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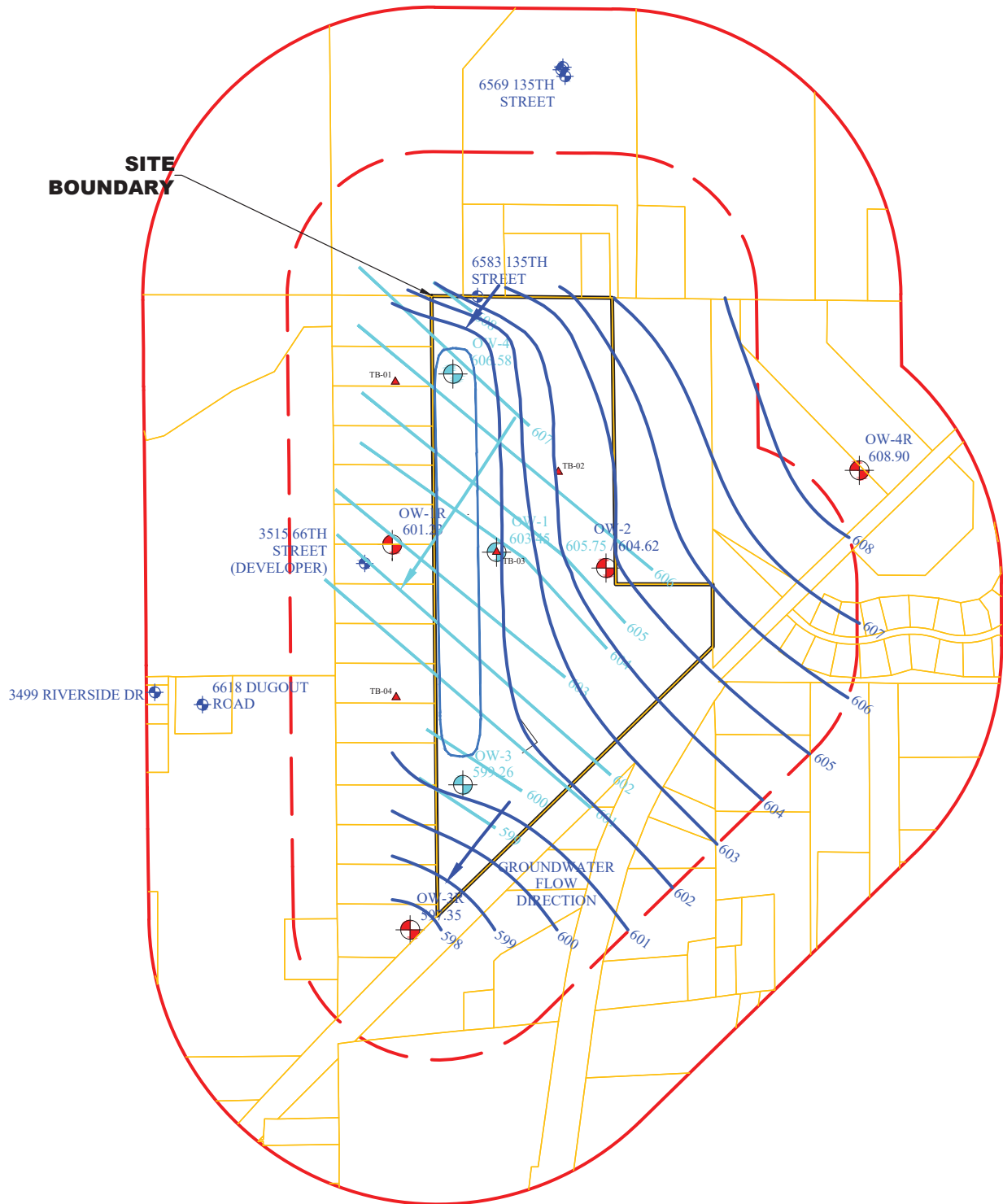
## **Attachment A: Relevant Local Water Well Records**

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## **Attachment B: Graphs of Relevant Water Level Data**

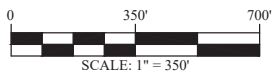
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**SITE BOUNDARY**



**LEGEND**

-  INITIAL OBSERVATION WELLS (2018)
-  INITIAL GROUNDWATER ELEVATION CONTOURS (3/23/2018)
-  CURRENT OBSERVATION WELLS (2021)
-  MOST RECENT GROUNDWATER ELEVATION CONTOURS (7/8/2021)
-  500 FT PROPERTY BUFFER
-  1,000 FT PROPERTY BUFFER
-  RESIDENTIAL WELL (EGLE WELLOGIC)



