

**CITY OF MADISON HEIGHTS  
BROWNFIELD REDEVELOPMENT AUTHORITY**

**BROWNFIELD PLAN**

**FORMER MADISON HEIGHTS SENIOR CENTER  
LOCATED AT 29448 JOHN R ROAD  
MADISON HEIGHTS, MICHIGAN**

**February 12, 2024**

Approved by BRA: January 16, 2024  
Approved by City Council:

**Prepared on Behalf of:**

**Moschouris Management Company, LLC**  
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## **PROJECT SUMMARY**

Project Name:	Former Madison Heights Senior Center
Applicant/Developer:	
Project Location:	The property is located at 29448 John R Road in Township one north (T.1N), Range eleven east (R.11E), Section 12, Madison Heights, Oakland County Michigan 48071 (the "Property").
Type of Eligible Property:	The property is determined to be a "Facility".
Eligible Activities:	Workplan Exempt Activities, Department Specific Activities, Asbestos Abatement Activities, Demolition, Infrastructure Improvements, Site Preparation, and Preparation of a Brownfield Plan.
Developer Reimbursable Costs:	\$2,041,686 (includes eligible activities and 15% contingency)
Length of Developer Reimbursement:	Estimated 30 Years from start of capture
Project Overview:	This project includes demolition of the existing vacant former senior center buildings (totaling approximately 12,427 square feet), to construct a 4,625 square foot car wash facility and a drive-thru restaurant consisting of approximately 2,500 square feet. In addition, the project will include the installation of an underground stormwater detention system, landscaping, and the removal and restoration of a parking lot into a greenfield.
Estimated Capital Investment:	Approximately \$4.8 million (including Acquisition, Hard and Soft Costs)
Estimated Job Creation:	It is estimated that 75 construction jobs and 25 new full-time equivalent (FTE) permanent jobs will be created by this redevelopment.

## **I. INTRODUCTION AND PURPOSE**

In order to promote the revitalization of environmentally distressed, historic, functionally obsolete and blighted areas within the boundaries of Madison Heights (“the City”), the City has established the Madison Heights Brownfield Redevelopment Authority (MHBRA) the “Authority” pursuant to the Brownfield Redevelopment Financing Act, Michigan Public Act 381 of 1996, as amended (“Act 381”).

The purpose of this Brownfield Plan (the “Plan”) is to promote the redevelopment of and investment in the eligible “Brownfield” Property within the City and to facilitate financing of eligible activities at the Brownfield Property. Inclusion of Brownfield Property within any Plan in the City will facilitate financing of eligible activities at eligible properties and will provide tax incentives to eligible taxpayers willing to invest in revitalization of eligible sites, commonly referred to as “Brownfields.” By facilitating redevelopment of the Brownfield Property, this Plan is intended to promote economic growth for the benefit of the residents of the City and all taxing units located within and benefited by the Authority.

The identification or designation of a developer or proposed use for the Brownfield Property that is subject to this Plan shall not be integral to the effectiveness or validity of this Plan. This Plan is intended to apply to the eligible property identified in this Plan and, to identify and authorize the eligible activities to be funded. Any change in the proposed developer or proposed use of the eligible property shall not necessitate an amendment to this Plan, affect the application of this Plan to the eligible property, or impair the rights available to the Authority under this Plan.

This Plan is intended to be a living document, which may be modified or amended in accordance with and as necessary to achieve the purposes of Act 381. The applicable sections of Act 381 are noted throughout the Plan for reference purposes.

This Brownfield Plan contains information required by Section 13(2) of Act 381, as amended.

### **I.a. Property Description**

The Eligible Property consists of one (1) legal parcel totaling approximately 4.91 acres with a street address of 29448 John R. Road, Madison Heights, Oakland County, Michigan. The parcels and all tangible personal property located thereon will comprise the eligible property and is referred to herein as the “subject property.”

The subject property is located on the John R. Road corridor, bounded by Dartmouth Street to the north, residential to the east, commercial/industrial to the south, and John R. Road to the west. Individual parcel information is outlined below.

<b>Property Address</b>	<b>Parcel ID Number</b>	<b>Approximate Acreage</b>	<b>Eligibility</b>
29448 John R. Road	44-25-12-304-010	4.91 acres	Facility

The parcel is currently zoned M-1 LT Light Industrial, and the Property is commercially developed with a 11,661 square foot, single-story, slab-on grade senior center building and a 766 square foot single-story, slab-on-grade masonry storage building.

The subject property was used for residential and agricultural purposes from at least 1936 to 1952. From about 1956 to 1972, the number of structures on the property decreased and the eastern portion of the property was part of the Southeastern Oakland County Resource Recovery Authority (SOCRRA) and was used for landfilling and associated waste management activities, including an incinerator and waste transfer station. Since 1977, the property has been used as a senior center and a park.

#### **I.b. Basis of Eligibility**

The subject property is considered “eligible property” as defined by Act 381, Section 2 because it (a) is located within the City of Madison Heights, a qualified local governmental unit under Act 381; (b) is determined to be a “facility” as defined by Act 381.

Additional information regarding the subject property’s eligibility is included within section II.h and documentation of eligibility is included within Appendix E.

#### **I.c. Project Description**

Moschouris Management Company, LLC or any affiliate, or such other developer as approved by the Authority, are collectively the project developer (“Developer”).

Moschouris Management Company, LLC (herein referred to as MMC), has been Michigan’s most experienced and highest volume retail real estate brokerage firm for over 28 years. MMC specializes in tenant representation, property acquisitions, surplus disposition, leasing services, and investment sales.

The proposed redevelopment includes demolition of the existing buildings (totaling approximately 12,427 square feet), to prepare the property for the construction of a 4,625 square foot car wash facility and a drive-thru restaurant consisting of approximately 2,500 square feet. In addition to the construction of the proposed buildings and associated parking lots, the project will include the installation of an underground stormwater detention system, landscaping, and the demolition of the existing parking lot located west of the existing building. The area will initially be restored as a greenfield while future development options are considered.

Demolition and site preparation activities are anticipated to begin in the winter of 2023 with the construction taking place immediately after. It is anticipated the project will be completed over a 1-year period, with completion estimated in the winter of 2024. MMC will invest an estimated \$4.8 million in the development and create approximately 75 construction jobs and 25 new full-time equivalent (FTE) permanent jobs. Preliminary site plans and renderings are included in Appendix D.

Preliminary site plans and renderings are included in Appendix D.

## **II. GENERAL PROVISIONS**

### **II.a. Description of Costs to be Paid for with Tax Increment Revenues (Section 13 (2)(a))**

Tax Increment Financing revenues will be used to reimburse the costs of “Eligible Activities” (as defined by Section 2 of Act 381) as permitted under the Brownfield Redevelopment Financing Act that include:

- Work Plan Exempt Activities
- Department Specific Activities
- Demolition
- Asbestos Abatement
- Site Preparation
- Infrastructure Improvements
- Preparation and Implementation of a Brownfield Plan

A 15% contingency has also been calculated and included within this Brownfield Plan. Tax Increment Revenues are also projected to be captured for MHBRA administrative fees and the Local Brownfield Revolving Fund (LBRF) if increment is available.

A summary of the eligible activities and their associated cost intended to be reimbursed with tax increment revenues captured from the subject property are shown in the attached Table 1.

The Eligible Activity cost estimates may increase or decrease depending on the nature and extent of unknown conditions encountered. If the total cost of eligible activities as described within this Plan is not exceeded, line-item categories and costs of eligible activities may differ from what is included within this Plan, to the extent the adjustments do not violate the terms of Act 381.

“Pre-plan” eligible activity costs may be incurred no more than six months (180 days) prior to this plan’s approval by Madison Heights City Council.

### **II.b. Brief Summary of the Eligible Activities that are Proposed (Section 13 (2)(b))**

1. Work Plan Exempt Activities include the completion of a Phase I Environmental Site Assessment (ESA), Phase II ESAs, Baseline Environmental Assessment (BEA) and Hazardous Materials Survey, as required as part of the pre-purchase due diligence conducted on the property at a cost of \$50,700.
2. Department Specific Activities includes vapor barrier design and installation, contaminated soil transport, disposal and backfill, groundwater management, utility corridor migration barriers, utility gasketing, surface cover, and oversight, sampling and reporting at an estimated cost of \$810,230.
3. Demolition includes building and site demolition, fill/compaction/rough grading to balance site where building was located, and removal of parking lots at an estimated costs of \$117,500.

4. Asbestos, Lead, and Mold Activities includes the abatement of asbestos containing materials within the existing buildings, and abatement monitoring, oversight, air monitoring and reporting by an environmental professional at an estimated cost of \$30,000.
5. Site Preparation includes temporary erosion control, temporary site control (fencing, gates, signage, and/or lighting), grading, and fill relating to other eligible activities at an estimate cost of \$247,475.
6. Infrastructure Improvements includes an underground storm water detention system at an estimated cost of \$500,000.
7. Preparation and Implementation of a Brownfield Plan and associated activities (e.g. meetings with BRA, review by City Attorney etc.) at an estimated cost of \$30,000.
8. A 15% contingency is established to address unanticipated environmental and/or other conditions that may be discovered through the implementation of site activities. This excludes the cost of Baseline Environmental Assessment Activities and preparation and implementation of the Brownfield Plan.

The total estimated cost of Eligible Activities subject to reimbursement to the developer from tax increment revenues is \$1,785,905, with a potential \$255,781 contingency, resulting in a total, not to exceed cost of \$2,041,686 unless the Plan is amended and approved by the MHBRA and City Council. At the time of Plan submission, it is estimated that \$1,442,551 of the total eligible activities will be reimbursed over 30 years.

## **II.c. Estimate of Captured Taxable Value and Tax Increment Revenues (Section 13 (2)(c))**

The costs of eligible activities included in, and authorized by, this Plan will be reimbursed with incremental local tax revenues (as applicable) generated by the subject property and captured by the MHBRA, subject to any limitations and conditions described in this Plan, and the terms of a Reimbursement Agreement between the Developer and the Authority (the “Reimbursement Agreement”).

The initial (“base”) taxable value of the subject property shall be determined by use of the 2023 tax year tax value, which is \$0. Tax increment revenue capture will begin when tax increment is generated by redevelopment of the subject property, which is expected to begin in 2025 or when full redevelopment is completed, whichever occurs first. The estimated taxable value of the completed development is \$1,200,000. An annual increase in taxable value of 2.0% has been applied to account for future tax increments in this Plan. Table 2 details the estimated available tax increment revenues for each year of the Plan. The actual taxable value will be determined by the authorized assessor.

