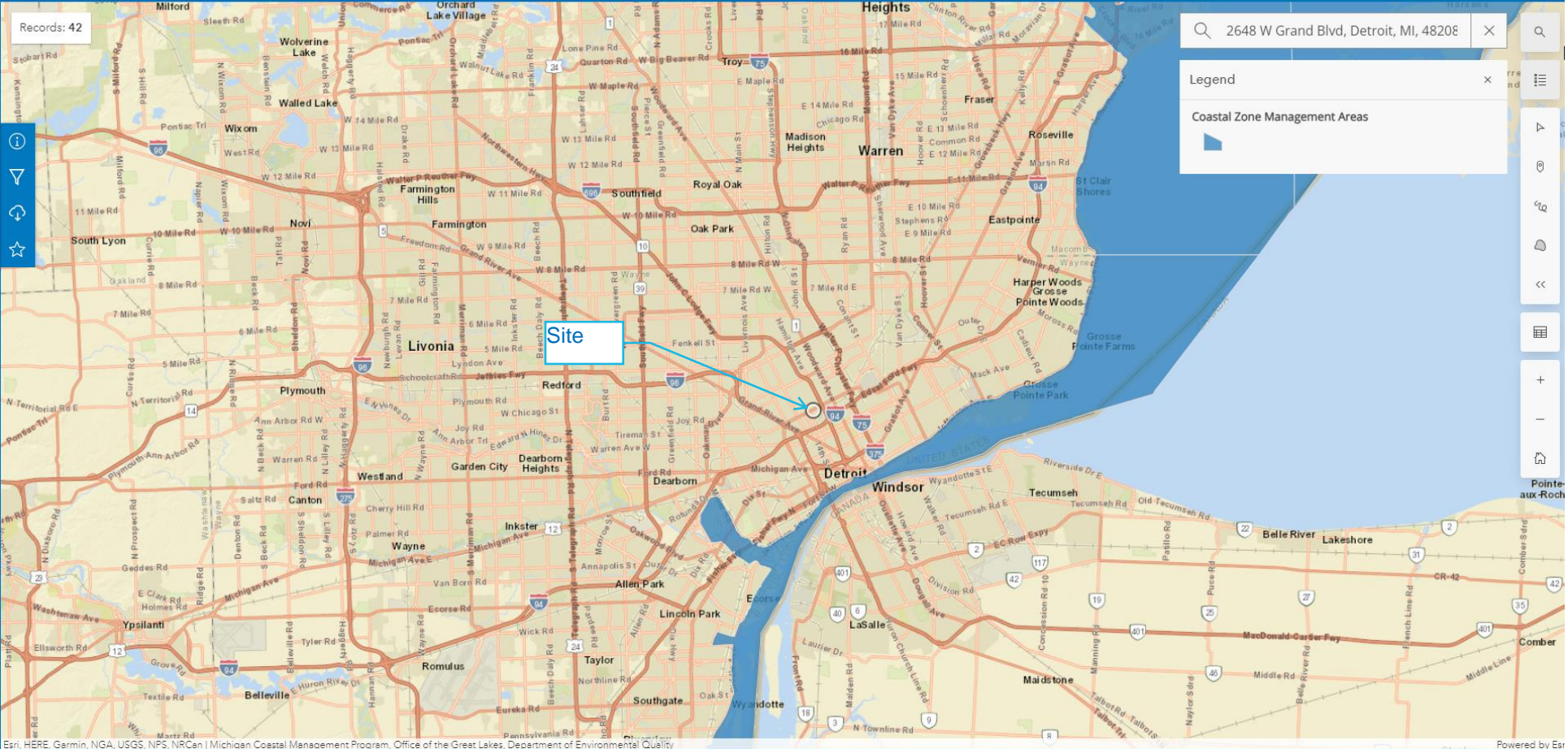
The heavy red line is the **Coastal Zone Management Boundary**
The red hatched area is the **Coastal Zone Management Area**.



Wayne County
Ecorse, Lincoln Park, Wyandotte and Riverview, T3S R11E
Trenton, T4S R11E
Rockwood, Gibraltar and Brownstown Township T5S R10E

The heavy red line is the **Coastal Zone Management Boundary**
The red hatched area is the **Coastal Zone Management Area**.





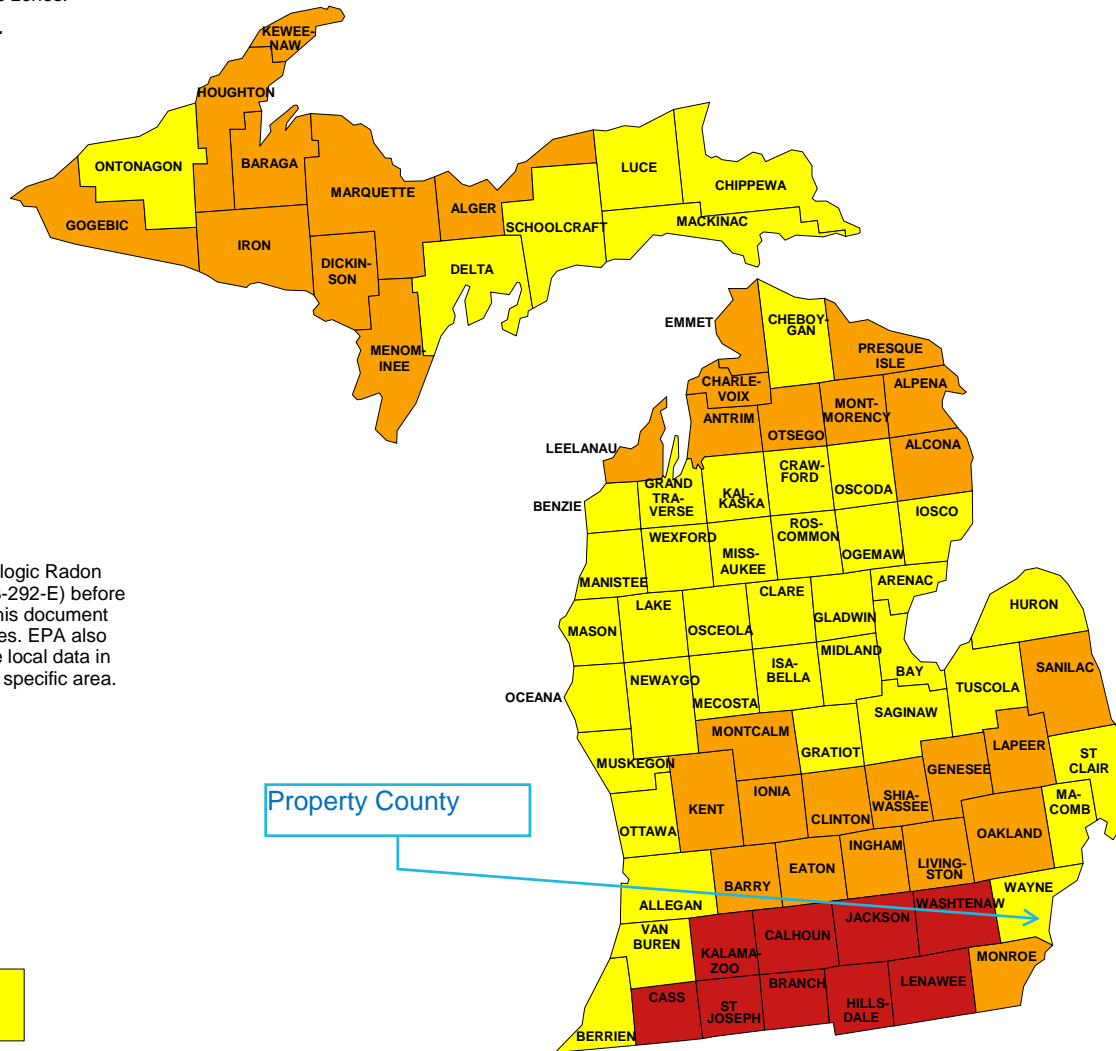
MICHIGAN - EPA Map of Radon Zones

<http://www.epa.gov/radon/zonemap.html>

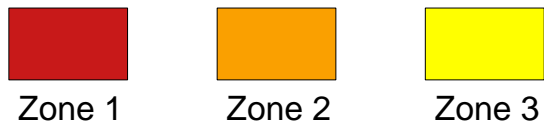
The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones.

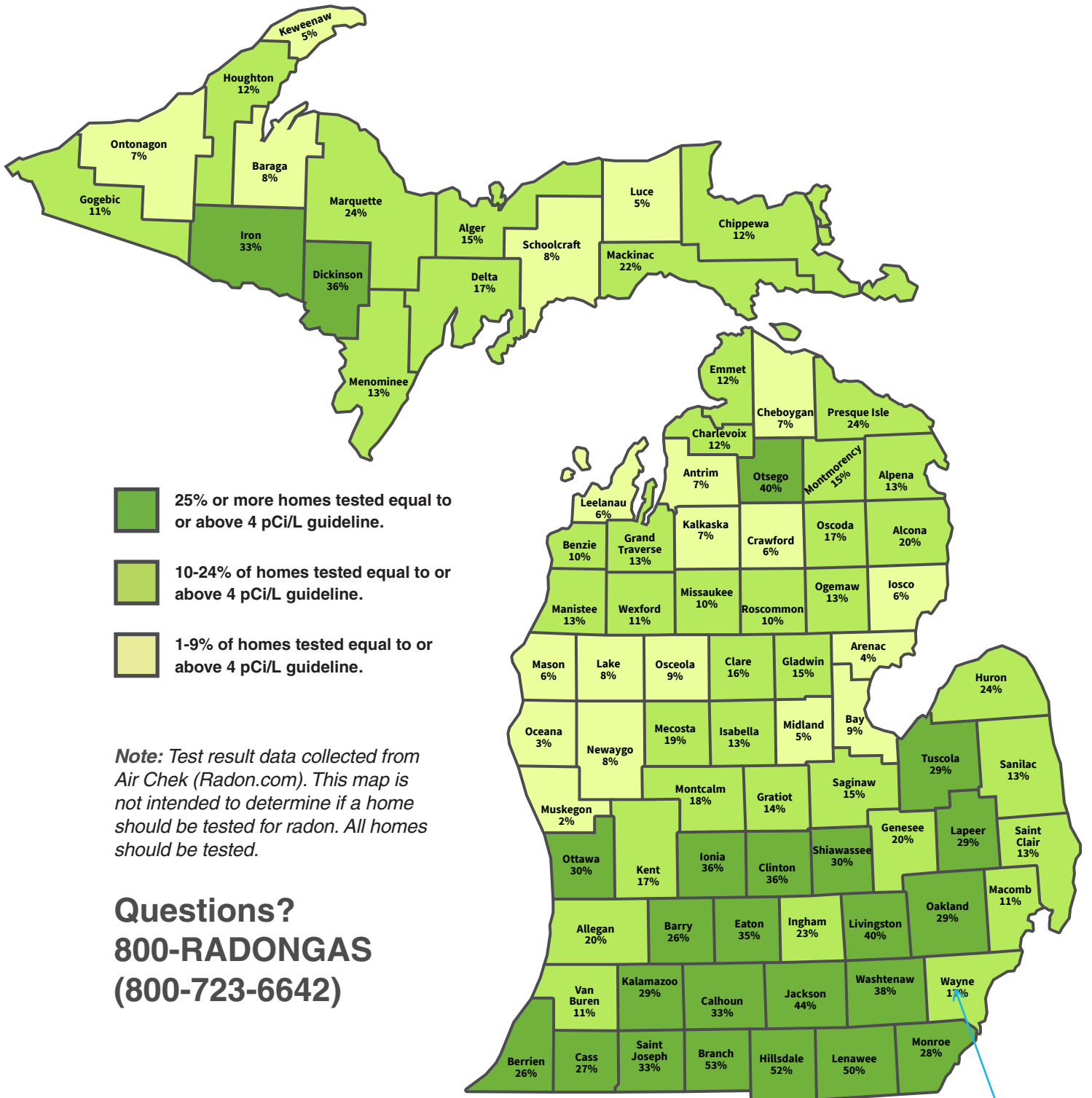
All homes should be tested, regardless of zone designation.



IMPORTANT: Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of Michigan" (USGS Open-file Report 93-292-E) before using this map. <http://energy.cr.usgs.gov/radon/grpinfo.html> This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.



Percentage of Elevated Radon Test Results by County



- 25% or more homes tested equal to or above 4 pCi/L guideline.
- 10-24% of homes tested equal to or above 4 pCi/L guideline.
- 1-9% of homes tested equal to or above 4 pCi/L guideline.

Note: Test result data collected from Air Chek (Radon.com). This map is not intended to determine if a home should be tested for radon. All homes should be tested.

Questions?
800-RADONGAS
(800-723-6642)

Property County

REPORT



Asbestos and Lead-Containing Paint Survey

Motown Museum Expansion Project

2648, 2654, 2656 and 2658-60 West Grand Boulevard
Detroit, Michigan

September 26, 2017

NTH Project No. 61-170276-01

NTH Consultants, Ltd.
41780 Six Mile Road
Northville, MI 48168





NTH Consultants, Ltd.

Infrastructure Engineering
and Environmental Services

41780 Six Mile Road
Northville, MI 48168
248.553.6300
248.324.5179 Fax

Mr. Allen Rawls
Motown Museum
2648 West Grand Boulevard
Detroit, Michigan 48208

September 26, 2017
NTH Project No. 61-170276-01

**RE: Report on Asbestos and Lead-Containing Paint Survey
Motown Museum Expansion Project
2648, 2654, 2656 and 2658-60 West Grand Boulevard
Detroit, Michigan**

Dear Mr. Rawls:

NTH Consultants, Ltd. is pleased to submit this report on asbestos and lead-containing paint survey conducted for the buildings located at the above referenced project site. This study was performed in accordance with the scope of services presented in our accepted proposal (NTH Proposal No. 61-170276), dated August 4, 2017, and subsequent Change Order, dated August 29, 2017.

We are pleased to be of service to you. Should you have any questions, please call us at 248-553-6300.

Sincerely,

NTH Consultants, Ltd.

Cliff J. Andrews
Senior Project Professional

Keith M. Swaffar, P.E.
Project Manager

CJA/KMS/mam

Attachments



TABLE OF CONTENTS

	<u>Page No.</u>
1.0 INTRODUCTION	1
2.0 SCOPE OF SERVICES	2
3.0 ASBESTOS EVALUATION	3
4.0 LEAD-CONTAINING PAINT EVALUATION	23
5.0 CONCLUSIONS	25
6.0 LIMITATIONS	28

APPENDICES

Sample Location Plans	APPENDIX A
Site Photographs	APPENDIX B
Asbestos Data	APPENDIX C
Lead-Containing Paint Data	APPENDIX D



1.0 INTRODUCTION

NTH Consultants, Ltd. was retained by the Motown Museum to perform asbestos and lead-containing paint survey of the four former residential buildings located at 2648, 2654, 2656 and 2658/2660 West Grand Boulevard in Detroit, Michigan. The buildings are described as follows:

Building Identifier	Building Information
2648 W. Grand Boulevard	This is a Motown Museum building and is comprised of two connected structures. The building is a two-story structure with basement, is approximately 5,750 square feet in size, and was constructed circa 1917.
2654 W. Grand Boulevard	The building is a two-story structure with a basement. The building is approximately 2,800 square feet in size and was constructed circa 1912. The building is used for office and storage purposes.
2654 W. Grand Boulevard	The building is a two-story structure with a basement. The building is approximately 1,717 square feet in size and was constructed circa 1912. The building is used for office and storage purposes.
2658/2660 W. Grand Boulevard	The building is a two-story structure with a basement. The building is approximately 2,916 square feet in size and was constructed circa 1912. The building is used for office and storage purposes.

The buildings are slated for renovation. Thus, as requested, the buildings were evaluated for asbestos-containing materials (ACM) and lead-containing paints (LCP).

The fieldwork for this study was conducted on August 18 and 21, and September 11, 2017 by Michael Millard and Shannon Hoskins, who are State of Michigan-Accredited Asbestos Building Inspectors (Accreditation Nos. A43314 and A51063, respectively).

The following limiting conditions were encountered during the fieldwork for this study:

- Due to the lack of electricity/lighting, certain portions of the buildings were surveyed using a flashlight.
- Due to the destructive nature of sampling, the roofing materials were not sampled for asbestos analysis. As such, these materials are assumed to be ACM until sampling and analysis proves otherwise.



- Certain rooms were not accessible at the time of the surveys due to stored items blocking the entrances or the doors being locked. These inaccessible areas are depicted on the Sample Location Plans in Appendix A.

Note: The quantities of ACM presented in this report are estimates and should not be relied upon by abatement or renovation contractors for bidding purposes. Although efforts were made to observe representative wall and ceiling cavities, ACM may be present in the areas that were not accessed. If suspect ACM is discovered during abatement or renovation activities, then such material shall be assumed to be asbestos-containing until sampling and analysis proves otherwise.

Sample Location Plans are included in Appendix A. Color photographs taken during the visual surveys of certain ACMs identified within 2648, 2654, and 2656 W. Grand Boulevard buildings are included in Appendix B. Because only roofing materials were identified as assumed ACM in 2658/2660 W. Grand Boulevard building, no photographs were taken in this building.

2.0 SCOPE OF SERVICES

Asbestos-Containing Materials (ACM)

- Conducted a walk-through survey of the buildings to identify, quantify and sample suspect ACM that were readily accessible.
- Analyzed bulk samples of suspect ACM to determine asbestos content.

Lead-Containing Paints (LCP)

- Painted building components were identified and sampled.
- Analyzed paint chip samples to determine lead levels.



3.0 ASBESTOS EVALUATION

A visual survey of the buildings was performed to evaluate accessible and readily visible suspect ACM.

The United States Environmental Protection Agency (USEPA) – National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations specify that all buildings regardless of age, with planned renovations or demolitions require an asbestos inspection. Under the Michigan Occupational Safety and Health Administration (MIOSHA) Asbestos Program inspections are to be performed by Michigan-accredited asbestos building inspector(s) or Certified Industrial Hygienist(s). The building survey must document the presence, location and quantity of suspected ACM.

The purpose of the asbestos survey was to identify, sample and quantify suspect ACM, and to categorize the suspect ACM into individual homogeneous areas. *A homogeneous area (HA) is defined as a material that appears similar in terms of color, texture, composition and/or date of application.*

The following homogenous areas of suspect ACM were identified in each building:

Building Identifier	Number of Homogenous Areas
2648 W. Grand Boulevard	38
2654 W. Grand Boulevard	24
2654 W. Grand Boulevard	23
2658/2660 West Grand Boulevard	11

Bulk samples were collected from the materials identified as suspect ACM. Due to the physical characteristics of multi-layered materials such as plaster and mortar, floor tile and mastic, carpet glue, drywall and joint compound and cove base and adhesive, the analytical results of such multi-layered suspect ACM were reported for each layer, where applicable, and are regarded as separate materials.



Analytical services for asbestos were provided by APEX Research Laboratories (APEX). The bulk samples of suspect asbestos were analyzed by Polarized Light Microscopy (PLM), EPA Method No. 600/R-93/116. APEX is accredited by the National Institute of Standards and Technology (NIST) and the National Voluntary Laboratory Accreditation Program (NVLAP) for analysis of asbestos using PLM. Laboratory data for the asbestos analysis are included in Appendix C.

The following tables present material descriptions, friability of the materials (friable = F, Category I non-friable = NF-I, and Category II non-friable = NF-II), sample locations, category of the sampled materials (surfacing = S, miscellaneous = M or thermal system insulation = TSI), and results of PLM analysis. If analysis indicated the presence of asbestos in the first analyzed sample, then the remaining samples of that homogenous area were not analyzed, and are listed as “not analyzed.”

ASBESTOS DATA – 2648 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
1	Suspended Ceiling Tile – Wormtracks and Pinholes	HA1-1	Studio A, control room	F	M	None Detected
		HA1-2	Studio A, control room			None Detected
2	Suspended Ceiling Tile – Larger Wormtracks and Fewer Pinholes	HA2-1	Studio A, control room	F	M	None Detected
		HA2-2	Studio A, control room			None Detected
3	9” x 9” Floor Tile and Mastic – Light Tan	HA3-1	Studio A, control room	NF-I	M	Tile: 10% Chrysotile Mastic: None Detected
		HA3-2	Studio A, control room			Tile: Not Analyzed Mastic: None Detected



ASBESTOS DATA – 2648 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
4	1' x 1' Ceiling Tile – Painted Black – and Brown Glue Pods	HA4-1	Studio A, hallway	Tiles: F	M	Tile: None Detected Tar: None Detected Pod: None Detected
		HA4-2	Studio A, hallway	Glue pods: NF-II		Tile: None Detected Tar: None Detected Pod: None Detected
5	Original Wall/Ceiling Plaster	HA5-1	Studio A, hallway	NF-II	S	Finish Coat: None Detected Base Coat: None Detected
		HA5-2	Studio A, hallway			Finish Coat: None Detected Base Coat: None Detected
		HA5-3	Tape library, storage room			Finish Coat: None Detected Base Coat: None Detected
		HA5-4	Rear stairwell, 1 st Floor			Finish Coat: None Detected Base Coat: None Detected
		HA5-5	Rear stairwell, 1 st Floor			Finish Coat: None Detected Base Coat: None Detected
		HA5-6	Rear stairwell, 2 nd Floor			Finish Coat: None Detected Base Coat: None Detected
		HA5-7	Rear stairwell, 2 nd Floor			Finish Coat: None Detected Base Coat: None Detected
6	Yellow Carpet Adhesive	HA6-1	Studio A, hallway	NF-I	M	None Detected
		HA6-2	Studio A, hallway			None Detected
7	9" x 9" Floor Tile and Glue – Teal	HA7-1	Studio A, hallway	NF-I	M	Tile: 10% Chrysotile Glue: None Detected
		HA7-2	Studio A, hallway			Tile: Not Analyzed Glue: None Detected



ASBESTOS DATA – 2648 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
8	9" x 9" Floor Tile and Mastic – Dark Red	HA8-1	Studio A, hallway	NF-I	M	Tile: 10% Chrysotile Mastic: None Detected
		HA8-2	Studio A, hallway			Tile: Not Analyzed Mastic: None Detected
9	Black Tar Paper Subfloor Layer	HA9-1	Studio A, hallway	NF-II	M	None Detected
		HA9-2	Studio A, hallway			None Detected
10	6" Black Vinyl Cove Base and Adhesive	HA10-1	Studio A, hallway	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA10-2	Studio A, hallway			Cove: None Detected Adhesive: None Detected
11	6" Tan Vinyl Cove Base and Adhesive	HA11-1	Studio A, hallway	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA11-2	Studio A, hallway			Cove: None Detected Adhesive: None Detected
12	1' x 1' Ceiling Tile – Non-Uniform Medium Circular Holes	HA12-1	Studio A, hallway	F	M	None Detected
		HA12-2	Studio A, hallway			None Detected
13	1' x 1' Ceiling Tile – Large Fissures, Small and Medium Gouges	HA13-1	Recording studio wall	F	M	None Detected
		HA13-2	Recording studio wall			None Detected
14	1' x 1' Ceiling Tile – Rough Texture	HA14-1	Recording studio wall	F	M	None Detected
		HA14-2	Recording studio wall			None Detected
15	1' x 1' Ceiling Tile with Yellow Adhesive – Pegboard Pattern	HA15-1	Recording studio wall	Tile: F	M	Tile: None Detected Adhesive: None Detected
		HA15-2	Recording studio wall	Glue pods: NF-II		Tile: None Detected Adhesive: None Detected



ASBESTOS DATA – 2648 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
16	1' x 1' Ceiling Tile with Brown Glue Pods – Non-Uniform Medium Circular Holes	HA16-1	Recording studio wall	Tile: F	M	Tile: None Detected Pods: None Detected
		HA16-2	Recording studio wall	Glue pods: NF-II		Tile: None Detected Pods: None Detected
17	9" x 9" Floor Tiles and Mastics – Black and White Intermixed	HA17-1	Basement of east building	NF-I	M	Black Tile: 2.25% White Tile: 2.25% Mastics: None Detected <i>(point count results)</i>
		HA17-2	Basement of east building			Tiles: Not Analyzed Mastics: None Detected
18	Fiberboard Wall Panels	HA18-1	Basement of east building	F	M	None Detected
		HA18-2	Basement of east building			None Detected
19	Drywall Panels with Cementitious Skimcoat	HA19-1	Basement, rear stairway surround	NF-II	M	Drywall: None Detected Skimcoat: None Detected
		HA19-2	Basement, rear stairway surround			Drywall: None Detected Skimcoat: None Detected
20	Older Drywall and Joint Compound	HA20-1	Basement of east building	NF-II	M	Drywall: None Detected Joint Compound: 0.50% Chrysotile <i>(point count result)</i>
		HA20-2	Tape library, storage room			Drywall: None Detected Joint Compound: 0.25% Chrysotile <i>(point count result)</i>
21	Woven White Paper Gap Filler	HA21-1	Basement of east building, between joists	F	M	40% Chrysotile
		HA21-2	Basement of east building, between joists			Not Analyzed



ASBESTOS DATA – 2648 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
22	Dark Red Stair Tread and Glue	HA22-1	Basement of rear stairwell	NF-I	M	Tread: None Detected Glue: None Detected
		HA22-2	Basement of rear stairwell			Tread: None Detected Glue: None Detected
23	9” x 9” Floor Tile and Mastic – Dark Red with Tan Streaks	HA23-1	Rear stairwell, 1 st Floor landing	NF-I	M	Tile: 10% Chrysotile Mastic: None Detected
		HA23-2	Rear stairwell, 1 st Floor landing			Tile: Not Analyzed Mastic: None Detected
24	9” x 9” Floor Tile and Glue – Tan with Brown Streaks	HA24-1	Rear stairwell, 2 nd Floor stair tread	NF-I	M	Tile: 10% Chrysotile Glue: None Detected
		HA24-2	Rear stairwell, 2 nd Floor landing			Tile: Not Analyzed Glue: None Detected
25	12” x 12” Floor Tile and Glue – Red with Black and White Streaks	HA25-1	1 st Floor, east building hallway	NF-I	M	Tile: None Detected Glue: None Detected
		HA25-2	1 st Floor, east building closet			Tile: None Detected Glue: None Detected
26	12” x 12” Floor Tile and Mastic – White with Blue Streaks	HA26-1	1 st Floor, east building, tape library	NF-I	M	Tile: None Detected Mastic: None Detected
		HA26-2	1 st Floor, east building, tape library			Tile: None Detected Mastic: None Detected
27	1’ x 1’ Ceiling Tile with Yellow Adhesive – Small and Medium Non-Uniform Holes	HA27-1	1 st Floor, east building, tape library	Tile: F Glue pods: NF-II	M	Tile: None Detected Pods: None Detected
		HA27-2	1 st Floor, east building, tape library			Tile: None Detected Pods: None Detected
28	6” White Vinyl Cove Base and Adhesive	HA28-1	1 st Floor, east building, southeast exhibit with window	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA28-2	1 st Floor, east building, southeast exhibit with window			Cove: None Detected Adhesive: None Detected
29	Wall Covering – Crosshatch, Painted White	HA29-1	1 st Floor, east building, southeast exhibit with window	NF-II	M	None Detected
		HA29-2	1 st Floor, east building, southeast exhibit with window			None Detected



ASBESTOS DATA – 2648 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
30	Sheet Flooring – White/Grey with Purple and Green Dots	HA30-1	2 nd Floor, west building, men’s bathroom	NF-I	M	None Detected
		HA30-2	2 nd Floor, west building, men’s bathroom			None Detected
31	4” Dark Green Vinyl Cove Base and Adhesive	HA31-1	2 nd Floor, west building, men’s bathroom	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA31-2	2 nd Floor, west building, men’s bathroom			Cove: None Detected Adhesive: None Detected
32	Drywall and Joint Compound – West Building	HA32-1	2 nd Floor, west building, north wall	NF-II	M	Drywall: None Detected Joint Compound: None Detected
		HA32-2	2 nd Floor, west building, north wall			Drywall: None Detected Joint Compound: None Detected
		HA32-3	2 nd Floor, west building, north wall			Drywall: None Detected Joint Compound: None Detected
33	Black Felt Paper Below Attic Concrete – West Building	HA33-1	West building’s attic	F	M	None Detected
		HA33-2	West building’s attic			None Detected
34	Sheet Flooring and Glue – Blue/Green Raised Dots	HA34-1	2 nd Floor, west building, southwest stairwell	NF-I	M	Flooring: None Detected Glue: None Detected
		HA34-2	2 nd Floor, west building, southwest stairwell			Flooring: None Detected Glue: None Detected
35	4” Dark Grey Vinyl Cove Base and Adhesive	HA35-1	1 st Floor, west building, women’s restroom	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA35-2	1 st Floor, west building, women’s restroom			Cove: None Detected Adhesive: None Detected
36	Exterior Door Caulk – Off-White	HA36-1	Northwest entry door frame	NF-II	M	None Detected
		HA36-2	Northwest entry door frame			None Detected



ASBESTOS DATA – 2648 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
37	Roofing Materials – Pitched Roof	N/A	N/A	NF-I	M	Assumed ACM
38	Roofing Materials – Flat Roof	N/A	N/A	NF-I	M	Assumed ACM

If the asbestos analytical result obtained through PLM is less than 10% asbestos, the USEPA suggests further refining the results by the point counting method. As defined by USEPA regulations, if the result obtained by point counting is different from the result obtained from PLM analysis, the point count result must be used. As such, the samples of black and white 9” x 9” floor tile (HA17) and joint compound associated with older drywall (HA20) were analyzed using point counting methods. The results of the point counting analysis are reflected in the above table.

ASBESTOS DATA – 2654 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
1	Aircell Straight Pipe Insulation	HA1-1	Basement, east half, near center	F	TSI	25% Chrysotile
		HA1-2	Basement, east half, south end			Not Analyzed
		HA1-3	Basement, west half			Not Analyzed
2	Mudded Pipe Fitting Insulation on Aircell Lines	HA2-1	Basement, east half, near center	F	TSI	30% Chrysotile
		HA2-2	Basement, east half, south end			Not Analyzed
		HA2-3	Basement, west half			Not Analyzed
3	Loose Fiberglass Insulation associated with an oil tank	HA3-1	Basement, east half, top of oil tank	F	M	None Detected



ASBESTOS DATA – 2654 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
4	Mortar associated with Boiler Exhaust Duct	HA4-1	Basement, east half, around boiler exhaust duct	NF-II	M	10% Chrysotile
		HA4-2	Basement, east half, around boiler exhaust duct			Not Analyzed
5	White Window Glazing associated with Basement Windows	HA5-1	Basement, west half, small room	NF-II	M	2.00% Chrysotile (point count result)
		HA5-2	Basement, west half, small room			Not Analyzed
6	Electrical Wire Wrap – White & Black	N/A	N/A	F	M	Assumed ACM
7	Not Used					
8	Wood Grain Vinyl Sheet Flooring	HA8-1	Basement, west half, roll against wall	NF-I	M	None Detected
		HA8-2	Basement, west half, roll against wall			None Detected
9	Yellow Carpet Adhesive	HA9-1	1 st Floor, northwest, closet under stairs	NF-I	M	None Detected
		HA9-2	1 st Floor, northwest, closet under stairs			None Detected
		HA9-3	1 st Floor, northeast, corner at doorway to hall			None Detected
10	Black Tar Paper Subfloor Layer	HA10-1	1 st Floor, northwest, closet under stairs	NF-II	M	None Detected
		HA10-2	1 st Floor, northeast, corner at doorway to hall			None Detected
11	Suspended Ceiling Tile – Small Gouges and Pinholes	HA11-1	1 st Floor, center of west side	F	M	None Detected
		HA11-2	1 st Floor, center of west side			None Detected
12	Wall/Ceiling Plaster	HA12-1	1 st Floor, west wall near center	NF-II	S	Finish Coat: None Detected Base Coat: None Detected
		HA12-2	1 st Floor, northwest, closet under stairs			Finish Coat: None Detected Base Coat: None Detected
		HA12-3	2 nd Floor, stairwell to attic			Finish Coat: None Detected Base Coat: None Detected



ASBESTOS DATA – 2654 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
		HA12-4	2 nd Floor, stairwell to attic			Finish Coat: None Detected Base Coat: None Detected
		HA12-5	2 nd Floor, west half, closet at center			Finish Coat: None Detected Base Coat: None Detected
		HA12-6	2 nd Floor, west half, office closet			Finish Coat: None Detected Base Coat: None Detected
		HA12-7	2 nd Floor, west half, office closet			Finish Coat: None Detected Base Coat: None Detected
13	Drywall and Joint Compound	HA13-1	1 st Floor, northwest, closet under stairs	NF-II	M	Drywall: None Detected Joint Compound: None Detected
		HA13-2	2 nd Floor, west half, center office			Drywall: None Detected Joint Compound: None Detected
		HA13-3	Attic, northwest corner wall			Drywall: None Detected Joint Compound: None Detected
14	White Sink Undercoating	HA14-1	1 st Floor, kitchen	NF-II	M	None Detected
		HA14-2	1 st Floor, kitchen			None Detected
15	Vinyl Sheet Flooring – Grey/Tan Marbled	HA15-1	1 st Floor, restroom	NF-I	M	None Detected
		HA15-2	1 st Floor, restroom			None Detected
16	9” x 9” Floor Tile and Mastic – Greyish-Green with Cream Streaks	HA16-1	1 st Floor, northeast room	NF-I	M	Tile: 10% Chrysotile Mastic: None Detected
		HA16-2	1 st Floor, northeast room			Tile: Not Analyzed Mastic: None Detected
17	1’ x 1’ Ceiling Tile – Flat White	HA17-1	2 nd Floor, northeast office	F	M	None Detected
		HA17-2	2 nd Floor, northeast office			None Detected



ASBESTOS DATA – 2654 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
18	Canvas Wall Panel	HA18-1	Front stairwell to 2 nd floor	NF-II	M	None Detected
		HA18-2	Front stairwell to 2 nd floor			None Detected
19	12” x 12” Self-Adhesive Floor Tile – Orange/Brown Marbled	HA19-1	2 nd Floor restroom	NF-I	M	Tile: None Detected Glue: None Detected
		HA19-2	2 nd Floor restroom			Tile: None Detected Glue: None Detected
20	Roofing Material Above Porch	N/A	N/A	NF-I	M	Assumed ACM
21	Wall Covering – Painted White	HA21-1	1 st Floor, northwest, closet under stairs	NF-II	M	None Detected
		HA21-2	1 st Floor, northwest, closet under stairs			None Detected
22	Drywall Panels without Joint Compound associated with Plaster	HA22-1	Stairwell to attic	NF-II	M	None Detected
		HA22-2	Stairwell to attic			None Detected
23	Exterior White Window Caulk – 1 st & 2 nd Floors	HA23-1	1 st Floor, west side, north window	NF-II	M	1.50% Chrysotile (point count result)
		HA23-2	1 st Floor, east side, north window			Not Analyzed
24	Exterior White Window Glazing – 1 st & 2 nd Floors	HA24-1	1 st Floor, west side, north window	NF-II	M	1.50% Chrysotile (point count result)
		HA24-2	1 st Floor, east side, north window			Not Analyzed
25	Roofing Shingles and Felt Paper	N/A	N/A	NF-I	M	Assumed ACM

Samples of white window glazing associated with the basement windows (HA5), exterior white caulk associated with 1st & 2nd floor windows (HA23), and exterior white window glazing associated with 1st & 2nd floor windows (HA24) were analyzed using point counting methods. The results of the point counting analysis are reflected in the above table.