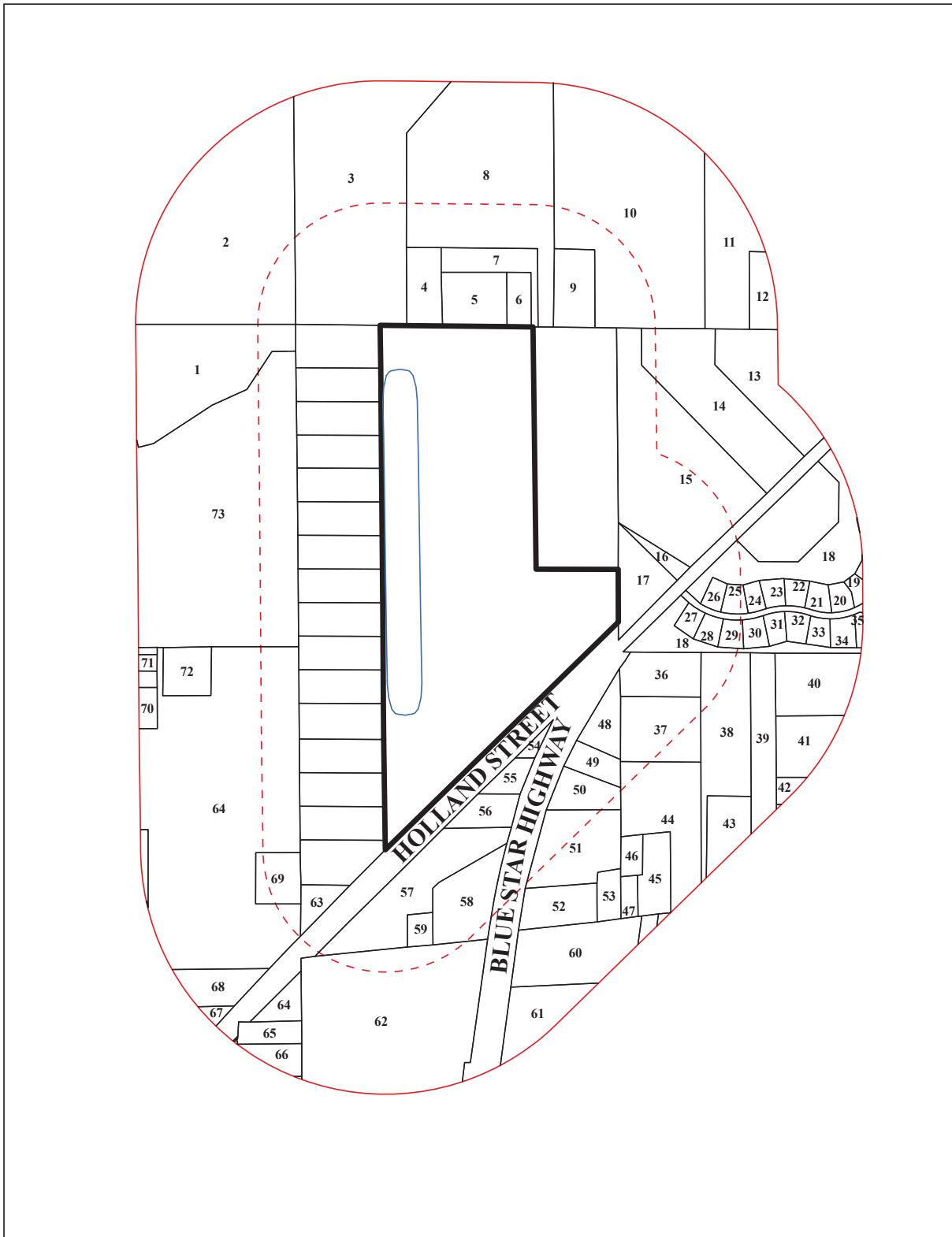
**SITE MAP WITH 2018 AND 2021 GROUNDWATER ELEVATIONS**

3515 66TH STREET  
SAUGATUCK TOWNSHIP, MICHIGAN 49453

PROJECT 18-601

AUGUST 2021

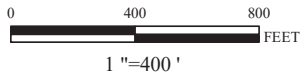
FIGURE 1



NOTES:  
 1. PARCEL BOUNDARIES OBTAINED FROM ALLEGAN COUNTY GIS JULY 2021  
 2. REFER TO TABLE 2 FOR CORRESPONDING PARCEL INFORMATION

