FORM EQP 5111 ATTACHMENT TEMPLATE B3
HYDROGEOLOGIC REPORT

This document is an attachment to the Michigan Department of Environmental Quality's *Instructions for Completing Form EQP 5111, Operating License Application Form for Hazardous Waste Treatment, Storage, and Disposal Facilities.* See Form EQP 5111 for details on how to use this attachment.

The administrative rules promulgated pursuant to Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), R 299.9506, R 299.9508, and R 299.9612 and Title 40 of the Code of Federal Regulations (CFR) §§264.94, 264.95, 264.97, 264.98, 270.13(10)(l), and 270.14(b)(19) establish requirements for hydrogeologic reports for hazardous waste management facilities. All references to 40 CFR citations specified herein are adopted by reference in R 299.11003.

This license application template addresses requirements for a hydrogeologic report for the hazardous waste management units and the hazardous waste management facility for the Wayne Disposal, Inc. facility in Belleville, Michigan. This template includes hydrogeologic report requirements, waiver demonstrations, and alternative information requests for operating license applications. This hydrogeologic report supplies information to support the groundwater monitoring program, or groundwater monitoring waiver request, proposed and included in Template B5, Environmental Monitoring Programs.

(Check as appropriate)

Applicant for Operating License for Existing Facility:

☒ R 299.9506 hydrogeologic report

☐ A waiver for the hydrogeologic report is requested for one or more units

☐ Alternative information is proposed for information required in the hydrogeologic report for one or more units

☐ A waiver is requested for groundwater monitoring requirements for one or more units, and is included in Template B5

☞ *More than one box may be checked, if waivers or alternative information apply to some of the units at the facility.*

Applicant for Operating License for New, Altered, Enlarged, or Expanded Facility:

☒ R 299.9506 hydrogeologic report

☐ A waiver is requested for groundwater monitoring requirements for one or more units, and is included in Template B5

☞ *Both boxes may be checked, if appropriate*

The Hydrogeologic Investigation Report, hereafter referred to as the "Report" was submitted to EGLE in 2011 in support of a license application that included a lateral expansion. The current

license reapplication does not extend the lateral footprint of the landfill; therefore, no additional hydrogeologic investigation was required or performed. Nor will there be any required changes to the groundwater monitoring program. The current application does include some liner configuration changes and changes to the final grade and thus may be considered “altered” but not in any way that requires additional information on the hydrogeology or environmental assessment previously conducted for the facility.

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📖 EPA 1992. *RCRA Groundwater Monitoring Draft Technical Guidance Document.* Document Number 530-R-93-001. November.

B3.A HYDROGEOLOGIC REPORT WAIVER REQUEST

[R 299.9508(2)]

☞ *Operating License Applicants: if there are units at the facility that are not landfills, surface impoundments, waste piles, or land treatment units, and these units meet the criteria below, you may seek a waiver from the hydrogeologic report. If you opt for the waiver provision for any unit, you must include, for each unit, a description of the structure, and how it provides protection from precipitation and runon/runoff. Also make a reference to the template and section that describes the design and operating standards required by R 299.9604.*

☐ The *[Hazardous Waste Unit]* is not a landfill, surface impoundment, waste pile, or land treatment unit, all hazardous waste management activities take place inside or under a structure that provides protection from precipitation and runon/runoff, and the unit is in compliance with the facility design and operating standards found in R 299.9604.

☞ *Note that the hydrogeologic report must include enough information to support the groundwater monitoring program proposed in Template B5, Environmental Monitoring Programs. If a waiver has been requested for a groundwater monitoring program, the hydrogeologic report must include enough information to support the waiver request. A waiver request for groundwater monitoring is not justification for a waiver request from the hydrogeologic report.*

B3.B SITE HYDROGEOLOGY

[R 299.9506 (1)(a) through (g) and 40 CFR, Part 265, Subpart F, and §§270.13(l), 270.14(b)(19), and 264.97]

This section presents a summary of the Wayne Disposal, Inc. facility's unit-specific preapplication groundwater monitoring data, an identification of all aquifers, hydrogeologic information on topographic maps, and identification of any plumes of contamination.

The following template has been annotated to direct the reviewer to the appropriate section(s) of the Report to address the items listed.

B3.B.1 Summary of Existing Information

[R 299.9506(1)(a)]

☞ *For operating facilities, the summary of existing information must include all preapplication data collected pursuant to Part 111 of Act 451 and 40 CFR, Part 265, Subpart F, monitoring information, and any other available monitoring data.*

For operating license applications for new, altered, enlarged or expanded facilities, the summary must include any available preapplication monitoring information.

Both types of facilities should specify the requirements for which all of the monitoring information has been collected

B3.B.2 Identification of Aquifers and Their Uses

[R 299.9506(1)(b), (c), and (d)]

☞ *This section must include the following information:*

1. *Identification of the uppermost saturated zone (including any perched zones), the uppermost aquifer, and any aquifers hydraulically interconnected with the uppermost aquifer.*

The identification of the uppermost aquifer and other water-bearing zones is described in Section 5.1.3 of the Report.

2. *Identification of the flow direction and rate for the uppermost aquifer, and interconnected aquifers, along with the basis for this information.*

The flow direction and rate, along with supporting data is described in Section 5.2.3 of the Report.

3. *Identification of all aquifers used by public and private wells within 2,000 feet of the site.*

The regional hydrogeology is described in Section 4.0 of the Report and the locations of public and private wells is shown Figure 6 of the Report.

4. *Identification of all other aquifers evidenced by available boring or well logs.*

See Section 4.0 and Appendix E.

B3.B.3 Topographic Map
[R 299.9506(1)(e)(i) through (v)]

A topographic map, in accordance with 40 CFR §270.14(b)(19), is included in Template A13. This topographic map is at a scale of one inch equal to no more than 200 feet, showing a distance of 1000 feet around the facility perimeter.

Figures 7 and 8 of the Report show the topographic map of the facility and surrounding area and identifies the waste management areas and the property boundary as required below.

☞ *To meet the requirements of R 299.9506(1)(e) and R 299.9504(1)(c) topographic maps at this scale and distance must also be included with information in Sections B3.B.3(a) through (f). More than one map may be used, but all must be at the proper scale.*

B3.B.3(a) Waste Management Area
[R 299.9506(1)(e)(i)]

☞ *The topographic map must include the waste management area and any other treatment or storage areas at the facility.*

B3.B.3(b) Property Boundaries
[R 299.9506(1)(e)(ii)]

☞ *The topographic map must include the property boundaries for the facility.*

B3.B.3(c) Point of Compliance
[R 299.9506(1)(e)(iii)]

☞ *The topographic map must include the proposed Point of Compliance, which has been defined in accordance with 40 CFR §264.95. The Point of Compliance is included in Template B5, Environmental Monitoring, and Template B2, Corrective Action.*

The point of compliance is described in Section 6.1 of the report and consists of a monitoring well network including downgradient wells placed as close as practicable to the hazardous waste management landfill units. The well location map is shown on Figure 20 of the Report.

B3.B.3(d) Groundwater Monitoring Wells
[R 299.9506(1)(e)(iv)]

☞ *The topographic map must include the proposed locations of groundwater monitoring wells, which have been selected in accordance with 40 CFR §264.97, and proposed in Template B5, Environmental Monitoring, and Template B2, Corrective Action.*

See Figure 20 of the Report.

B3.B.3(e) Aquifer Information
[R 299.9506(1)(e)(v)]

☞ *The topographic map must include, to the extent possible, the uppermost aquifer, aquifers which are hydraulically interconnected to the uppermost aquifer, and groundwater flow directions and rates for these aquifers.*

Groundwater flow directions for the uppermost aquifer and the surficial water bearing zone are shown on Figures 9, 10 and 11 and computed flow rates are shown on Table 5.3 of the Report.

B3.B.3(f) Extent of Contaminant Plume
[R 299.9506(1)(g)(i)]

☞ *The topographic map must include a delineation of any plumes of contamination that have entered the groundwater from any hazardous waste management unit and plumes of contamination that have entered the groundwater from other regulated activities at the facility.*

Not applicable.