The MHBRA will capture \$2,500 of the total tax increment revenues on an annual basis for administrative fees, which is estimated to be \$75,000.

The MHBRA has established a Local Brownfield Revolving Fund (LBRF). If available, capture for the LBRF for five (5) years following developer reimbursement is eligible. Any funds deposited into the LBRF as part of this Plan will be used in accordance with the requirements of Act 381, as amended.

Prior to reimbursement of tax increment revenues to the Developer, payment of administrative fees will occur first.

A summary of the impact to taxing jurisdictions for the life of the Plan is summarized in Section II.h.

**II.d. Method of Financing Plan Costs and Description of Advances by the Municipality (Section 13 (2)(d))**

Eligible activities will be financed by Moschouris Management Company, LLC. The Developer will be reimbursed for eligible costs as described in Section II.c and outlined in Table 1. Costs for Eligible Activities funded by Moschouris Management Company, LLC will be repaid under the Michigan Brownfield Redevelopment Financing Program (Michigan Public Act 381, as amended) with incremental taxes generated by future development of the subject property.

No advances will be made by the MHBRA for this project. All reimbursements authorized under this Plan shall be governed by the Reimbursement Agreement.

**II.e. Maximum Amount of Note or Bonded Indebtedness (Section 13 (2)(e))**

No note or bonded indebtedness will be incurred by any local unit of government for this project.

**II.f. Duration of the Brownfield Plan (Section 13 (2)(f))**

Tax increment revenue capture will begin when tax increment is generated by redevelopment of the subject property, which is expected to begin in 2025 or when full redevelopment is completed, whichever occurs first.

In no event shall the duration of the Plan, exceed 35 years following the date of the resolution approving the Plan, nor shall the duration of the tax capture exceed the lesser of the period authorized under subsection (4) and (5) of Section 13 of Act 381 or 30 years. The subject property will become part of this Plan on the date this Plan is approved by the City of Madison Heights City Council.

**II.g. Estimated Impact of Tax Increment Financing on Revenues of Taxing Jurisdictions (Section 13 (2)(g))**

A summary of the total amounts estimated to be generated and preserved for taxing units during the life of the Plan are outlined below.

**Brownfield Plan for the Former Madison Heights Senior Center**  
**29448 John R. Road, Madison Heights, Michigan**  
**PM Project No. 01-14784-0-0001; January 5, 2024**

Millage	Rate	Developer Reimbursement	Administrative Fee	Local Brownfield Revolving Fund	Totals
State Education Tax (SET)	6.0000	\$ -	\$ -	\$ -	\$ -
School Operating	18.0000	\$ -	\$ -	\$ -	\$ -
<b>Subtotal</b>	<b>24.0000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
					\$ -
City Operating	12.8746	\$ 595,368.24	\$ 31,389.11	\$ -	\$ 626,757.35
Solid Waste	2.4976	\$ 115,498.09	\$ 6,089.31	\$ -	\$ 121,587.40
Road Improvement	1.8882	\$ 87,317.22	\$ 4,603.55	\$ -	\$ 91,920.78
Senior Citizens	0.4484	\$ 20,735.64	\$ 1,093.23	\$ -	\$ 21,828.87
Fire Stations BO	0.0000	\$ -	\$ -	\$ -	\$ -
County Gen Fund	3.9686	\$ 183,522.47	\$ 9,675.70	\$ -	\$ 193,198.17
Oakland Comm College	1.4891	\$ 68,861.39	\$ 3,630.52	\$ -	\$ 72,491.91
OISD Allocated	0.1881	\$ 8,698.43	\$ 458.60	\$ -	\$ 9,157.03
OISD Voted	2.9777	\$ 137,699.66	\$ 7,259.83	\$ -	\$ 144,959.48
Lanphere Sinking	2.9297	\$ 135,479.96	\$ 7,142.80	\$ -	\$ 142,622.76
Oakland Transit	0.9500	\$ 43,931.45	\$ 2,316.16	\$ -	\$ 46,247.61
H-C Metroparks	0.2070	\$ 9,572.43	\$ 504.68	\$ -	\$ 10,077.11
County Park & Rec	0.3431	\$ 15,866.19	\$ 836.50	\$ -	\$ 16,702.69
<b>Subtotal</b>	<b>30.7621</b>	<b>\$ 1,422,551.17</b>	<b>\$ 75,000.00</b>	<b>\$ -</b>	<b>\$ 1,497,551.17</b>
					\$ -
<b>Total Capturable Millages</b>	<b>54.7621</b>	<b>\$ 1,422,551.17</b>	<b>\$ 75,000.00</b>	<b>\$ -</b>	<b>\$ 1,497,551.17</b>
Non-Capturable Millages	Rate			Taxes Preserved for Taxing Unit	
Zoo Authority	0.0945			\$ 4,600.42	\$ 4,600.42
Art Institute	0.1945			\$ 9,468.59	\$ 9,468.59
P & F Pension	7.0000			\$ 340,771.87	\$ 340,771.87
Chap 20 Drain	0.8200			\$ 39,918.99	\$ 39,918.99
<b>Total Non-Capturable Millages</b>	<b>8.1090</b>			<b>\$ 394,759.87</b>	<b>\$ 394,759.87</b>

See Table 2 for a complete breakdown of estimated available tax increment revenues and Table 3 for the annual estimated developer reimbursement.

## **II.h. Legal Description, Property Map, Property Characteristics, and Personal Property (Section 13 (2)(h))**

The subject property's legal description is included in Appendix A and a map(s) showing the location and dimensions of the eligible property is included in Appendix B.

The subject property is considered "eligible property" as defined by Act 381, Section 2 because it (b) is located within the City of Madison Heights, a qualified local governmental unit under Act 381; and (b) is determined to be a "facility" as defined by Act 381.

The subject property was formerly used for landfilling, which included the presence of buried waste fill consisting of dump refuse, incinerator ash, and unburned refused. Concentrations of volatile organic compounds (VOCs) including naphthalene and heavy metals, including lead and mercury were identified in soil samples analyzed from the Property during previous site investigations occurring on July 20, 2020, above the Part 201 Generic Residential Cleanup Criteria (GRCC) drinking water protection (DWP), groundwater surface water interface protection (GSIP), and direct contact (DC) screening levels. Based on the identified exceedances of the Part 201 cleanup criteria, the Property meets the definition of a "facility" in accordance with Parts 201 of P.A. 451 of the Michigan Natural Resources Environmental Protection Act (NREPA), as amended. MMC conducted pre-purchase due diligence which included a Phase I ESA, Phase II ESAs, and a Baseline Environmental Assessment (BEA). The BEA provides statutory protection to the new owners and operators of the "facility" against cleanup liability for pre-existing

subsurface contamination under Michigan law. However, the non-labile owner and operator has due care obligations as defined under Section 20107a of Part 201.

Personal property may be included as part of the eligible property and associated tax increment capture to the extent that it is taxable personal property. However, personal property is not included within the projections attached to this Plan.

Documentation of characteristics that qualify the property as eligible property is provided in Appendix E.

**II.i. Estimates of the Number of Persons Residing on the Property (Section 13 (2)(i))**

No displacement of residents or families is expected as part of this project.

**II.j. Plan for Relocation of Displaced Residents (Section 13 (2)(j))**

No persons will be displaced as result of this development; therefore, a Plan for relocation is not applicable for this Plan.

**II.k. Provisions for Relocation Costs (Section 13 (2)(k))**

No persons will be displaced as result of this development; therefore, no relocation costs will be incurred.

**II.l. Strategy for Compliance with Michigan's Relocation Assistance Law (Section 13 (2)(l))**

No persons will be displaced as result of this development; therefore, no relocation assistance strategy is needed for this Plan.

**II.m. Other Material that the Authority or Governing Body Considers Pertinent (Section 13 (2)(m))**

The Brownfield Redevelopment Authority and the City Council as the Governing Body, in accordance with the Act, may amend this Plan in order to fund additional eligible activities associated with the Project described herein.