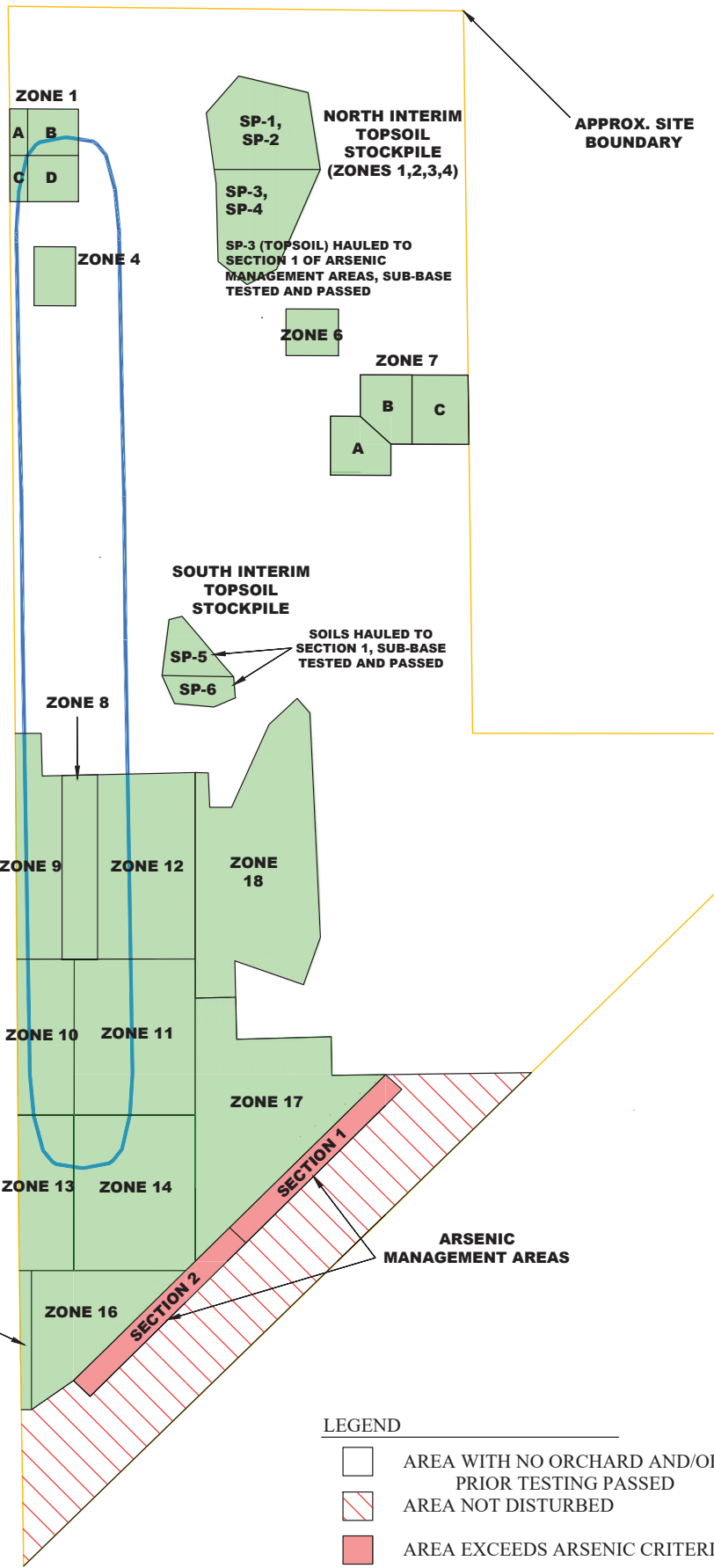
**LEGEND**

- PARCEL BOUNDARY
- POND BOUNDARY
- 1,000 FEET BUFFER
- 500 FEET BUFFER
- SITE PROPERTY



DWN BY: AES





<p><b>Lakeshore Environmental, Inc.</b>          Scientists   Engineers   Planners</p>	<b>RESIDENTIAL AND COMMERCIAL PROPERTIES IN AREA OF SITE</b>	
	3515 66TH STREET SAUGATUCK TOWNSHIP, MICHIGAN 49453	
18-601	AUGUST 2021	FIGURE 2

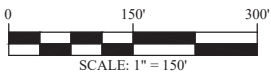


**NOTES**

- CURRENT STATUS AS OF 7/15/2021.
- ORIGINAL DECISION UNITS (DU's) CONSISTED OF A ZONE NUMBER AND LETTER.
- ZONES 2, 3, AND 5 ARE LOCATED OFF-SITE AND ARE NOT INCLUDED IN THIS FIGURE AND TABLE 3.