ASBESTOS DATA – 2656 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
1	Wall/Ceiling Plaster – Rough-Finished, Basement	HA1-1	Basement, north storage room ceiling	NF-II	S	None Detected
		HA1-2	Basement, north storage room ceiling			None Detected
		HA1-3	Basement, west-center mechanical room wall			None Detected
2	Drywall Panels without Joint Compound	HA2-1	Basement, north storage room ceiling	NF-II	M	None Detected
		HA2-2	Basement, north storage room ceiling			None Detected
3	Window Glazing associated with Basement Windows	HA3-1	Basement, north storage room, west windows	NF-II	M	1.25% Chrysotile (point count result)
		HA3-2	Basement, north storage room, west windows			Not Analyzed
4	12” x 12” Self-Adhered Floor Tile – Red Brick Pattern	HA4-1	Basement hallway, at base of stairs	NF-I	M	Tile: 5.50% Chrysotile (point count result) Glue: None Detected
		HA4-2	Basement hallway, at base of stairs			Tile: Not Analyzed Glue: None Detected
5	2” Black Vinyl Cove Base and Adhesive	HA5-1	Basement hallway, next to stairs	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA5-2	Basement hallway, next to stairs			Cove: None Detected Adhesive: None Detected
6	Uninstalled Slate Tabletop	HA6-1	Basement, west-center mechanical room	NF-II	M	None Detected
7	Electrical Wire Wrap – White & Black	N/A	N/A	F	M	Assumed ACM
8	1’ x 1’ Ceiling Tile – Non-Uniform Holes	HA8-1	2 nd Floor, southwest storage room	F	M	None Detected
		HA8-2	2 nd Floor, southwest storage room			None Detected
9	Black Felt Pipe Wrap	HA9-1	Basement, north storage room, northeast corner	F	M	None Detected



ASBESTOS DATA – 2656 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
10	1' x 1' Ceiling Tile – Flat White	HA10-1	1 st Floor, southwest office, north edge	F	M	None Detected
		HA10-2	1 st Floor, southwest office, north edge			None Detected
11	1' x 1' Ceiling Tile – Smaller Holes	HA11-1	1 st Floor, southeast office, south edge	F	M	None Detected
		HA11-2	1 st Floor, southeast office, south edge			None Detected
12	Texture Applied to 1 st Floor's Fireplace Brick	HA12-1	1 st Floor, northeast room's fireplace, right	NF-II	S	None Detected
		HA12-2	1 st Floor, northeast room's fireplace, front			None Detected
		HA12-3	1 st Floor, northeast room's fireplace, left			None Detected
13	12" x 12" Floor Tile and Glue – Light Tan Mottled	HA13-1	2 nd Floor, southeast storage room	NF-I	M	Tile: 1.75% Chrysotile (point count result) Glue: None Detected
		HA13-2	2 nd Floor, southeast storage room			Tile: Not Analyzed Glue: None Detected
14	9" x 9" Floor Tile and Mastic – Black with Cream Streaks	HA14-1	1 st Floor, just outside northeast restroom	NF-I	M	Tile: 10% Chrysotile Mastic: None Detected
		HA14-2	2 nd Floor, northwest storage room's doorway			Tile: Not Analyzed Mastic: None Detected
15	Yellow-Orange Carpet Adhesive	HA15-1	2 nd Floor hallway at base of attic stairs	NF-I	M	None Detected
		HA15-2	2 nd Floor hallway at base of attic stairs			None Detected
16	12" x 12" Floor Tile and Mastic – Cream, Small Stone Pattern	HA16-1	2 nd Floor, northwest storage room	NF-I	M	Tile: 2.50% Chrysotile (point count result) Glue: None Detected
		HA16-2	2 nd Floor, northwest storage room			Tile: Not Analyzed Glue: None Detected



ASBESTOS DATA – 2656 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
17	Wall/Ceiling Plaster – Smooth Finish	HA17-1	Basement’s north storage room, ceiling remnants	NF-II	S	Finish Coat: None Detected Base Coat: None Detected
		HA17-2	Basement’s north storage room, ceiling remnants			Finish Coat: None Detected Base Coat: 0.25% Chrysotile (<i>point count results</i>)
		HA17-3	2 nd Floor, southwest storage room, SW corner			Finish Coat: None Detected Base Coat: None Detected
		HA17-4	2 nd Floor, southwest storage room, SW corner			Finish Coat: None Detected Base Coat: Trace of Chrysotile (<i>point count results</i>)
		HA17-5	2 nd Floor, northwest storage room, south wall			Finish Coat: None Detected Base Coat: Trace of Chrysotile (<i>point count results</i>)
		HA17-6	Attic, at top of stairs			Finish Coat: None Detected Base Coat: 0.25% Chrysotile (<i>point count results</i>)
		HA17-7	Attic, at top of stairs			Finish Coat: None Detected Base Coat: None Detected
18	Residual Brown Glue Pods in Basement	HA18-1	Basement hallway at stairs	NF-II	M	None Detected
		HA18-2	Basement hallway at stairs			None Detected
19	Black Tar Paper below 9” x 9” Floor Tile	HA19-1	1 st Floor, just outside northeast restroom	NF-II	M	None Detected
		HA19-2	2 nd Floor, northwest storage room’s doorway			None Detected
20	Rough-Finished Exterior Stucco	HA20-1	1 st Floor, east-facing bay window build-out	NF-II	S	None Detected
		HA20-2	1 st Floor, east-facing bay window build-out			None Detected
		HA20-3	1 st Floor, east-facing bay window build-out			None Detected



ASBESTOS DATA – 2656 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
21	Original Exterior Window Caulk	HA21-1	1 st Floor, east-facing north end window	NF-II	M	None Detected
		HA21-2	1 st Floor, south-facing west end window			None Detected
22	Original Exterior Window Glazing	HA22-1	1 st Floor, east-facing north end window	NF-II	M	None Detected
		HA22-2	1 st Floor, south-facing west end window			None Detected
23	Roofing Materials	N/A	N/A	NF-I	M	Assumed ACM

Samples of window glazing associated with basement windows (HA3), 12” x 12” floor tile – red brick pattern (HA4), 12” x 12” floor tile – light tan mottled (HA13), 12” x 12” floor tile – cream, small stone pattern (HA16), and select samples of wall/ceiling smooth-finish plaster (HA17) were analyzed using point counting methods. The results of the point counting analysis are reflected in the above table.

ASBESTOS DATA – 2658/60 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
1	Wall/Ceiling Plaster	HA1-1	North wall in attic stairwell	NF-II	S	Finish Coat: None Detected Base Coat: None Detected
		HA1-2	North wall in attic stairwell			Finish Coat: None Detected Base Coat: None Detected
		HA1-3	1 st Floor, southeast office’s closet wall			Finish Coat: None Detected Base Coat: None Detected
		HA1-4	1 st Floor, office north of restroom, closet wall			Finish Coat: None Detected Base Coat: None Detected
		HA1-5	2 nd Floor, office north of restroom, closet wall			Finish Coat: None Detected Base Coat: None Detected



ASBESTOS DATA – 2658/60 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
		HA1-6	2 nd Floor, office north of restroom, closet wall			Finish Coat: None Detected Base Coat: None Detected
		HA1-7	2 nd Floor, southeast room's closet wall			Finish Coat: None Detected Base Coat: None Detected
2	Popcorn Ceiling Texture	HA2-1	1 st Floor, northwest room's northeast corner	NF-II	S	None Detected
		HA2-2	1 st Floor, office north of restroom			None Detected
		HA2-3	1 st Floor, southeast office's northeast corner			None Detected
		HA2-4	2 nd Floor, west-center room's ceiling			None Detected
		HA2-5	2 nd Floor, office north of restroom			None Detected
3	Drywall and Joint Compound	HA3-1	1 st Floor, restroom wall behind door	NF-II	M	Drywall: None Detected Joint Compound: None Detected
		HA3-2	1 st Floor, kitchen's wall in northwest corner			Drywall: None Detected Joint Compound: None Detected
		HA3-3	2 nd Floor, restroom wall behind door			Drywall: None Detected Joint Compound: None Detected
4	Yellow Carpet Adhesive	HA4-1	1 st Floor, hallway closet at south end	NF-I	M	None Detected
		HA4-2	1 st Floor, office north of restroom			None Detected
		HA4-3	2 nd Floor, southeast room's closet			None Detected
5	4" White Vinyl Cove Base and Adhesive	HA5-1	1 st Floor restroom, behind door	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA5-2	1 st Floor restroom, behind door			Cove: None Detected Adhesive: None Detected



ASBESTOS DATA – 2658/60 WEST GRAND BOULEVARD						
HA No.	Material Description	Sample No.	Sample Location	F/NF	Category	Asbestos Content
6	4” Dark Grey Vinyl Cove Base and Adhesive	HA6-1	1 st Floor, kitchen, northwest corner	NF-II	M	Cove: None Detected Adhesive: None Detected
		HA6-2	1 st Floor, kitchen, northwest corner			Cove: None Detected Adhesive: None Detected
7	Sink Undercoating – White	HA7-1	1 st Floor, kitchen sink	NF-II	M	None Detected
		HA7-2	2 nd Floor, kitchen sink			None Detected
8	Ceiling Texture – Hand-Applied Ridges	HA8-1	2 nd Floor’s southeast meeting room near center	NF-II	S	None Detected
		HA8-2	2 nd Floor’s southeast meeting room near center			None Detected
		HA8-3	2 nd Floor’s southeast meeting room near center			None Detected
9	Exterior Window Glazing – Basement Windows	HA9-1	South-facing basement window	NF-II	M	None Detected
		HA9-2	South-facing basement window			None Detected
10	Roofing Shingles	N/A	N/A	NF-I	M	Assumed ACM
11	Roofing Felt Paper Underlayment	HA11-1	Attic, at roof drain penetration above stairs	NF-I	M	None Detected
		HA11-2	Attic, at roof drain penetration above stairs			None Detected

Asbestos Quantities and Locations

The tables below present a description of each identified ACM along with the location, condition and approximate quantity.

ACM LOCATIONS AND CONDITIONS – 2648 West Grand Boulevard				
HA #	Material Description	Location	Condition/Notes	Approximate Quantity
3	9” x 9” Floor Tile – Light Tan	Studio A, control room floor	This non-friable, category-I material was observed to be in damaged condition. Mastic is non-ACM.	120 SF



ACM LOCATIONS AND CONDITIONS – 2648 West Grand Boulevard				
HA #	Material Description	Location	Condition/Notes	Approximate Quantity
7	9” x 9” Floor Tile – Teal	An under layer in the hallway outside of the Studio A control room (40 SF), as well as throughout all the 1 st floor northeastern areas (900 SF)	This non-friable, category-I material was observed to be in good condition and below carpet and other tiles; mastic is non-ACM.	940 SF
8	9” x 9” Floor Tile – Dark Red	An under layer in the hallway outside of the Studio A control room (40 SF), as well as throughout all the 1 st floor northeastern areas (900 SF)	This non-friable, category-I material was observed to be in good condition and below carpet and other tiles; mastic is non-ACM.	940 SF
17	9” x 9” Floor Tiles – Black and White Intermixed	Covers approximately 2/3 of the eastern building’s basement floor	This non-friable, category-I material was observed to be in significantly damaged condition; mastics are non-ACM.	800 SF
21	Woven White Paper Gap Filler	Basement of east building, between floor joists in two locations, ~1/2 SF each, approximately 3 feet apart, near the center doorway between the two buildings	This friable material was observed to be in damaged condition.	1 SF
23	9” x 9” Floor Tile – Dark Red with Tan Streaks	On the 1 st Floor landing of the eastern building’s rear stairwell	This non-friable, category-I material was observed to be in fair condition, with areas of localized damage; mastic is non-ACM.	35 SF
24	9” x 9” Floor Tile – Tan with Brown Streaks	On stair treads and risers of the eastern building’s rear stairwell	This non-friable, category-I material was observed to be in fair condition, with areas of localized damage; mastic is non-ACM.	80 SF
37	Roofing Materials – Pitched Roof	Roof the entire western building, and the northern half of the eastern building	This non-friable, category-I material was observed to be in good condition; not sampled so the integrity of the roofing system would not be compromised.	5,000 SF
38	Roofing Materials – Flat Roof	Roof of the southern side of the eastern building, above the recording studio A	This non-friable, category-I material was observed to be in good condition; not sampled so the integrity of the roofing system would not be compromised.	1,400 SF



ACM LOCATIONS AND CONDITIONS – 2654 West Grand Boulevard				
HA #	Material Description	Location	Condition/Notes	Approximate Quantity
1	Aircell Straight Pipe Insulation	Throughout basement areas, with an area of debris covering approximately 10 square feet on the northern side of the western half	This friable material was observed to be in fair condition, with areas of localized damage.	320 LF (+1 CF of debris)
2	Pipe Fitting Insulation associated with Aircell	Throughout basement areas, with an area of debris covering approximately 10 square feet on the northern side of the western half	This friable material was observed to be in fair condition, with areas of localized damage.	80 EA (+1 CF of debris)
4	Mortar associated with Boiler Exhaust Duct	Basement's center wall, next to boiler on the eastern side	This non-friable, category-II material was observed to be in damaged condition.	2 SF
5	White Window Glazing – Basement Windows	Basement exterior windows, approximately 3' x 2' in size, 14 LF of glazing (1/2" thick) per window, 11 windows total	This non-friable, category-II material was observed to be in fair condition, with areas of localized damage.	7 SF (or 160 LF of 1/2" thick glazing on 11 windows)
6	Electrical Wire Wrap – White & Black	Electrical wire insulation observed in the basement, assumed to be present throughout the structure	This friable material was observed to be in fair condition, with areas of localized damage (such as frayed ends).	Not feasibly quantified
16	9" x 9" Floor Tile – Greyish-Green with Cream Streaks	1 st Floor's northeastern room (200 SF) and the room adjacent to the south (170 SF), below carpet in both rooms	This non-friable, category-I material was observed to be in good condition; mastic is non-asbestos containing	370 SF
20	Roofing Materials – Above Porch	Roofing membrane layers above front porch	This non-friable, category-I material was observed to be in good condition; not sampled so the integrity of the roofing system would not be compromised.	230 SF
23	Exterior White Window Caulk – 1 st & 2 nd Floors	Around the perimeters of exterior wooden windows on the 1 st and 2 nd Floors; some have been replaced with vinyl windows; found around 19 windows of varying size	This non-friable, category-II material was observed to be in good condition.	11 SF (or 260 LF of 1/2" thick caulk around 19 windows)
24	Exterior White Window Glazing – 1 st & 2 nd Floors	Exterior wooden windows on the 1 st and 2 nd Floors; some have been replaced with vinyl windows; found on 19 windows of varying size	This non-friable, category-II material was observed to be in fair condition, with areas of localized damage.	15 SF (or 360 LF of 1/2" thick glazing on 19 windows)



ACM LOCATIONS AND CONDITIONS – 2654 West Grand Boulevard				
HA #	Material Description	Location	Condition/Notes	Approximate Quantity
25	Roofing Materials	Roof	This non-friable, category-I material was observed to be in good condition; not sampled so the integrity of the roofing system would not be compromised.	1,500 SF

ACM LOCATIONS AND CONDITIONS – 2656 West Grand Boulevard				
HA #	Material Description	Location	Condition/Notes	Approximate Quantity
3	Window Glazing associated with Basement Windows	Basement windows on exterior walls; approximately 3' x 2' in size, 14 LF of glazing (1/2" thick) per window, 5 windows total	This non-friable, category-II material was observed to be in fair condition, with areas of localized damage.	3 SF (or 70 LF of 1/2" thick glazing on 5 windows)
4	12" x 12" Floor Tile – Red Brick Pattern	At base of stairs in the basement (40 SF) as well as the middle landing between the 1 st Floor and basement (25 SF)	This non-friable, category-I material was observed to be in significantly damaged condition; glue is non-asbestos containing	65 SF
7	Electrical Wire Wrap – White & Black	Electrical wire insulation observed in the basement, assumed to be present throughout the structure	This friable material was observed to be in fair condition, with areas of localized damage (such as frayed ends).	Not feasibly quantified
13	12" x 12" Floor Tile – Light Tan Mottled	2 nd Floor's southeastern storage room and closet	This non-friable, category-I material was observed to be in good condition; glue is non-asbestos containing	120 SF
14	9" x 9" Floor Tile – Black with Cream Streaks	Found below carpet throughout the 1 st and 2 nd Floors	This non-friable, category-I material was observed to be in good condition; mastic is non-asbestos containing.	1,400 SF
16	12" x 12" Floor Tile – Cream, Small Stone Pattern	2 nd Floor's northwestern record storage room	This non-friable, category-I material was observed to be in good condition; glue is non-asbestos containing.	190 SF
23	Roofing Materials	Roof	This non-friable, category-I material was observed to be in good condition; not sampled so the integrity of the roofing system would not be compromised.	1,000 SF



ACM LOCATIONS AND CONDITIONS – 2658-60 West Grand Boulevard				
HA #	Material Description	Location	Condition/Notes	Approximate Quantity
10	Roofing Shingles	Roof	This non-friable, category-I material was observed to be in good condition; not sampled so the integrity of the roofing system would not be compromised; felt paper underlayment was able to be sampled from below (in the attic) without risk of damage.	1,600 SF

4.0 LEAD-CONTAINING PAINT EVALUATION

A visual survey of the buildings was performed to document and test various types and colors of paint applied to building components for the presence of lead.

For purposes of this study, and considering that the buildings are scheduled for renovation, the contractor(s) performing the renovation activities will need to comply with Michigan Occupational Safety and Health Administration (MIOSHA) Part 603 (Lead Exposure in Construction).

Five (5) paint chip samples were collected from each building. These samples were submitted to APEX for lead analysis using Atomic Absorption Spectroscopy (AAS, USEPA Method SW846 M/EPA 7420). Laboratory data on lead analysis are included in Appendix D.

The following tables present descriptions and locations of the tested surfaces, and analytical results:

PAINT CHIP ANALYSIS – 2648 West Grand Boulevard			
Sample ID	Color & Description	Location(s)	Result (% Lead)
PC-1	White paint on metal duct	Similarly painted metal ducts throughout	0.09%



PC-2	Blue paint on wood window	Similarly painted wooden windows throughout the basement	6.53%
PC-3	Blue paint on drywall wall	Similarly painted drywall walls throughout	<0.01%
PC-4	Blue paint on wood exterior trim	Similarly painted wooden exterior components	0.49%
PC-5	White paint on exterior brick wall	Similarly painted exterior brick walls	0.06%

PAINT CHIP ANALYSIS – 2654 West Grand Boulevard			
Sample ID	Color & Description	Location(s)	Result (% Lead)
PC-1	Green paint on plaster ceiling	Similarly painted plaster ceilings throughout	7.47%
PC-2	White paint on plaster ceiling	Similarly painted plaster ceilings throughout	0.04%
PC-3	Black paint with green below, on wood window	Similarly painted wooden windows throughout	0.67%
PC-4	Blue paint on wood exterior porch trim	Similarly painted wooden exterior components	0.31%
PC-5	White paint on wood exterior window	Similarly painted exterior window components throughout	0.71%

PAINT CHIP ANALYSIS – 2656 West Grand Boulevard			
Sample ID	Color & Description	Location(s)	Result (% Lead)
PC-1	White paint with grey and brown below on metal door jamb	Similarly painted metal door jambs found in basement	0.41%
PC-2	Grey paint on steel pipe	Similarly painted steel pipes throughout	0.21%
PC-3	White paint on plaster wall in center stairway to 2 nd Floor	Similarly painted plaster walls throughout	0.09%
PC-4	White paint with brown and blue below on wood window	Similarly painted wooden window components	0.83%
PC-5	White paint on exterior brick wall	Similarly painted exterior brick walls	<0.01%



PAINT CHIP ANALYSIS – 2658-60 West Grand Boulevard			
Sample ID	Color & Description	Location(s)	Result (% Lead)
PC-1	White paint on interior basement brick wall	Similarly painted interior basement brick walls	<0.01%
PC-2	Black paint on 1st Floor main entrance door	Similarly painted metal exterior doors	0.07%
PC-3	Cream paint on wood door jamb associated with 1st Floor main entry	Similarly painted wood door jambs throughout	5.95%
PC-4	Orange paint on plaster wall in the stairway to the attic	Similarly painted plaster walls throughout	0.15%
PC-5	White paint on plaster ceiling in the 2 nd Floor's northwestern room	Similarly painted plaster ceilings	<0.01%

The painted surfaces were observed to be in fair to good condition with chipping and peeling paint found mostly in the basements of the buildings. Other painted surfaces not discussed above or discovered during renovation of the buildings should be assumed to contain LCP.

5.0 CONCLUSIONS

The asbestos and lead-containing paint survey of the Motown Museum Expansion Project located at 2648, 2654, 2656 and 2658/60 W. Grand Boulevard in Detroit, Michigan identified following ACM in each building:

- **2648 W. Grand Boulevard**
 - 9” x 9” Floor Tile – Light Tan (mastic is non-ACM)
 - 9” x 9” Floor Tile – Teal (mastic is non-ACM)
 - 9” x 9” Floor Tile – Dark Red (mastic is non-ACM)
 - 9” x 9” Floor Tiles – Black and White Intermixed (mastics are non-ACM)
 - 9” x 9” Floor Tile – Dark Red with Tan Streaks (mastic is non-ACM)
 - 9” x 9” Floor Tile – Tan with Brown Streaks (mastic is non-ACM)
 - Roofing Materials – Pitched Roof (assumed ACM)
 - Roofing Materials – Flat Roof (assumed ACM)



- ***2654 W. Grand Boulevard***
 - Aircell Straight Pipe Insulation
 - Pipe Fitting Insulation associated with Aircell
 - Mortar associated with Boiler Exhaust Duct
 - White Window Glazing – Basement Windows
 - Electrical Wire Wrap – White & Black
 - 9” x 9” Floor Tile – Grey-Green with Cream Streaks (mastic is non-ACM)
 - Roofing Materials – Above Porch
 - Exterior White Window Caulk – 1st & 2nd Floors
 - Exterior White Window Glazing – 1st & 2nd Floors
 - Roofing Materials (assumed ACM)

- ***2656 W. Grand Boulevard***
 - Window Glazing associated with Basement Windows
 - 12” x 12” Floor Tile – Red Brick Pattern (mastic is non-ACM)
 - Electrical Wire Wrap – White & Black
 - 12” x 12” Floor Tile – Light Tan Mottled (mastic is non-ACM)
 - 9” x 9” Floor Tile – Black with Cream Streaks (mastic is non-ACM)
 - 12” x 12” Floor Tile – Cream, Small Stone Pattern (mastic is non-ACM)
 - Roofing Materials (assumed ACM)

- ***2658/60 W. Grand Boulevard***
 - Roofing Shingles (assumed ACM)

The surveys also included sampling and analysis of paint chips to determine lead content. Twenty samples were analyzed for lead using AAS. Lead was detected in the following painted surface:



- ***2648 W. Grand Boulevard***
 - White paint on metal duct
 - Blue paint on wood window
 - Blue paint on wood exterior trim
 - White paint on exterior brick wall

- ***2654 W. Grand Boulevard***
 - Green paint on plaster ceiling
 - White paint on plaster ceiling
 - Black paint with green below, on wood window
 - Blue paint on wood exterior porch trim
 - White paint on wood exterior window

- ***2656 W. Grand Boulevard***
 - White paint with grey and brown below on metal door jamb
 - Grey paint on steel pipe
 - White paint on plaster wall in center stairway to 2nd Floor
 - White paint with brown and blue below on wood window

- ***2658/60 W. Grand Boulevard***
 - Black paint on 1st Floor main entrance door
 - Cream paint on wood door jamb associated with 1st Floor main entry
 - Orange paint on plaster wall in the stairway to the attic

Specifications

Technical specifications are recommended for removal of ACM and management of LCP identified in this report. These specifications can be included in the bidding documents for the upcoming renovation activity.



Abatement Contractor and Air Quality Monitoring

A licensed and qualified abatement contractor should perform the removal and disposal of the ACM. A pre-bid contractor walk-through should be conducted to verify conditions and quantities of ACM identified in this report. NTH can assist with visual observations, verification of removal and cleanup, and air monitoring for asbestos fibers during abatement activity.

6.0 LIMITATIONS

The findings and evaluations presented in this report are based on the scope of services defined herein and have been made to assist Motown Museum in making a reasonable assessment of risk with respect to the possible presence of asbestos and lead-containing paint within the surveyed buildings. This study was performed in accordance with standards of care and diligence considered to be representative of industrial hygiene practices in this region at the present time.

The results of this assessment cannot and should not be construed as a certification of the final condition, actual quantities or absence of any hazardous or regulated substances from, but rather a diligent and prudent review of available data within an established work scope, and time and budgetary restraints.

This report is intended for the exclusive use of Motown Museum. The results of this study may not be relied upon by parties other than those identified above or without the prior knowledge and written consent of NTH Consultants, Ltd.



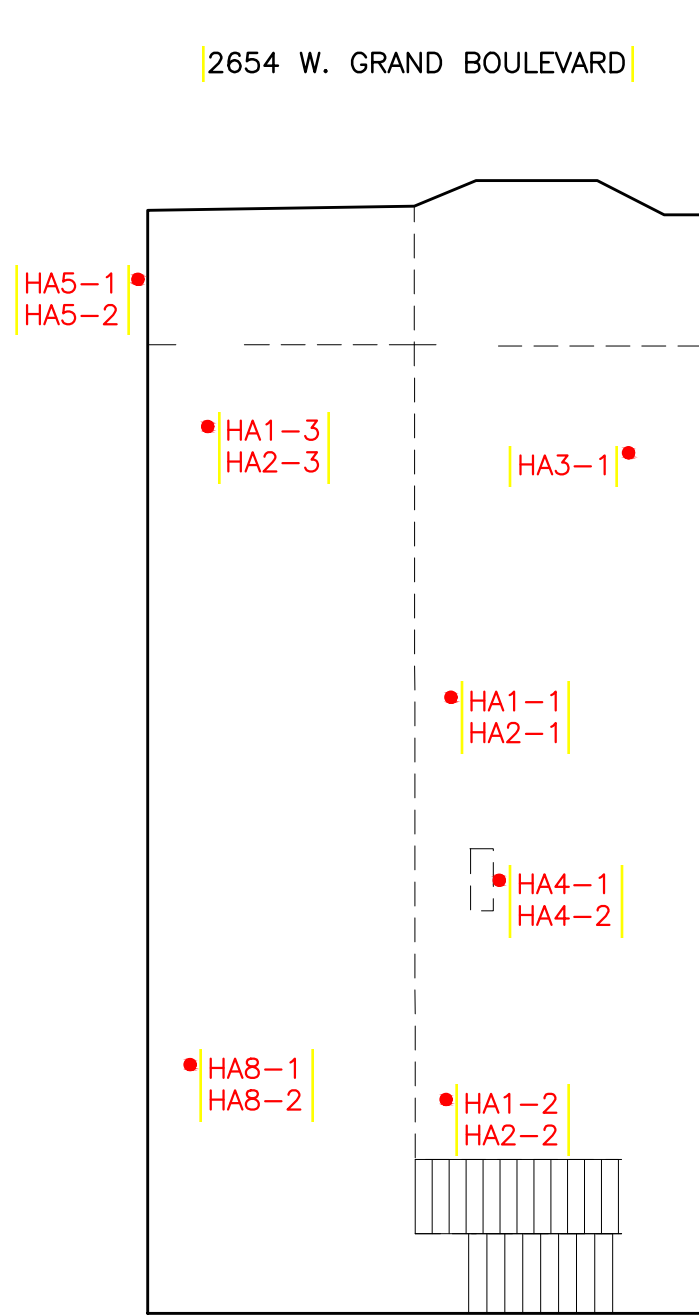
Through the course of this or any such surveys, there are a number of obstacles and limitations that can affect the final outcome of the report. These limitations include, but are not limited to, the following factors: access concerns; presence of stored items; materials that are damaged or cannot be intrusively sampled; and materials that have been replaced during previous renovation activities. Due to these limitations, suspect building materials uncovered during renovation activities and not mentioned in this report should be sampled, analyzed, and dealt with based on the findings, in accordance with the regulations governing such materials.

APPENDIX

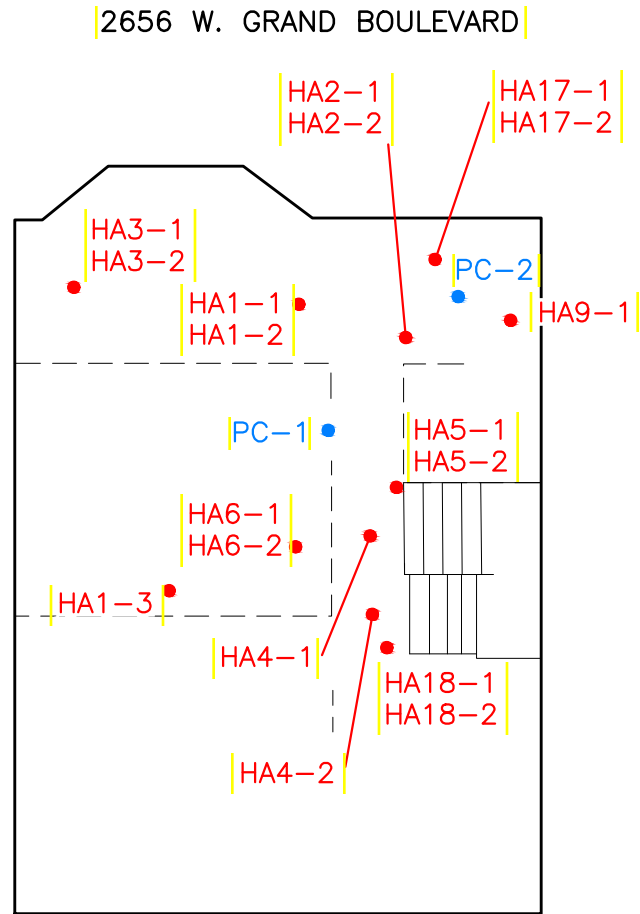


Sample Location Plans

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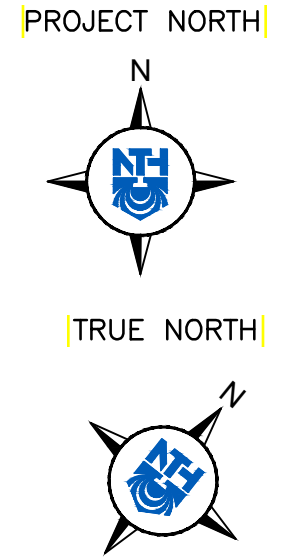
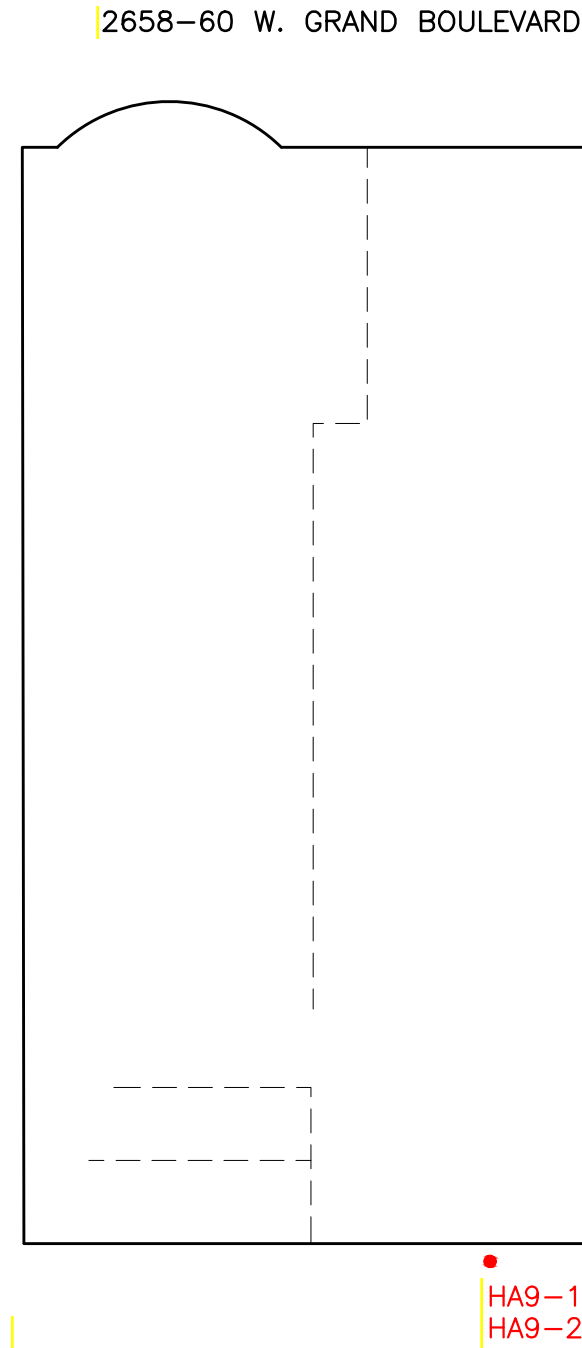


BASEMENT



LEGEND

- BUILDING OUTLINE
- - - INTERIOR WALL
- ASBESTOS SAMPLE LOCATION
- PAINT CHIP SAMPLE LOCATION

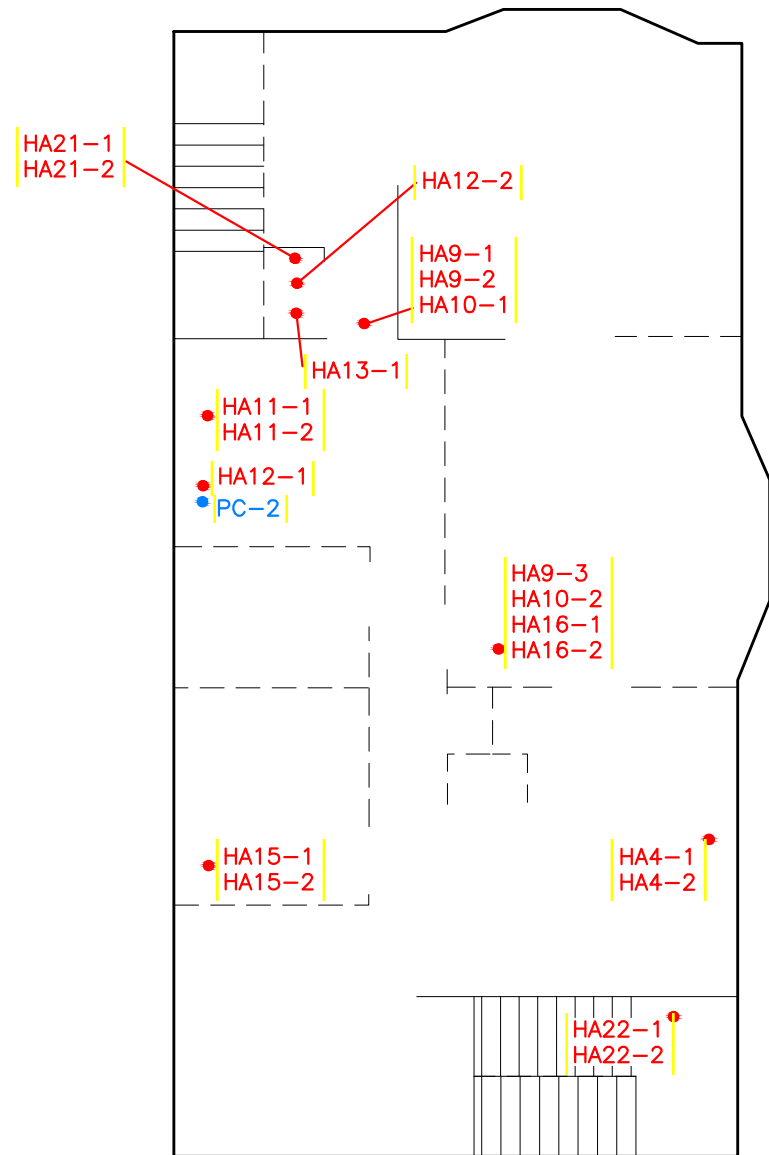


NOTE: LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT A LEGAL SURVEY.

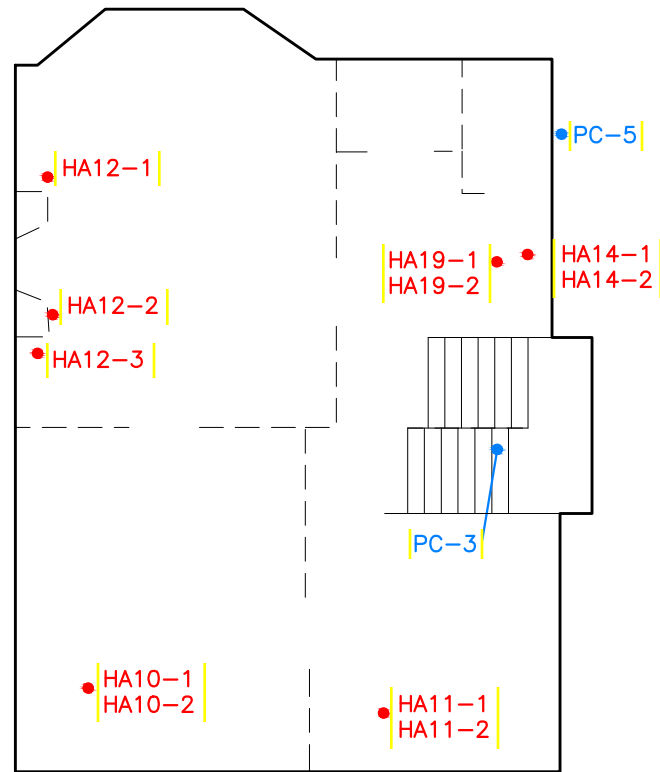
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SAMPLE LOCATION PLAN	
MOTOWN MUSEUM DETROIT, MICHIGAN	
FIGURE: 1A	

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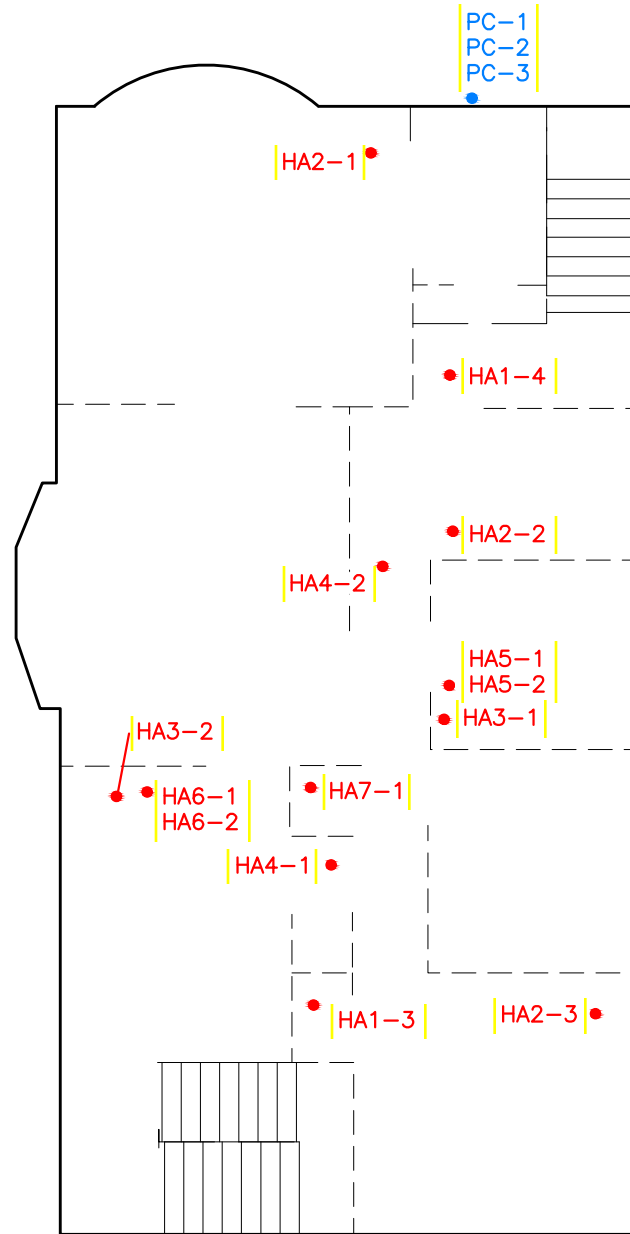
2654 W. GRAND BOULEVARD



2656 W. GRAND BOULEVARD



2658-60 W. GRAND BOULEVARD



PROJECT NORTH



TRUE NORTH



LEGEND

- BUILDING OUTLINE
- - - INTERIOR WALL
- ASBESTOS SAMPLE LOCATION
- PAINT CHIP SAMPLE LOCATION

FIRST FLOOR

NOTE: LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT A LEGAL SURVEY.