B3.B.4 Wells and Borings Within One Mile
[R 299.9506(1)(f)]

☞ *In addition to the topographic map described in Section B3.B.3 required by R 299.9506(1)(e), R 299.9506 requires that the topographic map, included as part of Item X of the application form, showing an area extending at least one mile beyond the property boundaries, contains the following information:*

A topographic map has been included as Item X of the Michigan Operating License Application Form for Hazardous Waste Treatment, Storage, and Disposal Facilities (EQP 5111). It also includes the following information.

1. Locations for all domestic, municipal, oil and gas, industrial, and agricultural wells within one mile of the facility, for which logs are available, and

2. Locations of soil borings within one mile of the facility, for which logs are available

B3.B.5 Contaminant Plume Description
[R 299.9506(1)(g)]

☞ *Describe any plume of contamination that has entered the groundwater, at the time of the application, from any hazardous waste management unit and from any other regulated activity at the facility. If the hazardous waste management units are landfills, surface impoundments, waste piles, or waste treatment units, the plume description must also include the concentrations of constituents identified in 40 CFR, Part 261, Appendix VIII, or identifies the maximum concentrations of each Appendix VIII constituent in the plume.*

Not Applicable.

B3.C ENGINEERING REPORT FOR PROPOSED GROUNDWATER MONITORING PROGRAM
[R 299.9506(2) and (7)]

The engineering information included in the hydrogeologic report supports the proposed groundwater monitoring programs or waiver requests included in this application as Template B5, Environmental Monitoring Programs, and Template B2, Corrective Action.

B3.C.1 Waiver or Alternate Information Request
[R 299.9506(7)]

☞ *If you wish to request a waiver for information requirements in R 299.9506(2), or substitute information for that required by R 299.9506(2), you may check the boxes below. However, you must include justification for waivers or substitutions, based on site-specific information, technologic information, and references to the appropriate template for each unit.*

☐ Waiver is requested for R 299.9506(2)

☐ Alternate information is substituted for information requirements in R 299.9506(2)

B3.C.2 Soil Borings, Sampling, and Testing
[R 299.9506(2)(a)(i) through (vi)]

A description of soil borings conducted, their locations, logs, and results from soil sampling and testing, is included in the sections below. This information thoroughly defines soil conditions at the site.

B3.C.2(a) Number and Location of Soil Borings
[R 299.9506(2)(a)(i)]

☞ *The applicant must provide information in this section that describes the following minimum number and location of soil borings, to demonstrate that an adequate definition of soil characteristics and variations has been achieved:*

1. *Five borings for the first five acres of the site and three borings for each additional five acres of the site. Fewer borings may be included for areas of the site that are not active. Borings may also be reduced in number if supported by geophysical testing information.*

This information is described in Section 3.2.1 of the Report.

2. *One boring for each geomorphic feature of the site, such as a ridge, or lowland area.*

Not Applicable.

3. *All borings must extend a minimum of 30 feet below the proposed grade or liner depth.*

This information is described in Section 3.2.1 of the Report.

B3.C.2(b) Soil Sampling and Testing
[R 299.9506(2)(a)(ii) and R 299.9506(6)(a)}

Check the boxes below, as applicable:

☐ The *[Hazardous Waste Unit]* unit is not a surface impoundment, landfill waste pile, or land treatment area. Soil sampling and testing information to meet requirements of R 299.9506(2)(a)(ii) is included in this section.

☞ *If you have checked the box above, you must provide completed soil sampling and testing results for the following requirements:*

1. *A soil sample must be collected at each change in soil layers or lithology within each boring.*

2. *Two of the required five borings must be logged using continuous sampling methods. For sites larger than five acres, one of each of the three additional required borings must be logged using continuous sampling methods.*

3. *Samples that are collected from changes in layers or lithology must be tested for particle size distribution (using both a sieve and a hydrometer), and Atterberg limits. Samples must also be classified using the Unified Soil Classification System.*

The applicant should also include a description of soil sampling methods used, and results of Standard Penetration Testing (using ASTM D1586-67).

☒ The *[Hazardous Waste Unit]* unit is a landfill, surface impoundment, waste pile, or land treatment area. Soil sampling and testing to meet the requirements of R 299.9506(2)(a)(ii) and R 299.9506(6)(a) is included in this section.

☞ *If the unit is a landfill, surface impoundment, waste pile, or land treatment area, in addition to the requirements of R 299.9506(2)(a)(ii), the sampling and testing must meet the requirements of R 299.9506(6)(a): particle size distribution, Atterburg limits, and Unified Soil Classifications, completed at minimum five-foot intervals or change in geologic formation. Standard Penetration Testing should also be included at the same minimum interval.*

B3.C.2(c) Soil Layer Evaluations
[R 299.9506(2)(a)(iii) and R 299.9506(6)(b)]

Check the boxes below, as applicable:

☐ The *[Hazardous Waste Unit]* unit is not a landfill, surface impoundment, waste pile, or land treatment area. Soil layer evaluations are included to meet the requirements of R 299.9506(2)(a)(iii).

☞ *If you have checked the box above, you must describe the results of the evaluations done on each soil layer, for the following:*

1. *Moisture content, using ASTM D422-63*

2. *Permeability with water, using one of the methods defined in R 299.9506(2)(a)(iii)(b).*

☒ The *[Hazardous Waste Uni])* unit is a landfill, surface impoundment, waste pile, or land treatment area. Soil layer evaluations have been included to meet the requirements of R 299.9506(2)(a)(iii) and R 299.9506(6)(b).

☞ *If you have checked the second box, in addition to the requirements for R 299.9506(2)(a)(iii), you must conduct these soil evaluations at a minimum 10-foot interval.*

B3.C.2(d) Boring Log Information
[R 299.9506(2)(a)(iv) and (vi)]

☞ *The boring logs must include soil and rock descriptions, sampling methods used, depth, the date and location of the boring, soil test data, water levels, and standard penetration numbers (using ASTM D1586-67). Elevations must be corrected to the United States Geological Survey datum.*

A description of soil boring procedures and collection of soil data is described in Section 3.2.1 of the Report. Soil boring logs are included in Appendix B and soil testing results are included in Appendix C.

B3.C.2(e) Borehole Completion
[R 299.9506(a)(2)(v)]

☞ *Identify all boring locations that have not been completed as observation wells, and include a description of how these boring locations have been backfilled, plugged, and recorded, in accordance with either Part 625 or Act 368, Michigan's Public Health Code.*

Boring backfilling is described in Section 3.2.1 of the Report.

B3.C.3 Observation Wells, and Well Clusters
[R 299.9506(2)(b) through (f)]

Observation well installation, including a well nest, is described in Section 3.2.2.

B3.C.3(a) Static Water Levels, and Construction Details
[R 299.9506(2)(b)]

☞ *The applicant must include static water level measurements from at least three observation wells and one well cluster, for the first 5 acres, and one well for each additional 10 acres. For land-based units, a minimum of three wells and one well cluster must be included for every 20 acres.*

For well construction, include reference to the appropriate sections of Templates B5, Environmental Monitoring, and Template B2, Corrective Action. These sections must show that the requirements of R 299.9612 have been met.

B3.C.3(b) Groundwater Maps
[R 299.9506(2)(c) and (d)]

☞ *Include a water level contour map for measurements taken in observation wells and well clusters. The contour interval must be no greater than one foot. Also include groundwater flow net diagrams, if more than two well clusters have been constructed.*

Groundwater contour maps are included on Figures 10 and 11 of the Report.

B3.C.3(c) Justification for Observation Well Locations
[R 299.9506(2)(e)]

☞ *Include a map that identifies locations for all observation wells and well clusters. If all observation wells have been included in the topographic map described in Section B3.B.3(d) of this application, a reference to this map may be included here. Also include depths for each observation well and well cluster.*

A map of the monitoring well network is presented on Figure 20 of the report. The rationale for the placement of wells based on aquifer properties is discussed in Section 6.1 of this report and more extensively in previous Hydrogeologic Reports for the facility.