**LEGEND**

-  AREA WITH NO ORCHARD AND/OR PRIOR TESTING PASSED
-  AREA NOT DISTURBED
-  AREA EXCEEDS ARSENIC CRITERIA
-  AREA BELOW CRITERIA (TESTED AND PASSED)

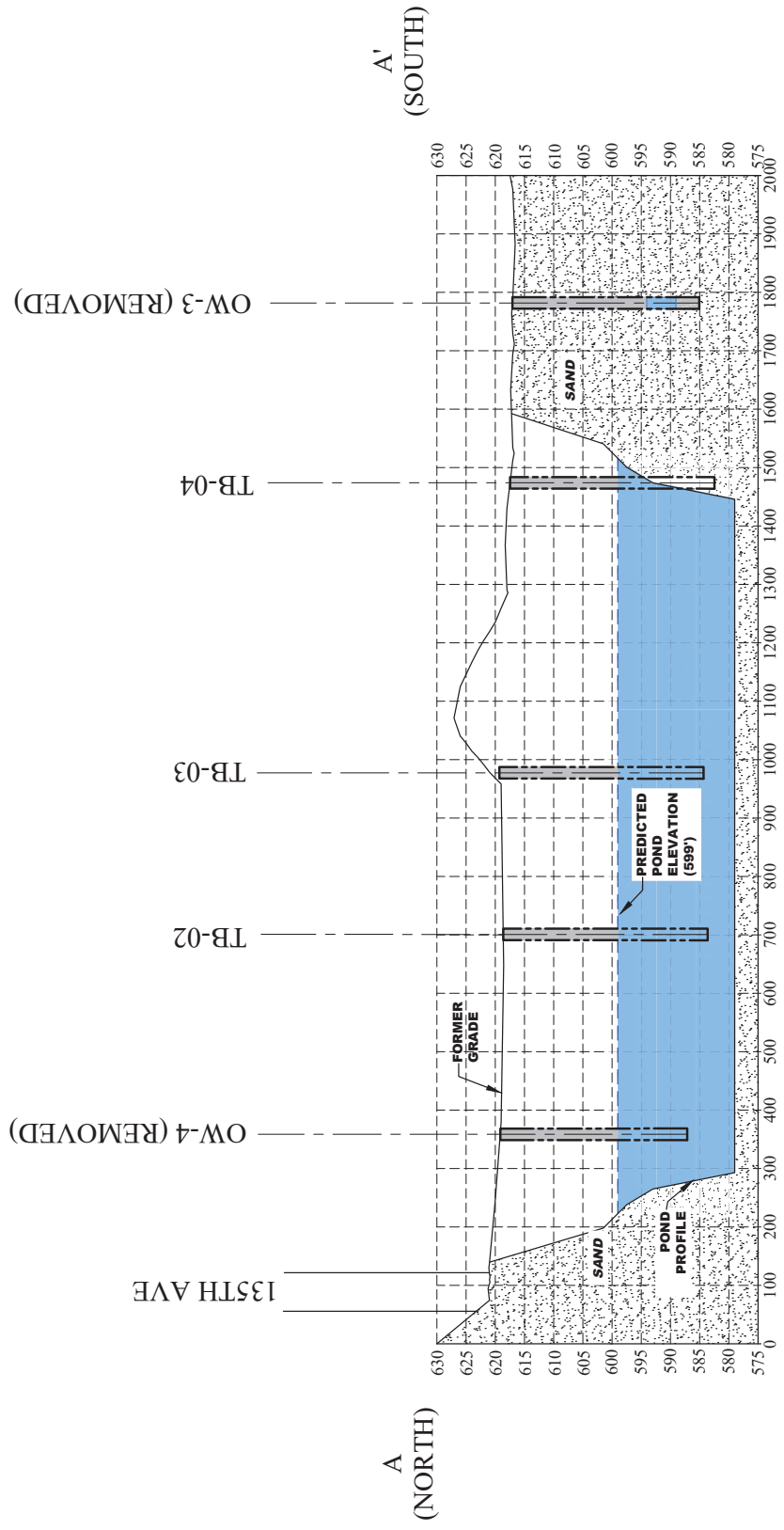


REV BY: NCK

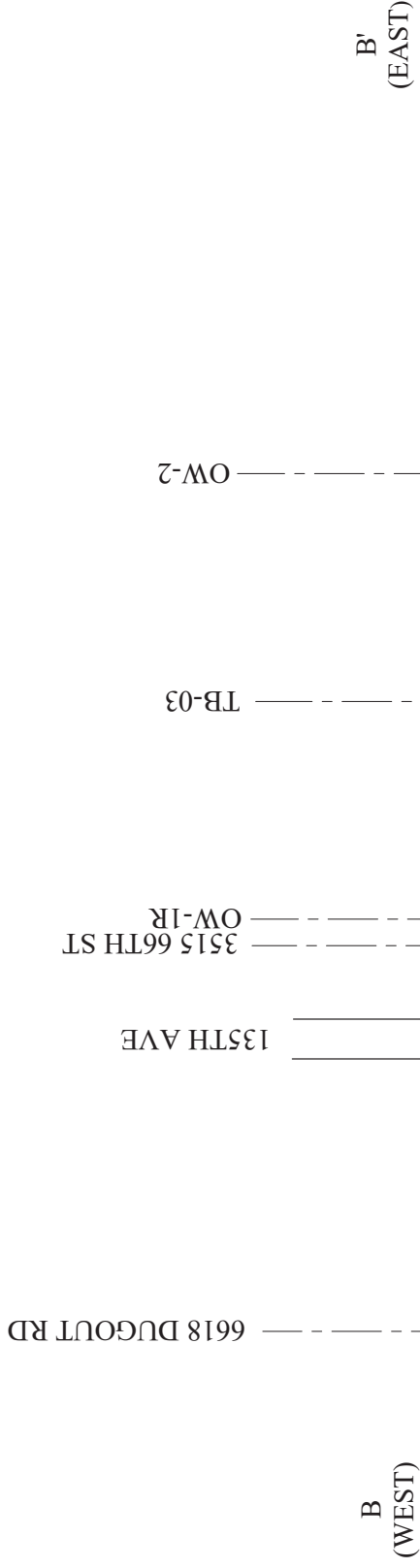


**SUMMARY OF ARSENIC TESTING LOCATIONS**

SECTION 3 SAUGATUCK TOWNSHIP, MICHIGAN		
PROJECT 18-601	AUGUST 2021	FIGURE 3



GEOLOGIC CROSS SECTION A-A' (NORTH-SOUTH)	
SECTION 3	
SAUGATUCK TOWNSHIP, MICHIGAN	
PROJECT 18-601	AUGUST 2021
FIGURE 4	





**Table 1 - Well and Boring Data and Groundwater Elevations**  
**Van Horn Development**  
**Saugatuck Township, Michigan**

Well/Boring ID	Date Installed	Depth of Boring (ft bgs)	Well Screened Interval (ft bgs)	Ground Elevation (ft NAV88)	Top of Casing Elevation (ft NAV88)	Stratigraphy (ft bgs)	Historical Groundwater Elevations				
							3/23/2018	4/11/2018	5/24/2018	8/14/2018	11/20/2018
OW-1R* (TB-03)	1/10/2018	35.0	28.0 - 32.0	619.33	622.10	0.0 - 0.8 Topsoil					
						0.8 - 18.0 Fine sand, compact					
						18.0 - 32.0 Fine sand, loose, wet @ 18.1					
OW-2	3/21/2018	32.0	16.0 - 21.0	621.73	625.57	32.0 - 35.0 Fine sand, very compact	603.45	603.80	603.82	603.56	602.59
						0.0 - 0.5 Topsoil					
						0.5 - 32.0 Fine to very fine sand, loose, wet @ 20.0	605.75	605.70	606.17	605.46	604.81
OW-3R*	3/21/2018	32.0	17.5 - 22.5	617.23	619.51	0.0 - 0.5 Topsoil					
						0.5 - 16.0 Fine to very fine sand, loose					
						16.0 - 24.0 Fine to very fine sand, loose, wet @ 21.0					