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NTH PROJECT No.:	61-170276 01	CAD FILE NAME:	170276-SLP
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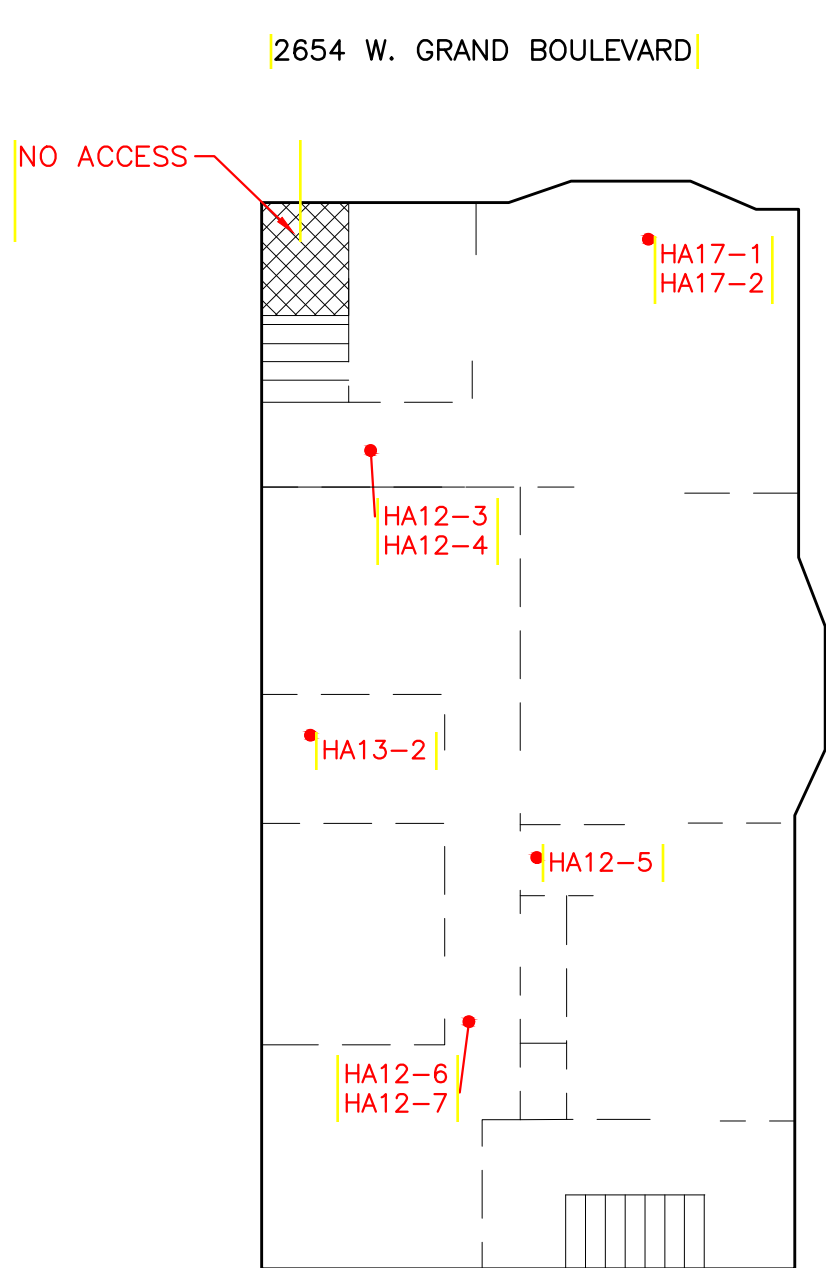
SAMPLE LOCATION PLAN

MOTOWN MUSEUM
DETROIT, MICHIGAN

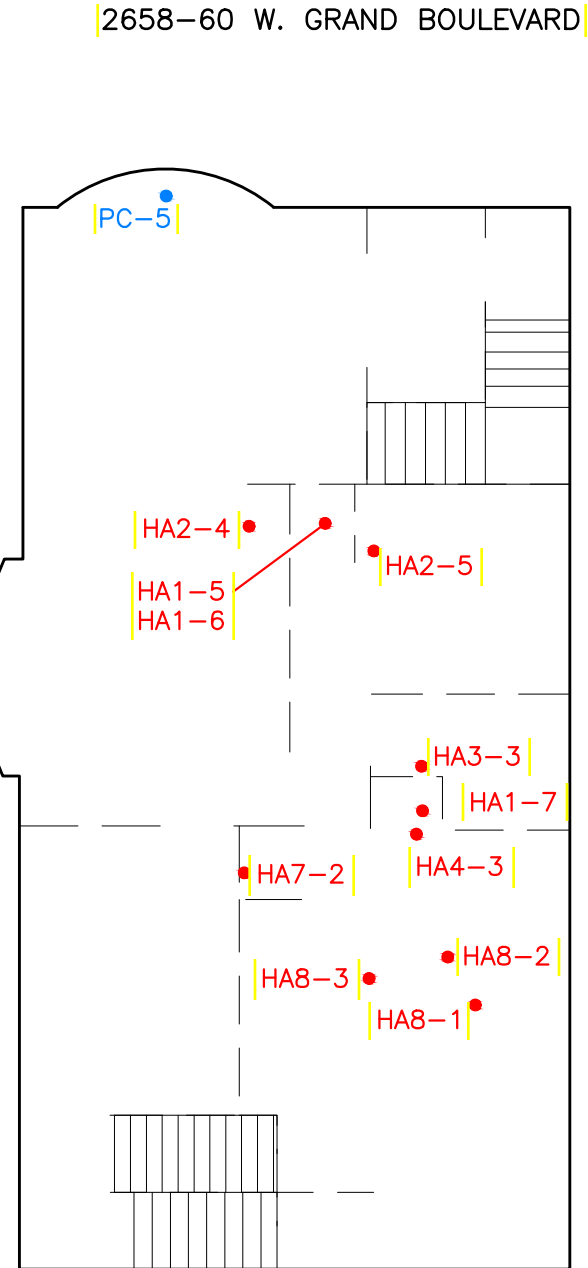
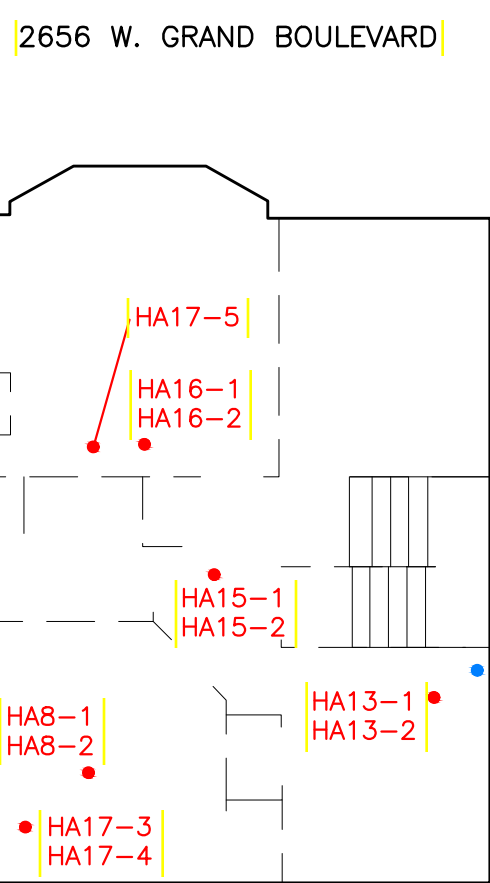
FIGURE:

1B

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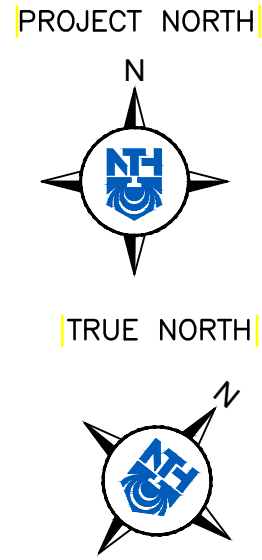


SECOND FLOOR



LEGEND

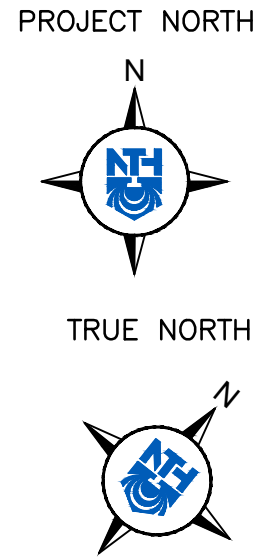
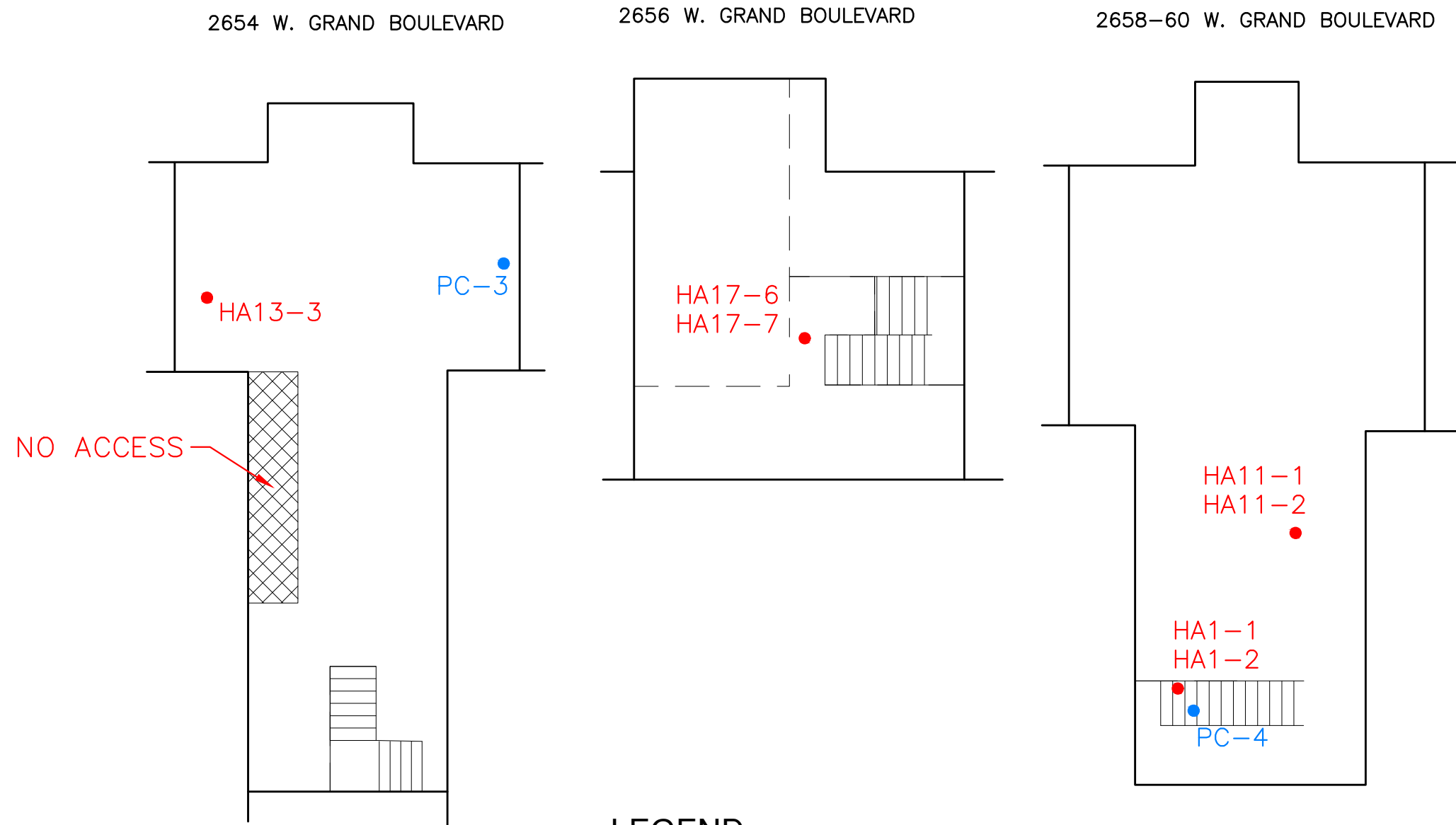
- BUILDING OUTLINE
- - - INTERIOR WALL
- ASBESTOS SAMPLE LOCATION
- PAINT CHIP SAMPLE LOCATION



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SAMPLE LOCATION PLAN MOTOWN MUSEUM DETROIT, MICHIGAN			
FIGURE:		1C	

NOTE: LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT A LEGAL SURVEY.

ATTIC



LEGEND

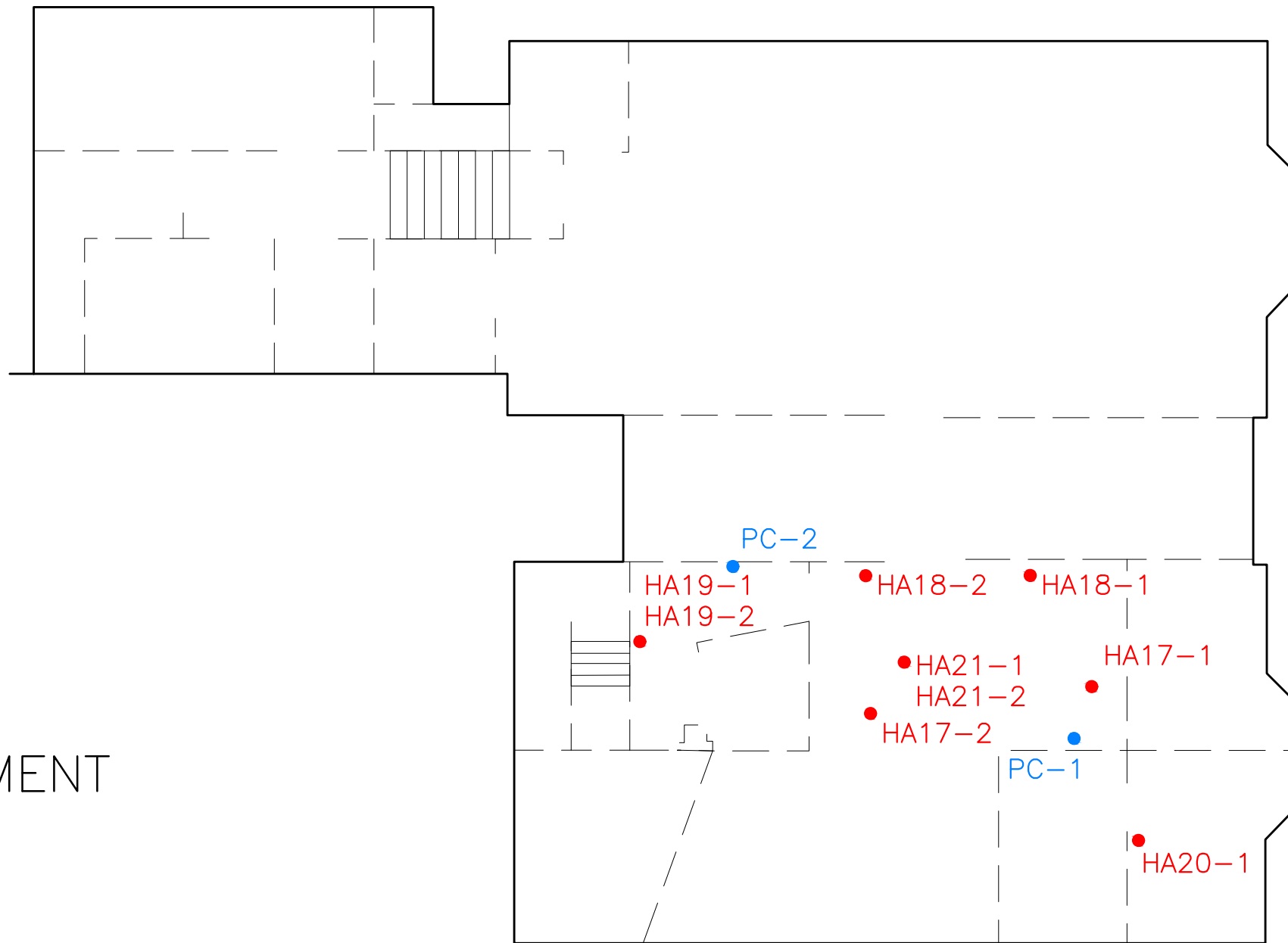
- BUILDING OUTLINE
- - - INTERIOR WALL
- ASBESTOS SAMPLE LOCATION
- PAINT CHIP SAMPLE LOCATION

NOTE: LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT A LEGAL SURVEY.

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DESIGNED BY: MM		INCEPTION DATE:	9/15/2017
DRAWN BY: KMB			
CHECKED BY: CJA			
SAMPLE LOCATION PLAN MOTOWN MUSEUM DETROIT, MICHIGAN			
FIGURE:		1D	

2648 W. GRAND BOULEVARD

BASEMENT



LEGEND

- BUILDING OUTLINE
- - - INTERIOR WALL
- ASBESTOS SAMPLE LOCATION
- PAINT CHIP SAMPLE LOCATION

NOTE: LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT A LEGAL SURVEY.



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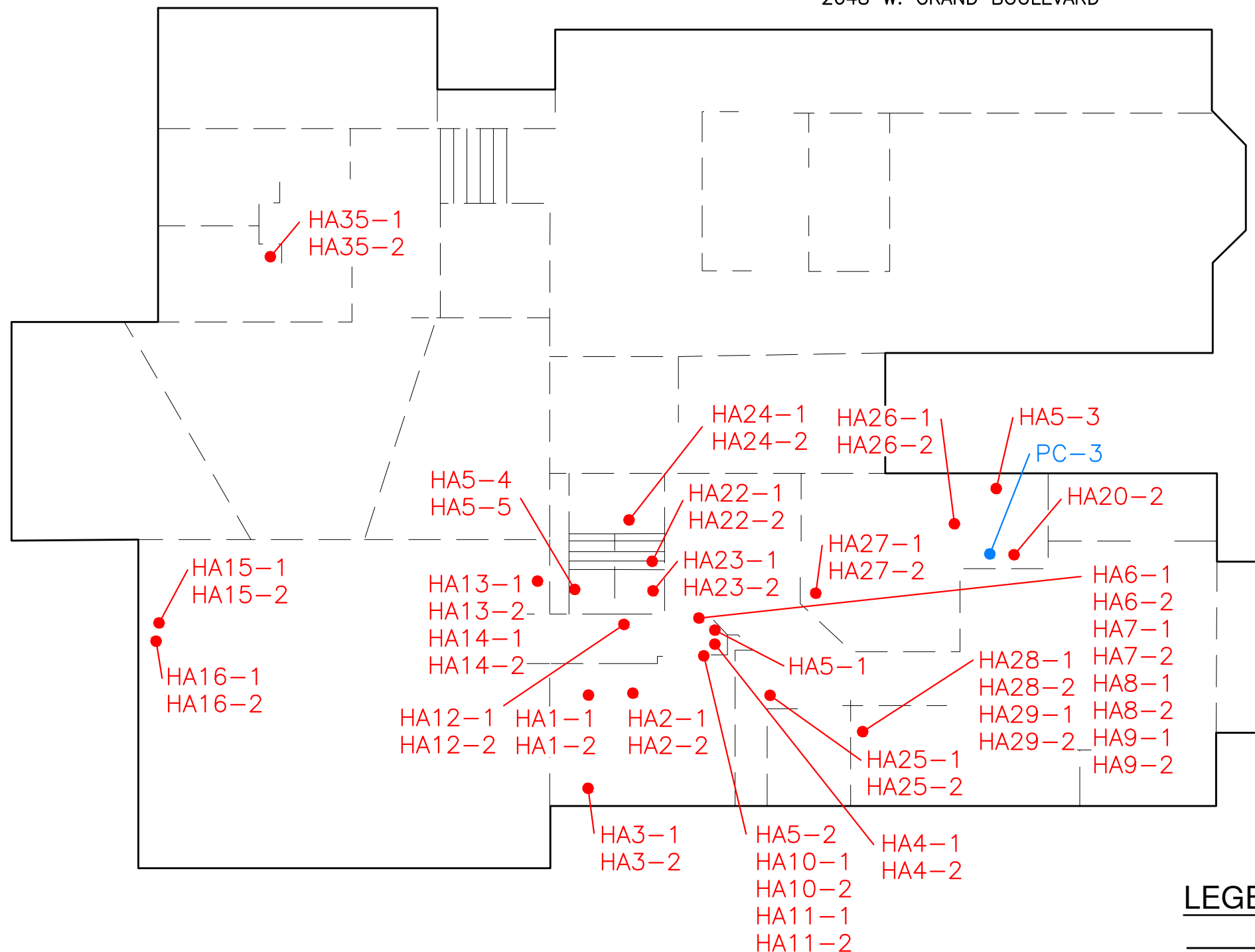
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CHECKED BY:	CJA	INCEPTION DATE:	9/15/2017

SAMPLE LOCATION PLAN
MOTOWN MUSEUM
DETROIT, MICHIGAN

FIGURE:
1E

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2648 W. GRAND BOULEVARD



FIRST FLOOR

LEGEND

- BUILDING OUTLINE
- - - - INTERIOR WALL
- ASBESTOS SAMPLE LOCATION
- PAINT CHIP SAMPLE LOCATION

NOTE: LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT A LEGAL SURVEY.

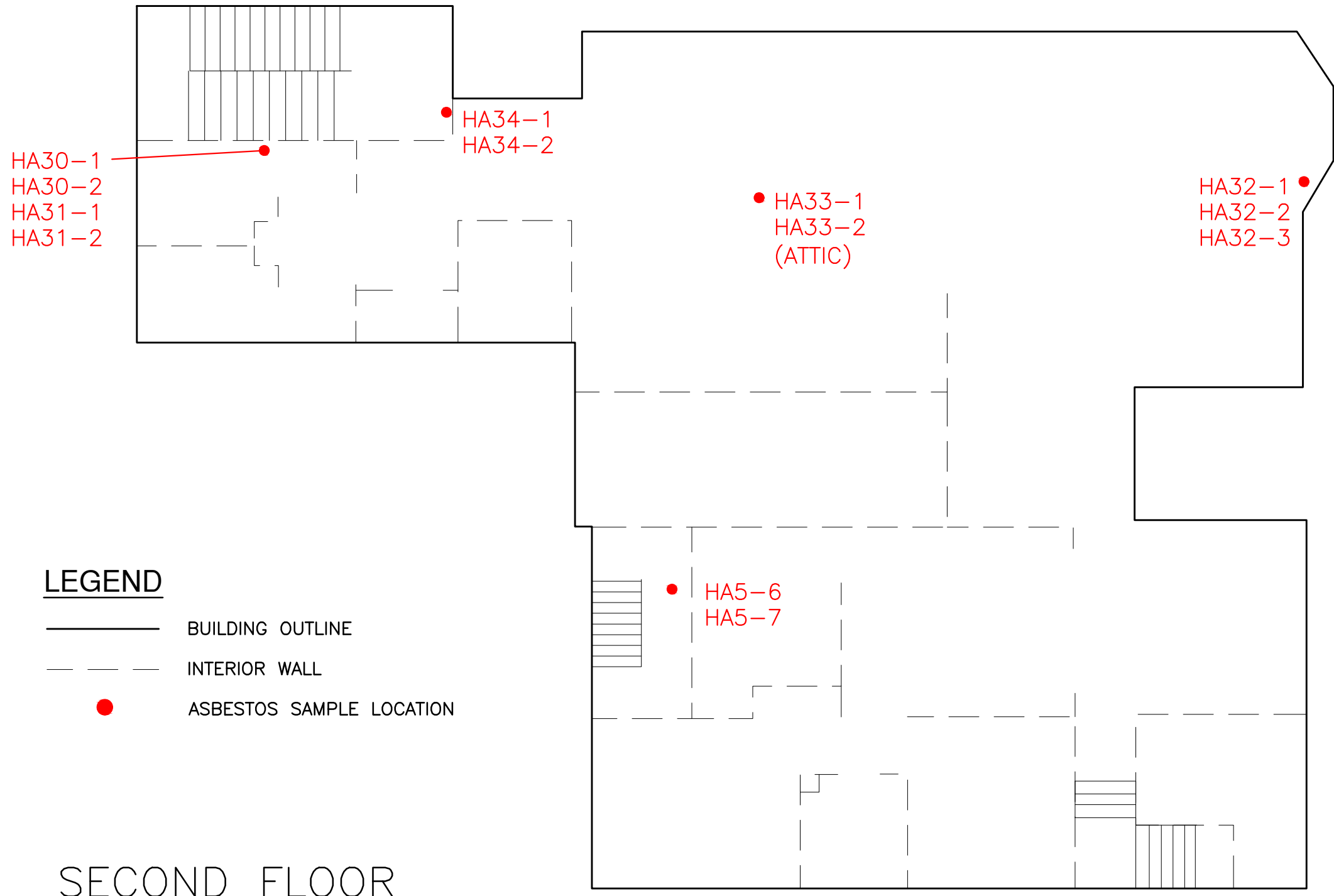
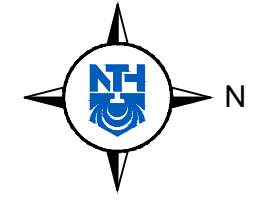


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DESIGNED BY:	MM
DRAWN BY:	KMB
CHECKED BY:	CJA

SAMPLE LOCATION PLAN
 MOTOWN MUSEUM
 DETROIT, MICHIGAN

FIGURE:
1F

2648 W. GRAND BOULEVARD



HA30-1
HA30-2
HA31-1
HA31-2

HA34-1
HA34-2

HA33-1
HA33-2
(ATTIC)

HA32-1
HA32-2
HA32-3

HA5-6
HA5-7

LEGEND

- BUILDING OUTLINE
- - - INTERIOR WALL
- ASBESTOS SAMPLE LOCATION

SECOND FLOOR

NOTE: LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT A LEGAL SURVEY.

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Infrastructure Engineering
and Environmental Services

NTH PROJECT No.:	61-170276 01	CAD FILE NAME:	170276-SLP
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SAMPLE LOCATION PLAN
MOTOWN MUSEUM
DETROIT, MICHIGAN

FIGURE:
1G

APPENDIX



Site Photographs

PHOTOGRAPHS—2648 West Grand Boulevard



Photograph 1: Asbestos-containing 9” x 9” floor tile-light tan (HA3). Mastic is non-ACM.



Photograph 2: Asbestos-containing 9” x 9” floor tile-dark red (HA8), with asbestos-containing 9” x 9” floor tile-teal (HA7) below. Mastics are non-ACM.



Photograph 3: Asbestos-containing 9” x 9” floor tiles-black and white intermixed (HA17). Mastics are non-ACM.



Photograph 4: Asbestos-containing woven white paper gap filler (HA21).

Not Pictured

Not Pictured

Photograph 5: Asbestos-containing 9” x 9” floor tile-dark red with tan streaks (HA23) and tan with brown streaks (HA24). Mastics are non-ACM.

Photograph 6: Assumed asbestos-containing roofing materials-pitched roof (HA37 and flat roof (HA38).

PHOTOGRAPHS—2654 West Grand Boulevard



Photograph 1: Asbestos-containing aircell straight pipe insulation (HA1) and associated fitting insulation (HA2).



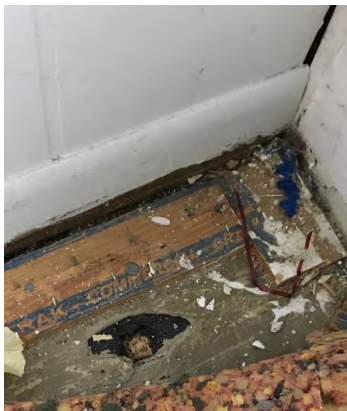
Photograph 2: Asbestos-containing mortar associated with boiler's exhaust duct (HA3).



Photograph 3: Asbestos-containing white window glazing associated with basement windows (HA5).



Photograph 4: Assumed asbestos-containing electrical wire wrap—white and black (HA6).

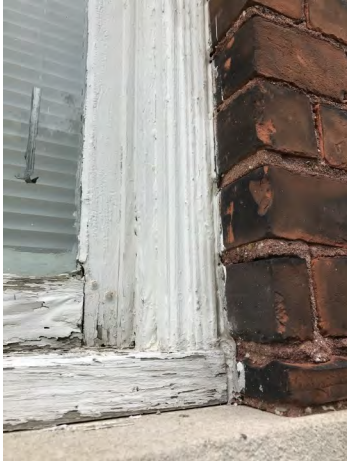


Photograph 5: Asbestos-containing 9" x 9" floor tile—grey-green with cream streaks (HA16). Mastic is non-ACM.



Photograph 6: Assumed asbestos-containing roofing materials above porch (HA20).

SITE PHOTOGRAPHS—2654 West Grand Boulevard



Photograph 7: Asbestos-containing exterior white window caulk and glazing-1st & 2nd floors (HA23 and 24).

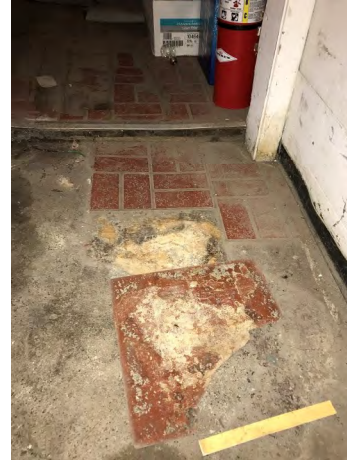
Not Pictured

Photograph 8: Assumed asbestos-containing roofing materials-upper roof (HA25).

PHOTOGRAPHS—2656 West Grand Boulevard



Photograph 1: Asbestos-containing window glazing associated with basement windows (H)



Photograph 2: Asbestos-containing 12” x 12” floor tile-red brick pattern (HA4). Mastic is non-ACM.



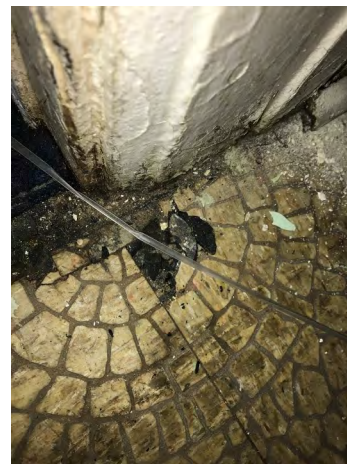
Photograph 3: Assumed asbestos-containing electrical wire wrap-white & black (HA7).



Photograph 4: Asbestos-containing 12” x 12” floor tile-light tan mottled (HA13). Mastic is non-ACM.



Photograph 5: Asbestos-containing 9” x 9” floor tile-black with cream streaks (HA14). Mastic is non-ACM



Photograph 6: Asbestos-containing 12” x 12” floor tile-cream, small stone pattern (HA16). Mastic is non-ACM.