# APPENDICES

# **Appendix A**

## **Legal Description**

**Appendix A**  
**Legal Description**

**29448 John R Road, Madison Heights, Oakland County, Michigan:**

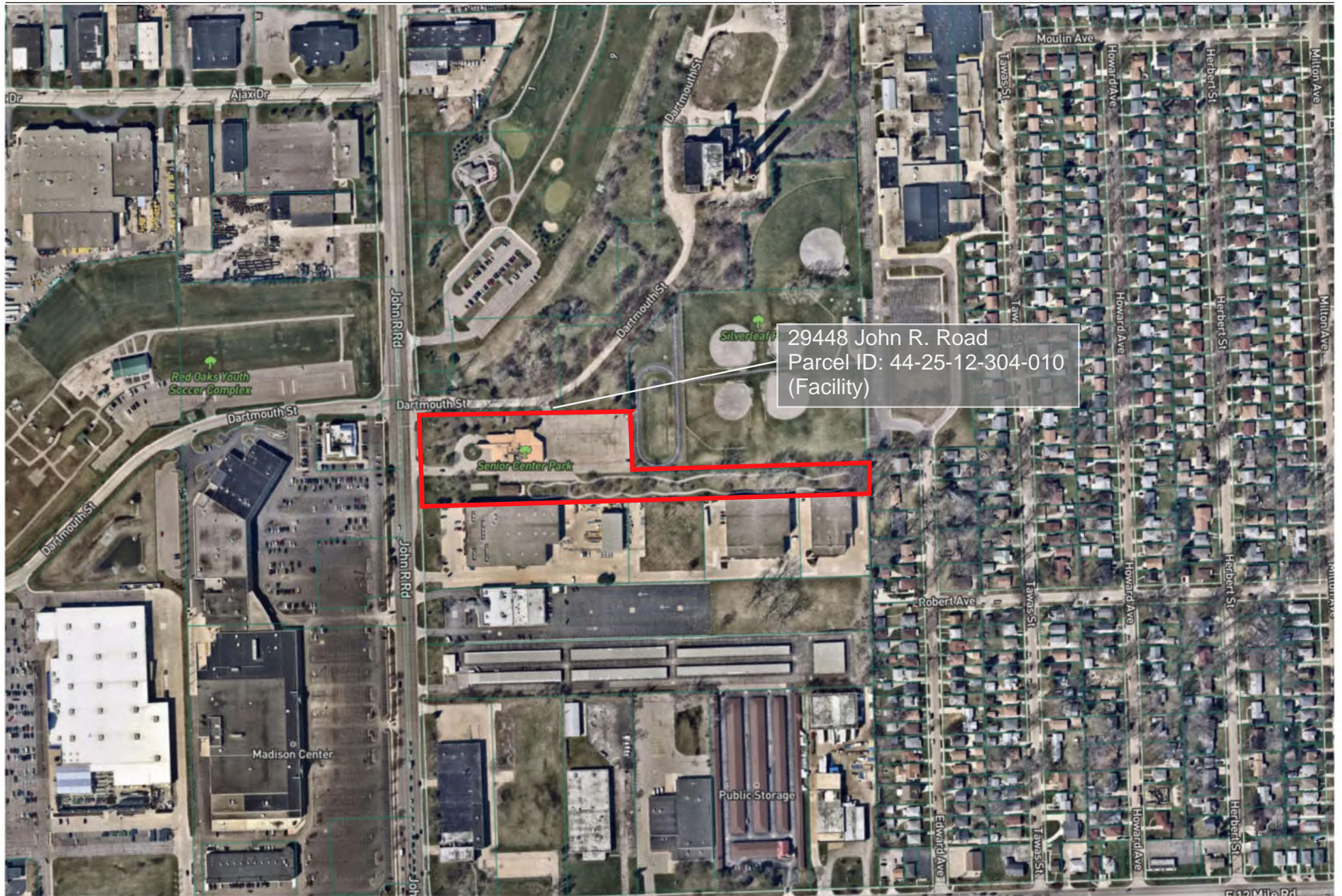
Parcel Number: 44-25-12-304-010

T1N, R11E, SEC 12, N 3 ACRES OFS 6 ACRES OF NW ¼ OF SW ¼ EXC 690 FT, ALSO PART OF NW ¼ OF SW ¼ BEG AT SW SEC COR, TH E 672.6 FT, TH 95.9 FT, TH W 672.2FT, TH S 95.9 FT TO BEG, ALSO PART OF SW ¼ OF SW ¼ BEG AT PT DIST N 00-10-00 E 1205.19 FT FROM SW SEC COR, TH N 00-10-00 E 80.39 FT, TH S 89-29-00 E 1374.18 FT, TH S 00-26-00 W 79.89 FT, TH N89-58-00 W 1373.81 FT TO BEG EXC W 60 FT OF EACH TAKEN FOR RD, ALSO EXC PART OF SW ¼ BEG AT PT DIST S 00-02-18 W 1161.72 FT & S 89-51-16 E 60 FT FROM W ¼ COR, TH S 89-51-16 E 613.92FT, TH S 00-18-28 E 14.24 FT, TH N 89-50-41 W 614 FT, TH N 00-02-18 E 14.14 FT TO BEG 4.91 A 08/04/08 FR 006

# **Appendix B**

## **Eligible Property Location Map**

## Appendix B



# **Appendix C**

## **Current Site Photos**



## PROPERTY PHOTOGRAPHS

PROJECT NAME:	29448 John R Road Property	PROJECT NO.:	22000306
PROPERTY ADDRESS:	29448 John R Road, Madison Heights, Michigan		
DATE TAKEN:	May 17, 2022	TAKEN BY:	Z.Moriarty
		PAGE:	1 of 9



Photograph 1. Overview of property, facing east.



Photograph 2. Overview of property, facing northwest.



## PROPERTY PHOTOGRAPHS

PROJECT NAME:	29448 John R Road Property	PROJECT NO.:	22000306
PROPERTY ADDRESS:	29448 John R Road, Madison Heights, Michigan		
DATE TAKEN:	May 17, 2022	TAKEN BY:	Z.Moriarty
		PAGE:	2 of 9



Photograph 3. Walking paths and picnic area located in the south portion of property.



Photograph 4. Overview of pavilion located in the south portion of property.



## PROPERTY PHOTOGRAPHS

PROJECT NAME:	29448 John R Road Property	PROJECT NO.:	22000306
PROPERTY ADDRESS:	29448 John R Road, Madison Heights, Michigan		
DATE TAKEN:	May 17, 2022	TAKEN BY:	Z.Moriarty
		PAGE:	3 of 9



Photograph 5. Overview of shuffleboard court located in the south portion of property.



Photograph 6. Shed on the north portion of property.



## PROPERTY PHOTOGRAPHS

PROJECT NAME:	29448 John R Road Property	PROJECT NO.:	22000306
PROPERTY ADDRESS:	29448 John R Road, Madison Heights, Michigan		
DATE TAKEN:	May 17, 2022	TAKEN BY:	Z.Moriarty
		PAGE:	4 of 9



Photograph 7. Community garden located in the north portion of property.



Photograph 8. Monitoring well OW-4 located in the southeast corner of property.

# **Appendix D**

## **Site Plans and Renderings**



# **Appendix E**

## **Documentation of Eligibility**

# REPORT



## Phase II Environmental Site Assessment

29488 John R Road Property  
Madison Heights, Michigan

Moschouris Management Company, LLC

29448 John R Road

Madison Heights, MI 48067

July 20, 2022

NTH Project No. 22000306-01

NTH Consultants, Ltd.  
41780 Six Mile Road, Suite 200  
Northville, MI 48168





**NTH Consultants, Ltd.**

Infrastructure Engineering  
and Environmental Services

41780 Six Mile Road, Suite 200  
Northville, MI 48168  
248.553.6300  
248.324.5179 Fax

Mr. Nikolaos Moschouris  
Moschouris Management Company, LLC  
29448 John R Road  
Madison Heights, Michigan 48067

July 20, 2022  
NTH Project No. 22000306-01

**RE: Report on Phase II Environmental Site Assessment  
29488 John R Road Property  
Madison Heights, Michigan**


Dear Mr. Moschouris:

NTH Consultants, Ltd. (NTH) is pleased to submit this report on Phase II Environmental Site Assessment (ESA) for the above referenced property. This study was performed at your request in accordance with the scope of services presented our accepted proposal (NTH Proposal No. 22000306-PHII) dated June 10, 2022.

We appreciate the opportunity to assist you with this project. Should you have any questions or require additional information on this study, please call us at 248-662-2740.

Sincerely,

NTH Consultants, Ltd.

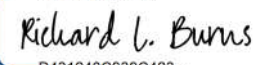
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CC62C3695D554CC...

Cliff J. Andrews  
Principal Professional

CJA/RLB/mlk

Attachments

cc: Larry Campbell – Century 21 Campbell Realty, Inc.  
John Byl -Warner Norcross & Judd LLP

DocuSigned by:  
  
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Richard L. Burns  
Senior Vice President



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## **APPENDICES**

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<b>SOIL AND GROUNDWATER LABORATORY DATA</b>	<b>APPENDIX B</b>



## 1.0 EXECUTIVE SUMMARY

This report presents the results of a Phase II Environmental Site Assessment (ESA) for the property located at 29488 John R Road in Madison Heights, Michigan. The subject property is approximately 4.9 acres. The northern portion of the property contains a Senior Center building, storage building, asphalt-paved driveways and parking lot, and landscaped areas. The southern portion of the property is the Jaycees VitaCourse Park and contains an open-sided picnic pavilion, concrete shuffleboard court, asphalt-paved walking paths, and landscaped areas.

NTH Consultants, Ltd. (NTH) conducted this Phase II ESA to evaluate the recognized environmental conditions identified at the property during the recently completed Phase I ESA. The Phase II assessment consisted of geoprobe soil borings and collection and analysis of soil and groundwater samples.

The results of soil and groundwater sample analysis identified certain heavy metals and naphthalene in soil samples and arsenic in groundwater samples above Michigan Department of Environment, Great Lakes, and Energy (EGLE's) Part 201 generic residential cleanup criteria (GRCC). Thus, based upon these results, the property is a "*facility*" as defined by 1994 P.A. 451, Part 201, as amended.

Mercury, ethylbenzene, naphthalene, and 1,2,4-trimethylbenzene were detected above EGLE's Residential Volatilization to Indoor Pathway (VIAP) Screening Levels, dated September 4, 2020.

This executive summary should not be reviewed separately from the remainder of the report as it provides a brief overview of the assessment results; it is not a substitute for a thorough review of the entire report.



## 2.0 INTRODUCTION

NTH Consultants, Ltd. (NTH) was retained by Moschouris Management Company, LLC (MMC) to perform a Phase II Environmental Site Assessment (ESA) for the John R Road property located in Madison Heights, Oakland County, Michigan.

NTH conducted a Phase I ESA at the property, and the results of that study were presented to EMDC in a report dated June 21, 2022. The Phase I ESA revealed the following evidence recognized environmental conditions (RECs) in connection with the property:

- The property was formerly used for landfilling and results of previous subsurface investigations have identified the property as a *facility*, as defined by 1994 P.A. 451, Part 201, as amended.
- Presence of buried waste fill consisting of dump refuse, incinerator ash, and unburned refuse at the property.
- Residential-type structures were previously located along John R Road. The environmental status and origin/source of backfill soil used during demolition of the former structures are unknown.
- The northern-adjacent property was formerly operated as a landfill (Royal Oak Dump), and Southeastern Oakland County Resource Recovery Authority's (SOCCRA) former transfer station and incinerator.

The objective of this Phase II ESA was to evaluate the above-identified RECs to the extent possible and where accessible.



### **3.0 SCOPE OF SERVICES**

The scope of services for the Phase II ESA comprised the following key tasks:

- Soil borings to evaluate the Phase I ESA-identified RECs, and to facilitate the collection of soil samples for analyses.
- Screened soil samples in the field for the presence of total volatile organic compounds (VOCs) using a portable photoionization detector (PID).
- NTH submitted representative soil and groundwater samples were submitted our subcontracted laboratory for analyses.
- Evaluated information gathered during the Phase II ESA as summarized in this report.

### **4.0 FIELD INVESTIGATION**

Terra Probe Environmental, Inc. (TPE), retained by NTH, drilled eight (8) geoprobe soil borings, designated as GP-101 through GP-108 on June 28, 2022, under the observation of Mr. Zach Moriarty of NTH. TPE advanced the borings to approximate depths up to 15 feet. The approximate locations of the borings are depicted on the Boring Location Plan in Appendix A.

The geoprobe drilling technique involves mechanically driving or pushing a 2-inch outside diameter stainless steel sampling tool, with a disposable clear acetate liner, to a desired sampling depth. This technique does not generate soil cuttings because the geoprobe rods push soils away from the rods as the tool string advances through the hole. TPE steam-cleaned the geoprobe equipment/tools prior to use and between each successive boring location to minimize the possibility of cross-contamination. Upon completion of drilling



activities and after collecting samples, TPE backfilled the boreholes with excavated soil and then topped with asphalt or concrete patch.