						24.0 - 32.0 Fine to very fine sand, loose	599.26	599.41	599.55	599.47	598.81
OW-4	3/21/2018	32.0	20.5 - 25.5	619.07	623.44	0.0 - 0.5 Topsoil					
						0.5 - 18.0 Fine to very fine sand, loose, wet @ 17.0					
						18.0 - 26.0 Brown sandy silt with trace clay					
						26.0 - 32.0 Fine to very fine sand, loose	606.58	606.33	607.15	605.91	605.59
TB-01	1/11/2018	35.0	NA	NM	NA	0.0 - 0.6 Topsoil					
						0.6 - 19.0 Fine sand, compact, wet @ 15.1					
						19.0 - 25.0 Fine sand, loose					
						25.0 - 30.0 Brown sandy silt with trace gravel					
TB-02	1/11/2018	35.0	NA	NM	NA	30.0 - 35.0 Fine sand, compact					
						0.0 - 0.8 Topsoil					
						0.8 - 15.0 Fine sand, compact					
						15.0 - 25.0 Fine sand, loose, wet @ 15.1					
TB-04	1/11/2018	35.0	NA	NM	NA	25.0 - 35.0 Fine sand, compact					
						0.0 - 1.1 Topsoil					
						1.1 - 6.5 Fine sand, compact					
						6.5 - 15.0 Fine sand, compact, trace silt					
						15.0 - 35.0 Fine sand, compact to very compact					

**Notes**

- All units expressed in feet
- bgs - below ground surface
- NA - not applicable
- NM - not measured
- OW -# : Observation well
- SP-SM : Poorly graded sand with silt
- \*OW-1 removed in March 2019 and replaced in August 2019 as OW-1R
- TOC prior to March 2019 = 622.10', remeasured as 620.17' August 2019
- \*OW-3 removed in April 2019 and replaced in August 2019 as OW-3R
- TOC prior to March 2019 = 619.51', remeasured as 612.50' August 2019