APPENDIX



Asbestos Data



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71889
Date Collected: 09/11/17
Date Received: 09/13/17
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Date Reported: 09/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 01 Cust. #: HA1-1 Material: 2'x4' Suspended CT, Wormtracks, Pinholes Location: Studio A, Control Room Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%
Lab ID #: 71889 - 02 Cust. #: HA1-2 Material: 2'x4' Suspended CT, Wormtracks, Pinholes Location: Studio A, Control Room Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Mineral Wool - 30% Other - 30%
Lab ID #: 71889 - 03 Cust. #: HA2-1 Material: 2'x4' Suspended CT, Large Wormtracks Location: Few Pinholes - Studio A, Control Room Appearance: yellow, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 04 Cust. #: HA2-2 Material: 2'x4' Suspended CT, Large Wormtracks Location: Few Pinholes - Studio A, Control Room Appearance: yellow, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 80% Other - 20%
Lab ID #: 71889 - 05 Cust. #: HA3-1 Material: 9"x9" Floor Tile, Light Tan Location: Studio A, Control Room Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 71889 - 05a Cust. #: HA3-1 Material: Mastic Location: Studio A, Control Room Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 06 Cust. #: HA3-2 Material: 9"x9" Floor Tile, Light Tan Location: Studio A, Control Room Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 71889 - 06a Cust. #: HA3-2 Material: Mastic Location: Studio A, Control Room Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71889 - 07 Cust. #: HA4-1 Material: 1'x1' Ceiling Tile, Painted Black Location: Studio A, Hallway Appearance: brown,fibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 07a Cust. #: HA4-1 Material: Tar Location: Studio A, Hallway Appearance: black,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 71889 - 07b Cust. #: HA4-1 Material: Glue Pod Location: Studio A, Hallway Appearance: brown,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 08 Cust. #: HA4-2 Material: 1'x1' Ceiling Tile, Painted Black Location: Studio A, Hallway Appearance: brown,fibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 08a Cust. #: HA4-2 Material: Tar Location: Studio A, Hallway Appearance: black,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Other - 98%
Lab ID #: 71889 - 08b Cust. #: HA4-2 Material: Glue Pod Location: Studio A, Hallway Appearance: brown,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 09 Cust. #: HA5-1 Material: Original Wall/Ceiling Plaster Finish Coat Location: Studio A, Hallway Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 09a Cust. #: HA5-1 Material: Plaster Base Coat Location: Studio A, Hallway Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 71889 - 10 Cust. #: HA5-2 Material: Original Wall/Ceiling Plaster Finish Coat Location: Studio A, Hallway Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 10a Cust. #: HA5-2 Material: Plaster Base Coat Location: Studio A, Hallway Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 11 Cust. #: HA5-3 Material: Original Wall/Ceiling Plaster Finish Coat Location: Tape Library, Storage Room Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 11a Cust. #: HA5-3 Material: Plaster Base Coat Location: Tape Library, Storage Room Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 71889 - 12 Cust. #: HA5-4 Material: Original Wall/Ceiling Plaster Finish Coat Location: Rear Stairwell, 1st Floor Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 12a Cust. #: HA5-4 Material: Plaster Base Coat Location: Rear Stairwell, 1st Floor Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 71889 - 13 Cust. #: HA5-5 Material: Original Wall/Ceiling Plaster Finish Coat Location: Rear Stairwell, 1st Floor Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 13a Cust. #: HA5-5 Material: Plaster Base Coat Location: Rear Stairwell, 1st Floor Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Hair - 2% Other - 96%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 14 Cust. #: HA5-6 Material: Original Wall/Ceiling Plaster Finish Coat Location: Rear Stairwell, 2nd Floor Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 14a Cust. #: HA5-6 Material: Plaster Base Coat Location: Rear Stairwell, 2nd Floor Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 1% Other - 98%
Lab ID #: 71889 - 15 Cust. #: HA5-7 Material: Original Wall/Ceiling Plaster Finish Coat Location: Rear Stairwell, 2nd Floor Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 15a Cust. #: HA5-7 Material: Plaster Base Coat Location: Rear Stairwell, 2nd Floor Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 2% Hair - 1% Other - 97%
Lab ID #: 71889 - 16 Cust. #: HA6-1 Material: Carpet Adhesive, Yellow Location: Studio A, Hallway Appearance: yellow, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71889 - 17 Cust. #: HA6-2 Material: Carpet Adhesive, Yellow Location: Studio A, Hallway Appearance: yellow, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 18 Cust. #: HA7-1 Material: 9"x9" Floor Tile, Teal Location: Studio A, Hallway Appearance: blue, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 71889 - 18a Cust. #: HA7-1 Material: Glue Location: Studio A, Hallway Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 19 Cust. #: HA7-2 Material: 9"x9" Floor Tile, Teal Location: Studio A, Hallway Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 19a Cust. #: HA7-2 Material: Glue Location: Studio A, Hallway Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 20 Cust. #: HA8-1 Material: 9"x9" Floor Tile, Dark Red Location: Studio A, Hallway Appearance: brown,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 71889 - 20a Cust. #: HA8-1 Material: Mastic Location: Studio A, Hallway Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 21 Cust. #: HA8-2 Material: 9"x9" Floor Tile, Dark Red Location: Studio A, Hallway Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 71889 - 21a Cust. #: HA8-2 Material: Mastic Location: Studio A, Hallway Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 22 Cust. #: HA9-1 Material: Black Tar Paper, Sub Floor Layer Location: Studio A, Hallway Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 23 Cust. #: HA9-2 Material: Black Tar Paper, Sub Floor Layer Location: Studio A, Hallway Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 71889 - 24 Cust. #: HA10-1 Material: 6" Vinyl Cove Base Location: Studio A, Hallway Appearance: black, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 24a Cust. #: HA10-1 Material: Adhesive Location: Studio A, Hallway Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 25 Cust. #: HA10-2 Material: 6" Vinyl Cove Base Location: Studio A, Hallway Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 25a Cust. #: HA10-2 Material: Adhesive Location: Studio A, Hallway Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 26 Cust. #: HA11-1 Material: 6" Vinyl Cove Base, Painted Blue Location: Studio A, Hallway Appearance: beige,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71889
Date Collected: 09/11/17
Date Received: 09/13/17
Date Analyzed: 09/15/17
Date Reported: 09/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 26a Cust. #: HA11-1 Material: Adhesive Location: Studio A, Hallway Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 27 Cust. #: HA11-2 Material: 6" Vinyl Cove Base, Painted Blue Location: Studio A, Hallway Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 27a Cust. #: HA11-2 Material: Adhesive Location: Studio A, Hallway Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 28 Cust. #: HA12-1 Material: 1'x1' Stapled CT, Med. Circular Holes Location: Non-Uniform /Studio A, Hallway Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71889 - 29 Cust. #: HA12-2 Material: 1'x1' Stapled CT, Med. Circular Holes Location: Non-Uniform /Studio A, Hallway Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71889 - 30 Cust. #: HA13-1 Material: 1'x1' Stapled CT, Upper Tiles, L. Fissures Location: Recording Studio Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Mineral Wool - 70% Other - 30%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 31 Cust. #: HA13-2 Material: 1'x1' Stapled CT, Upper Tiles, L. Fissures Location: Recording Studio Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Mineral Wool - 70% Other - 30%
Lab ID #: 71889 - 32 Cust. #: HA14-1 Material: 1'x1' Stapled CT, Lower Tiles, Rough Text. Location: Recording Studio Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Mineral Wool - 60% Other - 40%
Lab ID #: 71889 - 33 Cust. #: HA14-2 Material: 1'x1' Stapled CT, Lower Tiles, Rough Text. Location: Recording Studio Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Mineral Wool - 60% Other - 40%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 34 Cust. #: HA15-1 Material: 1'x1' Ceiling Tile, Pegboard Pattern Location: Recording Studio Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71889 - 34a Cust. #: HA15-1 Material: Glue Pod Location: Recording Studio Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 35 Cust. #: HA15-2 Material: 1'x1' Ceiling Tile, Pegboard Pattern Location: Recording Studio Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 35a Cust. #: HA15-2 Material: Glue Pod Location: Recording Studio Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 36 Cust. #: HA16-1 Material: 1'x1' Ceiling Tile, Med. Circular Holes Location: Non-Uniform - Recording Studio Appearance: brown,fibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71889 - 36a Cust. #: HA16-1 Material: Glue Pod Location: Non-Uniform - Recording Studio Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 37 Cust. #: HA16-2 Material: 1'x1' Ceiling Tile, Med. Circular Holes Location: Non-Uniform - Recording Studio Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71889 - 37a Cust. #: HA16-2 Material: Glue Pod Location: Non-Uniform - Recording Studio Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 38 Cust. #: HA17-1 Material: 9"x9" Floor Tile, Black/White Intermixed Location: Basement, East Building Appearance: black, fibrous, homogenous Layer: 1 of 4	Asbestos Present: YES Chrysotile - 5%	Other - 95%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 38a Cust. #: HA17-1 Material: Mastic Location: Basement, East Building Appearance: black,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 38b Cust. #: HA17-1 Material: White Floor Tile Location: Basement, East Building Appearance: white,fibrous,homogenous Layer: 3 of 4	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 71889 - 38c Cust. #: HA17-1 Material: Mastic Location: Basement, East Building Appearance: black,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 39 Cust. #: HA17-2 Material: 9"x9" Floor Tile, Black/White Intermixed Location: Basement, East Building Appearance: Layer: 1 of 4	Asbestos Present: NOT ANALYZED	
Lab ID #: 71889 - 39a Cust. #: HA17-2 Material: Mastic Location: Basement, East Building Appearance: black,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 39b Cust. #: HA17-2 Material: White Floor Tile Location: Basement, East Building Appearance: Layer: 3 of 4	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 39c Cust. #: HA17-2 Material: Mastic Location: Basement, East Building Appearance: black,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 40 Cust. #: HA18-1 Material: Fiberboard Wall Panels Location: Basement, East Building Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71889 - 41 Cust. #: HA18-2 Material: Fiberboard Wall Panels Location: Basement, East Building Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 42 Cust. #: HA19-1 Material: Drywall Panels Location: Basement, Rear Stairs Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71889 - 42a Cust. #: HA19-1 Material: Cementitious Skim Coat Location: Basement, Rear Stairs Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 43 Cust. #: HA19-2 Material: Drywall Panels Location: Basement, Rear Stairs Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 43a Cust. #: HA19-2 Material: Cementitious Skim Coat Location: Basement, Rear Stairs Appearance: grey, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 44 Cust. #: HA20-1 Material: Older Drywall Location: Basement, East Building Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71889 - 44a Cust. #: HA20-1 Material: Joint Compound Location: Basement, East Building Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - <1%	Cellulose - 1% Other - >98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 45 Cust. #: HA20-2 Material: Older Drywall Location: Tape Library, Storage Room Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71889 - 45a Cust. #: HA20-2 Material: Joint Compound Location: Tape Library, Storage Room Appearance: beige, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - <1%	Cellulose - 1% Other - >98%
Lab ID #: 71889 - 46 Cust. #: HA21-1 Material: Woven White Paper Gap Filler Location: Basement, East Building Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 40%	Cellulose - 40% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 47 Cust. #: HA21-2 Material: Woven White Paper Gap Filler Location: Between Joists at Center Hall Doorway Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 71889 - 48 Cust. #: HA22-1 Material: Dark Red Stair Tread Location: Basement, Rear Stairwell Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 48a Cust. #: HA22-1 Material: Glue Location: Basement, Rear Stairwell Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 49 Cust. #: HA22-2 Material: Dark Red Stair Tread Location: Basement, Rear Stairwell Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 49a Cust. #: HA22-2 Material: Glue Location: Basement, Rear Stairwell Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 50 Cust. #: HA23-1 Material: 9"x9" Floor Tile, Dark Red w/ Tan Streaks Location: Rear Stairwell, 1st Floor Landing Appearance: brown,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 50a Cust. #: HA23-1 Material: Mastic Location: Rear Stairwell, 1st Floor Landing Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 51 Cust. #: HA23-2 Material: 9"x9" Floor Tile, Dark Red w/ Tan Streaks Location: Rear Stairwell, 1st Floor Landing Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 71889 - 51a Cust. #: HA23-2 Material: Mastic Location: Rear Stairwell, 1st Floor Landing Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Project: Motown Museum Expansion
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71889
Date Collected: 09/11/17
Date Received: 09/13/17
Date Analyzed: 09/15/17
Date Reported: 09/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 52 Cust. #: HA24-1 Material: 9"x9" Floor Tile, Tan w/ Brown Streaks Location: Rear Stairwell, 1st/2nd Floors Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 71889 - 52a Cust. #: HA24-1 Material: Glue Location: Rear Stairwell, 1st/2nd Floors Appearance: brown, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 53 Cust. #: HA24-2 Material: 9"x9" Floor Tile, Tan w/ Brown Streaks Location: Rear Stairwell, 1st/2nd Floors Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 53a Cust. #: HA24-2 Material: Glue Location: Rear Stairwell, 1st/2nd Floors Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 54 Cust. #: HA25-1 Material: 12"x12" FT, Red w/ Black/White Streaks Location: 1st Floor, East Building Appearance: red,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 54a Cust. #: HA25-1 Material: Glue Location: 1st Floor, East Building Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 55 Cust. #: HA25-2 Material: 12"x12" FT, Red w/ Black/White Streaks Location: Hall/Closets (2) Appearance: red,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 55a Cust. #: HA25-2 Material: Glue Location: Hall/Closets (2) Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 56 Cust. #: HA26-1 Material: 12"x12" Floor Tile, White w/ Blue Streaks Location: 1st Floor, East Building Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 56a Cust. #: HA26-1 Material: Mastic Location: 1st Floor, East Building Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71889 - 57 Cust. #: HA26-2 Material: 12"x12" Floor Tile, White w/ Blue Streaks Location: Tape Library Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 57a Cust. #: HA26-2 Material: Mastic Location: Tape Library Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 58 Cust. #: HA27-1 Material: 1'x1' CT, Small/Med. Non-Uniform Circ. Hole: Location: 1st Floor, East Building Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Mineral Wool - 40% Other - 20%
Lab ID #: 71889 - 58a Cust. #: HA27-1 Material: Glue Pod Location: 1st Floor, East Building Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71889 - 59 Cust. #: HA-27-2 Material: 1'x1' CT, Small/Med. Non-Uniform Circ. Hole: Location: Tape Library Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Mineral Wool - 40% Other - 20%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 59a Cust. #: HA-27-2 Material: Glue Pod Location: Tape Library Appearance: beige,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 60 Cust. #: HA28-1 Material: 6" Vinyl Cove Base, White Location: 1st Floor, East Building Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 60a Cust. #: HA28-1 Material: Glue Location: 1st Floor, East Building Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 61 Cust. #: HA28-2 Material: 6" Vinyl Cove Base, White Location: SE Exhibit w/ Window Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 61a Cust. #: HA28-2 Material: Glue Location: SE Exhibit w/ Window Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 62 Cust. #: HA29-1 Material: Crosshatch Wall Covering Painted White Location: 1st Floor, East Building Appearance: white,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 63 Cust. #: HA29-2 Material: Crosshatch Wall Covering Painted White Location: SE Exhibit w/ Window Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 71889 - 64 Cust. #: HA30-1 Material: Sheet Flooring, White/Grey w/ Purple Dots Location: 2nd Floor, West Building Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 71889 - 65 Cust. #: HA30-2 Material: Sheet Flooring, White/Grey w/ Purple Dots Location: Men's Bathroom Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 66 Cust. #: HA31-1 Material: 4" Vinyl Cove Base, Dark Green Location: 2nd Floor, West Building Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 66a Cust. #: HA31-1 Material: Glue Location: 2nd Floor, West Building Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 67 Cust. #: HA31-2 Material: 4" Vinyl Cove Base, Dark Green Location: Men's Bathroom Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 67a Cust. #: HA31-2 Material: Glue Location: Men's Bathroom Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 68 Cust. #: HA32-1 Material: Drywall Location: 2nd Floor, West Building Appearance: white,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 71889 - 68a Cust. #: HA32-1 Material: Joint Compound Location: 2nd Floor, West Building Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 69 Cust. #: HA32-2 Material: Drywall Location: North Wall Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%
Lab ID #: 71889 - 69a Cust. #: HA32-2 Material: Joint Compound Location: North Wall Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 70 Cust. #: HA32-3 Material: Drywall Location: North Wall Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Fiberglass - 5% Other - 75%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 70a Cust. #: HA32-3 Material: Joint Compound Location: North Wall Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 71 Cust. #: HA34-1 Material: Sheet Flooring, Blue/Green, Raised Circles Location: 2nd Floor, West Building Appearance: blue, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 71a Cust. #: HA34-1 Material: Glue Location: 2nd Floor, West Building Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 72 Cust. #: HA34-2 Material: Sheet Flooring, Blue/Green, Raised Circles Location: SW Stairwell Appearance: blue,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 72a Cust. #: HA34-2 Material: Glue Location: SW Stairwell Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 73 Cust. #: HA35-1 Material: 4" Vinyl Cove Base, Dark Grey Location: 1st Floor, West Building Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 73a Cust. #: HA35-1 Material: Glue Location: 1st Floor, West Building Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 74 Cust. #: HA35-2 Material: 4" Vinyl Cove Base, Dark Grey Location: Women's Bathroom Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 74a Cust. #: HA35-2 Material: Glue Location: Women's Bathroom Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 75 Cust. #: HA36-1 Material: Door Caulk, Off White Location: Exterior, NW Door Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 76 Cust. #: HA36-2 Material: Door Caulk, Off White Location: Exterior, NW Door Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71889 - 77 Cust. #: HA33-1 Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Date Reported: 09/18/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71889 - 78 Cust. #: HA33-2 Material: Tar Paper Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

71889

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Lab Use Only
 Log-In: _____
 Report: _____
 Fax: _____
 Verbal: _____
 Email: _____

Date of Survey: 09/11/2017
 Project: MO TOWN MUSEUM EXPANSION
 Project # 01-170276-01
 Contact Person: Mike Millard
 Email: m.millard@nthconsultants.com
Circle analyses required, indicate type and quantity

Customer Name: NTH Consultants
 Address: 41780 Six Mile Road
 City, St., Zip: Northville, MI 48168
 Phone: (586) 876-7189 Fax: _____
 Turn Around Time: (circle one) 24 hour 72 hour
Terms and conditions on the other side.

Asbestos: Wipe Point Count _____ PCM
 Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint _____ Bulk _____
 Mold: _____ Air/Zefon/AIergencoD _____ BioSIS _____ Tape _____
 TEM: _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Rush _____
 48 hour _____
 Other: _____
 Samples received after 3pm
 logged in next morning

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	HA1-1	2'x4' Suspended Ceiling Tile / Studio A, Control Rm			
2	L1-2	Wd contractors + Pinholes / " L			
3	HA2-1	2'x4' Suspended Ceiling Tile / Studio A, Control Rm			
4	L2-2	Large Wd contractors + Few Pinholes / " L			
5	HA3-1	9"x9" Floor Tile + Mastic / Studio A, Control Rm			
6	L3-2	Light Tan / " L			
7	HA4-1	1'x1' Ceiling Tile + Studio A, Hallway			
8	L4-2	Brown GIVE Pods (Painted Black) / " L			
9	HA5-1	Original wall + Studio A, Hallway			
10	L5-2	Ceiling Plaster / " L			
11	L5-3	Tape Library, Storage Rm			
12	L5-4	Rear Stairwell, 1st Floor			

Relinquished By: [Signature] Date: 9/12/17
 Received By: [Signature] Date: SEP 13 2017
 Relinquished By: _____ Date: _____
 Received By: _____ Date: _____

Time/Date: _____
 Time/Date: _____

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 Report: _____
 Fax: _____
 Verbal: _____
 Email: _____

Date of Survey: 09/11/2017
 Project: MeTown Museum Expansion
 Project # 01-170276-01
 Contact Person: Mike Millard
 Email: m.millard@nthconsultants.com
Circle analyses required, indicate type and quantity

Customer Name: NTH Consultants
 Address: 4178D Six Mile Road
 City, St., Zip: Northville, MI 48168
 Phone: (586) 876-7189 Fax: _____
 Turn Around Time: (circle one) 24 hour Terms and conditions on the other side.

Asbestos: Bulk Wipe Point Count PCM
 Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO Air Paint Bulk
 Mold: Bulk Air/Zefon/AIergencoD BioSIS Tape
 TEM: Bulk/NOB NIOSH 7402 EPA Level II Other _____

Rush 24 hour
 48 hour 72 hour
 Other: TTP yes no
 (Test Till Positive)
 Samples received after 3pm
 logged in next morning

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	5-5	11	1	11	
14	5-6	Rear Stairwell, 2nd Floor			
15	5-7	11	1	11	
16	HA6-1	Carpet Adhesive - / Studio A, Hallway			
17	16-2	Yellow / 11			
18	HA7-1	9" x 9" Floor Tile + mastic / Studio A, Hallway			
19	17-2	Teal / 11			
20	HA8-1	9" x 9" Floor Tile + mastic / Studio A, Hallway			
21	18-2	Dark Red / 11			
22	HA9-1	Black Tar Paper / Studio A, Hallway			
23	19-2	Sub Floor Layer / 11			
24	HA10-1	6" Vinyl Cove Base + / Studio A, Hallway			

Relinquished By: Zep Millard Received By: _____
 Date: 9/12/17 Time/Date: _____
 Revision R4 Date: May/2017
 Relinquished By: _____ Received By: _____
 Date: SEP 13 2017 Time/Date: _____

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Address: 4178D Six Mile Road
City, St., Zip: Northville, MI 48168
Phone: (586) 876-7189 Fax: _____
Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Date of Survey: 09/11/2017
Project: MO TOWN MUSEUM EXPANSION
Project # 01-170276-01
Contact Person: Mike Millard
Email: mnmillard@nthconsultants.com
Circle analyses required, indicate type and quantity

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint _____ Bulk _____
Mold: Bulk _____ Air/Zefon/AIergencoD _____ BioSIS _____ Tape _____
TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Rush _____
48 hour _____
Other: _____ TTP yes no
(Test Till Positive)
Samples received after 3pm
logged in next morning

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	L 10-2	Adhesive, Black / "	L	"	
26	HA11-1	6" Vinyl Cove Base + Studio A, Hallway	"	"	
27	L 11-2	Adhesive, Tan (Painted Blue) / "	L	"	
28	HA12-1	1'x1' Staped Ceiling Tile / Studio A, # hallway	"	"	
29	L 12-2	Medium Circular Holes, Non-Uniform / "	L	"	
30	HA13-1	1'x1' Staped Ceiling Tile / Recording Studio	"	"	
31	L 13-2	Upper Tiles Large Fissures, smoky dark medium grays + white / "	L	"	
32	HA14-1	1'x1' Staped Ceiling Tile / Recording Studio	"	"	
33	L 14-2	Lower Tiles Rough Texture white / "	L	"	
34	HA15-1	1'x1' Ceiling Tile w/ Recording Studio	"	"	
35	L 15-2	Yellow Adhesive Peaked Pattern / "	L	"	
36	HA16-1	1'x1' Ceiling Tile / Recording Studio	"	"	

Relinquished By: [Signature]
Date: 9/12/17
Revision R4 Date: May/2017

Received By: _____
Date: SEP 13 2017

Relinquished By: _____
Date: _____

Received By: _____
Time/Date: _____

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Lab Use Only
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 Report: _____
 Fax: _____
 Verbal: _____
 Email: _____

Date of Survey: 09/11/2017
 Project: MoTown Museum Expansion
 Project # 01-170216-01
 Contact Person: Mike Millard
 Email: m.millard@nthconsultants.com
Circle analyses required, indicate type and quantity

Customer Name: NTH Consultants
 Address: 4178D Six Mile Road
 City, St., Zip: Northville, MI 48168
 Phone: (586) 876-7189 Fax: _____
 Turn Around Time: (circle one) 24 hour Terms and conditions on the other side.

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint _____ Bulk _____
 Mold: Bulk _____ Air/Zefon/AIergencoD _____ BioSIS _____ Tape _____
 TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Other: _____
 Samples received after 3pm
 logged in next morning

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	116-2	medium circular holes non-uniform w/ brown glue pads	1	"	
38	HA17-1	9" x 9" Floor Tile + Mastic	Basement	East	
39	117-2	Black + white Intermixed	Building		
40	HA18-1	Fiberboard	Basement	East Building	
41	118-2	wall Panels	1	"	
42	HA19-1	Drywall Panels w/	Basement	Rear	
43	119-2	Acoustical Skimcoat	Stairs		
44	HA20-1	older Drywall	Basement	East Building	
45	120-2	Joint Compound	Tape Library	Storage Room	
46	HA21-1	Woven white Paper	Basement	East Building	
47	121-2	Gap Filler	Between Joists	Center Hallway	
48	HA22-1	Dark Red Stair Tread	Basement		

Relinquished By: Mike Millard Received By: _____
 Date: 9/12/17 Time/Date: _____
 Revision R4 Date: May/2017

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 City, St., Zip: Northville, MI 48168
 Phone: (586) 876-7189 Fax: _____
 Turn Around Time: (circle one) 24 hour Terms and conditions on the other side.

Date of Survey: 09/11/2017
 Project: Northville Museum Expansion
 Project # 01-170276-01
 Contact Person: Mike Millard
 Email: m.millard@nthconsultants.com
Circle analyses required, indicate type and quantity

Lab Use Only
 Log-In: _____
 Report: _____
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 Email: _____

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint _____ Bulk _____
 Mold: Bulk _____ Air/Zefon/AIergencoD _____ BioSIS _____ Tape _____
 TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Other: _____
 Samples received after 3pm
 logged in next morning

Lab ID	Customer ID #	Material/Location	Volume	Results
49	J-22-Z	+ Adhesive / Rear Stairwell	Asca	
50	HA23-1	9" x 9" Floor Tile mastic / Rear Stairwell,		
51	J-23-Z	Dark Red w/ Tan Streaks / 1st Floor Landing		
52	HA24-1	9" x 9" Floor Tile mastic / Rear Stairwell,		
53	J-24-Z	Tan w/ Brown Streaks / 1st + 2nd Floors		
54	HA25-1	12" x 12" Floor Tile + mastic / 1st Floor East Bldg		
55	J-25-Z	Red w/ Black + white streaks / Hall + closets		
56	HA26-1	12" x 12" Floor Tile mastic / 1st Floor East Bldg		
57	J-26-Z	White w/ Blue Streaks / Tape Library		
58	HA27-1	1' x 1' Ceiling Tile / 1st Floor East Building		
59	J-27-Z	Small + medium non-uni form circular holes w/ yellow blue pads / Tape Library		
60	HA28-1	10" Vinyl Cove Base / 1st Floor East Building		

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Phone: (586) 876-7189 Fax: _____
Turn Around Time: (circle one) 24 hour Terms and conditions on the other side.

Date of Survey: 09/11/2017
Project: Northville Museum Expansion
Project # 01-170216-01
Contact Person: Mike Millard
Email: m.millard@nthconsultants.com
Circle analyses required, indicate type and quantity

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint _____ Bulk _____
Mold: Bulk _____ Air/Zefon/AlegencoD _____ BioSIS _____ Tape _____
TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
61	L28-2	+ Adhesive, white	SE exhibit w/ window		
62	HA29-1	Crosshatch wall covering	1st Floor, East Bldg.		
63	L29-2	Painted white	SE exhibit w/ window		
64	HA30-1	Sheet Flooring	2nd Floor, West Building		
65	L30-2	White/Grey w/ Polyletreenets	Men's Bathroom		
66	HA31-1	4" Vinyl cave Base +	2nd Floor, West Bldg.		
67	L31-2	Adhesive, Dark Green	Men's Bathroom		
68	HA32-1	Drywall +	2nd Floor, West Building		
69	L32-2	Joint compound / North Wall			
70	L32-3	I / "	"		
71	HA34-1	Sheet Flooring	2nd Floor, West Building		
72	L34-2	Blue/Green Raised Circles	SNW Stairwell		

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Date: 9/12/17 Time/Date: _____
Revision R4 Date: May/2017

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Customer Name: NTH Consultants
Address: 41780 Six Mile Road
City, St., Zip: Northville, MI 48168
Phone: (586) 876-7189 Fax: _____
Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Date of Survey: 09/11/2017
Project: Northville Museum Expansion
Project # 01-170276-01
Contact Person: Mike Millard
Email: m.millard@nthconsultants.com
Circle analyses required, indicate type and quantity

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Rush _____
48 hour _____
Other: _____ TTP yes no (Test Till Positive)
Samples received after 3pm logged in next morning

Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint _____ Bulk _____
Mold: _____ Air/Zefon/AlergencoD _____ BioSIS _____ Tape _____
TEM: _____ Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
73	HA 35-1	4" Vinyl Cove Base	1st Floor West Bldg		
74	J 35-2	+ Adhesive, Dark Grey	Women's Bathroom		
75	HA 36-1	Door Caulk	Exterior, NW Door		
76	J 36-2	OFF-white	"		
77	HA 33 - 1				
78	J 33 - 2				

Relinquished By: [Signature] Received By: _____
Date: 9/12/17 Time/Date: _____
Revision R4 Date: May/2017
APEX RESEARCH



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 01 Cust. #: HA1-1 Material: Aircell Straight Pipe Insulation Location: Basement, E. Half, Center Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 25%	Cellulose - 60% Other - 15%
Lab ID #: 71492 - 02 Cust. #: HA1-2 Material: Aircell Straight Pipe Insulation Location: Basement, E. Half, S. Center Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 71492 - 03 Cust. #: HA1-3 Material: Aircell Straight Pipe Insulation Location: Basement, West Half 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.



NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 04 Cust. #: HA2-1 Material: Pipe Fitting Simulation Assoc. w/ Aircell Location: Basement, E. Half, Center Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 30%	Cellulose - 10% Other - 60%
Lab ID #: 71492 - 05 Cust. #: HA2-2 Material: Pipe Fitting Simulation Assoc. w/ Aircell Location: Basement, E. Half, S. Center Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 71492 - 06 Cust. #: HA2-3 Material: Pipe Fitting Simulation Assoc. w/ Aircell Location: Basement, W. Half, Corner Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 07 Cust. #: HA3-1 Material: Loose FG Ins. Assoc. w/ Oil Tank Location: Basement, E. Half, Oil Tank Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Fiberglass - 80% Other - 20%
Lab ID #: 71492 - 08 Cust. #: HA4-1 Material: Mortar Assoc. w/ Boiler Exhaust Duct Location: Basement, E. Half, Boiler Exhaust Duct Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 71492 - 09 Cust. #: HA4-2 Material: Mortar Assoc. w/ Boiler Exhaust Duct Location: Basement, E. Half, Boiler Exhaust Duct Appearance: Layer: of	Asbestos Present: NOT ANALYZED	

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 10 Cust. #: HA5-1 Material: White Window Glaze Location: Basement, W. Half, Small Room Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 71492 - 11 Cust. #: HA5-2 Material: White Window Glaze Location: Basement, W. Half, Small Room Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 71492 - 12 Cust. #: HA8-1 Material: Wood Grain Vinyl Location: Basement, W. Half, Rolled Against Wall Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%

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

Robert T. Letarte Jr., Laboratory Director

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Project: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 13 Cust. #: HA8-2 Material: Sheet Flooring Location: Basement, W. Half, Rolled Against Wall Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 71492 - 14 Cust. #: HA9-1 Material: Yellow Carpet Adhesive Location: 1st Fl, NW Closet Under Stairs Appearance: brown, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71492 - 15 Cust. #: HA9-2 Material: Yellow Carpet Adhesive Location: 1st Fl, NW Closet Under Stairs Appearance: brown, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 16 Cust. #: HA9-3 Material: Yellow Carpet Adhesive Location: 1st Fl, NE Corner at Doorway to Hallway Appearance: beige, nonfibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71492 - 17 Cust. #: HA10-1 Material: Black Tar Paper Below Carpet Location: 1st Fl, NW Closet Under Stairs Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 71492 - 18 Cust. #: HA10-2 Material: Black Tar Paper Below Carpet Location: 1st Fl, NE Corner at Doorway to Hallway Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 19 Cust. #: HA11-1 Material: 2'x2' Suspended CT, Small Gouges, Pinholes Location: 1st Fl, Center of W. Side at Wall Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Mineral Wool - 30% Other - 20%
Lab ID #: 71492 - 20 Cust. #: HA11-2 Material: 2'x2' Suspended CT, Small Gouges, Pinholes Location: 1st Fl, Center of W. Side at Wall Appearance: beige, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Mineral Wool - 30% Other - 20%
Lab ID #: 71492 - 21 Cust. #: HA12-1 Material: Wall/Ceiling Plaster Finish Coat Location: 1st Fl, West Wall, Center Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 21a Cust. #: HA12-1 Material: Plaster Base Coat Location: 1st Fl, West Wall, Center Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 71492 - 22 Cust. #: HA12-2 Material: Wall/Ceiling Plaster Finish Coat Location: 1st Fl, NW Closet Under Stairs Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 22a Cust. #: HA12-2 Material: Plaster Base Coat Location: 1st Fl, NW Closet Under Stairs Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 23 Cust. #: HA12-3 Material: Wall/Ceiling Plaster Finish Coat Location: 2nd Floor Stairwell To Attic Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 23a Cust. #: HA12-3 Material: Plaster Base Coat Location: 2nd Floor Stairwell To Attic Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 71492 - 24 Cust. #: HA12-4 Material: Wall/Ceiling Plaster Finish Coat Location: 2nd Floor Stairwell To Attic Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 24a Cust. #: HA12-4 Material: Plaster Base Coat Location: 2nd Floor Stairwell To Attic Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 71492 - 25 Cust. #: HA12-5 Material: Wall/Ceiling Plaster Finish Coat Location: 2nd Fl, W. Half, Closet at Center Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 25a Cust. #: HA12-5 Material: Plaster Base Coat Location: 2nd Fl, W. Half, Closet at Center Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 26 Cust. #: HA12-6 Material: Wall/Ceiling Plaster Finish Coat Location: 2nd Fl, W. Half, Office Closet Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 26a Cust. #: HA12-6 Material: Plaster Base Coat Location: 2nd Fl, W. Half, Office Closet Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 71492 - 27 Cust. #: HA12-7 Material: Wall/Ceiling Plaster/Drywall Location: 2nd Fl, W. Half, Office Closet Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 27a Cust. #: HA12-7 Material: Joint Compound Location: 2nd Fl, W. Half, Office Closet Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 28 Cust. #: HA13-1 Material: Drywall Location: 1st Fl, NW Closet Under Stairs Appearance: white,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71492 - 28a Cust. #: HA13-1 Material: Joint Compound Location: 1st Fl, NW Closet Under Stairs Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 29 Cust. #: HA13-2 Material: Drywall Location: 2nd Fl, W. Half Center Office Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71492 - 29a Cust. #: HA13-2 Material: Joint Compound Location: 2nd Fl, W. Half Center Office Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 30 Cust. #: HA13-3 Material: Drywall Location: Attic, NW Corner Wall Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 30a Cust. #: HA13-3 Material: Joint Compound Location: Attic, NW Corner Wall Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 31 Cust. #: HA14-1 Material: White Sink Undercoating Location: 1st Floor, Kitchen Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71492 - 32 Cust. #: HA14-2 Material: White Sink Undercoating Location: 1st Floor, Kitchen Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 33 Cust. #: HA15-1 Material: Vinyl Sheet Flooring, Grey/Tan Marbled Location: 1st Floor, Restroom Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 71492 - 34 Cust. #: HA15-2 Material: Vinyl Sheet Flooring, Grey/Tan Marbled Location: 1st Floor, Restroom Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Fiberglass - 10% Other - 80%
Lab ID #: 71492 - 35 Cust. #: HA16-1 Material: 9"x9" FT, Greyish-Green, Cream Streaks Location: 1st Floor, NE Room Appearance: grey, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 35a Cust. #: HA16-1 Material: Mastic Location: 1st Floor, NE Room Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 36 Cust. #: HA16-2 Material: 9"x9" FT, Greyish-Green, Cream Streaks Location: 1st Floor, NE Room Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 71492 - 36a Cust. #: HA16-2 Material: Mastic Location: 1st Floor, NE Room Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 37 Cust. #: HA17-1 Material: 1'x1' Ceiling Tile, Flat White Location: 2nd Floor, NE Office Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71492 - 38 Cust. #: HA17-2 Material: 1'x1' Ceiling Tile, Flat White Location: 2nd Floor, NE Office Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71492 - 39 Cust. #: HA18-1 Material: Canvas Wall Panel Location: Front Stairwell to 2nd Floor Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 40 Cust. #: HA18-2 Material: Canvas Wall Panel Location: Front Stairwell to 2nd Floor Appearance: grey, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 71492 - 41 Cust. #: HA19-1 Material: 12"x12" Self Adhesive FT, Orange/Brown Location: 2nd Floor, Restroom Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71492 - 41a Cust. #: HA19-1 Material: Glue Location: 2nd Floor, Restroom Appearance: clear, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 42 Cust. #: HA19-2 Material: 12"x12" Self Adhesive FT, Orange/Brown Location: 2nd Floor, Restroom Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 42a Cust. #: HA19-2 Material: Glue Location: 2nd Floor, Restroom Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71492 - 43 Cust. #: HA21-1 Material: Wall Covering Painted White Location: 1st Fl, NW Closet Under Stairs Appearance: brown,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 44 Cust. #: HA21-2 Material: Wall Covering Painted White Location: 1st Fl, NW Closet Under Stairs Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 70% Other - 30%
Lab ID #: 71492 - 45 Cust. #: HA22-1 Material: Drywall Panels w/ Joint Compound Location: Stairwell to Attic, 2nd Floor Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71492 - 46 Cust. #: HA22-2 Material: Drywall Panels w/ Joint Compound Location: Stairwell to Attic, 2nd Floor Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 47 Cust. #: HA23-1 Material: Exterior White Caulk Location: West Side, 1st/2nd Floors Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 71492 - 48 Cust. #: HA23-2 Material: Exterior White Caulk Location: West Side, 1st/2nd Floors Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 71492 - 49 Cust. #: HA24-1 Material: Exterior White Window Glazing Location: West Side 1st/2nd Floor Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 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: Motown Museum Expansion- 2654
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 50 Cust. #: HA24-2 Material: Exterior White Window Glazing Location: West Side 1st/2nd Floor Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
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

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2654
Project # 61-170276-01
Supplemental Report

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71492pc
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71492 - 10 Cust. #: HA5-1 Material: White Window Glaze Location: Basement, W. Half, Small Room Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 2.00% POINT COUNT RESULT	Other - 98.00%
Lab ID #: 71492 - 47 Cust. #: HA23-1 Material: Exterior White Caulk Location: West Side, 1st/2nd Floors Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%
Lab ID #: 71492 - 49 Cust. #: HA24-1 Material: Exterior White Window Glazing Location: West Side 1st/2nd Floor Appearance: beige, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%

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



Customer Name: NTH CONSULTANTS

Address: 41780 Six Mile Rd.

City, St. Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax:

Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Date of Survey: 8/18 + 21/2017

Project: Moroni Museum Expansion - 2654

Project # 61-170276-01

Contact Person: MIKE MELLARD

Email: MMELLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Rush 24 hour 72 hour

48 hour TTP (Yes) / no (Test Till Positive)

Other:

Samples received after 3pm logged in next morning

Asbestos: Bulk Wipe Point Count PCM

Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO Air Paint

Mold: Bulk Air/Zefon/AlergenCOD BIOSIS Tape

TEM: Bulk/NOB NIOSH 7402 EPA Level II Other

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	HA1-1	Air cell / Basement, East Half, Center			
2	1-1-2	Straight Pipe Basement, East Half, South Center			
3	1-1-3	Insulation / Basement, West Half,			
4	HA2-1	Pipe Fitting / Basement, East Half, Center			
5	2-2	Insulation / Basement, East Half, Center			
6	2-3	Assoc. w/ Air cell / Basement, Center			
7	HA3-1	Loose Fiber Glass Insulation / Basement, East Half, S.S.D.C. w/ oil tank			
8	HA4-1	Mortar Assoc. w/ Boiler Exhaust Duct / Basement, East Half, Boiler Exhaust Duct			
9	1-4-2	Boiler Exhaust Duct / Basement, East Half, Boiler Exhaust Duct			
10	HA5-1	White Window / Basement, West Half, Small Room			
11	1-5-2	Glazing / Basement, West Half, Small Room			
12	HA8-1	Wood Grain Vinyl / Basement, West Half, Polished Against Wall			

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Received By:

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Received By:

Date:

Time/Date: AUG 23 2017

Date:

Time/Date:

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Customer Name: NTH CONSULTANTS
 Address: 41780 SIX MILE RD.
 City, St., Zip: NORTHVILLE, MI, 48168
 Phone: (586) 876-7184 Fax:
 Turn Around Time: (circle one) 24 hours Terms and conditions on the other side.