We field-screened soil samples retrieved from the borings were screened with a RAE Systems MiniRae™ PID. The PID can detect total VOCs, which include many petroleum-related substances, to a detection level of one part per million (ppm). The field PID measurements on the soil samples are shown on the boring logs in Appendix B. As indicated on the logs, the VOC readings ranged from less than the detection limit of the PID to 15.8 ppm. Petroleum odors were noted in the soil samples GP-102 S-1, and GP-3 S-1.

## **5.0 SUBSURFACE DATA**

Subsurface conditions observed in each boring are presented on the Log of Geoprobe Borings in Appendix B. The stratification shown on the boring logs represents the approximate boundary between soil types; the actual transition may be more gradual. In addition, the soil layers are described based on field classification of observed soil samples; accordingly, the soil layer descriptions are considered generalized.

The subsurface conditions at the boring locations comprised of up to 9 feet of sandy and clayey fill soil mixed with pieces of brick, concrete, glass, and metal. The fill soil is underlain by native clayey soils to the explored depths. Groundwater was encountered in GP-101, GP-102, GP-103, GP-104, GP-106, GP-107, and GP-108 at depths between 4 and 5.5 feet.

## **6.0 ANALYTICAL TESTING**

NTH selected soil samples for analysis based on the results of the field screening including visual and olfactory observations, and PID measurements.

We collected groundwater samples from GP-101, GP-102, GP-103, GP-106, GP-107, and GP-108. We were unable to collect groundwater samples from GP-104 because available



water volumes were not sufficient. Our staff collected groundwater samples directly from the boreholes by installing a temporary one-inch diameter polyvinyl chloride well assembly with 5-foot long well screens. The groundwater was extracted from the temporary wells using a peristaltic pump and flexible vinyl tubing. Due to the high turbidity and suspended solids content, a portion of the water samples for metal analyses were filtered in the field using disposable 0.45-micron filters prior to sample preservation. New well supplies were used at each temporary well location.

We placed the soil and groundwater samples in laboratory-supplied containers and stored in coolers packed with ice. We released the samples to Fibertec Environmental Services (FES) laboratory in accordance with NTH's chain-of-custody procedures.

FES analyzed soil and groundwater samples for VOCs, semi-VOCs (SVOCs), and the Michigan 10 metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc). Soil samples from GP-102 S-1, and GP-3 S-1 exhibiting petroleum odors were also analyzed for polychlorinated biphenyls (PCBs). The soil samples were prepared in the field for VOC analysis using Michigan-modified methanol preservation (EPA Method 5035).

Laboratory data for the soil and water sample analysis are included in Appendix B.

## **7.0 EVALUATION OF ANALYTICAL DATA**

### ***Soil Analytical Data***

NTH compared the soil analytical data to the EGLE's - Revised Part 201 Generic Cleanup Criteria and Screening Levels –Table 2; Soil: Residential, published on December 30, 2013, and updated on June 25, 2018. Specifically, we compared soil analytical results compared to Part 201 generic residential cleanup criteria (GRCC) including direct contact (DC), drinking water protection (DWP), groundwater/surface water interface protection (GSIP), soil volatilization to indoor air (SVIIC), infinite source soil volatilization to ambient air (VSIC), particulate soil



inhalation (PSIC), soil saturation concentration screening levels (SSCSL). For metals, we compared analytical results to the statewide default background (SWDB) concentrations, as established by EGLE. We only compared results of metals analysis to GRCC if the concentrations exceeded the SWDB.

### ***Groundwater Analytical Data***

NTH compared the groundwater analytical data to the EGLE's - Revised Part 201 Generic Cleanup Criteria and Screening Levels – Table 1; Groundwater: Residential and Nonresidential, published on December 30, 2013, and updated on June 25, 2018. Specifically, groundwater results to the Part 201 generic residential drinking water (DW) criteria, groundwater/surface water interface (GSI) criteria, groundwater volatilization to indoor air (GVIIC) criteria, water solubility (WS), and flammability and explosivity screening levels (FESL).

We also compared soil and groundwater data to the EGLE's Residential Volatilization to Indoor Pathway (VIAP) Screening Levels, dated September 4, 2020.

### **7.1 Volatile Organic Compounds (VOCs)**

VOCs in the samples were either not detected above laboratory method detection limits (MDLs) or where detected, the reported levels were below Part 201 GRCC, except for the following:

Contaminant	Boring / Sample Location	Media	GRCC Exceeded
Naphthalene	GP-102	Soil	GSIP

Ethylbenzene, naphthalene, and 1,2,4-trimethylbenzene were detected above EGLE's Residential VIAP Screening Levels.

### **7.2 Semi-Volatile Organic Compounds (SVOCs)**

The analyzed SVOCs in the samples were either not detected above laboratory MDLs or where detected, the reported levels were below Part 201 GRCC.



### 7.3 Heavy Metals

The following heavy metals were detected in the samples above Part 201 GRCC:

Metal	Boring / Sample Location	Media	GRCC Exceeded
Arsenic	GP-101, GP-103, and GP-105	Soil	DWP, GSIP, and DC
	GP-102 and GP-103	Water	DW and GSI
Barium	GP-101	Soil	GSIP
Cadmium	GP-101	Soil	DWP and GSIP
Chromium	GP-103, and GP-105	Soil	GSIP
	GP-101	Soil	DWP and GSIP
Copper	GP-101 and GP103	Soil	GSIP
Lead	GP-101	Soil	DWP and DC
Mercury	GP-101	Soil	GSIP
Selenium	GP-101 and GP-103	Soil	GSIP
Silver	GP-101 and GP-103	Soil	GSIP
Zinc	GP-101 and GP-103	Soil	GSIP

Mercury was detected above EGLE's Residential VIAP Screening Levels.

### 7.4 Polychlorinated Biphenyls (PCBs)

PCBs were not detected above laboratory MDLs.

## 8.0 CONCLUSIONS

NTH's Phase II ESA at the property comprised of drilling of eight soil borings, and collection and analysis of soil and groundwater samples to evaluate the RECs identified during the Phase I ESA. We identified the following analytical parameters above Part 201 GRCC in the analyzed samples:

The following heavy metals were detected in the samples above Part 201 GRCC:

Metal	CAS Nos.	Boring / Sample Location	Media	GRCC Exceeded
Arsenic	7440-38-2	GP-101, GP-103, and GP-105	Soil	DWP, GSIP, and DC
		GP-102 and GP-103	Water	DW and GSI
Barium	7440-39-3	GP-101	Soil	GSIP
Cadmium	7440-43-9	GP-101	Soil	DWP and GSIP
Chromium	7440-47-3	GP-103, and GP-105	Soil	GSIP
		GP-101	Soil	DWP and GSIP
Copper	7440-50-8	GP-101 and GP103	Soil	GSIP
Lead	7439-92-1	GP-101	Soil	DWP and DC
Mercury	7439-97-6	GP-101	Soil	GSIP



Metal	CAS Nos.	Boring / Sample Location	Media	GRCC Exceeded
Selenium	7782-49-2	GP-101 and GP-103	Soil	GSIP
Silver	7440-22-4	GP-101 and GP-103	Soil	GSIP
Zinc	7440-66-6	GP-101 and GP-103	Soil	GSIP
Naphthalene	91-20-3	GP-102	Soil	GSIP

Based on the above data, the property is a *facility*, as defined by 1994 P.A. 451, Part 201, as amended. *According to Section 20101(1)(s) of Part 201 of NREPA (1994 P.A. 451, as amended), “facility means any area, place, or property where a hazardous substance in excess of the concentrations that satisfy the cleanup criteria for unrestricted residential use has been released, deposited, disposed of, or otherwise comes to be located.”*

Mercury, ethylbenzene, naphthalene, and 1,2,4-trimethylbenzene were detected above EGLE’s Residential VIAP Screening Levels. The exceedance of the VIAP Screening Levels is indicative of potential vapor intrusion or indoor air quality risk. As such, further evaluation consisting of soil gas sampling and analysis is recommended for the future residential and commercial development plans for the property.

Moschouris Management Company, LLC intends to purchase the property. Accordingly, this new owner is eligible to submit a Baseline Environmental Assessment (BEA) report to EGLE, provided this report is prepared within 45 days of acquiring or operating on the property. The BEA provides certain statutory protection to the new (non-labile) owners and operators of the *facility* against cleanup liability for pre-existing subsurface contamination under Michigan law.

Under Section 20107a of Part 201, a person who owns or operates property that he/she has knowledge is a *facility* has the following due care obligations:

1. Prevent exacerbation of the existing contamination.



2. Prevent unacceptable human exposure and mitigate fire and explosion hazards to allow for the intended use of the facility in a manner that protects the public health and safety.
3. Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party.
4. Provide reasonable cooperation, assistance, and access to the persons that are authorized to conduct response activities at the property.
5. Comply with any land use or resource use restrictions established or relied on in connection with the response activities.
6. Not impede the effectiveness or integrity of any land use or resource use restriction.

A Plan for Due Care Compliance meeting the above obligations should be completed for the new owner and revised once future use or development plans are finalized.

## **9.0 LIMITATIONS**

The evaluations and conclusions presented in this report have been made to assist Moschouris Management Company, LLC in making a reasonable assessment of risk with respect to subsurface contamination at the property from the RECs identified during the Phase I ESA. Considering the limited scope of the present investigation, data collection and testing, our findings should not be construed as absolute certainties, but rather as probabilities based on our professional judgment. NTH cannot offer any form of warranty or guarantee with respect to the type and extent of hazardous substances on the property, other than those identified and discussed in this report.



This report is for the use and benefit of, and may be relied upon by Moschouris Management Company, LLC, and any of their respective affiliates, successors and assigns, in connection with a commercial real estate transaction involving the subject property, and in accordance with the terms and conditions in place between NTH and Moschouris Management Company, LLC for this project.

This report presents NTH's opinion of the property as of the report's publication date, based on the results of this assessment and on the information provided by the client during the course of the work. The results of our assessment may not be relied upon by parties other than those identified above without the prior knowledge and written consent of NTH.

Any authorized third-party agrees by accepting this report that any use or reliance on this report shall be limited by the exceptions and limitations in this report, and with the acknowledgment that actual site conditions may change with time, and that hidden conditions may exist at the property that were not discovered within the authorized scope of the assessment.

Any use by or distribution of this report to any unauthorized third parties, without the express written consent of NTH is at the sole risk and expense of such third party. In the absence of a written agreement with NTH granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against NTH or its officers, employees, vendors, affiliates successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold NTH and its respective officers, employees, affiliates, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses including attorneys' fees and costs attributable to such use. Unauthorized use of this report shall constitute acceptance of and commitment to these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted.