**Table 1 - Well and Boring Data and Groundwater Elevations  
Van Horn Development  
Saugatuck Township, Michigan**

Well/Boring ID	Date Installed	Depth of Boring (ft bgs)	Well Screened Interval (ft bgs)	Ground Elevation (ft NAV88)	Top of Casing Elevation (ft NAV88)	Historical Groundwater Elevations (con.)										Most Recent Data	
						2/13/2019	3/14/2019	5/7/2019	6/18/2019	8/8/2019	8/28/2019	9/16/2019	12/17/2019	5/13/2020	11/18/2020	Static Water Level	Ground Water Elevation
OW-1R* (TB-03)	1/10/2018	35.0	28.0 - 32.0	619.33	622.10	603.19	Removed	Removed	Removed	601.78	601.77	602.21	602.38	603.03	601.60	18.95	601.23
OW-2	3/21/2018	32.0	16.0 - 21.0	621.73	625.57	605.16	606.25	607.17	606.02	606.48	606.02	605.50	606.11	606.59	604.99	20.95	604.62
OW-3R*	3/21/2018	32.0	17.5 - 22.5	617.23	619.51	NM	Removed	Removed	598.34	598.58	598.19	598.70	599.24	597.69	15.15	597.35	
OW-4	3/21/2018	32.0	20.5 - 25.5	619.07	623.44	606.29	Removed	Removed	Removed	Removed	Removed	Removed	Removed	Removed	Removed	Removed	Removed
TB-01	1/11/2018	35.0	NA	NM	NA												
TB-02	1/11/2018	35.0	NA	NM	NA												
TB-04	1/11/2018	35.0	NA	NM	NA												

Notes

- All units expressed in feet
- bgs: below ground surface
- NA: not applicable
- NM: not measured
- OW-#: Observation well
- SP-SM: Poorly graded sand with silt
- \*OW-1 removed in March 2019 and replaced in August 2019 as OW-1R
- TOC prior to March 2019 = 622.10', remeasured as 620.17' August 2019
- \*OW-3 removed in April 2019 and replaced in August 2019 as OW-3R
- TOC prior to March 2019 = 619.51', remeasured as 612.50' August 2019

**Table 2 - Residential and Commercial Properties in Area of Site  
Van Horn Development – Section 3, Saugatuck Township, Michigan**

FIGURE NUMBER	PARCEL ID	PROPERTY OWNER	STREET ADDRESS	BUSINESS NAME (IF AVAILABLE)
1	20-004-003-20	NORTH SHORES OF SAUGATUCK	DUGOUT RD V/L	
2	20-004-001-00	NORTH SHORES OF SAUGATUCK	6500 135TH AVE	
3	20-003-054-00	NORTH SHORES OF SAUGATUCK	6500 135TH AVE	
4	20-003-052-00	NORTH SHORES OF SAUGATUCK	6583 135TH AVE	
5	20-003-051-00	NORTH SHORES OF SAUGATUCK	6573 135TH AVE	
6	20-003-051-20	NORTH SHORES OF SAUGATUCK	135TH AVE VACANT	
7	20-003-051-10	NORTH SHORES OF SAUGATUCK	6575 135TH AVE	
8	20-003-050-50	NORTH SHORES OF SAUGATUCK	6569 135TH AVE	
9	20-003-050-60	NORTH SHORES OF SAUGATUCK	6565 135TH AVE	
10	20-003-050-00	NORTH SHORES OF SAUGATUCK	135TH AVE V/L	
11	20-003-049-02	NORTH SHORES OF SAUGATUCK	6523 135TH AVE V/L	
12	20-003-049-21	NORTH SHORES OF SAUGATUCK	6523 135TH AVE V/L	
13	20-003-040-10	IHLE DAVID E	6525 BLUE STAR HWY	IHLE AUTO SERVICE
14	20-003-040-00	IHLE GARY & VIOLA	6525 BLUE STAR HWY	Dv8 CYCLES
15	20-003-041-00	MILANI JOSEPH JR TRUST	BLUE STAR HWY VACANT	
16	20-003-042-10	IHLE JACOB	BLUE STAR HWY	
17	20-003-042-00	SHULL LLC	6541 BLUE STAR HWY	
18	20-344-000-01	SANCTUARY OF SAUGATUCK CONDO ASSOC.	SANCTUARY COMMON AREA	
19	20-344-008-01	KUHN LANCE & ANN	6535 SANCTUARY TR	
20	20-344-007-01	LIPSIG RICHARD J TRUST	6539 SANCTUARY TR	
21	20-344-006-01	FREESE-VANDYKE TRUST	6543 SANCTUARY TR	
22	20-344-005-01	RAUTENBERG THOMAS & BELMONTE MARLA	6547 SANCTUARY TR	
23	20-344-004-01	JANUSZ JANE	6551 SANCTUARY TR	
24	20-344-003-01	SHERMAN FAMILY TRUST	6555 SANCTUARY TR	
25	20-344-002-01	JANUSZ CRAIG & SUSAN	6559 SANCTUARY TR	
26	20-344-001-01	COPELAND KIM & BARBARA	6563 SANCTUARY TR	
27	20-344-034-01	MATHIEU TAMMY	6564 SANCTUARY TR	
28	20-344-033-01	ANDERSON/SASINOWSKI FAMILY TRUST	6562 SANCTUARY TR	
29	20-344-032-01	HILDER ANDREW J & LINDA	6560 SANCTUARY TR	
30	20-344-031-01	WORKMAN GARY L	6556 SANCTUARY TR	
31	20-344-030-01	DEMSKI GERALD G & MERIBETH	6552 SANCTUARY TR	
32	20-344-029-01	WEBSTER DENISE LYNN LIVING	6546 SANCTUARY TR	
33	20-344-028-01	SWAN RESIDENTIAL LLC	6542 SANCTUARY TR	
34	20-344-027-01	SHOOK ELLEN & GLENN	6540 SANCTUARY TR	
35	20-344-026-01	MILLER KENNETH G & WENDY L	6538 SANCTUARY TR	
36	20-003-061-00	PETRO-SURDEL SHERRY	3493 BLUE STAR HWY	
37	20-003-058-20	RISTAU RUSSELL S & TAMMY C	6540 BLUE STAR HWY	
38	20-003-056-00	CAMPBELL RICHARD D TRUST	6535 CLEARBROOK DR	
39	20-003-057-00	HOSHOR JONATHAN C & KATIE	6527 CLEARBROOK DR	
40	20-003-055-10	BEEBE RICHARD E & MARTIN SUSAN A	3490 65TH ST	