Date of Survey: 8/18 + 21/2017
 Project: MOTOWN MUSEUM EXPANSION - 2654
 Project # 61-178276-01
 Contact Person: MIKE WILLARD
 Email: MWILLARD@NTHCONSULTANTS.COM
 Circle analyses required, indicate type and quantity

Lab Use Only
 Log-In:
 Report:
 Fax:
 Verbal:
 Email:

Rush 24 hour (72) hour
 48 hour
 Other: TTP Yes / no (Test Till Positive)
 Samples received after 3pm
 logged in next morning
 Lead / Cad / Chrome: Wipe ASTM E17927 circle YES or NO Air Point Count PCM
 Bulk Bulk Bulk Bulk Bulk Bulk
 Mold: Bulk Air/Zefon/Alergencod Paint Tape
 TEM: Bulk/NOB NIOSH 7402 EPA Level II Other

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	HA8-2	Sheet Flaming Basement, west half, called Adhesive wall			
14	HA9-1	Yellow First Floor, Northwest, closet under stairs			
15	L 9-2	Carpet First Floor Northwest, closet under stairs			
16	L 9-3	Adhesive First Floor, northeast corner at doorway to hallway			
17	HA10-1	Black Tack Paper First Floor, Northwest, closet under stairs			
18	L 10-2	Below Carpet / note rat doorway to hallway			
19	HA11-1	2' x 2' suspended ceiling tile First Floor, center of west side, at wall			
20	L 11-2	Small Gouges of First Floor, center of west side, at wall			
21	HA12-1	Wall / Ceiling Center First Floor, west wall,			
22	L 12-2	Plaster First Floor, west stairs			
23	L 12-3	Second Floor stairs to office			
24	L 12-4	Second Floor stairs to office			

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Date:

Time/Date:

Date:

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Customer Name: NTH CONSULTANTS

Address: 41780 Six Mile Rd.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7184 Fax:

Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Date of Survey: 8/18 + 21/2017

Project: MORROW MUSEUM EXPANSION - 2654

Project # 61-170276-01

Contact Person: MIKE MULLARD

Email: MMULLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Rush 24 hour 72 hour Asbestos: Bulk Wipe Point Count PCM

48 hour Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO Air Paint Bulk

Other: TTP (Yes) / no (Test Till Positive) Mold: Bulk Air/Zefon/AIergencod BIOSIS Tape

Samples received after 3pm logged in next morning TEM: Bulk/NOB NIOSH 7402 EPA Level II Other

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	HA12-5	Second Floor, west half, closet at center			
26	12-6	Second Floor, west half, office closet			
27	12-7	Second Floor, west half, office closet			
28	HA13-1	Drywall / First Floor, north west, closet under stairs			
29	13-2	Joint Compound / Second Floor, west half, center of office			
30	13-3	1 / attic, northwest corner wall			
31	HA14-1	White Sink / First Floor, Kitchen			
32	14-2	Undercoating / First Floor, Kitchen			
33	HA15-1	Thin Sheet / First Floor, Restroom			
34	15-2	Grey Tap / First Floor, Restroom			
35	HA16-1	9" x 9" / First Floor, Restroom			
36	16-2	Green Tile w/ Mastic / First Floor, Restroom			
		Greenish-green / First Floor, Restroom			
		Watermark Stains / Northeast Room			

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Customer Name: NTH CONSULTANTS
Address: 41780 Six Mile Rd.
City, St., Zip: NORTHVILLE, MI, 48168
Phone: (586) 876-7189 Fax:
Turn Around Time: (circle one) 24 hours and conditions on the other side.

Date of Survey: 8/18 + 21/2017
Project: Moretown Museum Expansion - 2654
Project # 61-178276-01
Contact Person: MIKE MULLARD
Email: MMULLARD@NTHCONSULTANTS.COM
Circle analyses required, indicate type and quantity

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Rush 24 hour 72 hour
Asbestos: Bulk Wipe Point Count PCM
48 hour Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO Air Paint Bulk

Other: _____ TTP Yes / no (Test Till Positive) Mold: Bulk Air/Zefon/Alergencod BioSIS Tape
Samples received after 3pm logged in next morning TEM: Bulk/NOB NIOSH 7402 EPA Level II Other

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	HA17-1	1'x1' Ceiling Tile	Second Floor	Northwest Office	
38	L17-2	Flat white	Second Floor	Northwest Office	
39	HA18-1	Canvas Wall	Front Stairwell to	Second Floor	
40	L18-2	Panel	Front Stairwell to	Second Floor	
41	HA19-1	12" x 12" Self-Adhesive Floor Tile	Second Floor	Restroom	
42	L19-2	Orange/Brown marbled	Second Floor	Restroom	
43	HA21-1	Wall Covering	First Floor	Northwest, Closet under stairs	
44	L21-2	Painted white	First Floor	Northwest, Closet under stairs	
45	HA22-1	Drywall Panels w/d	Stairwell to Attic,	Second Floor	
46	L22-2	Joint Compound Assoc.	Stairwell to Attic,	Second Floor	
47	HA23-1	Exterior white	West side First and	Second Floor	
48	L23-2	Window Caulk	West side First and	Second Floor	

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Date: _____ Time/Date: AUG 23 2017
Revision R4 Date: May/2017

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Customer Name: **NTH CONSULTANTS**

Address: **41780 Six Mile Rd.**

City, St., Zip: **NORTHVILLE, MI, 48168**

Phone: **(586) 876-7184** Fax: **✓**

Turn Around Time: (circle one) **72 hour** Terms and conditions on the other side.

Date of Survey: **8/18 + 21/2017**

Project: **MORROW MUSEUM EXHIBITION - 2654**

Project # **61-170276-01**

Contact Person: **MIKE MULLARD**

Email: **MMULLARD@NTHCONSULTANTS.COM**

Circle analyses required, indicate type and quantity

Lab Use Only

Log-In: _____

Report: _____

Fax: _____

Verbal: _____

Email: _____

Rush

24 hour

Asbestos:

Bulk Wipe _____

Point Count _____

PCM _____

48 hour

72 hour

Lead / Cad / Chrome:

Wipe ASTM E1792? circle YES or NO _____

Air _____

Paint _____

Bulk _____

Other:

TTP YES / no

Mold:

Bulk _____

Air/Zefon/Algencord _____

BioSIS _____

Tape _____

Samples received after 3pm logged in next morning

(Test Tilt Positive)

TEM:

Bulk/NOB _____

NIOSH 7402 _____

EPA Level II _____

Other _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
49	HA24-1	Exterior White Westside First and Second Flors			
82	1 24-2	Window Glazing Westside, First and Second Flors			

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Revision R4 Date: May/2017



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 01 Cust. #: HA1-1 Material: Wall/Ceiling Plaster - Rough Location: Basement, North Sto. Room Ceiling Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 02 Cust. #: HA1-2 Material: Wall/Ceiling Plaster - Rough Location: Basement, North Sto. Room Ceiling Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 03 Cust. #: HA1-3 Material: Wall/Ceiling Plaster - Rough Location: Bsmt, West-Center Mech. Room Wall Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 04 Cust. #: HA2-1 Material: Drywall Panels Location: Basement, North Sto. Room Ceiling Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71493 - 05 Cust. #: HA2-2 Material: Drywall Panels Location: Basement, North Sto. Room Ceiling Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71493 - 06 Cust. #: HA3-1 Material: Window Glazing Assoc. w/ Bsmt Windows Location: Bsmt, North Sto. Room, West Window Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Wollastonite - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 07 Cust. #: HA3-2 Material: Window Glazing Assoc. w/ Bsmt Windows Location: Bsmt, North Sto. Room, West Window Appearance: Layer: of	Asbestos Present: NOT ANALYZED	
Lab ID #: 71493 - 08 Cust. #: HA4-1 Material: 12"x12" Self Adhered FT, Red Brick Location: Basement, Hallway at Base of Stairs Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 71493 - 08a Cust. #: HA4-1 Material: Glue Location: Basement, Hallway at Base of Stairs Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 09 Cust. #: HA4-2 Material: 12"x12" Self Adhered FT, Red Brick Location: Basement, Hallway at Base of Stairs Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 71493 - 09a Cust. #: HA4-2 Material: Glue Location: Basement, Hallway at Base of Stairs Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 10 Cust. #: HA5-1 Material: 2" Vinyl Cove Base, Black Location: Basement Hallway Next to Stairs Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 10a Cust. #: HA5-1 Material: Adhesive Location: Basement Hallway Next to Stairs Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 11 Cust. #: HA5-2 Material: 2" Vinyl Cove Base, Black Location: Basement Hallway Next to Stairs Appearance: black,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 11a Cust. #: HA5-2 Material: Adhesive Location: Basement Hallway Next to Stairs Appearance: brown,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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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Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 12 Cust. #: HA6-1 Material: Uninstalled Slate Tabletop Location: Bsmt, West-Center Mech. Rm Lying Loose Appearance: black,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 13 Cust. #: HA8-1 Material: 1'x1' Ceiling Tile,Non Uniform Holes, Stapled Location: 2nd Floor, SW Sto. Room Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71493 - 14 Cust. #: HA8-2 Material: 1'x1' Ceiling Tile,Non Uniform Holes, Stapled Location: 2nd Floor, SW Sto. Room Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 15 Cust. #: HA9-1 Material: Black Felt Pipe Wrap Location: Basement, North Sto. Room, NE Corner Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Hair - 80% Other - 20%
Lab ID #: 71493 - 16 Cust. #: HA10-1 Material: 1'x1' Ceiling Tile, Flat White, Stapled Location: 1st Floor SW Office, North Edge Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71493 - 17 Cust. #: HA10-2 Material: 1'x1' Ceiling Tile, Flat White, Stapled Location: 1st Floor SW Office, North Edge Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

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NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
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Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 18 Cust. #: HA11-1 Material: 1'x1' Ceiling Tile, Smaller Holes, Stapled Location: 1st Floor SE Office, South Edge Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71493 - 19 Cust. #: HA11-2 Material: 1'x1' Ceiling Tile, Smaller Holes, Stapled Location: 1st Floor SE Office, South Edge Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 80% Other - 20%
Lab ID #: 71493 - 20 Cust. #: HA12-1 Material: Texture Applied to 1st Floor's Fireplace Brick Location: 1st Floor NE Room's Fireplace, Right Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 21 Cust. #: HA12-2 Material: Texture Applied to 1st Floor's Fireplace Brick Location: 1st Floor NE Room's Fireplace, Front Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 22 Cust. #: HA12-3 Material: Texture Applied to 1st Floor's Fireplace Brick Location: 1st Floor NE Room's Fireplace, Left Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 23 Cust. #: HA13-1 Material: 12"x12" Floor Tile, Lt. Tan Mottled Location: 2nd Floor, SE Sto. Room Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 23a Cust. #: HA13-1 Material: Glue Location: 2nd Floor, SE Sto. Room Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 24 Cust. #: HA13-2 Material: 12"x12" Floor Tile, Lt. Tan Mottled Location: 2nd Floor, SE Sto. Room Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 71493 - 24a Cust. #: HA13-2 Material: Glue Location: 2nd Floor, SE Sto. Room Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 25 Cust. #: HA14-1 Material: Yellow Glue Location: 1st Floor, Just Outside NE Restroom Appearance: yellow,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 25a Cust. #: HA14-1 Material: 9"x9" Floor Tile, Black, Cream Streaks Location: 1st Floor, Just Outside NE Restroom Appearance: black,fibrous,homogenous Layer: 2 of 3	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 71493 - 25b Cust. #: HA14-1 Material: Mastic Location: 1st Floor, Just Outside NE Restroom Appearance: black,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 26 Cust. #: HA14-2 Material: Yellow Glue Location: 2nd Floor, NW Sto. Room's Doorway Appearance: yellow,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 26a Cust. #: HA14-2 Material: 9"x9" Floor Tile, Black, Cream Streaks Location: 2nd Floor, NW Sto. Room's Doorway Appearance: Layer: 2 of 3	Asbestos Present: NOT ANALYZED	
Lab ID #: 71493 - 26b Cust. #: HA14-2 Material: Mastic Location: 2nd Floor, NW Sto. Room's Doorway Appearance: black,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 27 Cust. #: HA15-1 Material: Carpet Adhesive, Yellow/Orange Location: 2nd Floor, Hallway at Base of Attic Stairs Appearance: yellow,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 28 Cust. #: HA15-2 Material: Carpet Adhesive, Yellow/Orange Location: 2nd Floor, Hallway at Base of Attic Stairs Appearance: yellow,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 29 Cust. #: HA16-1 Material: 12"x12" FT, Cream, Small Stone Pattern Location: 2nd Floor, NW Sto. Room Appearance: beige,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 29a Cust. #: HA16-1 Material: Glue Location: 2nd Floor, NW Sto. Room Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 30 Cust. #: HA16-2 Material: 12"x12" FT, Cream, Small Stone Pattern Location: 2nd Floor, NW Sto. Room Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 71493 - 30a Cust. #: HA16-2 Material: Glue Location: 2nd Floor, NW Sto. Room Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 31 Cust. #: HA17-1 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: Bsmt's North Sto. Room, Ceiling Remnants Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 31a Cust. #: HA17-1 Material: Plaster Base Coat Location: Bsmt's North Sto. Room, Ceiling Remnants Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 71493 - 32 Cust. #: HA17-2 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: Bsmt's North Sto. Room, Ceiling Remnants Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 32a Cust. #: HA17-2 Material: Plaster Base Coat Location: Bsmt's North Sto. Room, Ceiling Remnants Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - <1%	Hair - 2% Other - >97%
Lab ID #: 71493 - 33 Cust. #: HA17-3 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: 2nd FL's SW Sto. Room, SW Corner Wall Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 33a Cust. #: HA17-3 Material: Plaster Base Coat Location: 2nd FL's SW Sto. Room, SW Corner Wall Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 34 Cust. #: HA17-4 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: 2nd FL's SW Sto. Room, SW Corner Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 34a Cust. #: HA17-4 Material: Plaster Base Coat Location: 2nd FL's SW Sto. Room, SW Corner Wall Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - <1%	Hair - 5% Other - >94%
Lab ID #: 71493 - 35 Cust. #: HA17-5 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: 2nd Floor's NW Sto. Room, South Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 35a Cust. #: HA17-5 Material: Plaster Base Coat Location: 2nd Floor's NW Sto. Room, South Wall Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - <1%	Hair - 2% Other - >97%
Lab ID #: 71493 - 36 Cust. #: HA17-6 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: Attic at Top of Stairs Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 36a Cust. #: HA17-6 Material: Plaster Base Coat Location: Attic at Top of Stairs Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - <1%	Hair - 2% Other - >97%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 37 Cust. #: HA17-7 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: Attic at Top of Stairs Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 37a Cust. #: HA17-7 Material: Plaster Base Coat Location: Attic at Top of Stairs Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Hair - 2% Other - 97%
Lab ID #: 71493 - 38 Cust. #: HA18-1 Material: Residual Brown Glue Pods in Basement Location: Basement Hallway at Stairs Appearance: brown,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 39 Cust. #: HA18-2 Material: Residual Brown Glue Pods in Basement Location: Basement Hallway at Stairs Appearance: brown,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 40 Cust. #: HA19-1 Material: Black Tar Paper Below 9"x9" FT Location: 1st FL Just Outside NE Restroom Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 71493 - 41 Cust. #: HA19-2 Material: Black Tar Paper Below 9"x9" FT Location: 2nd FL NW Sto. Room's Doorway Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 42 Cust. #: HA20-1 Material: Rough Finished Exterior Stucco Location: 1st Floor, East-Facing Window Bay Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 43 Cust. #: HA20-2 Material: Rough Finished Exterior Stucco Location: 1st Floor, East-Facing Window Bay Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 44 Cust. #: HA20-3 Material: Rough Finished Exterior Stucco Location: 1st Floor, East-Facing Window Bay Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 45 Cust. #: HA21-1 Material: Original Exterior Window Caulk Location: 1st Floor, E-Facing North End Window Appearance: beige,nonfibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 46 Cust. #: HA21-2 Material: Original Exterior Window Caulk Location: 1st Floor, S-Facing West End Window Appearance: white,nonfibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71493 - 47 Cust. #: HA22-1 Material: Original Exterior Window Glazing Location: 1st Floor, E-Facing North End Window Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01

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Northville, MI 48168

ARI Report # 17-71493
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 48 Cust. #: HA22-2 Material: Original Exterior Window Glazing Location: 1st Floor, S-Facing West End Window Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2656
Project # 61-170276-01
Supplemental Report

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493pc
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 06 Cust. #: HA3-1 Material: Window Glazing Assoc. w/ Bsmt Windows Location: Bsmt, North Sto. Room, West Window Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 1.25% POINT COUNT RESULT	Wollastonite - 5% Other - 93.75%
Lab ID #: 71493 - 08 Cust. #: HA4-1 Material: 12"x12" Self Adhered FT, Red Brick Location: Basement, Hallway at Base of Stairs Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5.50% POINT COUNT RESULT	Other - 94.50%
Lab ID #: 71493 - 08a Cust. #: HA4-1 Material: Glue Location: Basement, Hallway at Base of Stairs Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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

Robert T. Letarte Jr., Laboratory Director

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ARI Report # 17-71493pc
 Date Collected: 8/18-21/2017
 Date Received: 08/23/17
 Date Analyzed: 08/26/17
 Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 23 Cust. #: HA13-1 Material: 12"x12" Floor Tile, Lt. Tan Mottled Location: 2nd Floor, SE Sto. Room Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 1.75% POINT COUNT RESULT	Other - 98.25%
Lab ID #: 71493 - 23a Cust. #: HA13-1 Material: Glue Location: 2nd Floor, SE Sto. Room Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 29 Cust. #: HA16-1 Material: 12"x12" FT, Cream, Small Stone Pattern Location: 2nd Floor, NW Sto. Room Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 2.50% POINT COUNT RESULT	Other - 97.50%

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Robert T. Letarte Jr., Laboratory Director

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 Northville, MI 48168

ARI Report # 17-71493pc
 Date Collected: 8/18-21/2017
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 Date Analyzed: 08/26/17
 Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 29a Cust. #: HA16-1 Material: Glue Location: 2nd Floor, NW Sto. Room Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 32 Cust. #: HA17-2 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: Bsmt's North Sto. Room, Ceiling Remnants Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 32a Cust. #: HA17-2 Material: Plaster Base Coat Location: Bsmt's North Sto. Room, Ceiling Remnants Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - 0.25% POINT COUNT RESULT	Hair - 2% Other - 97.75%

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Project # 61-170276-01
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ARI Report # 17-71493pc
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 34 Cust. #: HA17-4 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: 2nd FL's SW Sto. Room, SW Corner Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 34a Cust. #: HA17-4 Material: Plaster Base Coat Location: 2nd FL's SW Sto. Room, SW Corner Wall Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - Trace POINT COUNT RESULT	Hair - 5% Other - 95%
Lab ID #: 71493 - 35 Cust. #: HA17-5 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: 2nd Floor's NW Sto. Room, South Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71493pc
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/26/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71493 - 35a Cust. #: HA17-5 Material: Plaster Base Coat Location: 2nd Floor's NW Sto. Room, South Wall Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - Trace POINT COUNT RESULT	Hair - 2% Other - 98%
Lab ID #: 71493 - 36 Cust. #: HA17-6 Material: Wall/Ceiling Plaster Finish Coat - Smooth Location: Attic at Top of Stairs Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71493 - 36a Cust. #: HA17-6 Material: Plaster Base Coat Location: Attic at Top of Stairs Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO Chrysotile - 0.25% POINT COUNT RESULT	Hair - 2% Other - 97.75%

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NVLAP Lab Code 102118-0



11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com

Pg 1/4

Customer Name: NTH CONSULTANTS
 Address: 41780 Six Mile Rd.
 City, St., Zip: NORTHVILLE, MI, 48168
 Phone: (586) 876-7189 Fax: /
 Turn Around Time: (circle one) 72 hours

Date of Survey: 8/18 + 21/2017
 Project: MOTOWN MUSEUM EXPANSION - 2656
 Project # 61-170276-01
 Contact Person: MIKE MILLARD
 Email: MMILLARD@NTHCONSULTANTS.COM
Circle analyses required, indicate type and quantity

Lab Use Only
 Log-In: _____
 Report: _____
 Fax: _____
 Verbal: _____
 Email: _____

Rush _____ 24 hour _____
 48 hour (72 hour)
 Other: _____ TTP (yes) / no _____
Samples received after 3pm logged in next morning
(Test Till Positive)
 Asbestos: Bulk Wipe _____ Point Count _____ PCM _____
 Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint _____ Bulk _____
 Mold: Bulk _____ Air/Zefon/AlergencoD _____ BioSIS _____ Tape _____
 TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	HA1-1	WALL/CEILING PLASTER - BSMT, NORTH STD. RM.	CEILING		
2	1-2	ROUGH-FINISHED			
3	1-3	BASEMENT ONLY			
4	HA2-1	DRYWALL PANELS w/o BSMT, NORTH STD. RM.	CEILING		
5	1-2-2	JOINT COMPOUND			
6	HA3-1	WINDOW GLAZING ASSOC. BSMT, NORTH STD. RM., WEST WINDOW			
7	1-3-2	w/ BASEMENT WINDOWS			
8	HA4-1	12" x 12" SELF-ADHERED BSMT. HALLWAY AT BASE OF STAIRS			
9	1-4-2	FLOOR TILE - RED BRICK			
10	HA5-1	2" VINYL Cove BASE BSMT. HALLWAY NEXT TO STAIRS			
11	1-5-2	BLACK - + ADHESIVE			
12	HA6-1	UNINSTALLED SLATE TABLETOP BSMT. WEST-CENTER MECH. RM. LYING LOOSE			

RECEIVED

Relinquished By: [Signature]
 Date: 8/21/17
 Revision R4 Date: May/2017

Received By: [Signature]
 Time/Date: AUG 23 2017

Relinquished By: _____
 Date: _____
 Received By: _____
 Time/Date: _____

71493

APEX Research, Inc.

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Pg 2 / 4

Customer Name: NTH CONSULTANTS

Address: 41780 SIX MILE RD.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Rush 24 hour

48 hour 72 hour

Other: TTP (Yes) / no (Test Till Positive)

Samples received after 3pm logged in next morning

Date of Survey: 8/18 + 21/2017

Project: MOTOWN MUSEUM EXPANSION - 2656

Project # 61-170276-01

Contact Person: MIKE MILLARD

Email: MMILLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Asbestos: Bulk Wipe Point Count PCM

Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO Air Paint Bulk Tape Other

Mold: Bulk Air/Zefon/AIergencoD BioSIS

TEM: Bulk/NOB NIOSH 7402 EPA Level II

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	HA 8-1	1' x 1' CEILING TILE - NON - 2 ND FLOOR, SW STD. RM			
14	I 8-2	UNIFORM HOLES, STAPLED /			
15	HA 9-1	BLACK FELT PIPE WRAP / BSMT. NORTH STD. RM., NE CORNER			
16	HA 10-1	1' x 1' CEILING TILE - 1 ST FL. SW OFFICE, NORTH EDGE			
17	I 10-2	FLAT WHITE, STAPLED /			
18	HA 11-1	1' x 1' CEILING TILE - 1 ST FL. SE OFFICE, SOUTH EDGE			
19	I 11-2	SMALLER HOLES, STAPLED /			
20	HA 12-1	TEXTURE APPLIED TO 1 ST FL. NE ROOM'S FIREPLACE, RIGHT			
21	I 12-2	1 ST FLOOR'S			
22	I 12-3	FIREPLACE BRICK /			
23	HA 13-1	12" x 12" FLOOR TILE + 2 ND FLOOR, SE STD. ROOM			
24	I 13-2	MASTIC - Lt. TAN MOTTLED /			

Relinquished By: Mike Millard

Date: 8/21/17

Revision R4 Date: May 2017

RECEIVED

Received By: _____

Time/Date: AUG 23 2017

Relinquished By: _____

Date: _____

Received By: _____

Time/Date: _____

APEX RESEARCH

71493

APEX Research, Inc.

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Pg 3/4

Customer Name: NTH CONSULTANTS

Address: 41780 SIX MILE RD.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) 72 hours Terms and conditions on the other side.

Rush

48 hour

Other:

Samples received after 3pm logged in next morning

24 hour

72 hour

TTP (Yes) / no (Test Till Positive)

Asbestos:

Lead / Cad / Chrome:

Mold:

TEM:

Bulk

Wipe

Bulk

Bulk/NOB

circle YES or NO

Air/Zefon/AIergencoD

NIOSH 7402

PCM

Air

Paint

BioSIS

PCM

Air

Paint

BioSIS

PCM

Air

Paint

BioSIS

PCM

Air

Paint

BioSIS

PCM

Air

Paint

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Date of Survey: 8/18 + 21/2017

Project: MOTOWN MUSEUM EXPANSION - 2656

Project # 61-170276-01

Contact Person: MIKE MILLARD

Email: MMILLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Lab Use Only

Log-In: _____

Report: _____

Fax: _____

Verbal: _____

Email: _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
23	HA14-1	9" x 9" Floor Tile + MASTIC - 1st Fl. JUST OUTSIDE N/E RESTROOM			
24	I 14-2	BLACK w/ CREAM STREAKS 2nd Fl. NW STD. ROOM'S PORCHWAY			
25	HA15-1	CARPET ADHESIVE - 2nd Fl. HALLWAY AT BASE OF ATTIC STAIRS			
26	I 15-2	" " " " " "			
27	HA16-1	12" x 12" Floor Tile + MASTIC - 2nd Fl. NW STD. ROOM			
28	I 16-2	" " " " " "			
29	HA17-1	CREAM, SMALL STONE PATTERN " "			
30	I 17-2	WALL + CEILING BASEMENT'S NORTH STD. RM, CEILING REMNANTS			
31	HA17-2	" " " " " "			
32	I 17-2	PLASTER - " "			
33	17-3	SMOOTH 2nd Floor's SW STD. RM, SW CORNER WALL			
34	17-4	" " " " " "			
35	17-5	" " " " " "			
36	I 17-6	2nd Floor's NW STD. RM, SOUTH WALL			
		ATTIC, AT TOP OF STAIRS			

Relinquished By: Mike Millard

Date: 8/21/17

Revision R4 Date: May 2017

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Received By: h

Time/Date: AUG 23 2017

Relinquished By: _____

Date: _____

Received By: _____

Time/Date: _____

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71493

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Pg 4 / 4



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City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) 24 hour 72 hour

Other: Terms and conditions on the other side.

Asbestos: Bulk Wipe

Lead / Cad / Chrome: Bulk Wipe circle YES or NO

Mold: Bulk Air/Zefon/AIergencoD

TEM: Bulk/NOB NIOSH 7402 EPA Level II

Point Count PCM

Paint BioSIS Tape Other

Date of Survey: 8/18 + 21/2017

Project: MOTOWN MUSEUM EXPANSION - 2656

Project # 61-170276-01

Contact Person: MIKE MILLARD

Email: MMILLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
37	HA17-7	ATTIC, AT TOP OF STAIRS			
38	HA18-1	RESIDUAL BROWN GULCH / BSMT. HALLWAY AT STAIRS			
39	I 18-2	PODS IN BASEMENT			
40	HA19-1	BLACK TAPE PAPER / SAME AS HA14-1			
41	I 19-2	BELOW 9" x 9" FT " I " HA14-2			
42	HA20-1	ROUGH-FINISHED / 1ST FL, EAST-FACING WINDOW BAY			
43	I 20-2	EXTERIOR			
44	I 20-3	STUCCO			
45	HA21-1	DRG. EXTERIOR / 1ST FL. E-FACING NORTH END WINDOW			
46	I 21-2	WINDOW CAULK / 1ST FL. S-FACING WEST END WINDOW			
47	HA22-1	DRG. EXTERIOR / SAME AS HA21-1			
48	I 22-2	WINDOW GLAZING / " I " HA21-2			

Relinquished By: MMillard

Date: 8/21/17

Revision R4 Date: May/2017

Received By: Mike

Time/Date: AUG 23 2017

Relinquished By: _____

Date: _____

Received By: _____

Time/Date: _____

RECEIVED



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2658-60
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71496
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 01 Cust. #: HA1-1 Material: Wall/Ceiling Plaster Finish Coat Location: Wall in Attic Stairway, North Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 01a Cust. #: HA1-1 Material: Plaster Base Coat Location: Wall in Attic Stairway, North Wall Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%
Lab ID #: 71496 - 02 Cust. #: HA1-2 Material: Wall/Ceiling Plaster Finish Coat Location: Wall in Attic Stairway, North Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



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Project # 61-170276-01

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41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71496
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 02a Cust. #: HA1-2 Material: Plaster Base Coat Location: Wall in Attic Stairway, North Wall Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 71496 - 03 Cust. #: HA1-3 Material: Wall/Ceiling Plaster Finish Coat Location: 1st Floor, SE Office's Closet Wall Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 03a Cust. #: HA1-3 Material: Plaster Base Coat Location: 1st Floor, SE Office's Closet Wall Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%

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

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0



Certificate of Laboratory Analysis

Test Method, Polarized Light Microscopy (PLM)

Project: Motown Museum Expansion- 2658-60
Project # 61-170276-01

Report To:
Mr. Mike Millard
NTH Consultants, LTD
41780 Six Mile Road
Northville, MI 48168

ARI Report # 17-71496
Date Collected: 8/18-21/2017
Date Received: 08/23/17
Date Analyzed: 08/25/17
Date Reported: 08/28/17

Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 04 Cust. #: HA1-4 Material: Wall/Ceiling Plaster Finish Coat Location: 1st FL, Office North of Restrm, Closet Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 04a Cust. #: HA1-4 Material: Plaster Base Coat Location: 1st FL, Office North of Restrm, Closet Wall Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 71496 - 05 Cust. #: HA1-5 Material: Wall/Ceiling Plaster Finish Coat Location: 2nd FL, Office North of Restrm, Closet Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 05a Cust. #: HA1-5 Material: Plaster Base Coat Location: 2nd FL, Office North of Restrm, Closet Wall Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 71496 - 06 Cust. #: HA1-6 Material: Wall/Ceiling Plaster Finish Coat Location: 2nd FL, Office North of Restrm, Closet Wall Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 06a Cust. #: HA1-6 Material: Plaster Base Coat Location: 2nd FL, Office North of Restrm, Closet Wall Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 5% Other - 95%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 07 Cust. #: HA1-7 Material: Wall/Ceiling Plaster Finish Coat Location: 2nd Floor, SE Room's Closet Wall Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 07a Cust. #: HA1-7 Material: Plaster Base Coat Location: 2nd Floor, SE Room's Closet Wall Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 71496 - 08 Cust. #: HA2-1 Material: Popcorn Ceiling Texture Location: 1st Floor, NW Room's NE Corner Ceiling Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 09 Cust. #: HA2-2 Material: Popcorn Ceiling Texture Location: 1st FL, Office North of Restroom, Ceiling Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71496 - 10 Cust. #: HA2-3 Material: Popcorn Ceiling Texture Location: 1st Floor, SE Office's NE Corner Ceiling Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71496 - 11 Cust. #: HA2-4 Material: Popcorn Ceiling Texture Location: 2nd Floor, West-Center Room's Ceiling Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 12 Cust. #: HA2-5 Material: Popcorn Ceiling Texture Location: 2nd Floor, Office North of Restroom Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 13 Cust. #: HA3-1 Material: Drywall Location: 1st Floor, Restroom, Wall Behind Door Appearance: white,fibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71496 - 13a Cust. #: HA3-1 Material: Joint Compound Location: 1st Floor, Restroom, Wall Behind Door Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 14 Cust. #: HA3-2 Material: Drywall Location: 1st FL, SW Rm (Kitchen) NW Corner, Wall Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 71496 - 14a Cust. #: HA3-2 Material: Joint Compound Location: 1st FL, SW Rm (Kitchen) NW Corner, Wall Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 15 Cust. #: HA3-3 Material: Drywall Location: 2nd Floor, Restroom Wall Behind Door Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 15a Cust. #: HA3-3 Material: Joint Compound Location: 2nd Floor, Restroom Wall Behind Door Appearance: white, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 16 Cust. #: HA4-1 Material: Carpet Adhesive, Yellow Location: 1st Floor, Hallway Closet at South End Appearance: yellow, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71496 - 17 Cust. #: HA4-2 Material: Carpet Adhesive, Yellow Location: 1st Floor, Office North of Restroom Appearance: yellow, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 18 Cust. #: HA4-3 Material: Carpet Adhesive, Yellow Location: 2nd Floor, SE Room's Closet Appearance: yellow,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71496 - 19 Cust. #: HA5-1 Material: 4" Vinyl Cove Base, White Location: 1st Floor Restroom, Behind Door Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 19a Cust. #: HA5-1 Material: Glue Location: 1st Floor Restroom, Behind Door Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 20 Cust. #: HA5-2 Material: 4" Vinyl Cove Base, White Location: 1st Floor Restroom, Behind Door Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 20a Cust. #: HA5-2 Material: Glue Location: 1st Floor Restroom, Behind Door Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 21 Cust. #: HA6-1 Material: 4" Vinyl Cove Base, Dark Grey Location: 1st Floor Kitchen, NW Corner Appearance: grey, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 21a Cust. #: HA6-1 Material: Glue Location: 1st Floor Kitchen, NW Corner Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 22 Cust. #: HA6-2 Material: 4" Vinyl Cove Base, Dark Grey Location: 1st Floor Kitchen, NW Corner Appearance: grey,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 22a Cust. #: HA6-2 Material: Glue Location: 1st Floor Kitchen, NW Corner Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 23 Cust. #: HA7-1 Material: Sink Undercoating, White Location: 1st Floor's Kitchen Sink Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 71496 - 24 Cust. #: HA7-2 Material: Sink Undercoating, White Location: 2nd Floor's Kitchen Sink Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 71496 - 25 Cust. #: HA8-1 Material: Ceiling Texture, Hand Applied Ridges Location: 2nd FL's SE Meeting Rm Ceiling Near Center Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 26 Cust. #: HA8-2 Material: Ceiling Texture, Hand Applied Ridges Location: 2nd FL's SE Meeting Rm Ceiling Near Center Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71496 - 27 Cust. #: HA8-3 Material: Ceiling Texture, Hand Applied Ridges Location: 2nd FL's SE Meeting Rm Ceiling Near Center Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 71496 - 28 Cust. #: HA9-1 Material: Exterior Window Glazing, Bsmt Windows Location: South-Facing Basement Window Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos
Lab ID #: 71496 - 29 Cust. #: HA9-2 Material: Exterior Window Glazing, Bsmt Windows Location: South-Facing Basement Window Appearance: beige, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 71496 - 30 Cust. #: HA11-1 Material: Roofing Felt Paper Underlayment Location: Attic, Roof Drain Penetration by Stairway Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%
Lab ID #: 71496 - 31 Cust. #: HA11-2 Material: Roofing Felt Paper Underlayment Location: Attic, Roof Drain Penetration by Stairway Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 60% Other - 40%

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71496

Apex #

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



PG 1/3

Customer Name: NTH CONSULTANTS

Address: 41780 SIX MILE RD.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) 72 hours Terms and conditions on the other side.

Rush

24 hour

72 hours

Other: _____

TTP (yes) / no
(Test Till Positive)

Samples received after 3pm
logged in next morning

Asbestos: Bulk Wipe _____

Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____

Bulk: _____

PCM _____

Mold: _____

Air / Zefon / AlergenCoD _____

Paint _____

Bulk _____

TEM: _____

Bulk/NOB _____

NIOSH 7402 _____

EPA Level II _____

Other _____

Date of Survey: 8/18 + 21/2017

Project: MOTOWN MUSEUM EXPANSION - 2658-60

Project # 61-170276-01

Contact Person: MIKE MILLARD

Email: MMILLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Lab Use Only

Log-In: _____

Report: _____

Fax: _____

Verbal: _____

Email: _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	HA 1-1	WALL & CEILING	WALL IN ATTIC STAIRWAY, NORTH WALL		
2	1-2	PLASTER		"	
3	1-3		1 ST FL., SE OFFICE'S CLOSET WALL		
4	1-4		1 ST FL., OFFICE NORTH OF RESTRM., CLOSET WALL		
5	1-5		2 ND FL., OFFICE NORTH OF RESTRM., CLOSET WALL		
6	1-6		"	"	
7	1-7		2 ND FL., SE ROOM'S CLOSET WALL		
8	HA2-1	POP CORN	1 ST FL., NW ROOM'S NE CORNER CEILING		
9	2-2	CEILING	1 ST FL., OFFICE NORTH OF RESTRM., CEILING		
10	2-3	TEXTURE	1 ST FL., SE OFFICE'S NE CORNER CEILING		
11	2-4		2 ND FL., WEST-CENTER ROOM'S CEILING		
12	2-5		2 ND FL., OFFICE NORTH OF RESTRM.		

RECEIVED

Relinquished By: [Signature]

Date: 8/21/17

Relinquished By: [Signature]

Date: AUG 23 2017

Received By: [Signature]

Date: 10/17

Received By: _____

Time/Date: _____

Revision R4 Date: May/2017

APEX RESEARCH

71496

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com

PG 2/3



Customer Name: NTH CONSULTANTS

Address: 41780 SIX MILE RD.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) 72 hours Terms and conditions on the other side.