# APPENDIX



Boring Location Plan;

Log of Geoprobes;


Summary of Soil and Groundwater Analysis

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LEGEND

- LIMITS OF STUDY
- BORING LOCATION

FIGURE:  <div>1</div>	BORING LOCATION PLAN  29488 JOHN R ROAD PROPERTY MADISON HEIGHTS, MI	NTH PROJECT No.: 22000306-01		CAD FILE NAME: 22000306-BP
		DESIGNED BY: ZBM		PLOT DATE: 7/15/2022
		DRAWN BY: MSM		DRAWING SCALE: 1" = 100'
		CHECKED BY: CJA		INCEPTION DATE: 5/23/2022
		<div></div> <div><b>NTH Consultants, Ltd.</b> Infrastructure Engineering and Environmental Services</div>		

## LOG OF GEOPROBE BORINGS

GP NO.	GROUND SURFACE ELEV.	DEPTH (FT)	SOIL DESCRIPTION	DISCRETE SAMPLE INFO.			
				SAMPLE NO.	DEPTH (FT)		PID READING (PPM)
					FROM	TO	
GP-101	N/A	0-0.25	ASPHALT PAVEMENT		0.25	2.0	<1.0
		0.25-2.5	FILL: BROWN SAND WITH PIECES CRUSHED STONE		2.0	4.0	<1.0
		2.5-5.0	FILL: BLACK SAND WITH PIECES OF GLASS	S-1*	4.0	5.0	<1.0
		5.0-9.0	FILL: BROWN AND GREY SAND WITH PIECES OF METAL		5.0	7.0	--
					7.0	9.0	--
		9.0-10.0	BROWN SAND WITH CLAY		9.0	10.0	--
		10.0-15.0	BROWN CLAY		10.0	12.0	<1.0
					12.0	14.0	<1.0
					14.0	15.0	<1.0

## NOTES:

- BORINGS BACKFILLED WITH SOIL CUTTINGS & HYDRATED BENTONITE PELLETS AFTER OBTAINING SOIL AND/OR WATER SAMPLES.
- BORINGS OBSERVED BY Z. MORIARTY OF NTH CONSULTANTS, LTD.
- SOIL CLASSIFICATION BASED SOLELY ON VISUAL OBSERVATION.
- \* SAMPLE SUBMITTED FOR ANALYTICAL TESTING.

DRILLED BY: TERRA PROBE ENVIRONMENTAL

DATE: JUNE 28, 2022

FIGURE NO: 2

**LOG OF GEOPROBE BORINGS**

GP NO.	GROUND SURFACE ELEV.	DEPTH (FT)	SOIL DESCRIPTION	DISCRETE SAMPLE INFO.		
				SAMPLE NO.	DEPTH (FT) FROM TO	PID READING (PPM)
GP-103	N/A	0-0.5	<b>ASPHALT PAVEMENT</b>		0.5 2.0	
		0.5-3.5	<b>FILL: BROWN SAND</b> WITH PIECES OF CONCRETE		2 3.5	8.6
		3.5-5.0	<b>FILL: BLACK AND BROWN CLAYEY SAND</b> WITH PIECES OF METAL AND PETROLEUM ODOR	S-1*	3.5 5.0	4.8
		5.0-10.0	BROWN AND GREY <b>CLAYEY SAND</b>		5.0 7.0	--
					7.0 9.0	--
					9.0 10.0	9.9
		10.0-15.0	BROWN AND GREY <b>CLAY</b>		10.0 12.0	
					12.0 14.0	
					14.0 15.0	
			GROUNDWATER ENCOUNTERED AT 5.5' (*GW-1)			
GP-104	N/A	0-0.25	<b>TOPSOIL: BROWN SAND</b>		0 0.25	7.4
		0.25-2.5	<b>FILL: BROWN AND GREY SANDY CLAY</b>	S-1	2.25 2.5	5.7
		2.5-3.0	DARK BROWN <b>SAND</b>		2.5 3.0	6.7
		3.0-5.0	BROWN <b>SAND</b>		3.0 5.0	8.7
		5.0-5.5	BROWN <b>SAND</b>		5.0 5.5	7.5
					5.5 7.5	--
		5.5-8.0	BROWN <b>SAND</b>		7.5 8.0	--
		8.0-10.0	BROWN AND GREY <b>CLAY</b>		8.0 10.0	6.3
			GROUNDWATER ENCOUNTERED AT 5.5' (INSUFFICIENT AMOUNTS FOR SAMPLING PURPOSES)			

**NOTES:**

- BORINGS BACKFILLED WITH SOIL CUTTINGS & HYDRATED BENTONITE PELLETS AFTER OBTAINING SOIL AND/OR WATER SAMPLES.
- BORINGS OBSERVED BY Z. MORIARTY OF NTH CONSULTANTS, LTD.
- SOIL CLASSIFICATION BASED SOLELY ON VISUAL OBSERVATION.
- \* SAMPLE SUBMITTED FOR ANALYTICAL TESTING.

DRILLED BY: TERRA PROBE ENVIRONMENTAL

DATE: JUNE 28, 2022

FIGURE NO: 2

PROJECT NO: 22000306-01

NTH CONSULTANTS, LTD.

SHEET 3 OF 4

**LOG OF GEOPROBE BORINGS**

GP NO.	GROUND SURFACE ELEV.	DEPTH (FT)	SOIL DESCRIPTION	DISCRETE SAMPLE INFO.		
				SAMPLE NO.	DEPTH (FT) FROM TO	PID READING (PPM)
GP-105	N/A	0-0.25	<b>TOPSOIL: BROWN SAND</b>		0 0.25	14.0
		0.25-3.5	<b>FILL: BROWN CLAYEY SAND</b>	S-1	0.25 1.5	5.6
					1.5 3.5	5.9
		3.5-4.5	<b>FILL: BROWN SANDY CLAY</b> WITH PIECES OF TILE	S-2*	3.5 4.5	7.1
		4.5-10.0	<b>BROWN AND GREY CLAY</b>		4.5 6.0	3.0
					6.0 8.0	7.5
					8.0 10.0	2.6
			No GROUNDWATER ENCOUNTERED			
GP-106	N/A	0-0.5	<b>ASPHALT PAVEMENT</b>		0 0.5	12.4
		0.5-2.5	<b>FILL: GREY SANDY CLAY</b> WITH PIECES OF BRICK	S-1	0.5 2.5	15.8
		2.5-4.0	<b>FILL: BLACK CLAYEY SAND</b>	S-2*	2.5 4.0	13.0
					4.0 6.0	--
		4.0-8.0	<b>BROWN SAND</b>		6.0 8.0	--
		8.0-10.0	<b>BROWN AND GRAY CLAY</b>		8.0 10.0	12.7
			GROUNDWATER ENCOUNTERED AT 4.0' (*GW-1)			

**NOTES:**

- BORINGS BACKFILLED WITH SOIL CUTTINGS & HYDRATED BENTONITE PELLETS AFTER OBTAINING SOIL AND/OR WATER SAMPLES.
- BORINGS OBSERVED BY Z. MORIARTY OF NTH CONSULTANTS, LTD.
- SOIL CLASSIFICATION BASED SOLELY ON VISUAL OBSERVATION.
- \* SAMPLE SUBMITTED FOR ANALYTICAL TESTING.

DRILLED BY: TERRA PROBE ENVIRONMENTAL

DATE: JUNE 28, 2022

FIGURE NO: 2

PROJECT NO: 22000306-01

NTH CONSULTANTS, LTD.

SHEET 4 of 4

**LOG OF GEOPROBE BORINGS**

GP NO.	GROUND SURFACE ELEV.	DEPTH (FT)	SOIL DESCRIPTION	DISCRETE SAMPLE INFO.			
				SAMPLE NO.	DEPTH (FT)		PID READING (PPM)
					FROM	TO	
GP-107	N/A	0-0.25	TOPSOIL: BROWN SAND		0	2.0	9.4
		0.25-1.5	FILL: DARK BROWN SAND WITH GRAVEL		2.0	4.0	8.9
		1.5-8.0	LIGHT BROWN SAND	S-1	4.0	5.0	10.0
					5.0	7.0	--
					7.0	8.0	--
		8.0-10.0	BROWN AND GREY CLAY		8.0	10.0	8.7
			GROUNDWATER ENCOUNTERED AT 5' (*GW-1)				
GP-108	N/A	0-0.25	TOPSOIL: BROWN SAND		0	2.0	6.2
		0.25-3.75	BROWN AND GRAY SANDY CLAY WITH GRAVEL		2.0	3.75	5.3
		3.75-5.25	FILL: BROWN SAND WITH PIECES OF BRICK AND CONCRETE	S-1*	3.75	5.25	6.4
		5.25-7.0	BROWN SAND		5.25	7.0	--
		7.0-10.0	BROWN AND GREY CLAY		7.0	9.0	5.2
					9.0	10.0	4.1
			GROUNDWATER ENCOUNTERED AT 5.25' (*GW-1)				
				</			

**NOTES:**

- BORINGS BACKFILLED WITH SOIL CUTTINGS & HYDRATED BENTONITE PELLETS AFTER OBTAINING SOIL AND/OR WATER SAMPLES.
- BORINGS OBSERVED BY Z. MORIARTY OF NTH CONSULTANTS, LTD.
- SOIL CLASSIFICATION BASED SOLELY ON VISUAL OBSERVATION.
- \* SAMPLE SUBMITTED FOR ANALYTICAL TESTING.