Notes:  
Highlighted properties are commercial properties within 500 feet of VanHorn property.

Table 2 - Residential and Commercial Properties in Area of Site  
Van Horn Development – Section 3, Saugatuck Township, Michigan

FIGURE NUMBER	PARCEL ID	PROPERTY OWNER	STREET ADDRESS	BUSINESS NAME (IF AVAILABLE)
41	20-003-055-30	SCHOCK BRUCE A & CAROL	3486 65TH ST	
42	20-003-055-00	ARIAGNO MEENA M TRUST	OLD WALNUT LN V/L	
43	20-003-056-10	BOSSERT NICOLE R & RICHARD M	6533 CLEARBROOK DR	
44	20-003-062-00	RISTAU RUSSELL & TAMMY	6541 CLEARBROOK DR	
45	20-003-062-10	DIRKSE ANDREW D	6543 CLEARBROOK DR	
46	20-003-060-00	LAMB CULVER S & KAREN L	6545 CLEARBROOK DR	
47	20-003-059-00	DIRKSE ANDREW D	6549 CLEARBROOK DR	
48	20-003-066-50	AERNOUTS JOSEPH III & AMY	3483 BLUE STAR HWY	BLUE STAR BARN
49	20-003-066-52	VANDERBEEK ALAN G	3481 BLUE STAR HWY	BIG BLUE WATER, LLC
50	20-003-066-51	NAHAL PROPERTIES LLC	3479 BLUE STAR HWY	MARATHON GAS
51	20-003-066-00	NORTH POINTE PLAZA LLC	3467 BLUE STAR HWY	DOLLAR GENERAL
52	20-003-066-10	SAUGATUCK TOWNSHIP OFFICE	3461 BLUE STAR HWY	SAUGATUCK TOWNSHIP CLERK
53	20-003-067-00	KARAVIOTOU MRLIDDS	6551 CLEARBROOK DR	
54	20-003-069-00	DEVELOPMENT HOUSE LLC	3484 BLUE STAR HWY	ALFIERI FAMILY CHIROPRACTIC
55	20-003-068-20	WALKER TERRY	3480 BLUE STAR HWY	LULU CADIEUX
56	20-003-068-10	JOHNSON JOHN J	6564 HOLLAND ST 4 UNITS	SAUGATUCK COTTAGE SUITES
57	20-003-068-00	SINGAPORE COVE LLC	6591 CLEARBROOK DR	
58	20-003-068-30	SAUGATUCKMINIGOLF LLC	BLUE STAR HWY V/L	
59	20-003-064-00	VALKEMA DONALD C & NANCIE L	6581 CLEARBROOK DR	
60	20-003-074-13	SHREE KRISHNA ENTERPRISES NC	3457 BLUE STAR HWY	BEST WESTERN PLAZA HOTEL SAUGATUCK
61	20-003-076-00	ST AMOUR MARK DOUGLAS DAVID	3445 BLUE STAR HWY	
62	20-003-072-00	RIVERSIDE CEMETERY	6576 CLEARBROOK DR	RIVERSIDE CEMETARY (SAUGATUCK TOWNSHIP)
63	20-003-070-10	ZERKLE SUSAN	3460 66TH ST	
64	20-004-017-00	MCENROE PAUL	3468 HOLLAND ST	
65	20-004-025-00	WENDT GARY J & MILEWSKI RAFAEL	3442 66TH ST	HEARTLAND HOUSE SAUGATUCK
66	20-004-025-10	WENDT GARY J & MILEWSKI RAFAEL	66TH ST VACANT	
67	20-004-034-10	DEVRIES GREGORY	3446 HOLLAND ST	
68	20-004-032-00	MCENROE PAUL	66TH ST V/L	
69	20-004-019-00	RANDOLPH TRAVIS M & SANDRA D	3470 66TH ST	
70	20-004-021-00	MERKLE BERNIE	RIVERSIDE V/L	
71	20-004-020-00	FRIEDMAN MICHAEL J & HARVEY BARBARA	3499 RIVERSIDE DR	
72	20-004-018-00	WIERENGA SCOTT & REBEKAH TRUST	6618 DUGOUT RD	
73	20-004-003-00	PINE TRAIL LLC	3525 DUGOUT RD	PINE TRAIL CAMP