Date of Survey: 8/18 + 21/2017

Project: MOTOWN MUSEUM EXPANSION - 2658-60

Project # 61-170276-01

Contact Person: MIKE MILLARD

Email: MMILLAR@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Rush

24 hour

72 hours

Other: TTP yes / no
(Test Till Positive)

Samples received after 3pm
logged in next morning

Asbestos: Bulk Wipe

Point Count PCM

Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO Air

Bulk Paint

Mold: Bulk Air/Zefon/AlergenCoD

Bulk Tape

TEM: Bulk/NOB NIOSH 7402 EPA Level II Other

Bulk/NOB NIOSH 7402 EPA Level II Other

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
13	HA 3-1	DRYWALL / 1 ST FL., RESTRM. WALL BEHIND DOOR			
14	1 3-2	+ JOINT / 1 ST FL., SW ROOM (KITCHEN) IN NW CORNER	WALL		
15	1 3-3	COMPOUND / 2 ND FL., RESTROOM WALL BEHIND DOOR			
16	HA 4-1	CARPET / 1 ST FL., HALLWAY CLOSET AT SOUTH END			
17	1 4-2	ADHESIVE / 1 ST FL., OFFICE NORTH OF RESTRM			
18	1 4-3	YELLOW / 2 ND FL., SE ROOM'S CLOSET			
19	HA 5-1	4" VINYL COVE BASE / 1 ST FL. RESTRM. BEHIND DOOR			
20	1 5-2	+ ADHESIVE - WHITE /			
21	HA 6-1	4" VINYL COVE BASE / 1 ST FL. KITCHEN, NW CORNER			
22	1 6-2	+ ADH. - DARK GREY /			
23	HA 7-1	SINK UNDERCOATING / 1 ST FLOOR'S KITCHEN SINK			
24	1 7-2	- WHITE / 2 ND FLOOR'S KITCHEN SINK			

Relinquished By: [Signature]

RECEIVED

Received By: [Signature]

Date: 8/21/17

Relinquished By: _____

Date: AUG 23 2017

Revision R & F Date: May/2017

Received By: _____

Relinquished By: _____

Date: _____

Date: _____

Received By: _____

Time/Date: _____

Time/Date: _____

Time/Date: _____

Time/Date: _____

Time/Date: _____

71496

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11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449-9990, Fax (734) 449-9991 www.ApexMI.com

PG 3/3



Customer Name: NTH CONSULTANTS

Address: 41780 SIX MILE RD.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Rush

48 hour

Other: TTP (yes) / no

Samples received after 3pm logged in next morning (Test Till Positive)

24 hour

72 hour

Asbestos: Bulk Wipe PCM

Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO

Mold: Bulk Air/Zefon/AtergencoD

TEM: Bulk/NOB NIOSH 7402 EPA Level II

Point Count

Paint

BioSIS

Tape

Date of Survey: 8/18 + 21/2017

Project: NOTOWN MUSEUM EXPANSION - 2658-60

Project # 61-170276-01

Contact Person: MIKE MELLARD

Email: MMILLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Lab Use Only

Log-In: _____

Report: _____

Fax: _____

Verbal: _____

Email: _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
25	HA 8-1	CEILING TEXTURE - 2ND FLOOR'S SE MEETING ROOM	CEILING	NEAR CENTER	"
26	8-2	HAND-APPLIED	I		"
27	8-3	RIDGES	I		"
28	HA 9-1	EXTERIOR WINDOW GLAZING - SOUTH-FACING BENT. WINDOW			
29	9-2	BASEMENT WINDOWS	I		"
30	HA 11-1	ROOFING FELT			
31	11-2	PAPER UNDERLAYMENT			
		ATTIC - ROOF DRAIN PENETRATION BY STAIRWAY	I		"

Relinquished By: MMellard
 Date: 8/21/17
 Revision R4/Date: May/2017

RECEIVED

Received By: MMellard
 Time/Date: AUG 23 2017
 Relinquished By: _____
 Date: _____

Received By: _____
 Time/Date: _____

APEX RESEARCH

APPENDIX



Lead-Containing Paint Data

Certificate of Laboratory Analysis

Test Method, Metals in Paint Analysis



Project: Motown Museum Expansion
Project #: 61-170276-01

Report to:
Mr. Mike Millard
NTH Consultants, Ltd.
41780 Six Mile Rd.
Northville, MI 48168

ARL Report # 17-L14441
Date Collected: 09/11/17
Date Received: 09/13/17
Date Analyzed: 09/14/17
Date Reported: 09/14/17

Sample Information	Method/RL	Metal Type/Percent	Date/Analyst
Lab ID #: L14441-01 Cust. #: PC-1 Material: Metal Duct in Basement - White	SW846 - 7420M RL - 0.01%	Pb - 0.09%	09/14/17 BB
Lab ID #: L14441-02 Cust. #: PC-2 Material: Wood Window in Basement - Blue	SW846 - 7420M RL - 0.01%	Pb - 6.53%	09/14/17 BB
Lab ID #: L14441-03 Cust. #: PC-3 Material: Drywall in Tape Library Storage Room - Blue	SW846 - 7420M RL - 0.01%	Pb - < 0.01%	09/14/17 BB
Lab ID #: L14441-04 Cust. #: PC-4 Material: Wood Trim on Ext. of Building	SW846 - 7420M RL - 0.01%	Pb - 0.49%	09/14/17 BB
Lab ID #: L14441-05 Cust. #: PC-5 Material: Brick Wall on Ext. of Building	SW846 - 7420M RL - 0.01%	Pb - 0.06%	09/14/17 BB

RL = Reporting Limit. Reporting Limit of 0.01% is based on minimum sample weight of 100mg per our SOP, and may vary based on smaller sample size. APEX Research is not responsible for sample collection activities. Methods have been slightly modified. This certificate of analysis relates only to the samples tested and to ensure the integrity of the results, may only be reproduced in full. Liability limited to cost of analysis. APEX Research participates in the AIHA ELPAT program.

Robert T. Letarte Jr., Laboratory Director

L14441

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Lab Use Only
 Log-In: _____
 Report: _____
 Fax: _____
 Verbal: _____
 Email: _____

Date of Survey: 09/12/17
 Project: MOTOWN MUSEUM EXPANSION
 Project # 61-170776-01
 Contact Person: MIKE MILLARD
 Email: mmillard@anthraciteconsultants.com
Circle analyses required, indicate type and quantity

Customer Name: NIH CONSULTANTS
 Address: 41780 SIX MILE ROAD
 City, St., Zip: NORTHVILLE, MI 48168
 Phone: (586) 876-7189 Fax: _____
 Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Asbestos: Bulk _____ Wipe _____ Point Count _____ PCM _____
 Lead / Cad / Chrome: Lead Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint X Bulk _____
 Mold: Bulk _____ Air/Zefon/AlergenCoD _____ BioSIS _____ Tape _____
 TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Rush _____ 24 hour _____
 48 hour _____ 72 hour 72 hour
 Other: _____ TTP yes / no _____
 Samples received after 3pm (Test Till Positive) logged in next morning

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	PC-1	White Paint on Metal Duct in Basement			
2	PC-2	Blue Paint on Wood Window in Basement			
3	PC-3	Blue Paint w/ Teal and Peach Paint below on driveway in Tape Library Storage Room			
4	PC-4	Blue Paint on Wood Trim on Exterior of Building			
5	PC-5	White Paint on Brick Wall on Exterior of Building			

Relinquished By: Mike Millard Received By: _____
 Date: 9/12/17 Time/Date: 11:56 Relinquished By: _____
 Date: SEP 13 2017 Time/Date: _____
 Revision R4 Date: May/2017

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 APEX RESEARCH

Certificate of Laboratory Analysis

Test Method, Metals in Paint Analysis



Project: Motown Museum Expansion - 2654
Project #: 61-170276-01

Report to:
Mr. Mike Millard
NTH Consultants, Ltd.
41780 Six Mile Rd.
Northville, MI 48168

ARL Report # 17-L14377
Date Collected: 08/18-08/21/17
Date Received: 08/23/17
Date Analyzed: 08/23/17
Date Reported: 08/24/17

Sample Information	Method/RL	Metal Type/Percent	Date/Analyst
Lab ID #: L14377-01 Cust. #: PC-1 Material: 1st Floor, S. Stairwell Ceiling - Green	SW846 - 7420M RL - 0.01%	Pb - 7.47%	08/24/17 BB
Lab ID #: L14377-02 Cust. #: PC-2 Material: 1st Floor, W. Half, Center Ceiling - White	SW846 - 7420M RL - 0.01%	Pb - 0.04%	08/24/17 BB
Lab ID #: L14377-03 Cust. #: PC-3 Material: Attic Window, E. Half Center - Black, Green	SW846 - 7420M RL - 0.01%	Pb - 0.67%	08/24/17 BB
Lab ID #: L14377-04 Cust. #: PC-4 Material: Exterior, Front Porch - Blue	SW846 - 7420M RL - 0.01%	Pb - 0.31%	08/24/17 BB
Lab ID #: L14377-05 Cust. #: PC-5 Material: Exterior, Front Porch - White	SW846 - 7420M RL - 0.01%	Pb - 0.71%	08/24/17 BB

RL = Reporting Limit. Reporting Limit of 0.01% is based on minimum sample weight of 100mg per our SOP, and may vary based on smaller sample size. APEX Research is not responsible for sample collection activities. Methods have been slightly modified. This certificate of analysis relates only to the samples tested and to ensure the integrity of the results, may only be reproduced in full. Liability limited to cost of analysis. APEX Research participates in the AIHA ELPAT program.

Robert T. Letarte Jr., Laboratory Director

Apex # L14377

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com

Pg 1/1



Customer Name: NTH CONSULTANTS

Address: 41780 SIX MILE RD.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) 24 hour / 72 hour / TTP (Test Till Positive)

Date of Survey: 8/18 + 21/2017

Project: MOTOOWN MUSEUM EXPANSION - 2654

Project # 61-170276-01

Contact Person: MIKE MILLARD

Email: MMILLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Lab Use Only
Log-In: _____
Report: _____
Fax: _____
Verbal: _____
Email: _____

Rush _____ 24 hour _____ 72 hour _____
Asbestos: Bulk _____ Wipe _____ Point Count _____ PCM _____
Lead / Cad / Chrome: Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint Bulk _____
Mold: Bulk _____ Air/Zefon/AlergenCoD _____ BioSIS _____ Tape _____
TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Samples received after 3pm
logged in next morning

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	PC-1	Green on Plaster Ceiling / First Floor, South Stairwell			
2	PC-2	White on Plaster Ceiling / First Floor, West Hall			
3	PC-3	Black/Green/Brown / Attic window			
4	PC-4	White on Wooden Patch / Exterior, Front Porch			
5	PC-5	White on Wooden window / Exterior, Front Porch			

Relinquished By: _____
Date: _____
Revision R4 Date: May/2017

Received By: Mike 8-17
Time/Date: AUG 23 2017

Relinquished By: _____
Date: _____
Revision R4 Date: May/2017

Received By: _____
Time/Date: _____

Relinquished By: _____
Date: _____

APEX RESEARCH

Certificate of Laboratory Analysis

Test Method, Metals in Paint Analysis



Project: Motown Museum Expansion - 2656
Project #: 61-170276-01

Report to:
Mr. Mike Millard
NTH Consultants, Ltd.
41780 Six Mile Rd.
Northville, MI 48168

ARL Report # 17-L14378
Date Collected: 08/18-08/21/17
Date Received: 08/23/17
Date Analyzed: 08/23/17
Date Reported: 08/24/17

Sample Information	Method/RL	Metal Type/Percent	Date/Analyst
Lab ID #: L14378-01 Cust. #: PC-1 Material: Metal Door Jamb, Basement	SW846 - 7420M RL - 0.01%	Pb - 0.41%	08/24/17 BB
Lab ID #: L14378-02 Cust. #: PC-2 Material: Steel Pipe, Basement N. Storage Room	SW846 - 7420M RL - 0.01%	Pb - 0.21%	08/24/17 BB
Lab ID #: L14378-03 Cust. #: PC-3 Material: Plaster Wall/Stairway Ceiling to 2nd Floor	SW846 - 7420M RL - 0.01%	Pb - 0.09%	08/24/17 BB
Lab ID #: L14378-04 Cust. #: PC-4 Material: Wood Window, 2nd Floor SE Room	SW846 - 7420M RL - 0.01%	Pb - 0.83%	08/24/17 BB
Lab ID #: L14378-05 Cust. #: PC-5 Material: Ext. Brick Wall, N. End of E. Side	SW846 - 7420M RL - 0.01%	Pb - < 0.01%	08/24/17 BB

RL = Reporting Limit. Reporting Limit of 0.01% is based on minimum sample weight of 100mg per our SOP, and may vary based on smaller sample size. APEX Research is not responsible for sample collection activities. Methods have been slightly modified. This certificate of analysis relates only to the samples tested and to ensure the integrity of the results, may only be reproduced in full. Liability limited to cost of analysis. APEX Research participates in the AIHA ELPAT program.

Robert T. Letarte Jr., Laboratory Director

L14378

APEX Research, Inc.

11054 Hi Tech Drive, Whitmore Lake, MI 48189. Phone: (734) 449 - 9990, Fax (734) 449 - 9991 www.ApexMI.com



Customer Name: NTH CONSULTANTS

Address: 41780 Six Mile Rd.

City, St., Zip: NORTHVILLE, MI, 48168

Phone: (586) 876-7189 Fax: /

Turn Around Time: (circle one) Terms and conditions on the other side.

Date of Survey: 8/18 + 21/2017

Project: MDTOWN MUSEUM EXPANSION - 2656

Project # 61-170276-01

Contact Person: MIKE MELLARD

Email: MMELLARD@NTHCONSULTANTS.COM

Circle analyses required, indicate type and quantity

Rush

24 hour

(72 hour)

Other: TTP (yes) / no (Test Till Positive)

Asbestos:

(Lead) / Cad / Chrome

Mold:

TEM:

Bulk

Wipe ASTM E1792? circle YES or NO

Bulk

Bulk/NOB

Wipe

Air

Air/Zefon/AlergenCoD

NIOSH 7402

Point Count

Paint

BioSIS

EPA Level II

PCM

Paint

Bulk

Tape

Lab Use Only

Log-In:

Report:

Fax:

Verbal:

Email:

pg 1/1

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	PC-1	WHITE PAINT w/ GREY + BROWN BELOW METAL DOOR JAMB IN BSMT.			
2	PC-2	GREY PAINT / STEEL PIPE IN BSMT.'S NORTH STORAGE ROOM			
3	PC-3	WHITE PAINT ON PLASTER WALL / STAIRWAY CEILING TO 2ND FLOOR			
4	PC-4	WHITE PAINT w/ BROWN + BLUE BELOW ON WOOD WINDOW / 2ND FLOOR SIDE ROOM			
5	PC-5	WHITE PAINT ON EXTERIOR BRICK WALL / NORTH END OF EAST SIDE			

Relinquished By: Mike Mellard
Date: 8/21/17
Revision R4 Date: May/2017

Relinquished By: _____
Date: _____

Received By: _____
Time/Date: _____

APEX RESEARCH

Certificate of Laboratory Analysis

Test Method, Metals in Paint Analysis



Project: Motown Museum Expansion - 2658-60
Project #: 61-170276-01

Report to:
Mr. Mike Millard
NTH Consultants, Ltd.
41780 Six Mile Rd.
Northville, MI 48168

ARL Report # 17-L14379
Date Collected: 08/18-08/21/17
Date Received: 08/23/17
Date Analyzed: 08/24/17
Date Reported: 08/24/17

Sample Information	Method/RL	Metal Type/Percent	Date/Analyst
Lab ID #: L14379-01 Cust. #: PC-1 Material: Basement, Brick Wall - White	SW846 - 7420M RL - 0.01%	Pb - < 0.01%	08/24/17 BB
Lab ID #: L14379-02 Cust. #: PC-2 Material: 1st Fl. Main Entry, Metal Door - Black	SW846 - 7420M RL - 0.01%	Pb - 0.07%	08/24/17 BB
Lab ID #: L14379-03 Cust. #: PC-3 Material: 1st Fl. Main Entry, Wood Door Jamb - Cream	SW846 - 7420M RL - 0.01%	Pb - 5.95%	08/24/17 BB
Lab ID #: L14379-04 Cust. #: PC-4 Material: Attic Stairway, Plaster Wall - Orange	SW846 - 7420M RL - 0.01%	Pb - 0.15%	08/24/17 BB
Lab ID #: L14379-05 Cust. #: PC-5 Material: 2nd Fl., NW Room, Plaster Ceiling - White	SW846 - 7420M RL - 0.01%	Pb - < 0.01%	08/24/17 BB

RL = Reporting Limit. Reporting Limit of 0.01% is based on minimum sample weight of 100mg per our SOP, and may vary based on smaller sample size. APEX Research is not responsible for sample collection activities. Methods have been slightly modified. This certificate of analysis relates only to the samples tested and to ensure the integrity of the results, may only be reproduced in full. Liability limited to cost of analysis. APEX Research participates in the AIHA ELPAT program.

Robert T. Letarte Jr., Laboratory Director

L14379

APEX Research, Inc.

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Pg 1/1

Customer Name: NTH CONSULTANTS
 Address: 41780 SIX MILE RD.
 City, St., Zip: NORTHVILLE, MI, 48168
 Phone: (586) 876-7189 Fax: /
 Turn Around Time: (circle one) 72 hour Terms and conditions on the other side.

Date of Survey: 8/18 + 21/2017
 Project: MOTOWN MUSEUM EXPANSION - 2658-60
 Project # 61-170276-01
 Contact Person: MIKE MELLARD
 Email: MMELLARD@NTHCONSULTANTS.COM
Circle analyses required, indicate type and quantity

Lab Use Only
 Log-In: _____
 Report: _____
 Fax: _____
 Verbal: _____
 Email: _____

Asbestos: Bulk _____ Wipe _____ Point Count _____ PCM _____
 Lead / Cad / Chrome: (72 hour) Wipe ASTM E1792? circle YES or NO _____ Air _____ Paint X Bulk _____
 Mold: Bulk _____ Air/Zefon/AlergencoD _____ BioSIS _____ Tape _____
 TEM: Bulk/NOB _____ NIOSH 7402 _____ EPA Level II _____ Other _____

Lab ID	Customer ID #	Material/Location	Volume	Area	Results
1	PC-1	WHITE PAINT ON BASEMENT BRICK WALL			
2	PC-2	BLACK PAINT ON METAL DOOR / 1 ST FLOOR MIREN ENTRY			
3	PC-3	CREAM PAINT ON WOOD DOOR JOINTS / 1 ST FL. MIREN ENTRY			
4	PC-4	ORANGE PAINT ON PLASTER WALL / ATTIC STAIRWAY WALL			
5	PC-5	WHITE PAINT ON PLASTER CEILING / 2 ND FL. NW ROOM			

Relinquished By: MMellard Received By: _____
 Date: 8/21/17 Time/Date: _____
 Revision R4 Date: May/2017

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 1017
 AUG 23 2017
 APEX RESEARCH



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Michigan Ecological Services Field Office
2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360
Phone: (517) 351-2555 Fax: (517) 351-1443

In Reply Refer To:

03/19/2024 19:16:03 UTC

Project Code: 2024-0065136

Project Name: 2648 W Grand Blvd Detroit MI

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Official Species List

The attached species list identifies any Federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Under 50 CFR 402.12(e) (the regulations that implement section 7 of the Endangered Species Act), the accuracy of this species list should be verified after 90 days. You may verify the list by visiting the IPaC website (<https://ipac.ecosphere.fws.gov/>) at regular intervals during project planning and implementation. To update an Official Species List in IPaC: from the My Projects page, find the project, expand the row, and click Project Home. In the What's Next box on the Project Home page, there is a Request Updated List button to update your species list. Be sure to select an "official" species list for all projects.

Consultation requirements and next steps

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize Federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-Federal representative) must consult with the Fish and Wildlife Service if they determine their project may affect listed species or critical habitat.

There are two approaches to evaluating the effects of a project on listed species.

Approach 1. Use the All-species Michigan determination key in IPaC. This tool can assist you in making determinations for listed species for some projects. In many cases, the determination key

will provide an automated concurrence that completes all or significant parts of the consultation process. Therefore, we strongly recommend screening your project with the **All-Species Michigan Determination Key (Dkey)**. For additional information on using IPaC and available Determination Keys, visit <https://www.fws.gov/media/mifo-ipac-instructions> (and click on the attachment). Please carefully review your Dkey output letter to determine whether additional steps are needed to complete the consultation process.

Approach 2. Evaluate the effects to listed species on your own without utilizing a determination key. Once you obtain your official species list, you are not required to continue in IPaC, although in most cases using a determination key should expedite your review. If the project is a Federal action, you should review our section 7 step-by-step instructions before making your determinations: <https://www.fws.gov/office/midwest-region-headquarters/midwest-section-7-technical-assistance>. If you evaluate the details of your project and conclude “no effect,” document your findings, and your listed species review is complete; you do not need our concurrence on “no effect” determinations. If you cannot conclude “no effect,” you should coordinate/consult with the Michigan Ecological Services Field Office. The preferred method for submitting your project description and effects determination (if concurrence is needed) is electronically to EastLansing@fws.gov. Please include a copy of this official species list with your request.

For all **wind energy projects** and **projects that include installing communications towers >450 feet that use guy wires**, please contact this field office directly for assistance, even if no Federally listed plants, animals or critical habitat are present within your proposed project area or may be affected by your proposed project.

Migratory Birds

Please see the “Migratory Birds” section below for important information regarding incorporating migratory birds into your project planning. Our Migratory Bird Program has developed recommendations, best practices, and other tools to help project proponents voluntarily reduce impacts to birds and their habitats. The Bald and Golden Eagle Protection Act prohibits the take and disturbance of eagles without a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <https://www.fws.gov/program/eagle-management/eagle-permits> to help you avoid impacting eagles or determine if a permit may be necessary.

Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your consideration of threatened and endangered species during your project

planning. Please include a copy of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Michigan Ecological Services Field Office

2651 Coolidge Road Suite 101

East Lansing, MI 48823-6360

(517) 351-2555

PROJECT SUMMARY

Project Code: 2024-0065136
Project Name: 2648 W Grand Blvd Detroit MI
Project Type: Federal Grant / Loan Related
Project Description: Redevelopment
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.3641872,-83.0879200130091,14z>



Counties: Wayne County, Michigan

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/OLKLXZRABBGUXNVNDOZ3XQYE34/documents/generated/6982.pdf	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

REPTILES

NAME	STATUS
Eastern Massasauga (=rattlesnake) <i>Sistrurus catenatus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> For all Projects: Project is within EMR Range Species profile: https://ecos.fws.gov/ecp/species/2202 General project design guidelines: https://ipac.ecosphere.fws.gov/project/OLKLXZRABBGUXNVNDOZ3XQYE34/documents/generated/5280.pdf	Threatened

CLAMS

NAME	STATUS
Northern Riffleshell <i>Epioblasma rangiana</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/527	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Eastern Prairie Fringed Orchid <i>Platanthera leucophaea</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/601	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO BALD AND GOLDEN EAGLES WITHIN THE VICINITY OF YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9643	Breeds May 20 to Aug 10
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

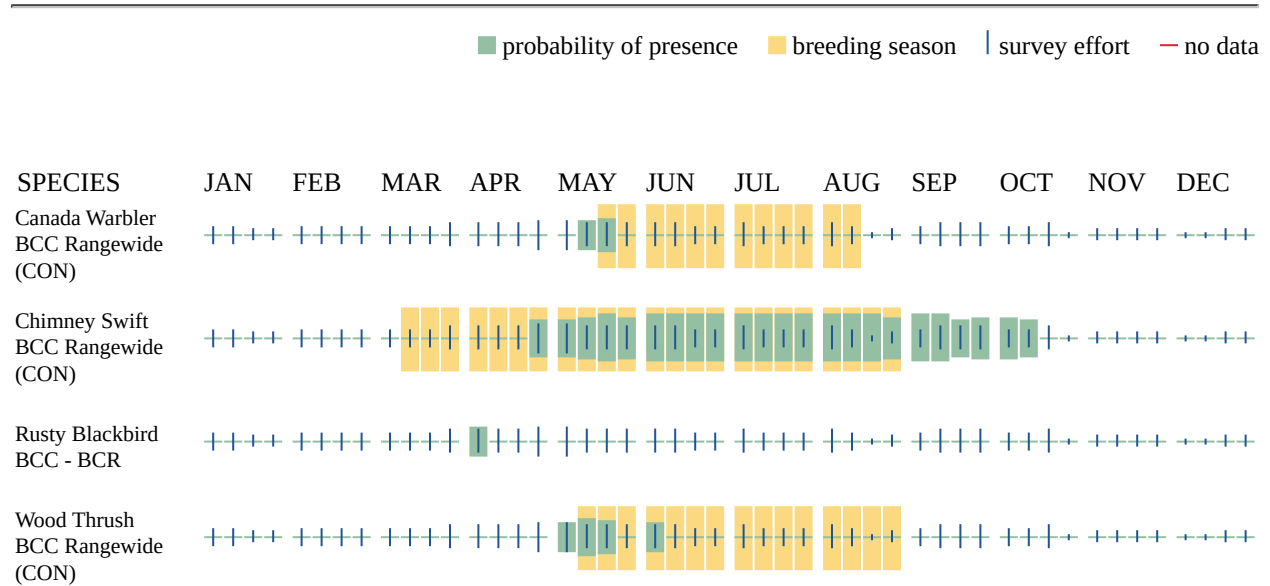
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (-)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Lindsey Sorensen
Address: 2034 84th Street
City: Byron Center
State: MI
Zip: 49315
Email: sorensen@pmenv.com
Phone: 6162221777

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Housing and Urban Development

You have indicated that your project falls under or receives funding through the following special project authorities:

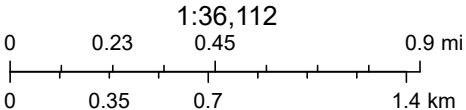
- BIPARTISAN INFRASTRUCTURE LAW (BIL) (OTHER)

Letter ANSI A Landscape



October 24, 2023

-  Project Buffer
-  Project 1



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United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Wayne County, Michigan**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

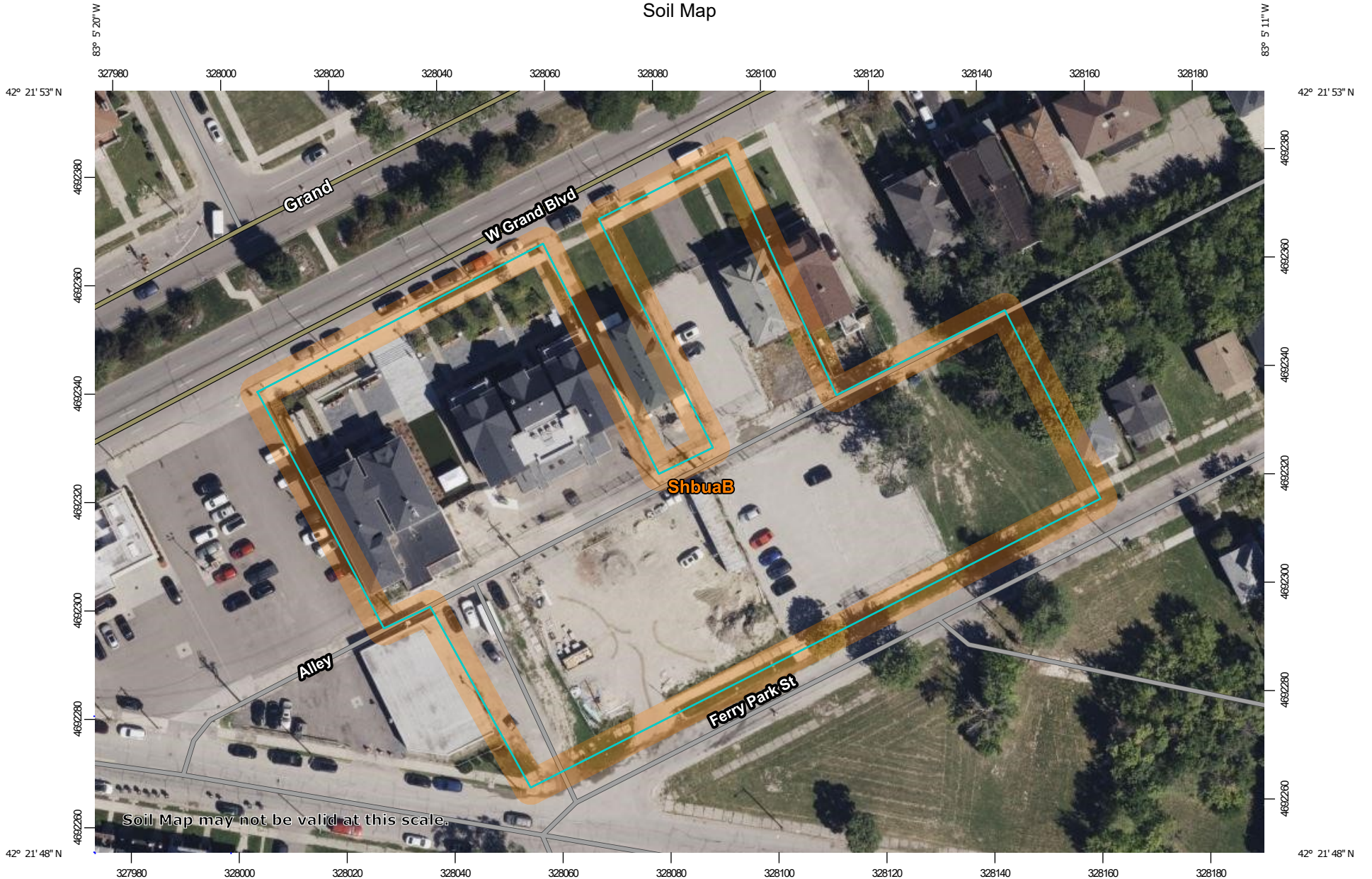
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:990 if printed on A landscape (11" x 8.5") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wayne County, Michigan
 Survey Area Data: Version 9, Aug 25, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 8, 2022—Oct 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ShbuaB	Shebeon-Urban land complex, 0 to 4 percent slopes	2.2	100.0%
Totals for Area of Interest		2.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Wayne County, Michigan

ShbuaB—Shebeon-Urban land complex, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2v13s
Elevation: 580 to 670 feet
Mean annual precipitation: 28 to 38 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 135 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Shebeon, human transported surface, and similar soils: 55 percent
Urban land: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shebeon, Human Transported Surface

Setting

Landform: Wave-worked till plains, water-lain moraines
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Loamy human-transported material over loamy lodgment till

Typical profile

^Au - 0 to 9 inches: sandy loam
^Cu - 9 to 12 inches: loam
Bwb - 12 to 27 inches: loam
BC - 27 to 31 inches: clay loam
C - 31 to 55 inches: clay loam
Cd - 55 to 80 inches: loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: 51 to 65 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 33 to 47 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline (0.1 to 1.5 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: C
Ecological site: F099XY007MI - Lake Plain Flats

Custom Soil Resource Report

Hydric soil rating: No

Description of Urban Land

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components

Parkhill, human transported surface

Percent of map unit: 5 percent

Landform: Wave-worked till plains, water-lain moraines

Microfeatures of landform position: Open depressions

Down-slope shape: Linear, concave

Across-slope shape: Linear, convex

Ecological site: F099XY013MI - Wet Lake Plain Flats

Hydric soil rating: No

Midtown

Percent of map unit: 3 percent

Landform: Water-lain moraines, wave-worked till plains

Down-slope shape: Linear

Across-slope shape: Convex, linear

Ecological site: F099XY007MI - Lake Plain Flats

Hydric soil rating: No

Avoca, human transported surface

Percent of map unit: 2 percent

Landform: Wave-worked till plains, water-lain moraines

Down-slope shape: Linear

Across-slope shape: Linear, convex

Ecological site: F099XY003MI - Warm Moist Sandy Depression

Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

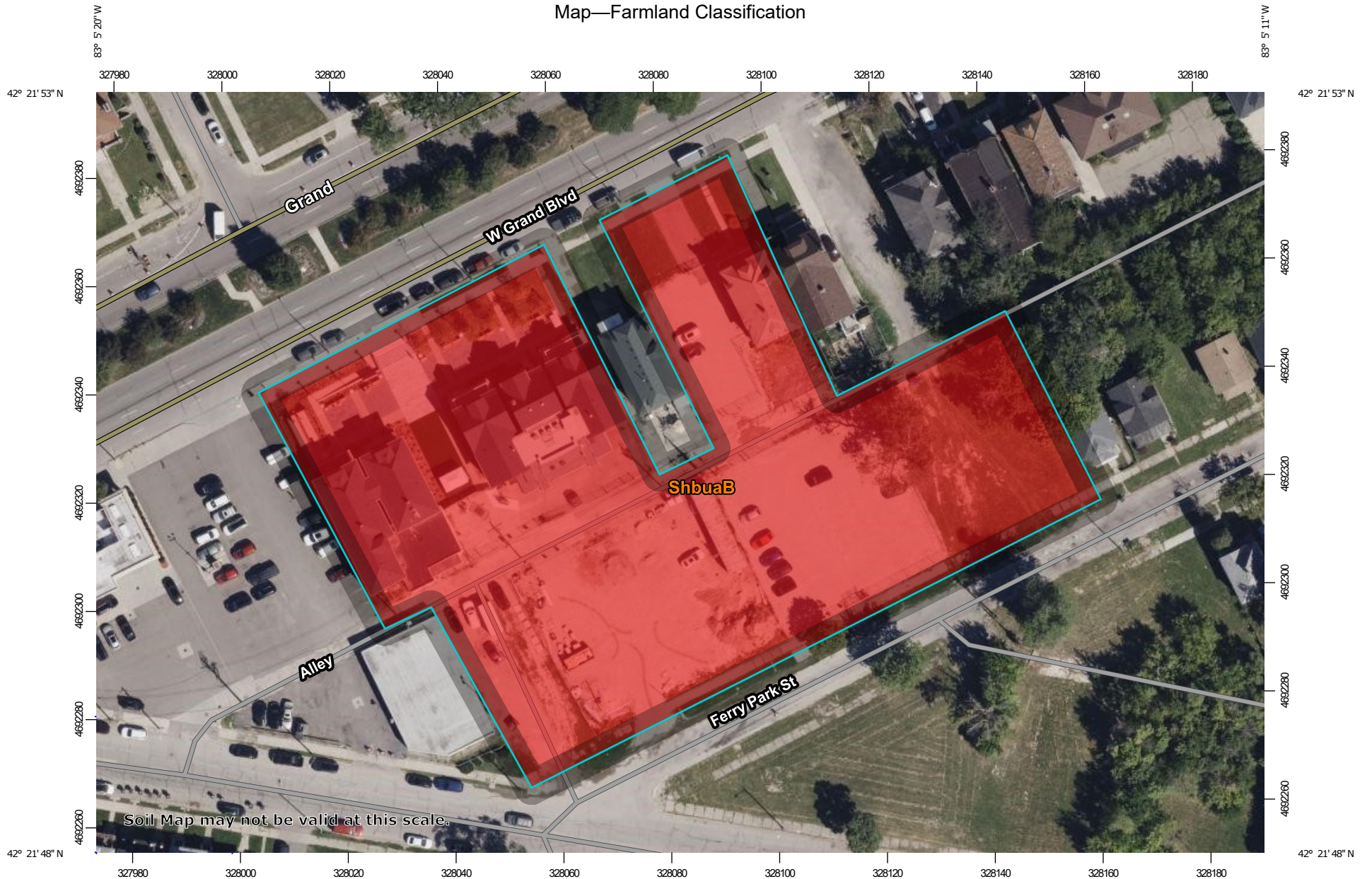
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report Map—Farmland Classification



Map Scale: 1:990 if printed on A landscape (11" x 8.5") sheet.