DRILLED BY: TERRA PROBE ENVIRONMENTAL

DATE: JUNE 28, 2022

FIGURE NO: 2

Table 1: SUMMARY OF CHEMICAL ANALYSES- SOIL  
Madison Heights Property  
NTH Project No. 22000306-01

Sample Designation	Sample Depth (ft)	Collect Date	Michigan 10 Metals										VOCs				SVOCs / PNAs											
			Arsenic	Barium	Cadmium	Chromium, Total	Copper	Lead	Mercury, Total	Selenium	Silver	Zinc	Ethylbenzene	Naphthalene	1,2,4-Trimethylbenzene	Xylenes	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	
			7440-38-2	7440-39-3	7440-43-9	7440-47-3	7440-50-8	7439-92-1	7439-97-6	7782-49-2	7440-22-4	7440-66-6	100-41-4	91-20-3	95-63-6	1330-20-7	120-12-7	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	85-01-8	129-00-0	
GP-101 S-1	(4' - 5')	06/28/22	360,000	780,000	6,700	70,000	1,500,000	1,200,000	630	1,300	4,100	2,700,000	<50	<330	<100	<150	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	
GP-102 S-1	(4' - 5.5')	06/28/22	3,300	81,000	340	12,000	18,000	36,000	<50	200	120	74,000	55	14,000	280	160	380	1,100	810	1,100	470	460	1,000	2,100	500	1,400	1,900	
GP-103 S-1	(3.5' - 5')	06/28/22	9,900	240,000	1,400	22,000	100,000	330,000	91	570	1,100	800,000	<50	<330	<100	<150	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	
GP-105 S-2	(3.4' - 4.5')	06/28/22	8,000	64,000	220	19,000	16,000	14,000	<50	220	<100	58,000	<50	<330	<100	<150	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	<390	
GP-106 S-2	(2.5' - 4')	06/28/22	2,000	17,000	120	6,500	2,800	5,400	<50	350	<100	20,000	<50	<330	<100	<150	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	
GP-108 S-1	3.75' - 5.25	06/28/22	3,200	120,000	170	9,300	49,000	210,000	<50	<200	<100	130,000	<50	<330	<100	<150	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	
PART 201 RESIDENTIAL SOIL CLEANUP CRITERIA		SWDB	5,800	75,000	1,200	18,000	32,000	21,000	130	410	1,000	47,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		DWP	4,600	1.3E+06	6,000	30,000	5.8E+06	7.0E+05	1,700	4,000	4,500	2.4E+06	1,500	35,000	2,100	5,600	41,000	NLL	NLL	NLL	NLL	NLL	NLL	7.3E+05	NLL	56,000	4.8E+05	
		GSIP	4,600	4.4E+05(G)	3,000(G,X)	3,300	75,000(G)	2.5E+06(G,X)	50 (M); 1.2	400	100 (M); 27	1.7E+05(G)	360	730	570	980	ID	NLL	NLL	NLL	NLL	NLL	NLL	5,500	NLL	2,100	ID	
		SVIIC	NLV	NLV	NLV	NLV	NLV	NLV	48,000	NLV	NLV	NLV	87,000	2.5E+05	4.3E+06	6.3E+06	1.0E+09	NLV	NLV	ID	NLV	NLV	ID	1.0E+09	NLV	2.8E+06	1.0E+09	
		VSIC	NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	7.2E+05	3.0E+05	2.1E+07	4.6E+07	1.4E+09	NLV	NLV	ID	NLV	NLV	ID	7.4E+08	NLV	1.6E+05	6.5E+08	
		VSIC 5M	NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	1.0E+06	3.0E+05	5.0E+08	6.1E+07	1.4E+09	NLV	NLV	ID	NLV	NLV	ID	7.4E+08	NLV	1.6E+05	6.5E+08	
		VSIC 2M	NLV	NLV	NLV	NLV	NLV	NLV	52,000	NLV	NLV	NLV	2.2E+06	3.0E+05	5.0E+08	1.3E+08	1.4E+09	NLV	NLV	ID	NLV	NLV	ID	7.4E+08	NLV	1.6E+05	6.5E+08	
		PSIC	7.2E+05	3.3E+08	1.7E+06	2.6E+05	1.3E+08	1.0E+08	2.0E+07	1.3E+08	6.7E+06	ID	1.0E+10	2.0E+08	8.2E+10	2.9E+11	6.7E+10	ID	1.5E+06	ID	ID	ID	9.3E+09	ID	6.7E+06	6.7E+09		
		DC	7,600	3.7E+07	5.5E+05	2.5E+06	2.0E+07	4.0E+05	1.6E+05	2.6E+06	2.5E+06	1.7E+08	2.2E+07	1.6E+07	3.2E+07	4.1E+08	2.3E+08	20,000	2,000	20,000	2.5E+06	2.0E+05	2.0E+06	4.6E+07	20,000	1.6E+06	2.9E+07	
		SSCSL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4E+05	NA	1.1E+05	1.5E+05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RESIDENTIAL VOLATILIZATION TO INDOOR AIR PATHWAY SCREENING LEVELS			NA	NA	NA	NA	NA	NA	22(M)	NA	NA	NA	12(M)	67(M)	150(JT)	280(J)	1.3E+07	1.6E+05 (MM)	NA	NA	NA	NA	NA	NA	NA	1,700	2.5E+07	

NOTES:

[1]

PART 201 CRITERIA EFFECTIVE DATE: JUNE 25, 2018

[2]

SAMPLES COLLECTED BY NTH CONSULTANTS PERSONNEL AND ANALYZED BY FIBERTEC ENVIRONMENTAL SERVICES OF HOLT, MICHIGAN.

[3]

ALL VALUES PRESENTED AS µG/KG - MICROGRAMS PER KILOGRAM (≈ PARTS PER BILLION).

[4]

ID - INADEQUATE DATA TO DEVELOP CRITERION

[5]

NLV - CHEMICAL IS NOT LIKELY TO VOLATILIZE UNDER MOST CONDITIONS

[6]

NA - NOT APPLICABLE

[7]

ND - NOT DETECTED ABOVE LABORATORY REPORTED METHOD DETECTION LIMITS

[8]

SWDB - STATE-WIDE DEFAULT BACKGROUND

[9]

DWP - RESIDENTIAL DRINKING WATER PROTECTION CRITERIA

[10]

GSIP - GROUNDWATER / SURFACE WATER INTERFACE PROTECTION CRITERIA.

[11]

SVIIC - SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA.

[12]

VSIC - VOLATILE SOIL INHALATION CRITERIA (AMBIENT AIR; INFINITE SOURCE).

[13]

VSIC 5M - FINITE VSIC FOR 5 METER SOURCE THICKNESS

[14]

VSIC 2M - FINITE VSIC FOR 2 METER SOURCE THICKNESS

[15]

PSIC - PARTICULATE SOIL INHALATION CRITERIA

[16]

DC - DIRECT CONTACT CRITERIA

[17]

SSCSL - SOIL SATURATION CONCENTRATION SCREENING LEVELS

[18]

G - AQUATIC TOXICITY IS PROPORTIONAL TO WATER HARDNESS AND/OR pH OF THE RECEIVING SURFACE WATER; THESE GSI VALUES HAVE BEEN CALCULATED BASED ON DEFAULT WATER HARDNESS OF 150 PPM AS A REASONABLE ESTIMATE FOR MOST SURFACE WATER BODIES IN MICHIGAN.

[19]

X - THE GSI CRITERION LISTED MAY NOT BE PROTECTIVE FOR SURFACE WATER THAT IS USED AS A DRINKING WATER SOURCE. FOR SOIL THAT MAY LEACH AND RESULT IN A IN CLOSE GROUNDWATER DISCHARGE TO THE GREAT LAKES AND THEIR CONNECTING WATERS OR DISCHARGE IN CLOSE PROXIMITY TO A WATER SUPPLY INTAKE IN INLAND SURFACE WATERS, THE GENERIC GSI CRITERION WOULD BE THE RESIDENTIAL DWP LISTED IN THE TABLE.

[20]

- REPORTED CONCENTRATION EXCEEDS ONE OR MORE APPLICABLE PART 201 CRITERIA

[21]

REPORTED CONCENTRATION EXCEEDS VAPOR INTRUSION SCREENING LEVELS

**Table 2: SUMMARY OF CHEMICAL ANALYSES-GROUNDWATER  
Madison Heights Property  
NTH Project No. 22000306-01**

Sample Designation	Collect Date	Michigan 10 Metals				VOCs
		Arsenic	Barium	Copper	Zinc	Toluene
		7440-38-2	7440-39-3	7440-50-8	7440-66-6	108-88-3
GP-102 GW-1	06/28/22	70	380	<4.0	110	<1.0
GP-103 GW-1	06/28/22	14	430	<4.0	<50	<1.0
GP-106 GW-1	06/28/22	<5.0	470	<4.0	<50	1.0
GP-107 GW-1	06/28/22	<5.0	250	6.2	73	<1.0
GP-108 GW-1	06/28/22	<5.0	260	<4.0	55	<1.0
PART 201 RESIDENTIAL GROUNDWATER CLEANUP CRITERIA	DW	10	2,000	1,000	2,400	790
	GSI	10	670(G)	13(G)	170(G)	270
	GVIIC	NLV	NLV	NLV	NLV	5.3E+05
	WS	NA	NA	NA	NA	5.3E+05
	FESL	ID	ID	ID	ID	61,000
RESIDENTIAL VOLATILIZATION TO INDOOR AIR PATHWAY SCREENING LEVELS		NA	NA	NA	NA	300(FF)

**NOTES:**

- [1] 201 CRITERIA EFFECTIVE DATE: JUNE 25, 2018
- [2] SAMPLES COLLECTED BY NTH CONSULTANTS PERSONNEL AND ANALYZED BY FIBERTEC ENVIRONMENTAL SERVICES OF HOLT, MICHIGAN.
- [3] ALL VALUES PRESENTED AS µG/L - MICROGRAMS PER LITER (≈ PARTS PER BILLION).
- [4] ND - NOT DETECTED AT OR ABOVE LABORATORY REPORTED METHOD DETECTION LIMIT (SEE LABORATORY DATA REPORT FOR PARAMETER/SAMPLE SPECIFIC DETECTION LIMITS).
- [5] ID - INADEQUATE DATA TO DEVELOP CRITERION
- [6] NLL - CHEMICAL IS NOT LIKELY TO LEACH UNDER MOST SOIL CONDITIONS.
- [7] NLV - CHEMICAL IS NOT LIKELY TO VOLATILIZE UNDER MOST CONDITIONS.
- [8] DW - CONCENTRATION IN GROUNDWATER, IF NOT EXCEEDED, IS CONSIDERED SAFE FOR EXPOSURE.
- [9] NRDW - NONRESIDENTIAL DRINKING WATER CRITERIA
- [10] GSI - PRESENTED ONLY TO ESTABLISH GROUNDWATER CRITERIA WHICH ARE PROTECTIVE OF SURFACE WATER.
- [11] GVIIC - GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA.
- [12] NRGVIIC - NONRESIDENTIAL GROUNDWATER VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA.
- [13] WS - WATER SOLUBILITY
- [14] FESL - FLAMMABILITY AND EXPLOSIVITY SCREENING LEVEL
- [15]   - REPORTED CONCENTRATION EXCEEDS ONE OR MORE APPLICABLE PART 201 CRITERIA
- [16]   REPORTED CONCENTRATION EXCEEDS VAPOR INTRUSION SCREENING LEVELS