☞ *Include a description of how observation wells are capable of effectively detecting hazardous constituents from the facility, based upon all of the following:*

1. *Groundwater flow direction, velocity, gradients, and thickness of the saturated zone*

2. *Dispersion properties of the hazardous waste constituents*

B3.C.3(d) Logs for Borings Completed as Observation Wells
[R 299.9506(2)(f)]

☞ *For each boring completed as an observation well, the applicant must include a description and discussion of continuous lithologic sampling, logging, and classifications, at a minimum of 10 feet above the screen elevation to the bottom of the borehole.*

The observation well logs are found in Appendix B of this Report.

B3.D GROUNDWATER MONITORING PROGRAM
[R 299.9506(3) through (5), R 299.9611(2)(b) and (3), R 299.9612, R 299.9629, and 40 CFR, Part 264, Subpart F, except 40 CFR §§264.94(a)(2) and (3), 264.94(b) and (c), 264.100, and 264.101}

The summary of preapplication monitoring information and information included in the engineering report establish the basis for determining the appropriate groundwater monitoring program for each unit at the Wayne Disposal Inc, facility. The proposed detection monitoring and compliance monitoring programs for applicable units are included in Template B5, Environmental Monitoring

Programs. The proposed corrective action groundwater monitoring program for applicable units is included in Template B5, Environmental Monitoring Programs, and Template B2, Corrective Action. The table below identifies unit-specific determinations for groundwater monitoring programs and is identical to the table included in Section B5.A of Template B5.

Table B3.D.1 Unit-Specific Groundwater Monitoring Program

Unit	Land Disposal Unit (Yes)[1]	Land Disposal Unit (No)[2]	Waiver[3]	Detection Monitoring[4]	Compliance Monitoring[5]	Corrective Action[6]
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

☞ *Different units can be in different programs. The following instructions should be considered and addressed as appropriate for each unit at the facility.*

[1] *Surface impoundments, waste piles, and land treatment units or landfills (land disposal units) that receive hazardous waste after July 26, 1982, are considered regulated units and must comply with the requirements specified in 40 CFR §§264.91 through 264.99 except 40 CFR §§264.94(a)(2) and (3), and 264.94(b) and (c), and R 299.9629 for purposes of detecting, characterizing, and responding to releases to the uppermost aquifer. If the unit is a land disposal unit, check the "yes" column and indicate in the table whether a waiver for a groundwater monitoring program is being requested or if the facility is proposing a detection monitoring, compliance monitoring, or corrective action program.*

[2] *If the unit is not a land disposal unit, check the "no" column. The applicant should indicate in the table that a waiver is being requested.*

[3] *The unit is a land disposal unit and the applicant is requesting a waiver for a groundwater monitoring program.*

[4] *If an applicant is not required to implement a compliance monitoring program or a corrective action program, in all other cases, the applicant must institute a detection monitoring program under 40 CFR §264.98.*

[5] *Whenever hazardous constituents under 40 CFR §264.93 are detected at a compliance point, the applicant must institute a compliance monitoring program under 40 CFR §264.99. Detected is defined as statistically significant evidence of contamination as described in 40 CF §264.98(f).*

[6] *If an unit is undergoing corrective action in accordance with R 299.9629 and 40 CFR, Part 264, Subpart F, except 40 CFR §§264.100 and 264.101, the application should refer to Template B2, Corrective Action, which discusses the groundwater monitoring associated with corrective action.*

In summary, if no hazardous constituents have been detected at the time of this application, the unit is subject to detection monitoring program requirements. If hazardous constituents have been detected at the point of compliance at the time of this application, the unit is subject to compliance monitoring requirements. If hazardous constituents have been detected at levels that exceed concentration limits, or if groundwater monitoring conducted at the time of this application indicate the presence of hazardous constituents from the unit above background concentrations, the unit is subject to corrective action.

B3.E ADDITIONAL INFORMATION REQUIREMENTS
[R 299.9506(6)]

Check as appropriate:

☐ The *[Hazardous Waste Unit]* unit is not a landfill, surface impoundment, waste pile, or land treatment unit. The requirements of R 299.9506(6) do not apply.

☒ The *[Hazardous Waste Unit]* unit is a landfill, surface impoundment, waste pile, or land treatment unit. Additional information has been included to address requirements necessary to determine site suitability and facility design.

B3.E.1 Additional Soil Boring Tests
[R 299.9506(6)(a) and (b)]

Soil boring tests in accordance with R 299.9506(6)(a) and (b) are included in Sections B3.C.2(b) and B3.C.2(c), respectively.

B3.E.2 Soil Borings to Define Bedrock
[R 299.9506(6)(c)]

☞ *Include soil borings and soil sample results to define bedrock conditions. Examples of types of information that should be included are:*

1. *Depth of rock*
2. *Type of rock*
3. *Water-bearing properties*
4. *Definition of whether the formation is used as an aquifer and groundwater flow direction*
5. *Any trends in fracture patterns*
6. *Presence of voids or other factors which might affect permeability*

See Section 5.2.2.5 of the Report. Based on this and previous borings the shale bedrock is not an aquifer although the upper 10 feet or so is weathered and transmits water. This weathered zone is hydraulically continuous with the overlying glacial sand.

B3.E.3 Additional Geotechnical Characteristics
[R 299.9506(6)(d)]

☞ *Include additional information that characterizes each soil layer, such as shear strength, in-situ density, specific gravity, stress deformation, shrinkage limit, clay mineralogy, and the presence of cracks, fissures, or other voids that might increase the effective permeability of the soil.*

B3.E.4 Geologic Cross Sections
[R 299.9506(6)(e)]

Geologic cross sections are shown of Figures 12 through 18 of the Report.

☞ *Include a series of geologic cross sections or fence diagrams, referenced to a site map illustrating all of the following:*

1. *Existing topography*
2. *Soil borings*
3. *Soil classifications*
4. *Stratigraphy*
5. *Bedrock*
6. *Locations of wells*
7. *Stabilized water level readings*
8. *Proposed site grade*

***Note**: References to previously included topographic maps may be included to address some of these requirements.*

B3.E.5 Water Budget Calculations
[R 299.9506(6)(f)]

☞ *The applicant must include water budget calculations for present site conditions, future active site conditions, and, for disposal facilities, site conditions during the postclosure period. All water budget calculations must be based upon all of the following:*

1. *Precipitation*
2. *Evaporation*
3. *Runoff*
4. *Infiltration*
5. *Evapotranspiration*
6. *Groundwater flow velocities and volume*
7. *Soil moisture holding capacity*

For disposal facilities, also include the capacity of proposed wastes to hold moisture.

This water budget calculations are described in Section 5.2.6 of the Report.

Supplemental Hydrogeologic Information

The following report contains updated information regarding the hydrogeologic conditions at and around the WDI landfill (the Site). The last comprehensive update to the hydrogeologic conditions at and around the Site was done in 2011 as part of a hazardous waste license application. The 2011 Hydrogeologic Report (HR) was prepared by NTH Consultants, Ltd. was also submitted with WDI's license application in 2021. WDI received a technical notice of deficiency (TNOD) regarding this 2021 license application. The supplemental information presented herein addresses the relevant comments regarding the hydrogeological report in the TNOD, which are included along with the updated information. The numbered points that follow correspond with the numbered points from the TNOD. WDI's responses to each of the numbered comments are provided in blue text below.

67. Provide a summary of reports that include all the groundwater monitoring data since 2008. {R 299.9506(1)(a)}

The groundwater data from 2010 through 2024 is summarized in spreadsheet form in Attachment A. WDI remains in detection monitoring, and, based on routine quarterly groundwater monitoring reports, there has been no evidence for landfill influence on the groundwater aquifer being monitored for the hazardous waste management area.