0 10 20 40 60 Meters


0 45 90 180 270 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Custom Soil Resource Report









MAP LEGEND








Area of Interest (AOI)






 Area of Interest (AOI)








Soils



Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season









-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60





































-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Custom Soil Resource Report

 Prime farmland if subsoiled, completely removing the root inhibiting soil layer	 Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium	 Farmland of unique importance	 Prime farmland if subsoiled, completely removing the root inhibiting soil layer
 Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	 Farmland of statewide importance, if irrigated and drained	 Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season	 Not rated or not available	 Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
 Prime farmland if irrigated and reclaimed of excess salts and sodium	 Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season	Soil Rating Points  Not prime farmland	 Prime farmland if irrigated and reclaimed of excess salts and sodium
 Farmland of statewide importance	 Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer	 Farmland of statewide importance, if warm enough	 All areas are prime farmland	 Prime farmland if irrigated and reclaimed of excess salts and sodium
 Farmland of statewide importance, if drained	 Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	 Farmland of statewide importance, if thawed	 Prime farmland if protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance
 Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer	 Farmland of local importance	 Prime farmland if irrigated	 Farmland of statewide importance, if drained
 Farmland of statewide importance, if irrigated	 Farmland of statewide importance, if warm enough	 Farmland of local importance, if irrigated	 Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
			 Prime farmland if irrigated and drained	 Farmland of statewide importance, if irrigated
			 Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season	

Custom Soil Resource Report

Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season	Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium	Farmland of unique importance Not rated or not available	The soil surveys that comprise your AOI were mapped at 1:12,000.
Farmland of statewide importance, if irrigated and drained	Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season	Water Features Streams and Canals	<div style="border: 1px solid black; padding: 5px;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div>
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season	Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season	Transportation Rails Interstate Highways US Routes Major Roads Local Roads	
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer	Farmland of statewide importance, if warm enough	Background Aerial Photography	Please rely on the bar scale on each map sheet for map measurements.
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	Farmland of statewide importance, if thawed		Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
	Farmland of local importance		Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.
	Farmland of local importance, if irrigated		This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.
			Soil Survey Area: Wayne County, Michigan Survey Area Data: Version 9, Aug 25, 2023
			Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.
			Date(s) aerial images were photographed: Sep 8, 2022—Oct 4, 2022
			The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ShbuaB	Shebeon-Urban land complex, 0 to 4 percent slopes	Not prime farmland	2.2	100.0%
Totals for Area of Interest			2.2	100.0%

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

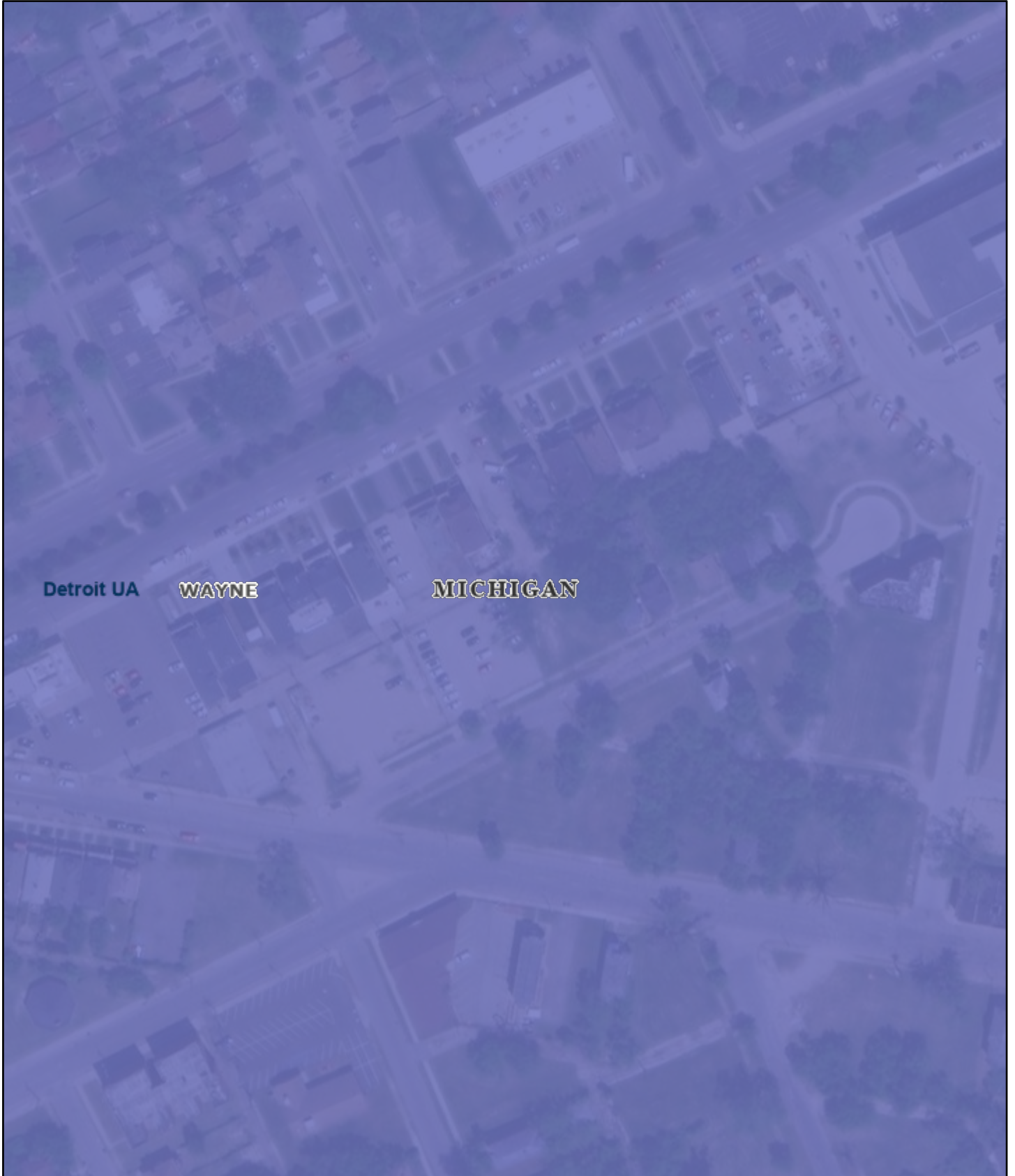
Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

TIGERweb



October 24, 2023

Counties



2020 Urban Areas

States

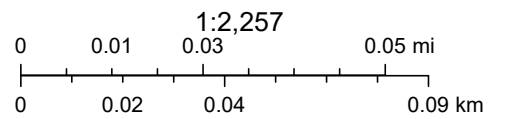


Counties

2020 Urban Areas



States

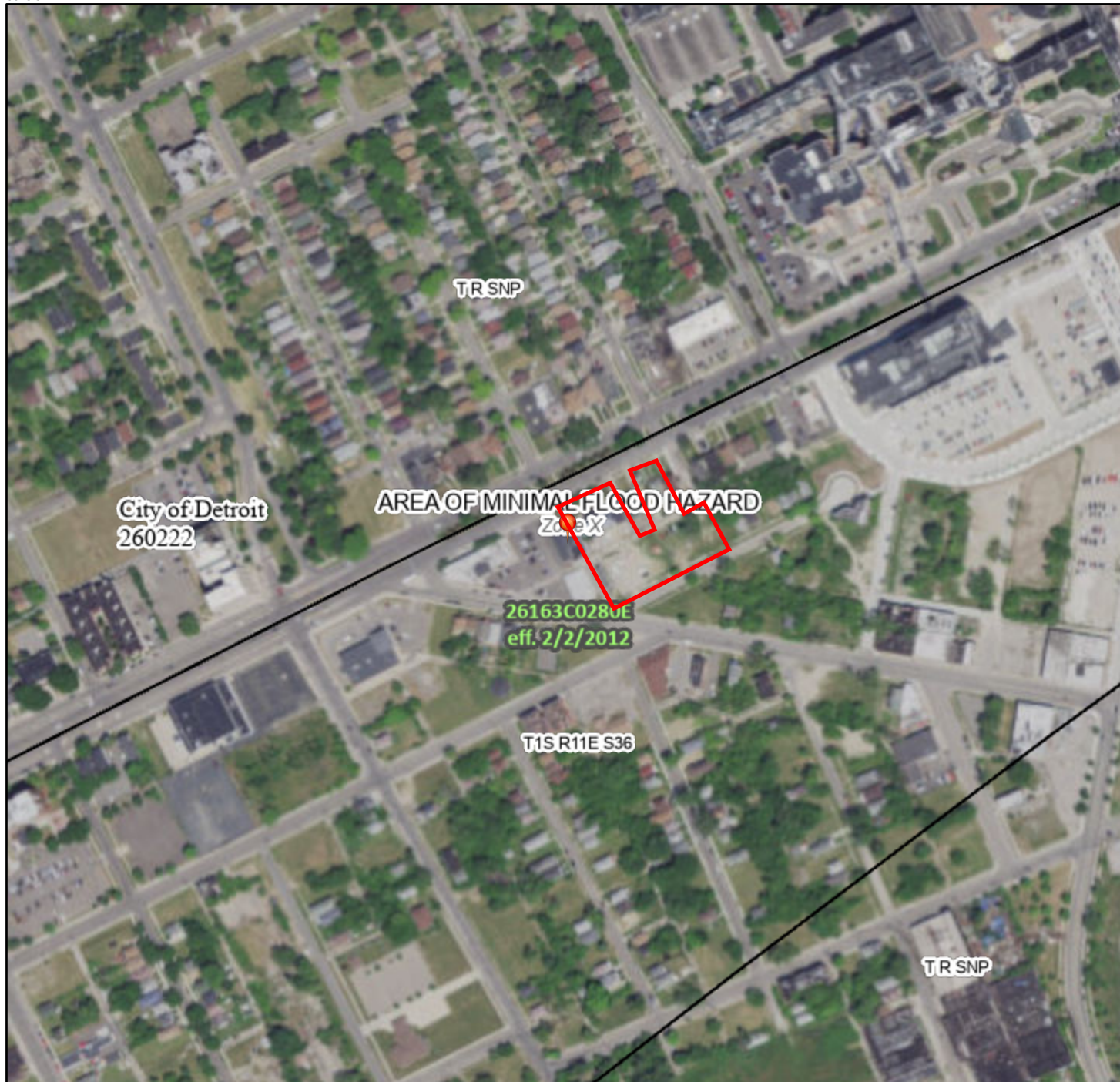


Maxar, Microsoft, Source: U.S. Census Bureau

National Flood Hazard Layer FIRMMette



83°5'37"W 42°22'4"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **10/24/2023 at 11:51 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

83°5'W 42°21'37"N

Basemap Imagery Source: USGS National Map 2023



Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 908
Detroit, Michigan 48226

Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

March 18, 2024

Penny Dwoinen
City of Detroit Housing & Revitalization Department
Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 908
Detroit, MI 48226

RE: Section 106 Review of a HUD Funded Project Located at 2648 W Grand Blvd, known as the Motown Museum, in the City of Detroit, Wayne County, Michigan

Dear Mrs. Dwoinen,

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, I am providing a determination of historic eligibility regarding the above-referenced project under the authority of the "Programmatic Agreement between the Michigan State Historic Preservation Office and the City of Detroit, Michigan..." dated 12/21/2022.

The proposed work includes approximately 35,000 sf of new construction for a four-story tall expansion to the existing Motown Museum (2648 W. Grand Boulevard). The new construction/addition is to consist of the following components: Exhibit Galleries, Theatre, Retail Shop, Box Office, Administrative Offices, and Multi-Purpose Areas. These components are augmented by the required circulation, utility, audio/visual, mechanical, electrical, plumbing, and other spaces required to support the facility. The work will include the removal of utility structures, utility lines, curb and gutter, asphalt pavement, and concrete sidewalk and alleyway pavement as well as the removal of some trees/shrubs. Most of this work will occur south of the alleyway that runs parallel to and between W. Grand Blvd. and Ferry Park St.

Per Stipulation VI of Programmatic Agreement (PA), the proposed undertaking qualified for review by SHPO's archaeologist and consultation with Tribes. An archaeological assessment was prepared by The Mannik & Smith Group, Inc., and submitted for consultation with SHPO on 11/1/2023. The archaeological consultant demonstrated that the project area has been previously disturbed and based on research, recommended that no archaeological work is needed. In a letter dated, 12/4/2023, SHPO's archaeologist concurred with the recommendation of "No Adverse Effect."

On 11/1/2023, a request for Tribal Consultation was submitted to the following Tribes:

- Bay Mills Indian Community
- Forest County Potawatomi Community of Wisconsin
- Grand Traverse Band of Ottawa & Chippewa Indians
- Hannahville Indian Community
- Ketegitigaaning Ojibwe Nation/Lac Vieux Desert Band of Lake Superior Chippewa Indians



Keweenaw Bay Indian Community of the Lake Superior Band of Chippewa Indians
Lac du Flambeau Band of Lake Superior Chippewa Indians
Little River Band of Ottawa Indians
Little Traverse Bay Bands of Odawa Indians
Menominee Indian Tribe of Wisconsin
Match-E-Be-Nash-She-Wish (Gun Lake) Band of Pottawatomi Indians
Miami Tribe of Oklahoma
Michigan Anishinaabek Cultural Preservation and Repatriation Alliance
Nottawaseppi Huron Band of the Potawatomi
Pokagon Band of Potawatomi Indians, Michigan and Indiana
Saginaw Chippewa Indian Tribe of Michigan
Sault Ste. Marie Tribe of Chippewa Indians
Seneca Cayuga Nation

This consultation concluded with no objections to the proposed activities related to this undertaking. In the event of an unanticipated discovery, Tribal Consultation will be reinitiated under the direction of the unanticipated discoveries plan for this project.

The building at 2648 W. Grand Boulevard is eligible for listing on the National Register of Historic Places as a contributing resource of the West Grand Boulevard African American Arts and Business Historic Local District. Additionally, The James H. Cole Home for Funerals Local Historic District is adjacent to the project's area of direct impact. Therefore, per Stipulation V.B of the PA, the project shall be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Project design plans, dated 11/27/2023, were submitted with an amended Section 106 application on 2/23/2024. Project activities will be located behind and across the alleyway from resources in the proposed Motown Historic District, with minimal physical impacts to the 1964 rear addition connecting 2644-2646 and 2648 W. Grand Blvd. The design plans meet the Secretary of the Interior's Standards for Rehabilitation, specifically Standards 9 and 10.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

This project has been given a **Conditional No Adverse Effect** determination (Federal Regulations 36 CFR Part 800.5(b)) on properties that are listed or eligible for listing in the National Register of Historic Places, as long as the following conditions are met:



Housing and Revitalization
Department

Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 908
Detroit, Michigan 48226

Phone: 313.224.6380
Fax: 313.224.1629
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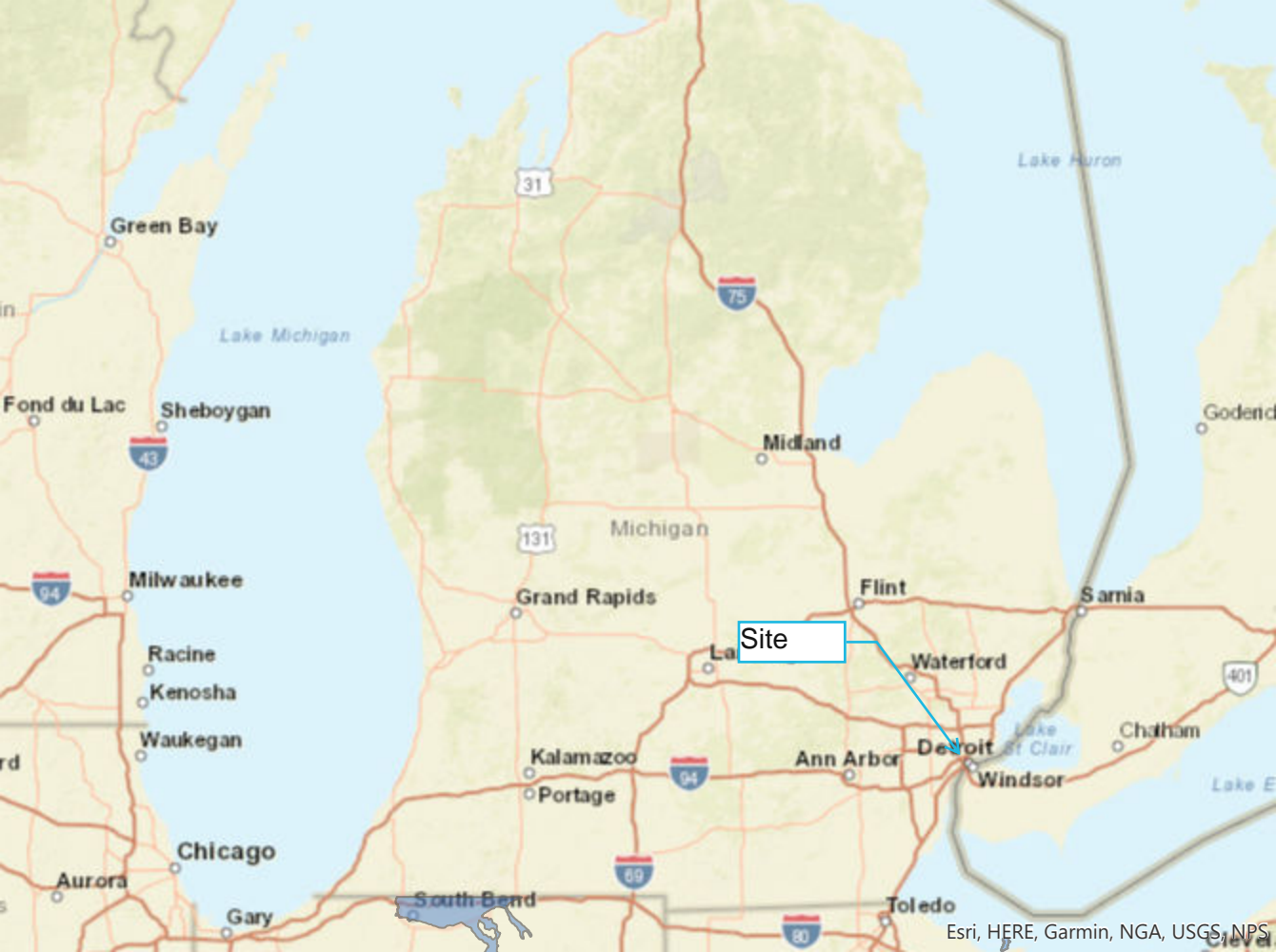
- The work is conducted in accordance with the specifications submitted to the Preservation Specialist on 2/23/2024, and any changes to the scope of work for the project shall be submitted to the Preservation Specialist for review and approval prior to the start of work.
- In the event of an unanticipated discovery during construction, the unanticipated discoveries plan is followed.
- Photos of the completed work are submitted to the Preservation Specialist.

Please note that the Section 106 Review process will not be complete until the above-mentioned conditions are met. Please be advised that this Section 106 review is not a substitute for a review for the Local Historic District Commission or for projects applying for Federal Historic Preservation Tax Credits. If you have any questions, you may direct them to the Preservation Specialist at Ciavattone@detroitmi.gov.

Sincerely,

A handwritten signature in blue ink that reads 'Tiffany Ciavattone'.

Tiffany Ciavattone
Preservation Specialist
City of Detroit
Housing & Revitalization Department






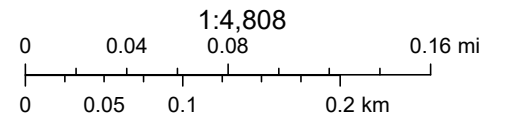
Wetlands Map Viewer



October 24, 2023

Part 303 Final Wetlands Inventory

-  Wetlands as identified on NWI and MIRIS maps
-  Soil areas which include wetland soils
-  Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Disclaimer: This map is not intended to be used to determine the specific

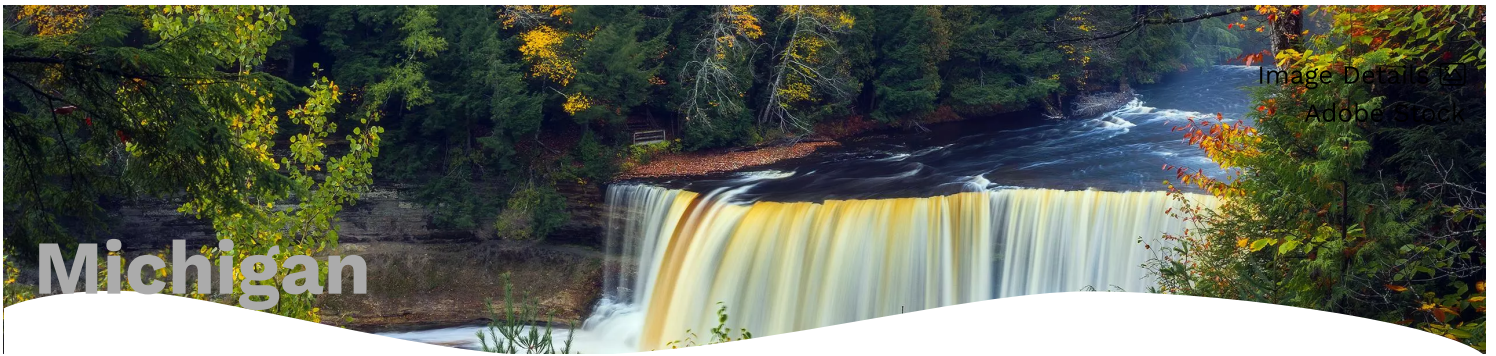


October 24, 2023

Wetlands

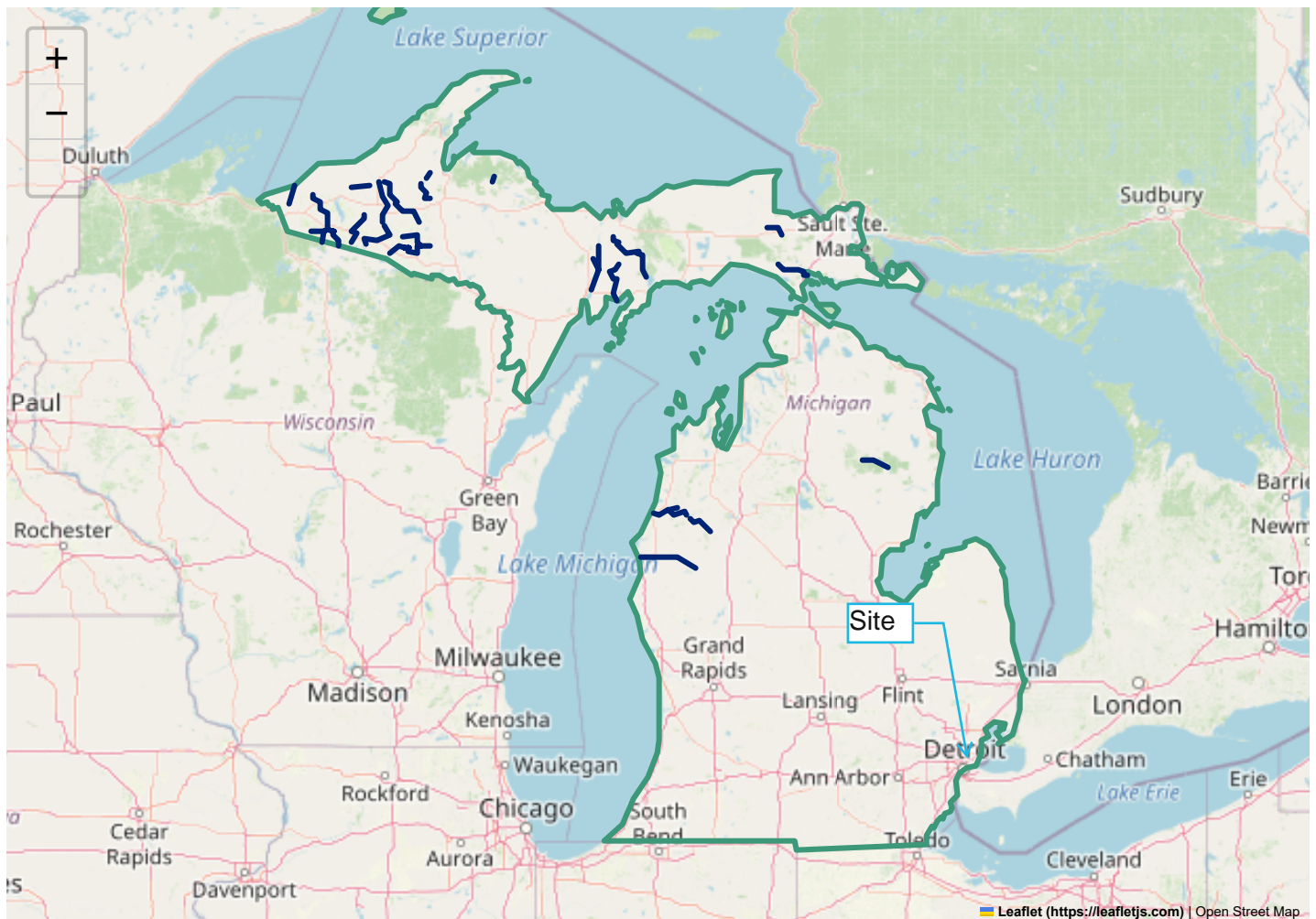
- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Lake
- Estuarine and Marine Wetland
- Freshwater Forested/Shrub Wetland
- Other
- Freshwater Pond
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Even in the “Great Lakes State,” rivers play a huge role in the lives of every Michigander. From recreation to creation, Michigan’s rivers have carved paths for industries to rise and cities to thrive. The state has over 300 named rivers — several names are shared by different rivers (e.g., there are eight Pine Rivers and seven Black Rivers). In four cases, two rivers of the same name are in one county.

Michigan has approximately 51,438 miles of river, of which 656.4 miles are designated as wild & scenic — just slightly more than 1% of the state's river miles.



EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

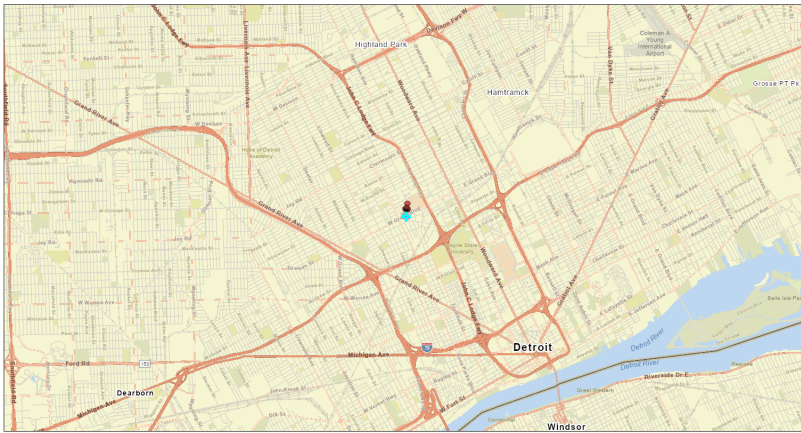
Detroit, MI

1 mile Ring Centered at 42.364354,-83.088550

Population: 12,656

Area in square miles: 3.14

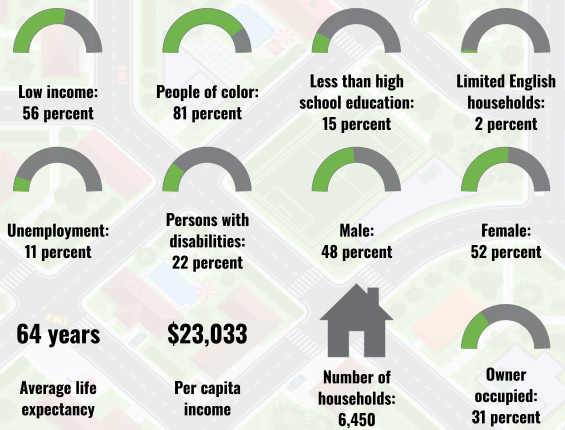
A3 Landscape



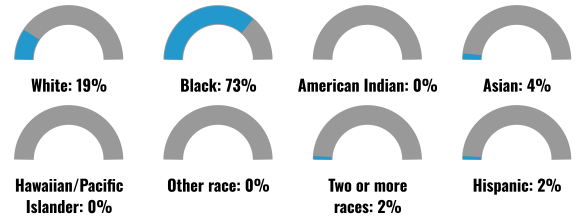
March 19, 2024
Project 1
Search Result (point)

1:72,224
0 0.5 1 2 mi
0 1 2 4 km
Province of Ontario, East Canada, East Toronto, Ontario, Canada; © GeoNames, Inc., © OpenStreetMap contributors, CC-BY, Imagery © Mapbox, © EPA, NPS, USDA, USFWS, TRCA, Parks Canada

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	93%
Spanish	3%
Other Indo-European	2%
Other and Unspecified	1%
Total Non-English	7%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

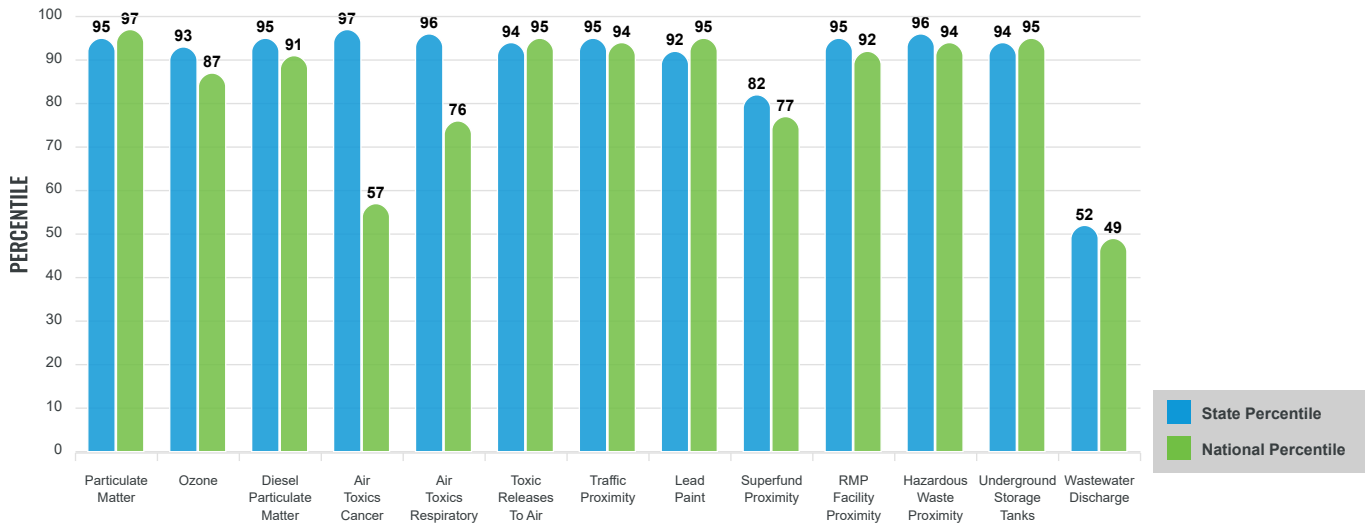
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

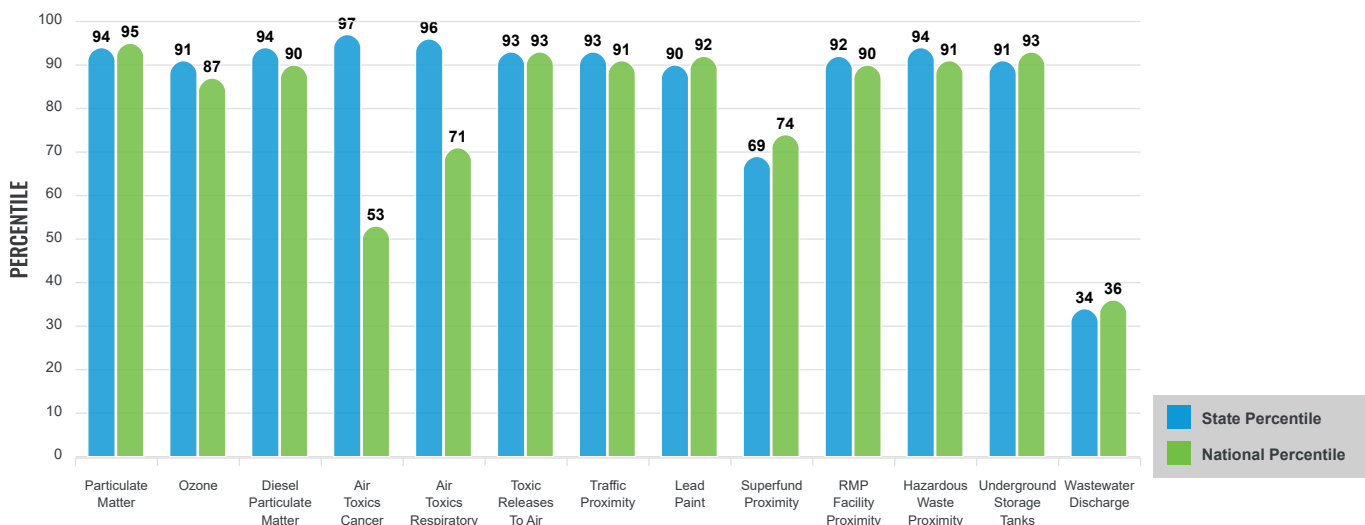
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 1 mile Ring Centered at 42.364354,-83.088550

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	10.6	8.51	98	8.08	97
Ozone (ppb)	62.9	60	76	61.6	62
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.343	0.183	96	0.261	76
Air Toxics Cancer Risk* (lifetime risk per million)	21	19	14	25	5
Air Toxics Respiratory HI*	0.3	0.2	88	0.31	31
Toxic Releases to Air	4,600	2,500	89	4,600	85
Traffic Proximity (daily traffic count/distance to road)	610	120	97	210	92
Lead Paint (% Pre-1960 Housing)	0.69	0.38	78	0.3	85
Superfund Proximity (site count/km distance)	0.049	0.15	37	0.13	42
RMP Facility Proximity (facility count/km distance)	0.62	0.31	85	0.43	80
Hazardous Waste Proximity (facility count/km distance)	3.7	1.1	95	1.9	84
Underground Storage Tanks (count/km ²)	30	8	94	3.9	98
Wastewater Discharge (toxicity-weighted concentration/m distance)	9.8E-06	0.13	16	22	17
SOCIOECONOMIC INDICATORS					
Demographic Index	69%	28%	91	35%	89
Supplemental Demographic Index	22%	14%	87	14%	84
People of Color	81%	26%	91	39%	84
Low Income	56%	31%	85	31%	86
Unemployment Rate	12%	7%	83	6%	85
Limited English Speaking Households	2%	2%	79	5%	61
Less Than High School Education	15%	9%	82	12%	72
Under Age 5	5%	5%	56	6%	53
Over Age 64	14%	18%	40	17%	45
Low Life Expectancy	25%	20%	87	20%	91

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	1
Water Dischargers	0
Air Pollution	3
Brownfields	7
Toxic Release Inventory	1

Other community features within defined area:

Schools	6
Hospitals	2
Places of Worship	10

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	No

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 1 mile Ring Centered at 42.364354,-83.088550

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	25%	20%	87	20%	91
Heart Disease	8.4	6.6	86	6.1	87
Asthma	15.9	11.6	94	10	99
Cancer	5.3	6.6	17	6.1	31
Persons with Disabilities	21%	14.6%	85	13.4%	88

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	1%	7%	17	12%	17
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	33%	14%	94	14%	91
Lack of Health Insurance	7%	5%	71	9%	50
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Report for 1 mile Ring Centered at 42.364354,-83.088550

48	9	10
46	7	8
46	5	6





United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Wayne County, Michigan**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:990 if printed on A landscape (11" x 8.5") sheet.

0 10 20 40 60 Meters

0 45 90 180 270 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wayne County, Michigan
 Survey Area Data: Version 9, Aug 25, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 8, 2022—Oct 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ShbuaB	Shebeon-Urban land complex, 0 to 4 percent slopes	2.2	100.0%
Totals for Area of Interest		2.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Wayne County, Michigan

ShbuaB—Shebeon-Urban land complex, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2v13s
Elevation: 580 to 670 feet
Mean annual precipitation: 28 to 38 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 135 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Shebeon, human transported surface, and similar soils: 55 percent
Urban land: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shebeon, Human Transported Surface

Setting

Landform: Wave-worked till plains, water-lain moraines
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Loamy human-transported material over loamy lodgment till

Typical profile

^Au - 0 to 9 inches: sandy loam
^Cu - 9 to 12 inches: loam
Bwb - 12 to 27 inches: loam
BC - 27 to 31 inches: clay loam
C - 31 to 55 inches: clay loam
Cd - 55 to 80 inches: loam

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: 51 to 65 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 33 to 47 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline (0.1 to 1.5 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: C
Ecological site: F099XY007MI - Lake Plain Flats

Custom Soil Resource Report

Hydric soil rating: No

Description of Urban Land

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components

Parkhill, human transported surface

Percent of map unit: 5 percent

Landform: Wave-worked till plains, water-lain moraines

Microfeatures of landform position: Open depressions

Down-slope shape: Linear, concave

Across-slope shape: Linear, convex

Ecological site: F099XY013MI - Wet Lake Plain Flats

Hydric soil rating: No

Midtown

Percent of map unit: 3 percent

Landform: Water-lain moraines, wave-worked till plains

Down-slope shape: Linear

Across-slope shape: Convex, linear

Ecological site: F099XY007MI - Lake Plain Flats

Hydric soil rating: No

Avoca, human transported surface

Percent of map unit: 2 percent

Landform: Wave-worked till plains, water-lain moraines

Down-slope shape: Linear

Across-slope shape: Linear, convex

Ecological site: F099XY003MI - Warm Moist Sandy Depression

Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

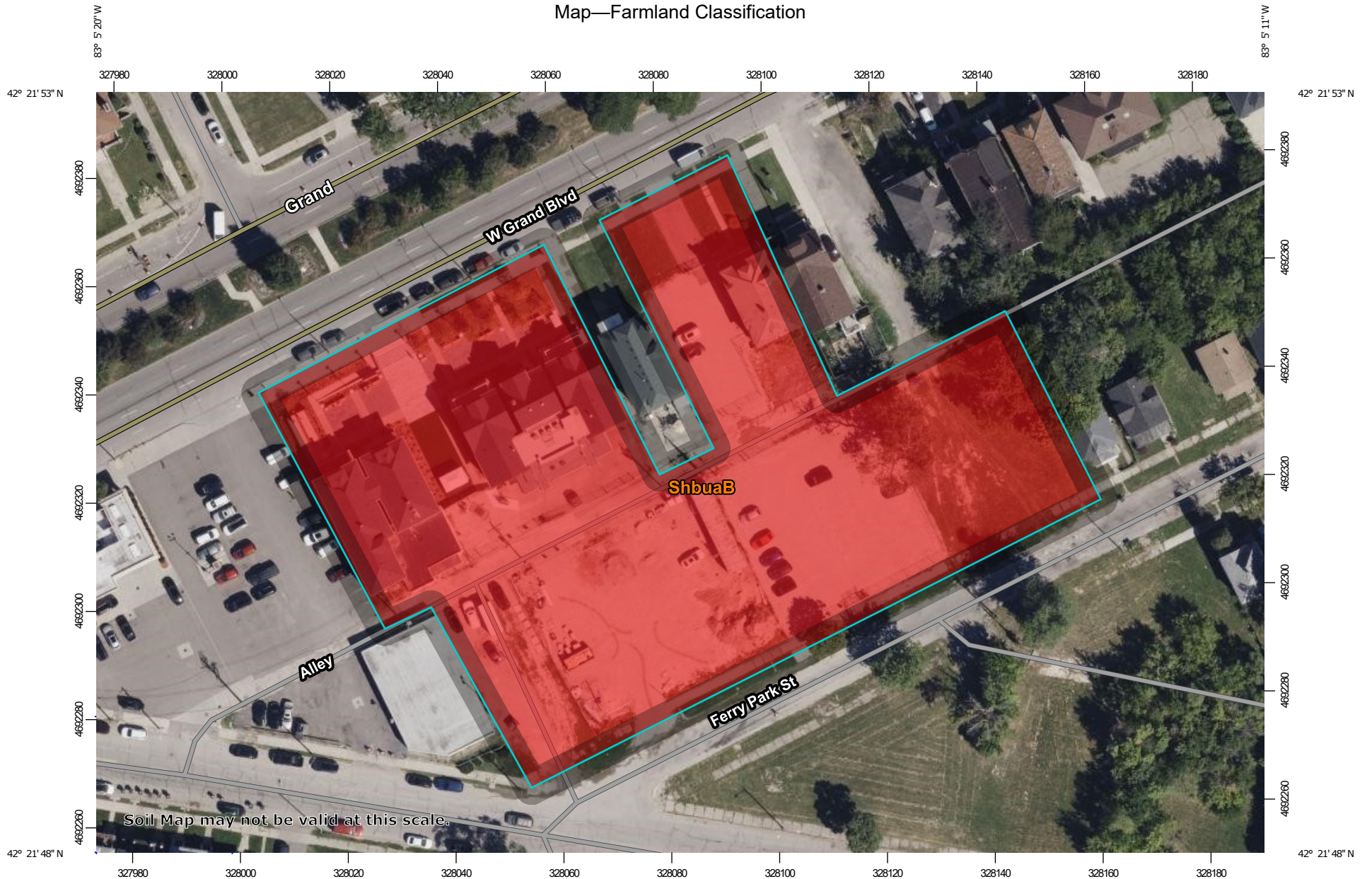
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report Map—Farmland Classification



Map Scale: 1:990 if printed on A landscape (11" x 8.5") sheet.