Notes:  
Highlighted properties are commercial properties within 500 feet of VanHorn property.

**TABLE 3**  
**Summary of Arsenic Testing Data**  
**Detectable Concentrations Compared to Part 201 Generic Residential Cleanup Criteria**  
**66th Street, 135th Avenue, Blue Star Highway**

Parameters	Generic Residential Cleanup Criteria (GRCC)		Sample Identification							
	Statewide Default Background Level	Direct Contact	Zone 1			Zone 4		2/14/19	5,000	
		Residential	Non-Residential	A	Duplicate	Triplicate	B			C
Arsenic, Total	5,800	7,600	37,000	770	850	790	890	740	680	2/13/19

**Notes**

All concentrations in units of µg/kg

Bold concentrations exceed laboratory reporting limits

Bold and shaded concentrations exceed Statewide Default Background Level

Original Decision Units (DU's) consisted of a Zone number and letter.

As the number of sample data and confidence level increased,

DU's became equivalent to Zones.

Zones 2, 3, and 5 are located off-site and not included in Table 3 and Figure 3.

**TABLE 3**  
**Summary of Arsenic Testing Data**  
**Detectable Concentrations Compared to Part 201 Generic Residential Cleanup Criteria**  
**66th Street, 135th Avenue, Blue Star Highway**

Parameters	Statewide Default Background Level	Generic Residential Cleanup Criteria (GRCC)		Sample Identification							
		Direct Contact		Zone 6	Zone 7			Zone 8			
		Residential	Non-Residential		A	Duplicate	Triplicate	B	C		
Arsenic, Total	5,800	7,600	37,000	2/21/19	2/21/19	800	810	810	1,000	960	2,800

**Notes**

All concentrations in units of µg/kg  
 Bold concentrations exceed laboratory reporting limits  
 Bold and shaded concentrations exceed Statewide Default Background Level  
 Original Decision Units (DU's) consisted of a Zone number and letter.  
 As the number of sample data and confidence level increased,  
 DU's became equivalent to Zones.  
 Zones 2, 3, and 5 are located off-site and not included in Table 3 and Figure 3.

**TABLE 3**  
**Summary of Arsenic Testing Data**  
**Detectable Concentrations Compared to Part 201 Generic Residential Cleanup Criteria**  
**66th Street, 135th Avenue, Blue Star Highway**

Parameters	Statewide Default Background Level	Generic Residential Cleanup Criteria (GRCC)		Sample Identification													
		Direct Contact		Zone 9	Zone 10	Zone 11	Zone 12	Zone 13									
		Residential	Non-Residential					Retest	Retest								
Arsenic, Total	5,800	7,600	37,000	7/8/19	7/8/19	7/8/19	7/8/19	8/28/19	9/10/19	9/16/19	1,300	2,700	1,600	1,300	6,000	8,600	920

**Notes**

All concentrations in units of µg/kg  
 Bold concentrations exceed laboratory reporting limits  
 Bold and shaded concentrations exceed Statewide Default Background Level  
 Original Decision Units (DU's) consisted of a Zone number and letter.  
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