69. Provide updated information to identify aquifer(s) used by public or private wells within 2000 feet of the site. This was not specifically addressed in NTH 1983 Hydrogeological Report. {R 299.9506(1)(c)}

This issue was addressed in the 2011 Hydrogeologic Report. To clarify, any households or businesses within 2000 feet of the Site are on municipal supply. Based on well logs in the region, anyone using a groundwater supply well within this area utilizes the glacial sand aquifer beneath the clay till unit. There are no known supply wells within 2000 feet of the Site that are installed in the surficial sand unit or in the shale bedrock beneath the glacial sand aquifer.

70. Provide updated information to identify the uppermost aquifer and aquifers hydraulically interconnected, flow direction and rates, and basis.

Table 1 provides flow rate data calculated from quarterly gradients measured in 2024 using hydraulic properties estimated from previous hydrogeologic studies at the Site. Because they have different gradients, flow rates are calculated for wells in both the glacial sand aquifer and the underlying weathered shale. In the upgradient wells at the Site, the glacial sand aquifer is thinner than in downgradient well and is separated from the shale by a clay unit, which is not present downgradient. This geologic difference between upgradient and downgradient locations results in a difference in water levels

between the upgradient wells in the glacial aquifer sand and the upgradient wells in the shale and a downward vertical gradient between the two. In downgradient and cross-gradient wells the glacial sand lies directly on the shale and there is no difference in the water levels, so there is essentially no vertical flow component between the glacial sand and the weathered shale.

As shown on Table 1, calculated groundwater flow velocities in 2024 ranged from 7.5 to 12.5 feet per year and averaged 9.2 feet per year. These estimates are considered maximum rates as a conservative effective porosity of 10% was utilized in the calculations. More likely, the effective porosity is closer to 20%, which would reduce the calculated flow rates by fifty percent.

The surficial sand unit is separated from the glacial sand aquifer by a low permeability clay till unit. The lack of connection between the surficial sand and glacial sand aquifer is confirmed by the large difference in the water levels; the water table in the surficial sand is around elevation 690 (feet above mean sea level) while the piezometric surface in the glacial sand aquifer is around elevation 655. There are no other aquifers hydraulically connected to the glacial sand aquifer. The top of the shale unit below the glacial sand aquifer is weathered and transmits water but is essentially part of the same hydraulic unit. The unweathered shale is a lower confining layer to the glacial sand/weathered shale aquifer.

71. Provide current groundwater flow contour maps.

The four quarterly ground water flow maps for the 2024 calendar year are included in Appendix B. Groundwater flow is generally to the south toward Belleville Lake, which is the discharge area for the glacial sand aquifer. Flow toward the southwest in the southwest portion of the Site is present in current and historic measurements and may reflect a change in the hydraulic conductivity in the glacial sand unit in this portion of the site.

72. Provide revised groundwater flow diagrams for current conditions and include groundwater flow net diagrams.

Quarterly groundwater flow cross-sections for two north-south transects are included in Attachment C. The flow cross-sections represent each of the four quarterly monitoring periods during the 2024 calendar year. The transect locations are shown on the plan view contour maps in Appendix B, labelled A – A' and B - B'. The cross-sections confirm the north to south flow direction displayed in the plan view contour maps, but also show the downward vertical flow component in the upgradient (north) area of the Site as well as the primarily horizontal flow as groundwater flow continues beneath the central and southern portions of the Site.

73. Provide the following items on the topographic map:

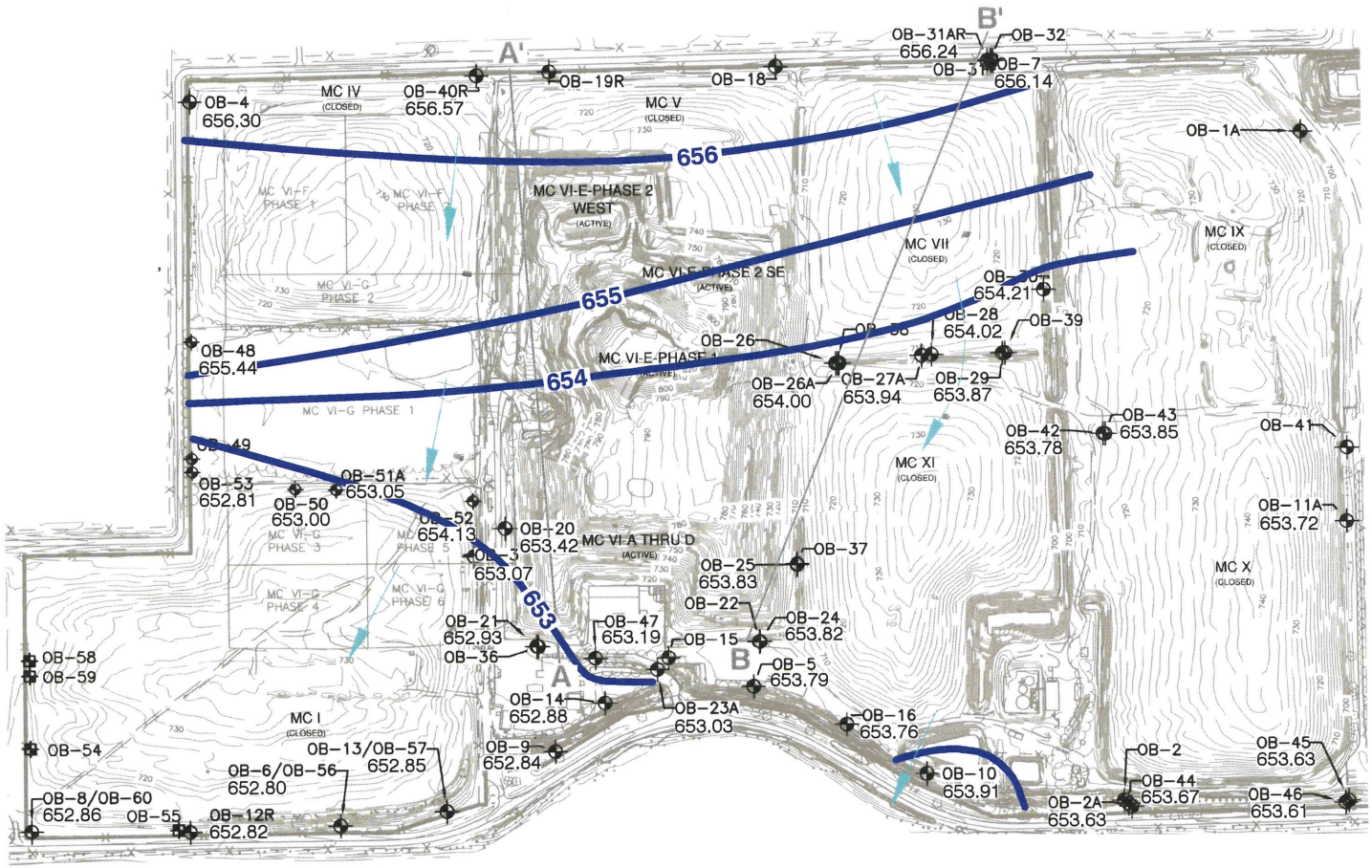
a. Waste management areas {R 299.9506(1)(e)(i)}.
b. Point(s) of compliance {R 299.9506(1)(e)(iii)}.
c. Locations of groundwater monitoring wells {R 299.9506(1)(e)(iv)}.
d. All domestic, municipal, industrial, oil, and gas wells and soil boring locations within 1 mile of the site. This should include the extraction wells around the lined pond and West and East Treatment Buildings. {R 299.9506(1)(f)}.

The hazardous waste management area, points of compliance, and location of groundwater wells are shown on the attached Figure 1. The locations of domestic, municipal, industrial and oil/gas wells are shown on an updated copy of Figure 6 from the 2011 Hydrogeological Report, which is included in Appendix D. A search for any new wells or wells that were not included on the original version of Figure 6 yielded three such wells. Each of these three wells are plotted as a triangular symbol on updated Figure 6. The well logs also are included in Appendix D. The three new wells are designated as 2025-1 through 2025-3 on updated Figure 6. Two of the three new wells were installed after the 2011 Hydrogeological Report (2025-1 and 2025-3), and, as shown on updated Figure 6, none are located within a mile of the facility.