# TABLES

## **Table 1**

### **Eligible Activity Cost Schedule**

**Table 1: Eligible Activities Cost Estimates**

Item/Activity	Total Request
<b>Work Plan Exempt Activities</b>	
Phase I ESA	\$ 3,000
Phase II ESA/BEA	\$ 37,700
Hazardous Materials Survey	\$ 10,000
<b>Work Plan Exempt Activities Sub-Total</b>	<b>\$ 50,700</b>
<b>Department Specific Activities</b>	
Vapor Barrier Design	\$ 35,000
Vapor Barrier Installation	\$ 174,250
Contaminated Soil Transport, Disposal and Backfill	\$ 187,130
Contaminated Groundwater Management	\$ 179,700
Utility Corridor Migration Barriers	\$ 21,000
Utility Gasketing	\$ 60,000
Surface Cover (demarcation barrier, clean fill etc.)	\$ 55,400
Oversight, Sampling and Reporting by Environmental Professional	\$ 97,750
<b>Department Specific Activities Sub-Total</b>	<b>\$ 810,230</b>
<b>Demolition</b>	
Building Demolition Activities (selective internal)	\$ 75,000
Site Demolition Activities	\$ 36,750
Fill/Compaction/Rough Grading to Balance Site where Bldg. was Located	\$ 5,750
<b>Demolition Sub-Total</b>	<b>\$ 117,500</b>
<b>Asbestos and Lead Activities</b>	
Asbestos Abatement, Oversight, Air Monitoring and Reporting	\$ 10,000
Asbestos Abatement	\$ 20,000
<b>Asbestos and Lead Activities Sub-Total</b>	<b>\$ 30,000</b>
<b>Infrastructure Improvements</b>	
Urban Storm Water Management Systems (Traditional versus Low Impact Design)	\$ 500,000
<b>Infrastructure Sub-Total</b>	<b>\$ 500,000</b>
<b>Site Preparation</b>	
Temporary Erosion Control	\$ 2,925
Temporary Site Control (fencing, gates, signage and/or lighting)	\$ 4,550
Grading (including reasonable mass grading of entire project site)	\$ 40,000
Fill Relating to Other Eligible Activities	\$ 200,000
<b>Site Preparation Sub-Total</b>	<b>\$ 247,475</b>
<b>Preparation of Brownfield Plan and Act 381 Workplan</b>	
Brownfield Plan	\$ 20,000
Brownfield Plan Implementation	\$ 10,000
<b>Brownfield Plan and Act 381 Workplan Sub-Total</b>	<b>\$ 30,000</b>
<b>Eligible Activities Sub-Total</b>	<b>\$ 1,785,905</b>
15% Contingency*	\$ 255,781
<b>Developer Eligible Reimbursement Total</b>	<b>\$ 2,041,686</b>
TIF Capture for Local Brownfield Revolving Fund	\$ -
Administrative Fee	\$ 75,000
<b>Total</b>	<b>\$ 2,116,686</b>

\*15% Contingency excludes preparation of Brownfield Plan/381 Work Plan and Pre-Approved Activities

## **Table 2**

### **Tax Increment Revenue Capture Estimates**

Table 2  
Tax Increment Capture Estimates

BROWNFIELD ONLY		Value (TV) Increase Rate:	2.00%	Multiplier	1.020													
Madison Heights																		
Brownfield Plan Year			1	2	3	4	5	6	7	8	9	10	11	12	13			
Calendar Year		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037			
Parent Parcel	Base Taxable Value	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
	Ad Valorem		\$ 1,200,000	\$ 1,224,000	\$ 1,248,480	\$ 1,273,450	\$ 1,298,919	\$ 1,324,897	\$ 1,351,395	\$ 1,378,423	\$ 1,405,991	\$ 1,434,111	\$ 1,462,793	\$ 1,492,049	\$ 1,521,890			
	Incremental Difference (New TV - Base TV)		\$ 1,200,000	\$ 1,224,000	\$ 1,248,480	\$ 1,273,450	\$ 1,298,919	\$ 1,324,897	\$ 1,351,395	\$ 1,378,423	\$ 1,405,991	\$ 1,434,111	\$ 1,462,793	\$ 1,492,049	\$ 1,521,890			
School Capture		Millage																
State Education Tax (SET)		6.0000	\$ 7,200	\$ 7,344	\$ 7,491	\$ 7,641	\$ 7,794	\$ 7,949	\$ 8,108	\$ 8,271	\$ 8,436	\$ 8,605	\$ 8,777	\$ 8,952	\$ 9,131			
School Operating		18.0000	\$ 21,600	\$ 22,032	\$ 22,473	\$ 22,922	\$ 23,381	\$ 23,848	\$ 24,325	\$ 24,812	\$ 25,308	\$ 25,814	\$ 26,330	\$ 26,857	\$ 27,394			
School Brownfield Capturable Total		24.0000	\$ 28,800	\$ 29,376	\$ 29,964	\$ 30,563	\$ 31,174	\$ 31,798	\$ 32,433	\$ 33,082	\$ 33,744	\$ 34,419	\$ 35,107	\$ 35,809	\$ 36,525			
Local Capture																		
City Operating		12.8746	\$ 15,450	\$ 15,759	\$ 16,074	\$ 16,395	\$ 16,723	\$ 17,058	\$ 17,399	\$ 17,747	\$ 18,102	\$ 18,464	\$ 18,833	\$ 19,210	\$ 19,594			
Solid Waste		2.4976	\$ 2,997	\$ 3,057	\$ 3,118	\$ 3,181	\$ 3,244	\$ 3,309	\$ 3,375	\$ 3,443	\$ 3,512	\$ 3,582	\$ 3,653	\$ 3,727	\$ 3,801			
Road Improvement		1.8882	\$ 2,266	\$ 2,311	\$ 2,357	\$ 2,405	\$ 2,453	\$ 2,502	\$ 2,552	\$ 2,603	\$ 2,655	\$ 2,708	\$ 2,762	\$ 2,817	\$ 2,874			
Senior Citizens		0.4484	\$ 538	\$ 549	\$ 560	\$ 571	\$ 582	\$ 594	\$ 606	\$ 618	\$ 630	\$ 643	\$ 656	\$ 669	\$ 682			
Fire Stations BO		0.0000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
County Gen Fund		3.9686	\$ 4,762	\$ 4,858	\$ 4,955	\$ 5,054	\$ 5,155	\$ 5,258	\$ 5,363	\$ 5,470	\$ 5,580	\$ 5,691	\$ 5,805	\$ 5,921	\$ 6,040			
Oakland Comm College		1.4891	\$ 1,787	\$ 1,823	\$ 1,859	\$ 1,896	\$ 1,934	\$ 1,973	\$ 2,012	\$ 2,053	\$ 2,094	\$ 2,136	\$ 2,178	\$ 2,222	\$ 2,266			
OISD Allocated		0.1881	\$ 226	\$ 230	\$ 235	\$ 240	\$ 244	\$ 249	\$ 254	\$ 259	\$ 264	\$ 270	\$ 275	\$ 281	\$ 286			
OISD Voted		2.9777	\$ 3,573	\$ 3,645	\$ 3,718	\$ 3,792	\$ 3,868	\$ 3,945	\$ 4,024	\$ 4,105	\$ 4,187	\$ 4,270	\$ 4,356	\$ 4,443	\$ 4,532			
Lanphere Sinking		2.9297	\$ 3,516	\$ 3,586	\$ 3,658	\$ 3,731	\$ 3,805	\$ 3,882	\$ 3,959	\$ 4,038	\$ 4,119	\$ 4,202	\$ 4,286	\$ 4,371	\$ 4,459			
Oakland Transit		0.95000	\$ 1,140	\$ 1,163	\$ 1,186	\$ 1,210	\$ 1,234	\$ 1,259	\$ 1,284	\$ 1,310	\$ 1,336	\$ 1,362	\$ 1,390	\$ 1,417	\$ 1,446			
H-C Metroparks		0.20700	\$ 248	\$ 253	\$ 258	\$ 264	\$ 269	\$ 274	\$ 280	\$ 285	\$ 291	\$ 297	\$ 303	\$ 309	\$ 315			
County Park & Rec		0.34310	\$ 412	\$ 420	\$ 428	\$ 437	\$ 446	\$ 455	\$ 464	\$ 473	\$ 482	\$ 492	\$ 502	\$ 512	\$ 522			
Local Brownfield Capturable Total		30.7621	\$ 36,915	\$ 37,653	\$ 38,406	\$ 39,174	\$ 39,957	\$ 40,757	\$ 41,572	\$ 42,403	\$ 43,251	\$ 44,116	\$ 44,999	\$ 45,899	\$ 46,817			
Non-Capturable Millages																		
Zoo Authority		0.0945	\$ 113	\$ 116	\$ 118	\$ 120	\$ 123	\$ 125	\$ 128	\$ 130	\$ 133	\$ 136	\$ 138	\$ 141	\$ 144			
Art Institute		0.1945	\$ 233	\$ 238	\$ 243	\$ 248	\$ 253	\$ 258	\$ 263	\$ 268	\$ 273	\$ 279	\$ 285	\$ 290	\$ 296			
P & F Pension		7.0000	\$ 8,400	\$ 8,568	\$ 8,739	\$ 8,914	\$ 9,092	\$ 9,274	\$ 9,460	\$ 9,649	\$ 9,842	\$ 10,039	\$ 10,240	\$ 10,444	\$ 10,653			
Chap 20 Drain		0.8200	\$ 984	\$ 1,004	\$ 1,024	\$ 1,044	\$ 1,065	\$ 1,086	\$ 1,108	\$ 1,130	\$ 1,153	\$ 1,176	\$ 1,199	\$ 1,223	\$ 1,248			
Total Non-Capturable Taxes		8.1090	\$ 9,731	\$ 9,925	\$ 10,124	\$ 10,326	\$ 10,533	\$ 10,744	\$ 10,958	\$ 11,178	\$ 11,401	\$ 11,629	\$ 11,862	\$ 12,099	\$ 12,341			
State and Local Total		62.8711	\$ 75,445	\$ 76,954	\$ 78,493	\$ 80,063	\$ 81,664	\$ 83,298	\$ 84,964	\$ 86,663	\$ 88,396	\$ 90,164	\$ 91,967	\$ 93,807	\$ 95,683			
State and Local Total Capturable		54.7621	\$ 65,715	\$ 67,029	\$ 68,369	\$ 69,737	\$ 71,132	\$ 72,554	\$ 74,005	\$ 75,485	\$ 76,995	\$ 78,535	\$ 80,106	\$ 81,708	\$ 83,342			