0 10 20 40 60 Meters

0 45 90 180 270 Feet


Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



Custom Soil Resource Report









MAP LEGEND








Area of Interest (AOI)






 Area of Interest (AOI)








Soils



Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season









-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60







































-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available






















Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

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 Prime farmland if subsoiled, completely removing the root inhibiting soil layer	 Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium	 Farmland of unique importance	 Prime farmland if subsoiled, completely removing the root inhibiting soil layer
 Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	 Farmland of statewide importance, if irrigated and drained	 Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season	 Not rated or not available	 Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
 Prime farmland if irrigated and reclaimed of excess salts and sodium	 Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season	Soil Rating Points  Not prime farmland	 Prime farmland if irrigated and reclaimed of excess salts and sodium
 Farmland of statewide importance	 Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer	 Farmland of statewide importance, if warm enough	 All areas are prime farmland	 Prime farmland if irrigated and reclaimed of excess salts and sodium
 Farmland of statewide importance, if drained	 Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	 Farmland of statewide importance, if thawed	 Prime farmland if protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance
 Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer	 Farmland of local importance	 Prime farmland if irrigated	 Farmland of statewide importance, if drained
 Farmland of statewide importance, if irrigated	 Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	 Farmland of local importance, if irrigated	 Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	 Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
			 Prime farmland if irrigated and drained	 Farmland of statewide importance, if irrigated
			 Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season	

Custom Soil Resource Report

<p> Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season</p>	<p> Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium</p>	<p> Farmland of unique importance</p> <p> Not rated or not available</p>	<p>The soil surveys that comprise your AOI were mapped at 1:12,000.</p>
<p> Farmland of statewide importance, if irrigated and drained</p>	<p> Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season</p>	<p>Water Features</p> <p> Streams and Canals</p>	<p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p>
<p> Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season</p>	<p> Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season</p>	<p>Transportation</p> <p> Rails</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p>	
<p> Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer</p>	<p> Farmland of statewide importance, if warm enough</p>	<p>Background</p> <p> Aerial Photography</p>	<p>Please rely on the bar scale on each map sheet for map measurements.</p>
<p> Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60</p>	<p> Farmland of statewide importance, if thawed</p>		<p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p>
	<p> Farmland of local importance</p>		<p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p>
	<p> Farmland of local importance, if irrigated</p>		<p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p>
			<p>Soil Survey Area: Wayne County, Michigan Survey Area Data: Version 9, Aug 25, 2023</p>
			<p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p>
			<p>Date(s) aerial images were photographed: Sep 8, 2022—Oct 4, 2022</p>
			<p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
ShbuaB	Shebeon-Urban land complex, 0 to 4 percent slopes	Not prime farmland	2.2	100.0%
Totals for Area of Interest			2.2	100.0%

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

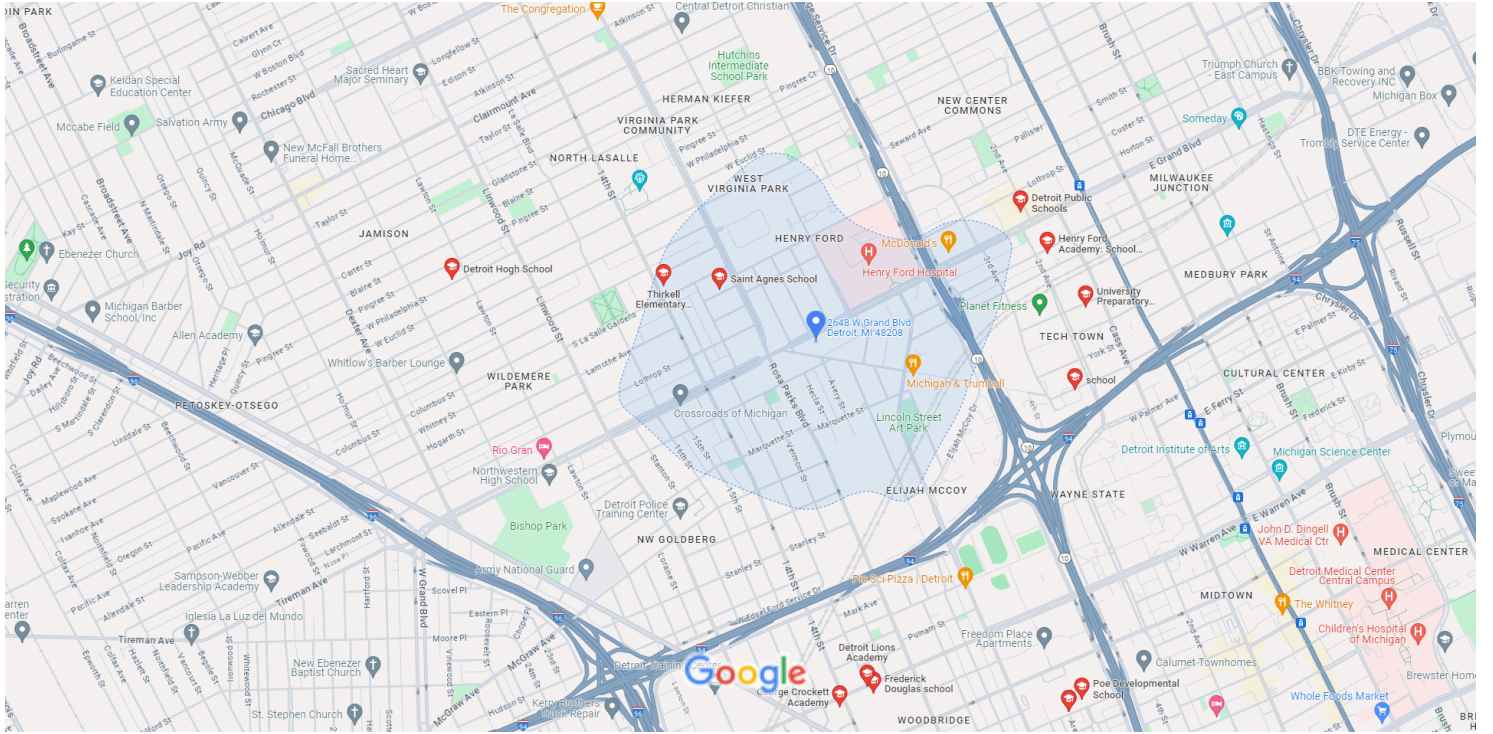
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Custom Soil Resource Report

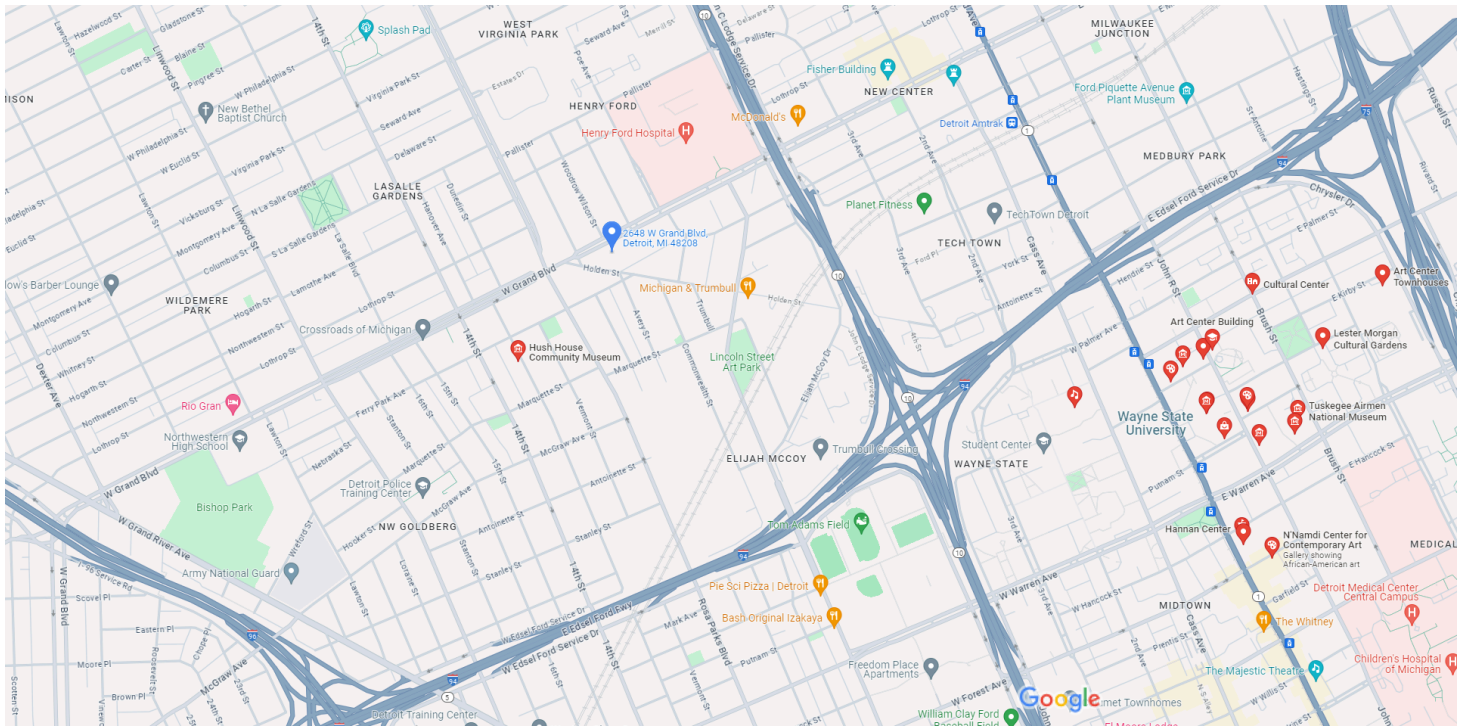
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cultural center



Map data ©2024 Google 500 ft

Rating ▾ Hours ▾ All filters

Results ⓘ

The Carr Center Contemporary

4.7 (23)

Art gallery · 15 E Kirby St

Open · Closes 8 PM



"Wonderful space to enjoy the creative arts"

Cultural Center

No reviews

Detroit, MI



Arts League of Michigan/The Carr Center

5.0 (2)

Arts organization · 4750 Woodward Ave

Open · Closes 5 PM



N'Namdi Center for Contemporary Art

4.9 (150)

Tourist attraction · 52 E Forest Ave

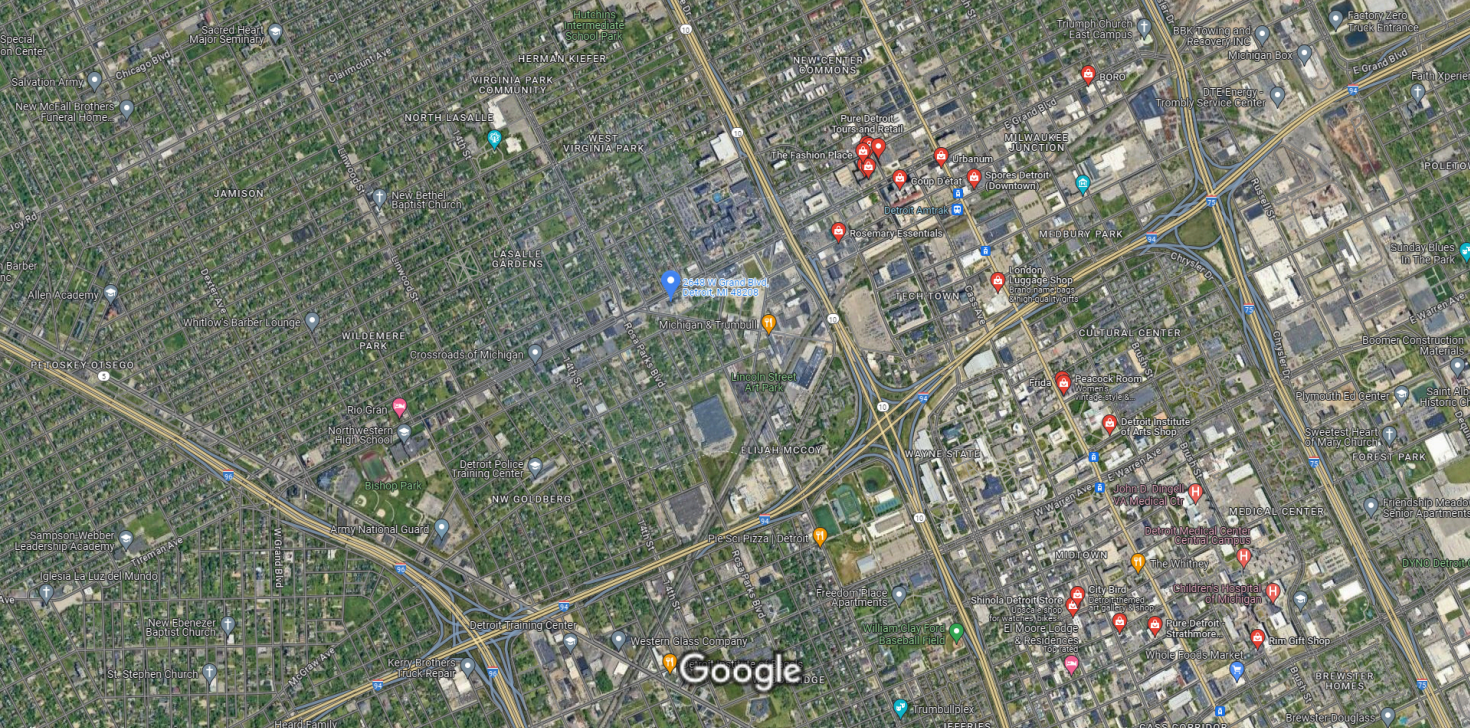
Gallery showing African-American art

Open · Closes 5 PM

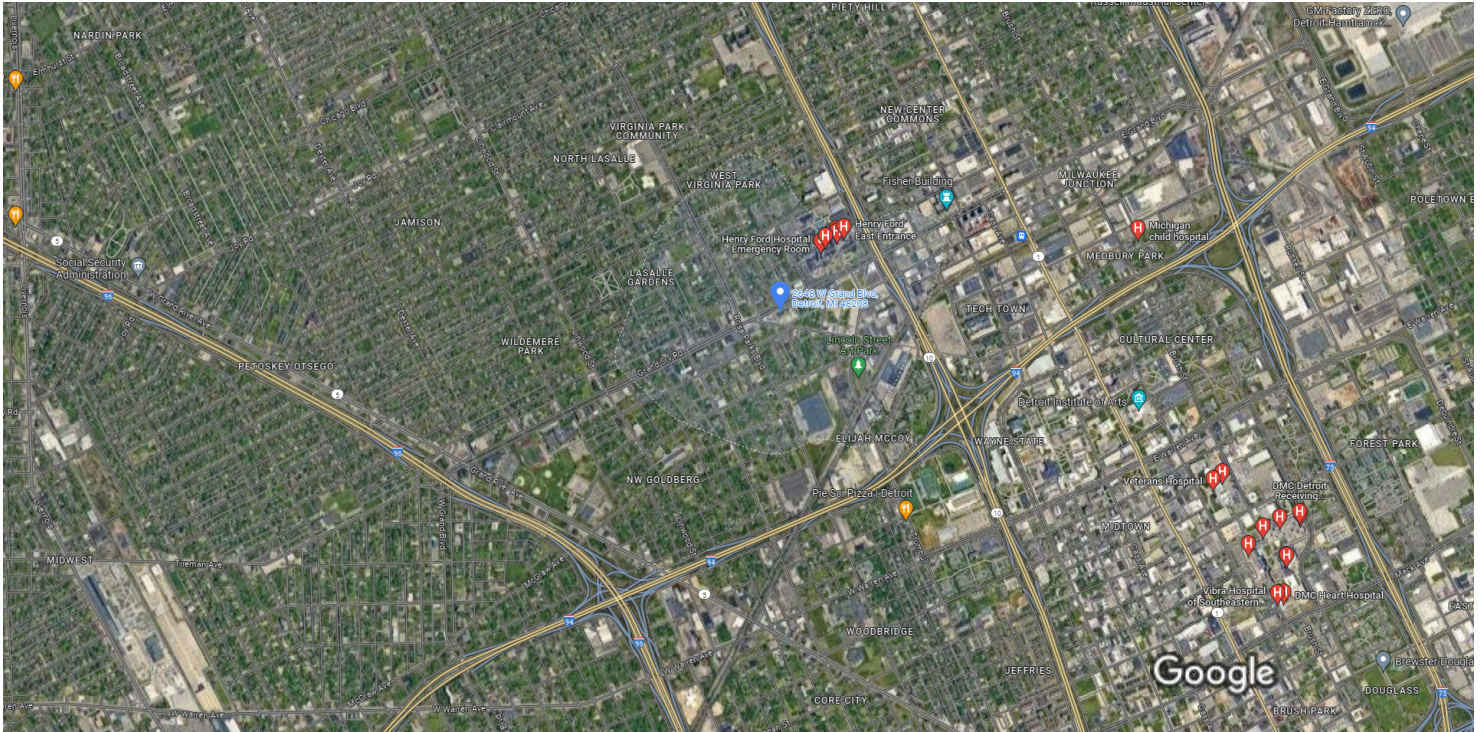


"Love the vibes and culture here!"

shopping



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USDA/FPAC/GEO, Map data ©2024 Google

Rating ▼ Hours ▼ All filters

Results ⓘ

Henry Ford Hospital

3.0 (1,465)
Hospital · 2799 W Grand Blvd
Open 24 hours · (313) 916-2600



Website



Directions

ⓘ "That was not good but this is a hospital in the hood so that is expected."

DMC Harper University Hospital

2.6 (317)
General hospital · 3990 John R St
Open 24 hours · (313) 745-8040

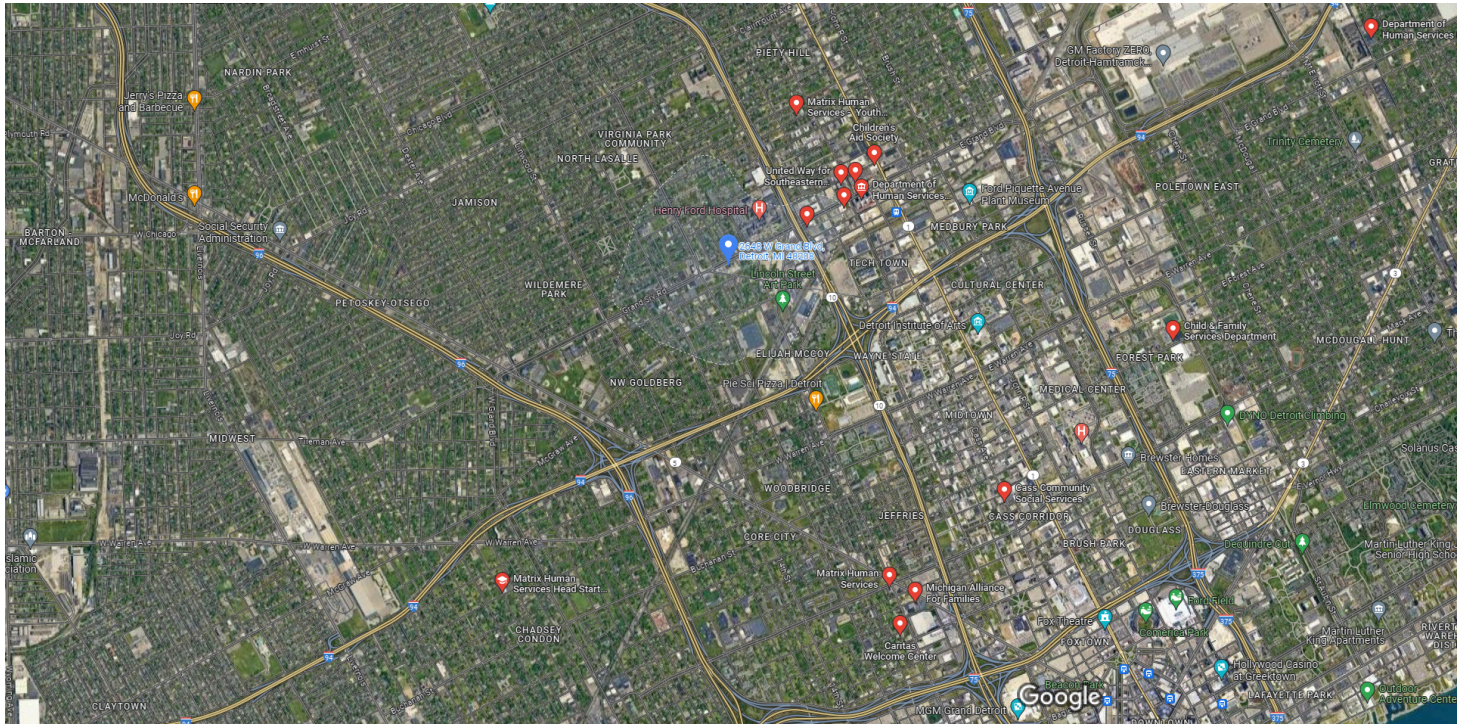


Website



Directions

ⓘ "I have had over 125 procedures and surgeries at Harper Hospital."



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Rating Hours All filters

Results

Matrix Human Services
No reviews
Social services organization · 1519
Martin Luther King Jr Blvd
(313) 962-5255

[Website](#) [Directions](#)

Children's Aid Society
3.0 (2)
Social services organization · 7375 Woodward Ave # 2700
Open · Closes 5 PM · (313) 961-8100

[Directions](#)

Department of Human Services SUITE L- 450
1.8 (17)
Municipal health department · 3040 W Grand Blvd
Open · Closes 5 PM · (313) 456-1000

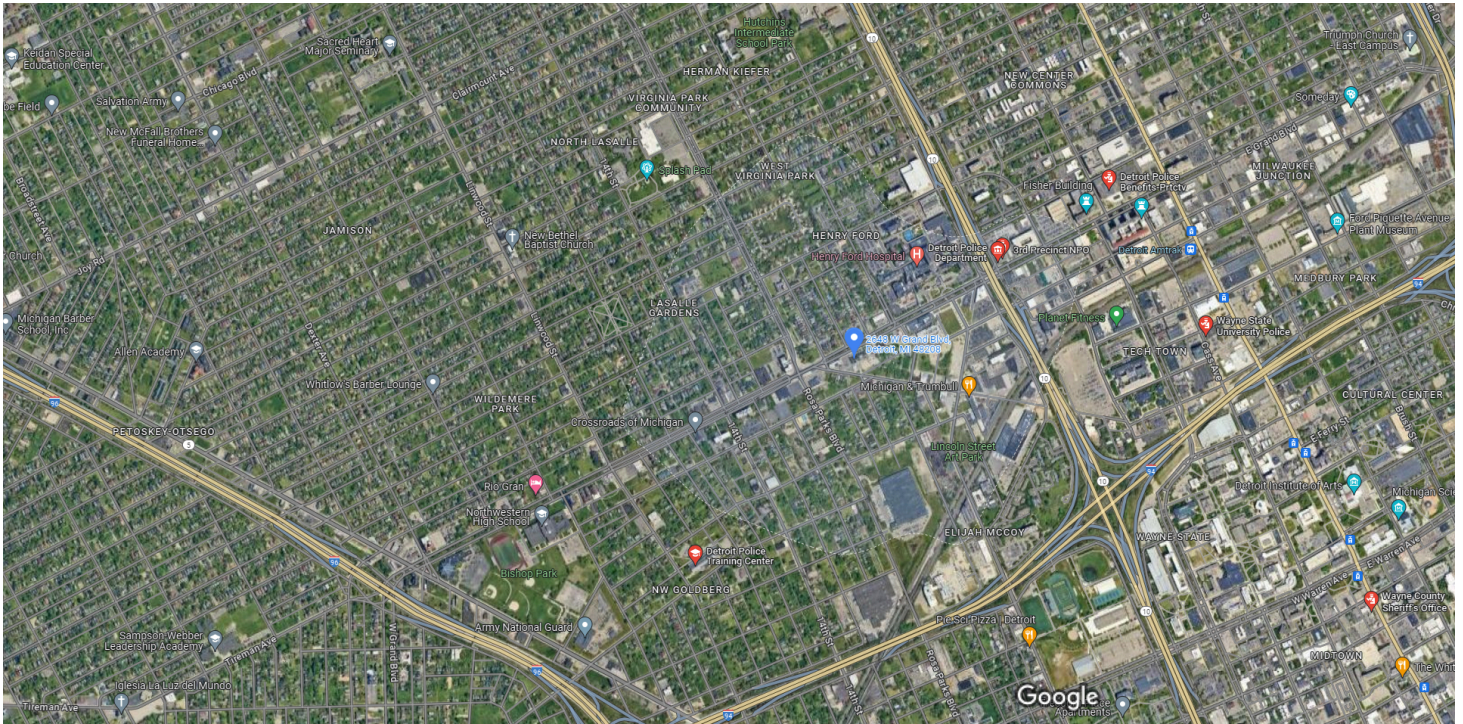
[Website](#) [Directions](#)

Center for Youth & Families
2.7 (3)
Youth social services organization · New Center One, 3031 W Grand Blvd #370
Open · Closes 5 PM · (313) 875-2092

[Website](#) [Directions](#)

Michigan Alliance For Families
3.0 (3)
Social services organization · 3111 Grand River Ave

[Directions](#)



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Hours ▾

All filters

Results ⓘ

Detroit Police Department

No reviews

Justice department · John C Lodge Service Dr



Directions

Wayne State University Police

No reviews

Police department · 6050 Cass Ave
(313) 577-2222



Directions

3rd Precinct NPO

No reviews

Police department · 2875 W Grand Blvd
(313) 596-5300



Directions

Detroit Police Benefits-Prtctv

No reviews

Police department · 3031 W Grand Blvd #43/405

Closed · Opens 7 AM Mon ·
(313) 870-9301



Website



Directions

Wayne County Sheriff's Office

No reviews

Sheriff's department · 4747 Woodward Ave

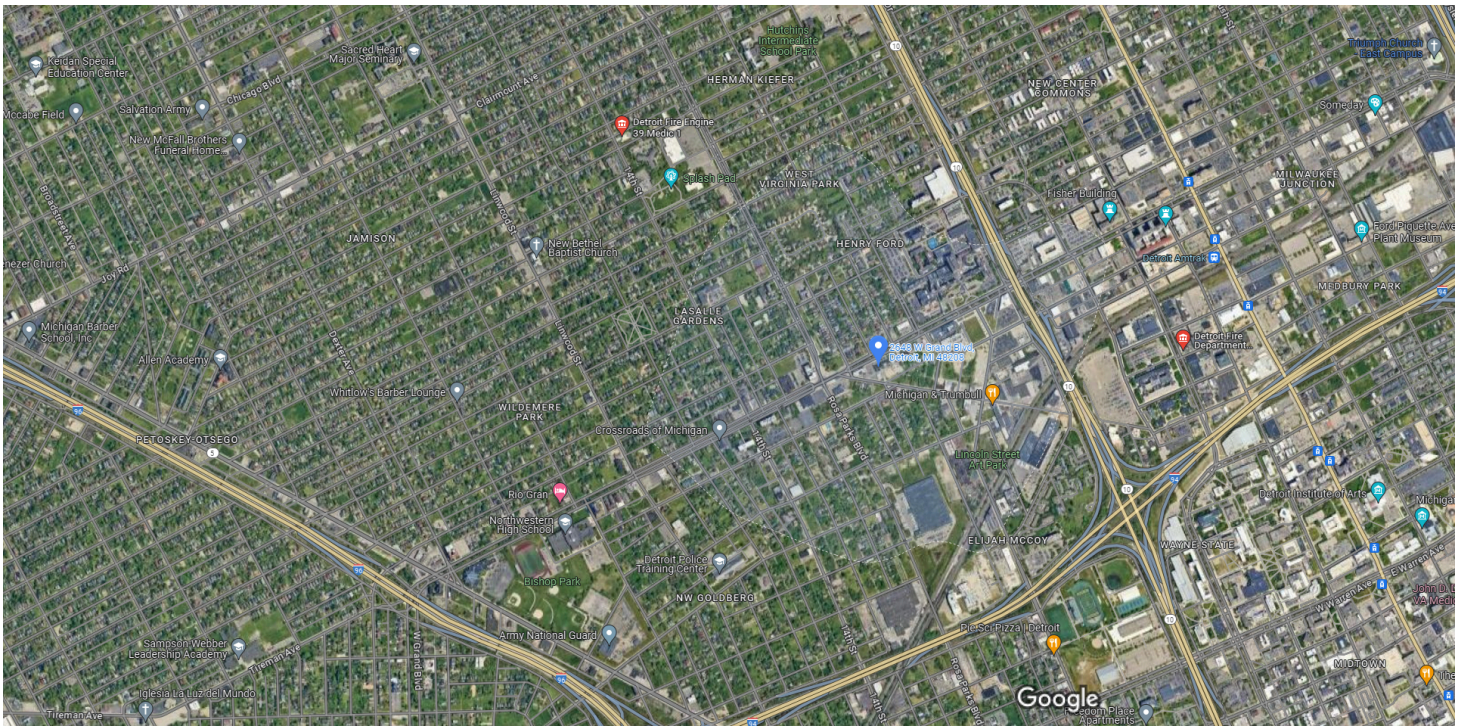
Open · Closes 6 PM · (313) 224-2222



Website



Directions



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Rating ▾ Hours ▾ All filters

Results ⓘ

Detroit Fire Department Engine 17
Ladder 7 Chief 5
4.3 (6)
Fire station · 6100 2nd Ave [Directions](#)

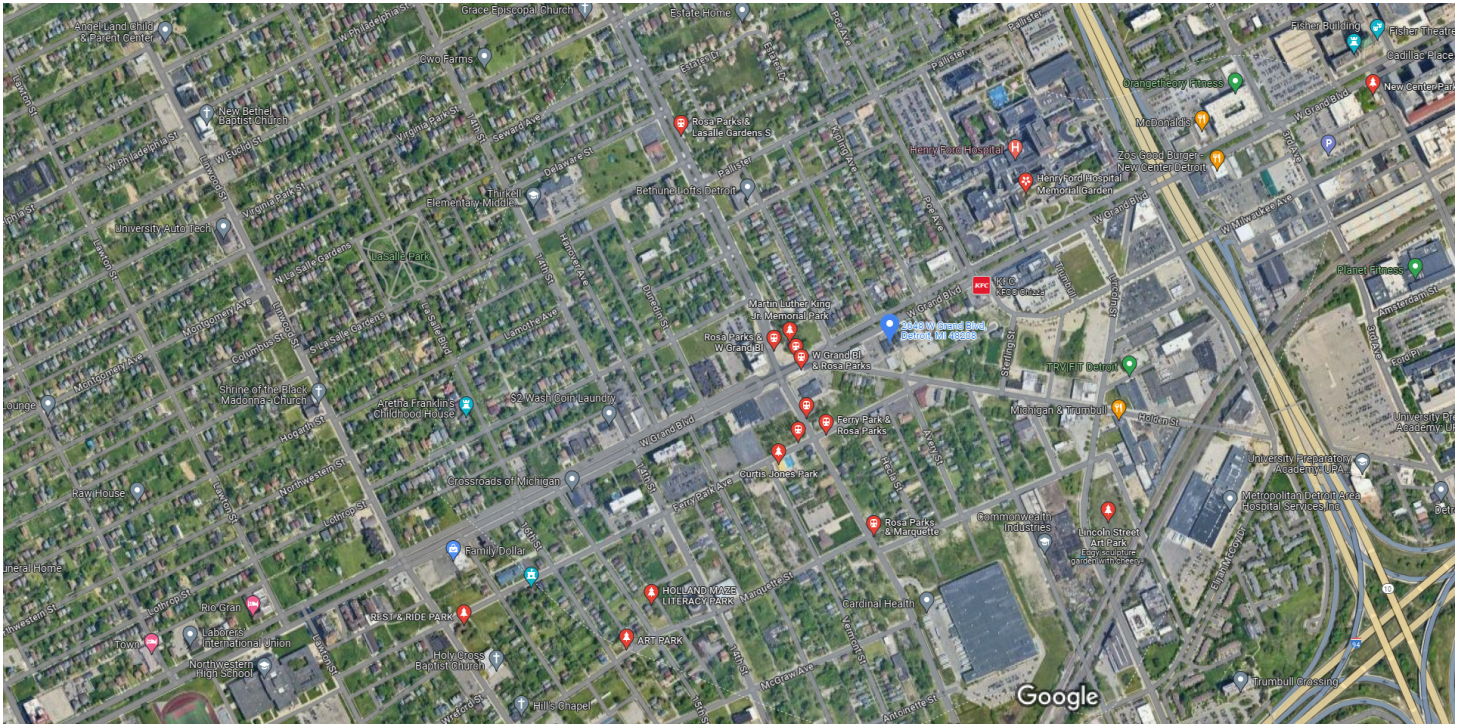
Detroit Fire Engine 39 Medic 1
5.0 (3)
Fire station · 8700 14th St [Website](#) [Directions](#)
Open 24 hours

Squad 4
5.0 (3)
Fire station · 1697 W Grand Blvd
(313) 614-0658 [Directions](#)

Ladder 20 Squad 2 Medic 6
5.0 (3)
Fire station · 477 W Alexandrine St #467
Open 24 hours [Directions](#)

Detroit Fire Department
No reviews
Fire station · 435 W Alexandrine St [Directions](#)

Detroit Fire Engine 1
5.0 (1)
Fire station · 111 W Montcalm St [Website](#) [Directions](#)
Open 24 hours



Imagery ©2024 Airbus, CNES / Airbus, First Base Solutions, Maxar Technologies, Sanborn, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2024 500 ft

Rating ▾ Hours ▾ All filters

Results ⓘ

New Center Park

4.5 (268)
Park · 2998 W Grand Blvd
Open · Closes 9 PM



ART PARK

4.7 (6)
Park · 6102 16th St
Open · Closes 10 PM



Lincoln Street Art Park

4.7 (469)
Park · 5926 Lincoln St
Edgy sculpture garden with cheery murals
Open 24 hours



Curtis Jones Park

4.2 (5)
Park · 1941 Ferry Park St
Open now



Martin Luther King Jr. Memorial Park

No reviews
Park · 2589 W Grand Blvd





U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Noise (EA Level Reviews) – PARTNER

<https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control>

1. What activities does your project involve? Check all that apply:

- New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.
→ Continue to Question 2.

- Rehabilitation of an existing residential property

NOTE: For major or substantial rehabilitation in Normally Unacceptable zones, HUD encourages mitigation to reduce levels to acceptable compliance standards. For major rehabilitation in Unacceptable zones, HUD strongly encourages mitigation to reduce levels to acceptable compliance standards. See 24 CFR 51 Subpart B for further details.
→ Continue to Question 2.

- None of the above

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

2. Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000’ from a major road, 3000’ from a railroad, or 15 miles from an airport).

Indicate the findings of the Preliminary Screening below:

- There are no noise generators found within the threshold distances above.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing the location of the project relative to any noise generators.

- Noise generators were found within the threshold distances.

→ Continue to Question 3.

3. Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:

Acceptable (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here: [Click here to enter text.](#)

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.*

Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in 24 CFR 51.105(a))

Indicate noise level here: [Click here to enter text.](#)

If project is rehabilitation:

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

If project is new construction:

Is the project in a largely undeveloped area¹?

No

Yes → ***The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i).***

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

Unacceptable: (Above 75 decibels)

Indicate noise level here: [Click here to enter text.](#)

If project is rehabilitation:

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels. Consider converting this property to a non-residential use compatible with high noise levels.

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

If project is new construction:

The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). Work with HUD or the RE to either complete an EIS or obtain a waiver signed by the appropriate authority.

→ *Continue to Question 4.*

4. HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Work with the RE/HUD on the development of the mitigation measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

Mitigation as follows will be implemented:

¹ A largely undeveloped area means the area within 2 miles of the project site is less than 50 percent developed with urban uses and does not have water and sewer capacity to serve the project.

Click here to enter text.

→ *Provide drawings, specifications, and other materials as needed to describe the project's noise mitigation measures.*

Continue to the Worksheet Summary.

No mitigation is necessary.

Explain why mitigation will not be made here:

Click here to enter text.

→ *Continue to the Worksheet Summary.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

Based on the project description (construction of a non-residential building), this project includes no activities that would require further evaluation under HUD's noise regulation. The project is in compliance with HUD's Noise regulation.