APPENDIX B. GROUNDWATER CONTOUR MAPS – 2024

P:\330-000\337-032\-CADD\Dwg\EN03\337032-EN03-GMW Location Map.dwg{FIGURE 1} LS:(5/22/2024 - rspain) - LP: 5/22/2024 11:53 AM

NORTH



SCALE IN FEET

0 800 1600

LEGEND:

- OB-9 EXISTING MONITORING WELL LOCATION
- OB-54 PROPOSED MC VI F/G WELL LOCATIONS
- 710 EXISTING TOPOGRAPHIC CONTOUR
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

*HAND SIGNATURE ON FILE

REFERENCE

1. Figure based on Attachment A: Groundwater Monitoring Well Location Map for Wayne Disposal, Inc., Site No. 2, from NTH Consultants, Ltd. Project 13060921-06 (CAD file 060921-WLM-02), dated 04/19/2019.

Civil & Environmental Consultants, Inc.
One SeaGate
Suite 2050
Toledo, OH 43604
Ph: 419.724.5281
www.cecinc.com

WAYNE DISPOSAL, INC. SITE NO. 2
VAN BUREN TWP., WAYNE COUNTY MICHIGAN

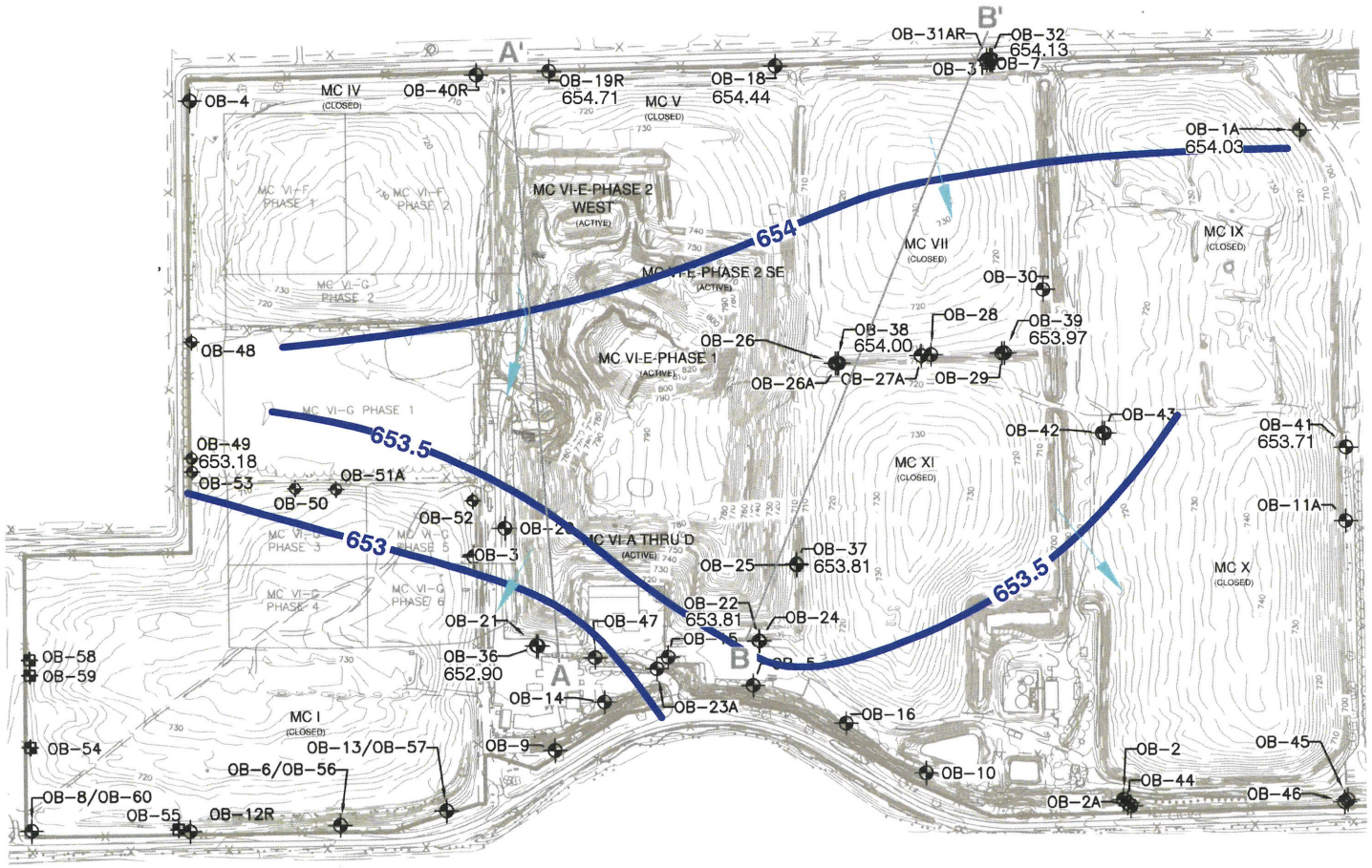
SAND AQUIFER

GROUNDWATER CONTOUR MAP
FEBRUARY 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	1
DATE:	MAY 2024	DWG SCALE:	1"=800'	PROJECT NO:	337-032		

P:\330-000\337-032\-CADD\Dwg\EN03\337032-EN03-GMW Location Map.dwg{FIGURE 2} LS:(5/22/2024 - rspain) - LP: 5/22/2024 11:53 AM

NORTH



SCALE IN FEET

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LEGEND:

- OB-9 EXISTING MONITORING WELL LOCATION
- OB-54 PROPOSED MC VI F/G WELL LOCATIONS
- 710 EXISTING TOPOGRAPHIC CONTOUR
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

REFERENCE

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ROCK AQUIFER

GROUNDWATER CONTOUR MAP
FEBRUARY 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	2
DATE:	MAY 2024	DWG SCALE:	1"=800'	PROJECT NO:	337-032		

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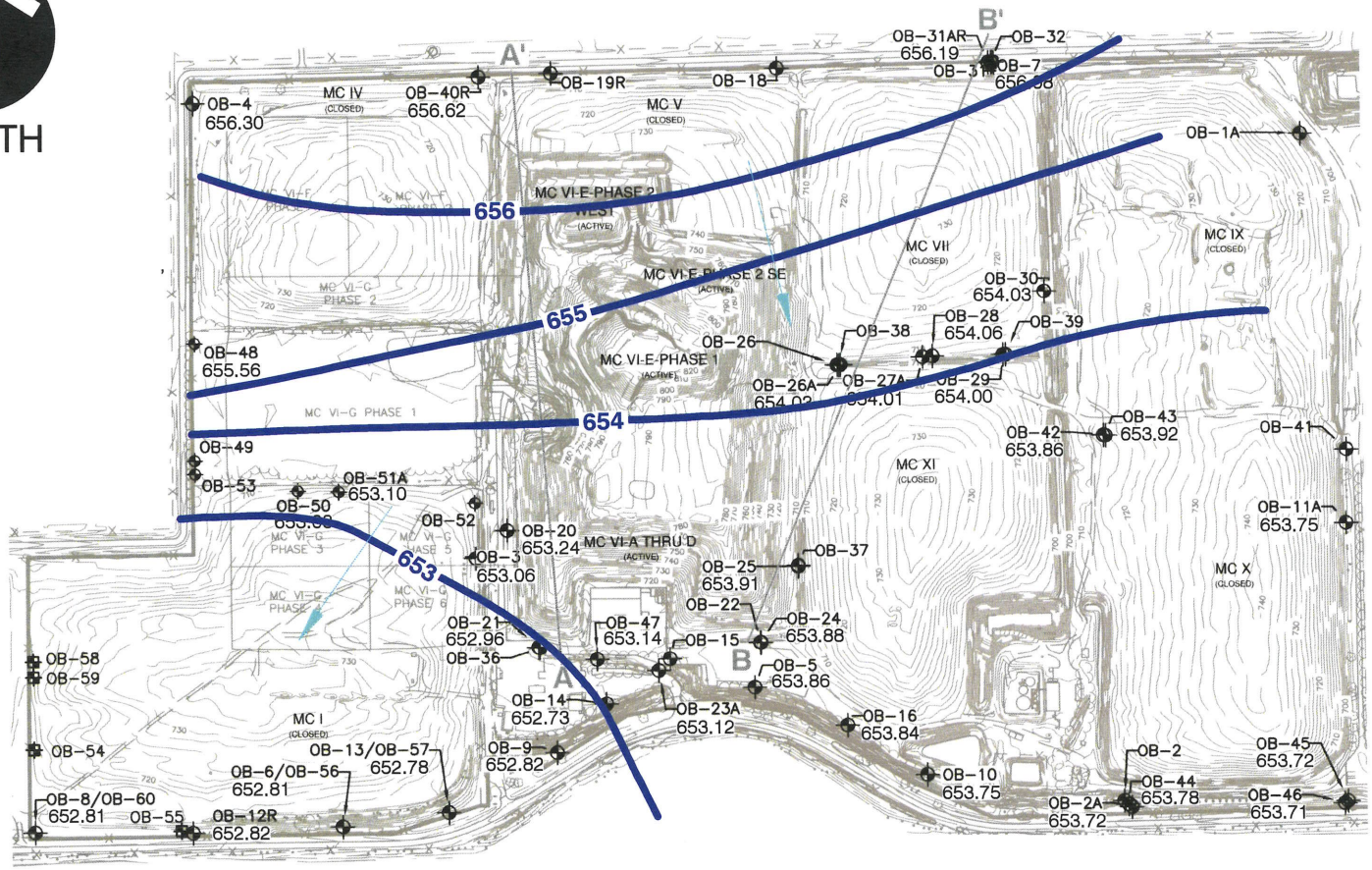
NORTH