Table 2  
Tax Increment Capture Estimates

14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL
2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
\$ 1,552,328	\$ 1,583,375	\$ 1,615,042	\$ 1,647,343	\$ 1,680,290	\$ 1,713,895	\$ 1,748,173	\$ 1,783,137	\$ 1,818,800	\$ 1,855,176	\$ 1,892,279	\$ 1,930,125	\$ 1,968,727	\$ 2,008,102	\$ 2,048,264	\$ 2,089,229	\$ 2,131,014	
\$ 1,552,328	\$ 1,583,375	\$ 1,615,042	\$ 1,647,343	\$ 1,680,290	\$ 1,713,895	\$ 1,748,173	\$ 1,783,137	\$ 1,818,800	\$ 1,855,176	\$ 1,892,279	\$ 1,930,125	\$ 1,968,727	\$ 2,008,102	\$ 2,048,264	\$ 2,089,229	\$ 2,131,014	
\$ 9,314	\$ 9,500	\$ 9,690	\$ 9,884	\$ 10,082	\$ 10,283	\$ 10,489	\$ 10,699	\$ 10,913	\$ 11,131	\$ 11,354	\$ 11,581	\$ 11,812	\$ 12,049	\$ 12,290	\$ 12,535	\$ 12,786	\$ 292,090
\$ 27,942	\$ 28,501	\$ 29,071	\$ 29,652	\$ 30,245	\$ 30,850	\$ 31,467	\$ 32,096	\$ 32,738	\$ 33,393	\$ 34,061	\$ 34,742	\$ 35,437	\$ 36,146	\$ 36,869	\$ 37,606	\$ 38,358	\$ 876,271
\$ 37,256	\$ 38,001	\$ 38,761	\$ 39,536	\$ 40,327	\$ 41,133	\$ 41,956	\$ 42,795	\$ 43,651	\$ 44,524	\$ 45,415	\$ 46,323	\$ 47,249	\$ 48,194	\$ 49,158	\$ 50,141	\$ 51,144	\$ 1,168,361
\$ 19,986	\$ 20,385	\$ 20,793	\$ 21,209	\$ 21,633	\$ 22,066	\$ 22,507	\$ 22,957	\$ 23,416	\$ 23,885	\$ 24,362	\$ 24,850	\$ 25,347	\$ 25,854	\$ 26,371	\$ 26,898	\$ 27,436	\$ 626,757
\$ 3,877	\$ 3,955	\$ 4,034	\$ 4,114	\$ 4,197	\$ 4,281	\$ 4,366	\$ 4,454	\$ 4,543	\$ 4,633	\$ 4,726	\$ 4,821	\$ 4,917	\$ 5,015	\$ 5,116	\$ 5,218	\$ 5,322	\$ 121,587
\$ 2,931	\$ 2,990	\$ 3,050	\$ 3,111	\$ 3,173	\$ 3,236	\$ 3,301	\$ 3,367	\$ 3,434	\$ 3,503	\$ 3,573	\$ 3,644	\$ 3,717	\$ 3,792	\$ 3,868	\$ 3,945	\$ 4,024	\$ 91,921
\$ 696	\$ 710	\$ 724	\$ 739	\$ 753	\$ 769	\$ 784	\$ 800	\$ 816	\$ 832	\$ 848	\$ 865	\$ 883	\$ 900	\$ 918	\$ 937	\$ 956	\$ 21,829
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ 6,161	\$ 6,284	\$ 6,409	\$ 6,538	\$ 6,668	\$ 6,802	\$ 6,938	\$ 7,077	\$ 7,218	\$ 7,362	\$ 7,510	\$ 7,660	\$ 7,813	\$ 7,969	\$ 8,129	\$ 8,291	\$ 8,457	
\$ 2,312	\$ 2,358	\$ 2,405	\$ 2,453	\$ 2,502	\$ 2,552	\$ 2,603	\$ 2,655	\$ 2,708	\$ 2,763	\$ 2,818	\$ 2,874	\$ 2,932	\$ 2,990	\$ 3,050	\$ 3,111	\$ 3,173	\$ 72,492
\$ 292	\$ 298	\$ 304	\$ 310	\$ 316	\$ 322	\$ 329	\$ 335	\$ 342	\$ 349	\$ 356	\$ 363	\$ 370	\$ 378	\$ 385	\$ 393	\$ 401	\$ 9,157
\$ 4,622	\$ 4,715	\$ 4,809	\$ 4,905	\$ 5,003	\$ 5,103	\$ 5,206	\$ 5,310	\$ 5,416	\$ 5,524	\$ 5,635	\$ 5,747	\$ 5,862	\$ 5,980	\$ 6,099	\$ 6,221	\$ 6,346	\$ 144,959
\$ 4,548	\$ 4,639	\$ 4,732	\$ 4,826	\$ 4,923	\$ 5,021	\$ 5,122	\$ 5,224	\$ 5,329	\$ 5,435	\$ 5,544	\$ 5,655	\$ 5,768	\$ 5,883	\$ 6,001	\$ 6,121	\$ 6,243	\$ 142,623
\$ 1,475	\$ 1,504	\$ 1,534	\$ 1,565	\$ 1,596	\$ 1,628	\$ 1,661	\$ 1,694	\$ 1,728	\$ 1,762	\$ 1,798	\$ 1,834	\$ 1,870	\$ 1,908	\$ 1,946	\$ 1,985	\$ 2,024	\$ 46,248
\$ 321	\$ 328	\$ 334	\$ 341	\$ 348	\$ 355	\$ 362	\$ 369	\$ 376	\$ 384	\$ 392	\$ 400	\$ 408	\$ 416	\$ 424	\$ 432	\$ 441	\$ 10,077
\$ 533	\$ 543	\$ 554	\$ 565	\$ 577	\$ 588	\$ 600	\$ 612	\$ 624	\$ 637	\$ 649	\$ 662	\$ 675	\$ 689	\$ 703	\$ 717	\$ 731	\$ 16,703
\$ 47,753	\$ 48,708	\$ 49,682	\$ 50,676	\$ 51,689	\$ 52,723	\$ 53,777	\$ 54,853	\$ 55,950	\$ 57,069	\$ 58,210	\$ 59,375	\$ 60,562	\$ 61,773	\$ 63,009	\$ 64,269	\$ 65,554	\$ 1,497,551
\$ 147	\$ 150	\$ 153	\$ 156	\$ 159	\$ 162	\$ 165	\$ 169	\$ 172	\$ 175	\$ 179	\$ 182	\$ 186	\$ 190	\$ 194	\$ 197	\$ 201	\$ 4,600
\$ 302	\$ 308	\$ 314	\$ 320	\$ 327	\$ 333	\$ 340	\$ 347	\$ 354	\$ 361	\$ 368	\$ 375	\$ 383	\$ 391	\$ 398	\$ 406	\$ 414	\$ 9,469
\$ 10,866	\$ 11,084	\$ 11,305	\$ 11,531	\$ 11,762	\$ 11,997	\$ 12,237	\$ 12,482	\$ 12,732	\$ 12,986	\$ 13,246	\$ 13,511	\$ 13,781	\$ 14,057	\$ 14,338	\$ 14,625	\$ 14,917	\$ 340,772
\$ 1,273	\$ 1,298	\$ 1,324	\$ 1,351	\$ 1,378	\$ 1,405	\$ 1,434	\$ 1,462	\$ 1,491	\$ 1,521	\$ 1,552	\$ 1,583	\$ 1,614	\$ 1,647	\$ 1,680	\$ 1,713	\$ 1,747	\$ 39,919
\$ 12,588	\$ 12,840	\$ 13,096	\$ 13,358	\$ 13,625	\$ 13,898	\$ 14,176	\$ 14,459	\$ 14,749	\$ 15,044	\$ 15,344	\$ 15,651	\$ 15,964	\$ 16,284	\$ 16,609	\$ 16,942	\$ 17,280	\$ 394,760
\$ 97,597	\$ 99,548	\$ 101,539	\$ 103,570	\$ 105,642	\$ 107,754	\$ 109,910	\$ 112,108	\$ 114,350	\$ 116,637	\$ 118,970	\$ 121,349	\$ 123,776	\$ 126,252	\$ 128,777	\$ 131,352	\$ 133,979	\$ 3,060,672
\$ 85,009	\$ 86,709	\$ 88,443	\$ 90,212	\$ 92,016	\$ 93,857	\$ 95,734	\$ 97,648	\$ 99,601	\$ 101,593	\$ 103,625	\$ 105,698	\$ 107,812	\$ 109,968	\$ 112,167	\$ 114,411	\$ 116,699	\$ 2,665,912

## **Table 3**

### **Tax Increment Reimbursement Estimates**



Table 3  
Tax Increment Reimbursement Estimates

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	TOTAL
\$48,708	\$49,682	\$50,676	\$51,689	\$52,723	\$53,777	\$54,853	\$55,950	\$57,069	\$58,210	\$59,375	\$60,562	\$61,773	\$63,009	\$64,269	\$65,554	\$1,497,551
\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$75,000
\$46,208	\$47,182	\$48,176	\$49,189	\$50,223	\$51,277	\$52,353	\$53,450	\$54,569	\$55,710	\$56,875	\$58,062	\$59,273	\$60,509	\$61,769	\$63,054	\$1,422,551
\$46,208	\$47,182	\$48,176	\$49,189	\$50,223	\$51,277	\$52,353	\$53,450	\$54,569	\$55,710	\$56,875	\$58,062	\$59,273	\$60,509	\$61,769	\$63,054	\$ 1,422,551
\$1,440,808	\$1,393,626	\$1,345,450	\$1,296,261	\$1,246,038	\$1,194,760	\$1,142,407	\$1,088,957	\$1,034,388	\$978,678	\$921,803	\$863,741	\$804,467	\$743,958	\$682,189	\$619,135	
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
\$46,208	\$47,182	\$48,176	\$49,189	\$50,223	\$51,277	\$52,353	\$53,450	\$54,569	\$55,710	\$56,875	\$58,062	\$59,273	\$60,509	\$61,769	\$63,054	\$1,422,551
\$1,440,808	\$1,393,626	\$1,345,450	\$1,296,261	\$1,246,038	\$1,194,760	\$1,142,407	\$1,088,957	\$1,034,388	\$978,678	\$921,803	\$863,741	\$804,467	\$743,958	\$682,189	\$619,135	
\$46,208	\$47,182	\$48,176	\$49,189	\$50,223	\$51,277	\$52,353	\$53,450	\$54,569	\$55,710	\$56,875	\$58,062	\$59,273	\$60,509	\$61,769	\$63,054	\$1,422,551
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0