GEND:

- B-9 EXISTING MONITORING WELL LOCATION
- B-54 PROPOSED MC VI F/G WELL LOCATIONS
- EXISTING TOPOGRAPHIC CONTOUR
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

SCALE IN FEET

0 800 1600

REFERENCE

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Ph: 419.724.5281
www.cecinc.com

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SAND AQUIFER

GROUNDWATER CONTOUR MAP
APRIL 8, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP	FIGURE NO.:	1
DATE:	AUGUST 2024	DWG SCALE:	1"=800'	PROJECT NO:	337-032		

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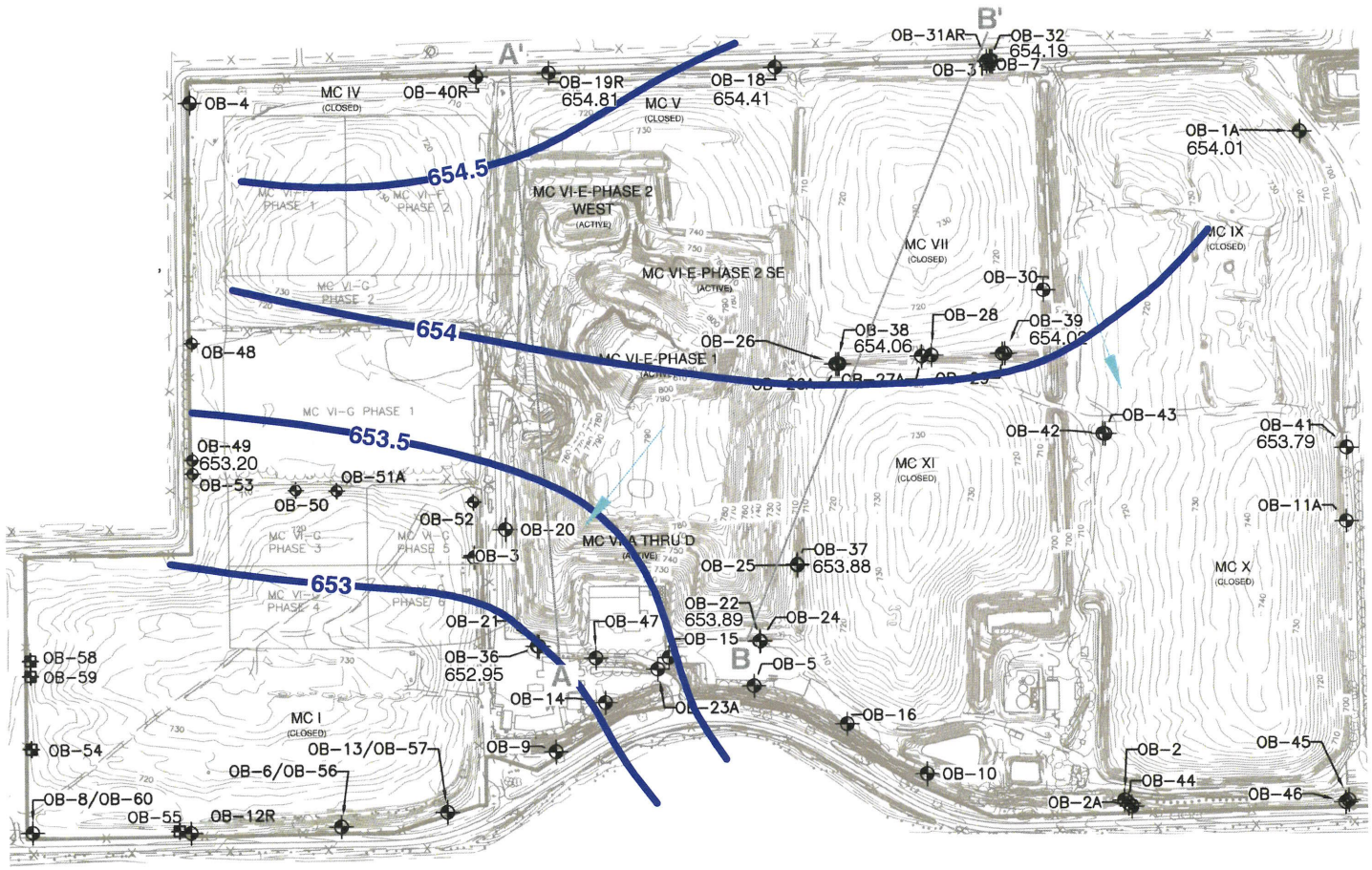
NORTH



SCALE IN FEET

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LEGEND:

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- 710 EXISTING TOPOGRAPHIC CONTOUR
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*HAND SIGNATURE ON FILE

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CEC
Civil & Environmental Consultants, Inc.
One SeaGate
Suite 2050
Toledo, OH 43604
Ph: 419.724.5281
www.cecinc.com

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ROCK AQUIFER

GROUNDWATER CONTOUR MAP
APRIL 8, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP	FIGURE NO.:	2
DATE:	AUGUST 2024	DWG SCALE:	1"=800'	PROJECT NO:	337-032		

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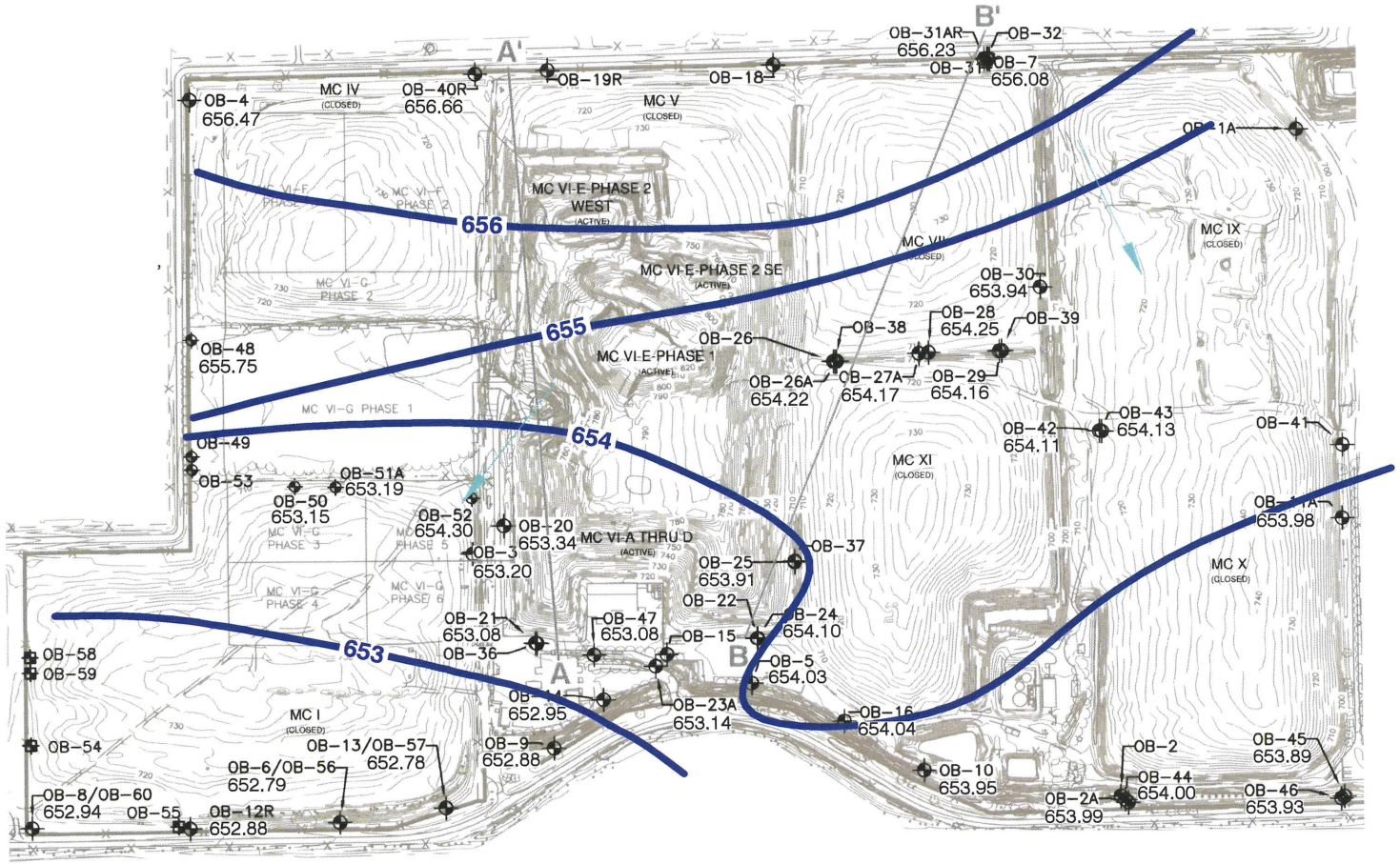

LEGEND:

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- 710 EXISTING TOPOGRAPHIC CONTOUR
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

SCALE IN FEET

0 800 1600

*HAND SIGNATURE ON FILE

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Suite 2050
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www.cecinc.com

WAYNE DISPOSAL, INC. SITE NO. 2
VAN BUREN TWP., WAYNE COUNTY MICHIGAN

SAND AQUIFER

GROUNDWATER CONTOUR MAP
JULY 3, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	1
DATE:	AUGUST 2024	DWG SCALE:	1"=800'	PROJECT NO:	337-032		

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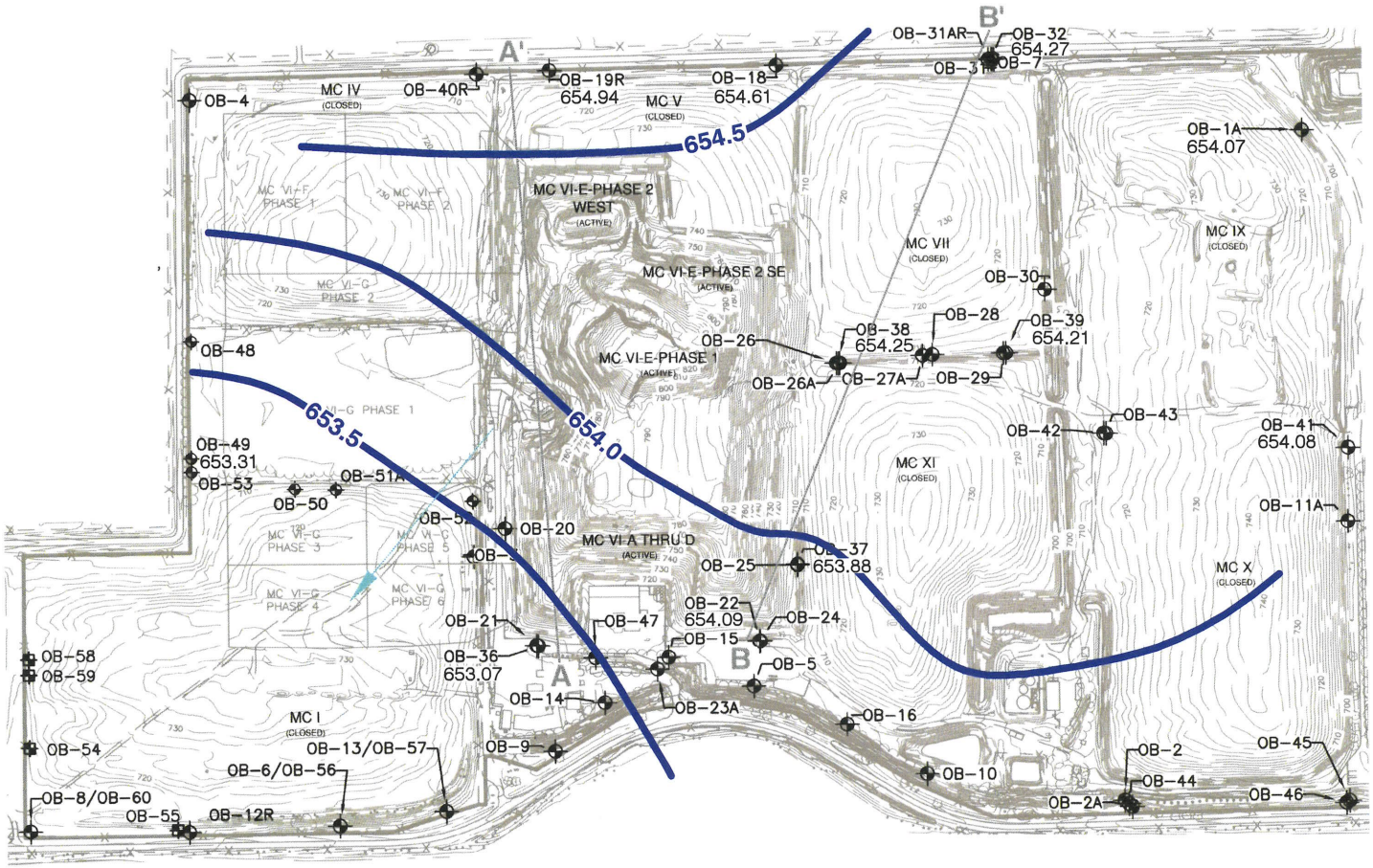
NORTH



SCALE IN FEET

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LEGEND:

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- 710 EXISTING TOPOGRAPHIC CONTOUR
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

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WAYNE DISPOSAL, INC. SITE NO. 2
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ROCK AQUIFER

GROUNDWATER CONTOUR MAP
JULY 3, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	2
DATE:	NOVEMBER 2024	DWG SCALE:	1"=800'	PROJECT NO:	337-032		

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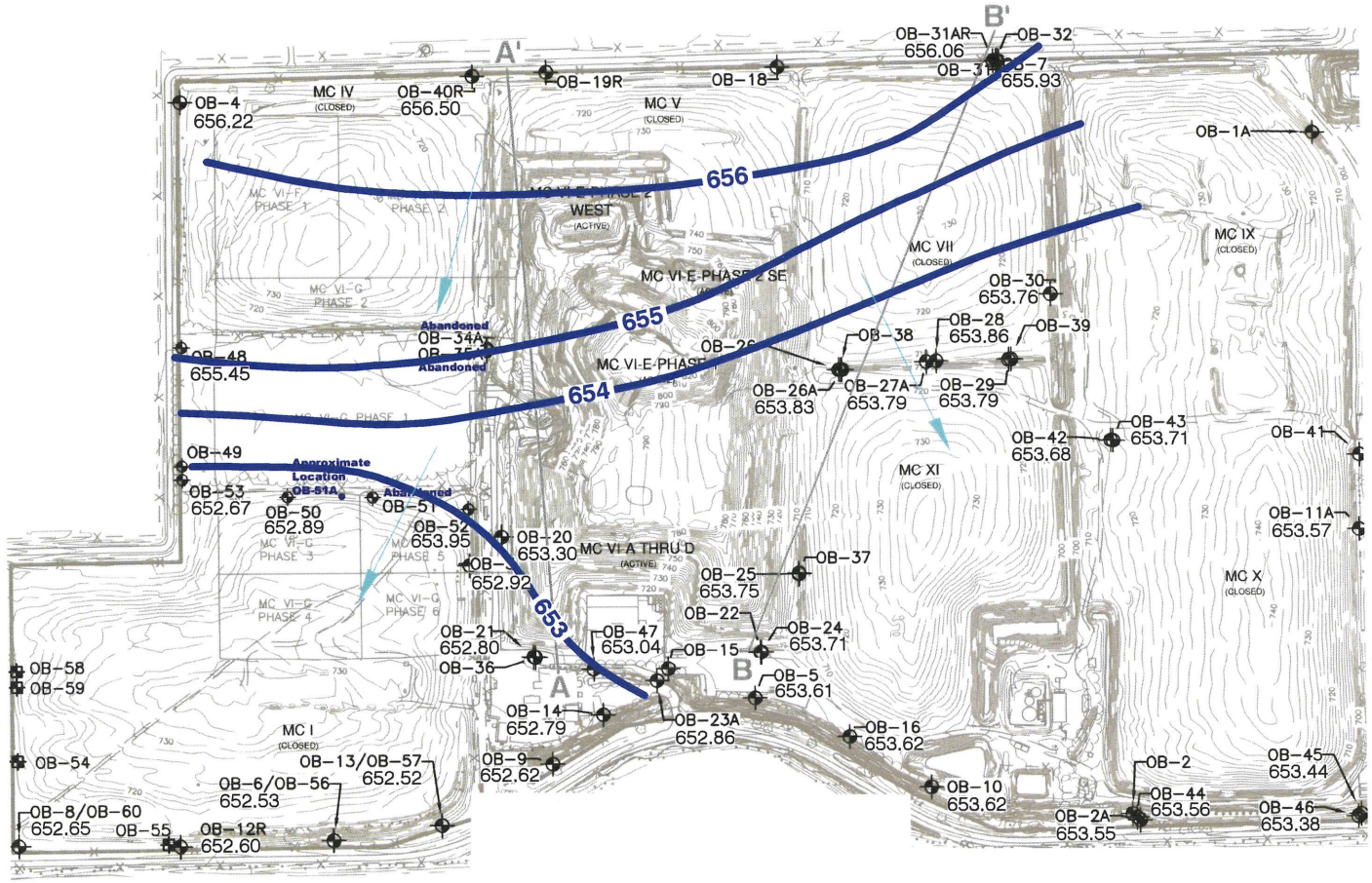

LEGEND:

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- 710 EXISTING TOPOGRAPHIC CONTOUR
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

SCALE IN FEET

0 800 1600

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Suite 2050
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www.cecinc.com

WAYNE DISPOSAL, INC. SITE NO. 2
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SAND AQUIFER

GROUNDWATER CONTOUR MAP
OCTOBER 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	1
DATE:	FEBRUARY 2025	DWG SCALE:	1"=800'	PROJECT NO:	350-319		

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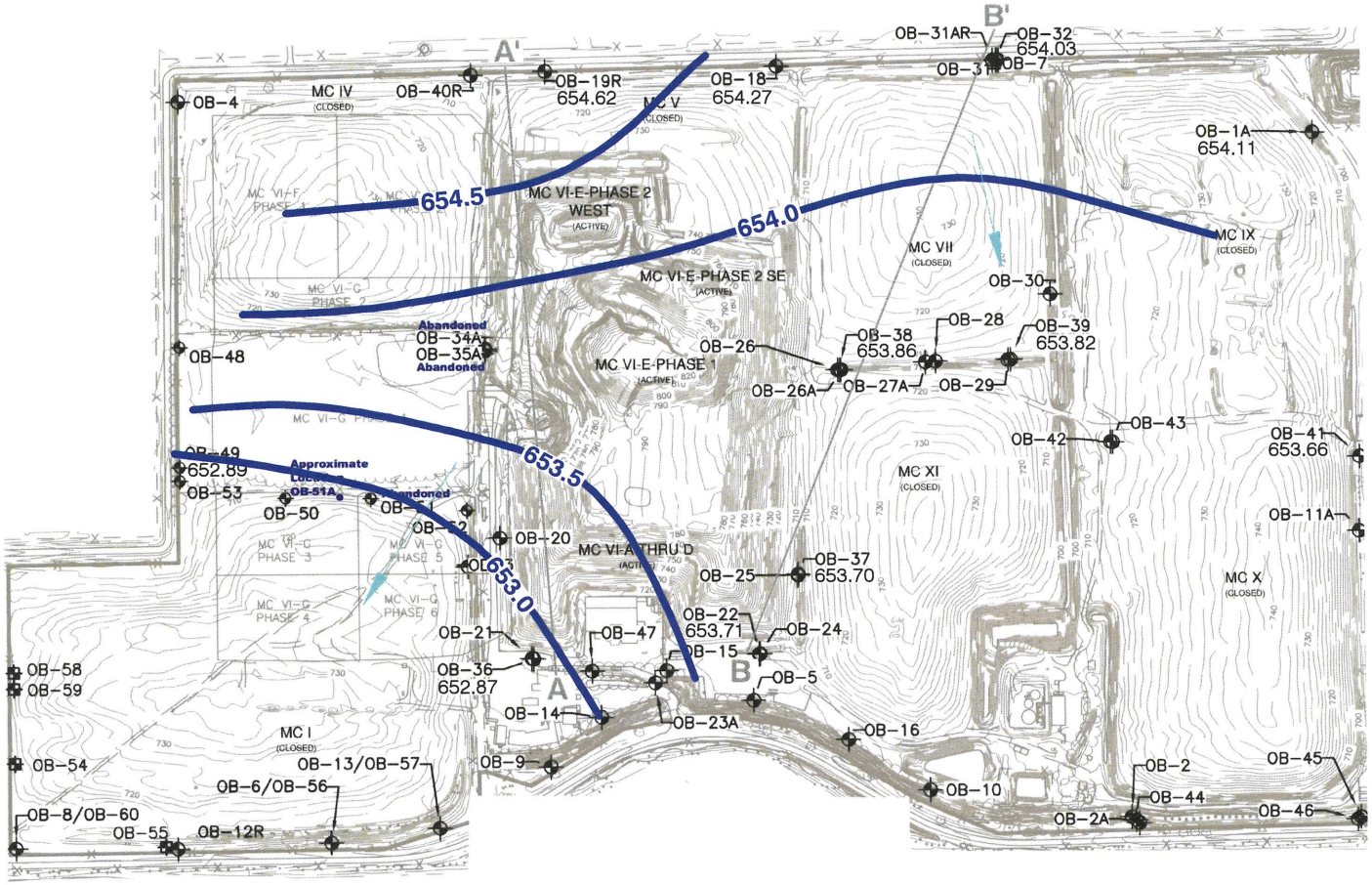
NORTH



SCALE IN FEET

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LEGEND:

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- 710 EXISTING TOPOGRAPHIC CONTOUR
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

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www.cecinc.com

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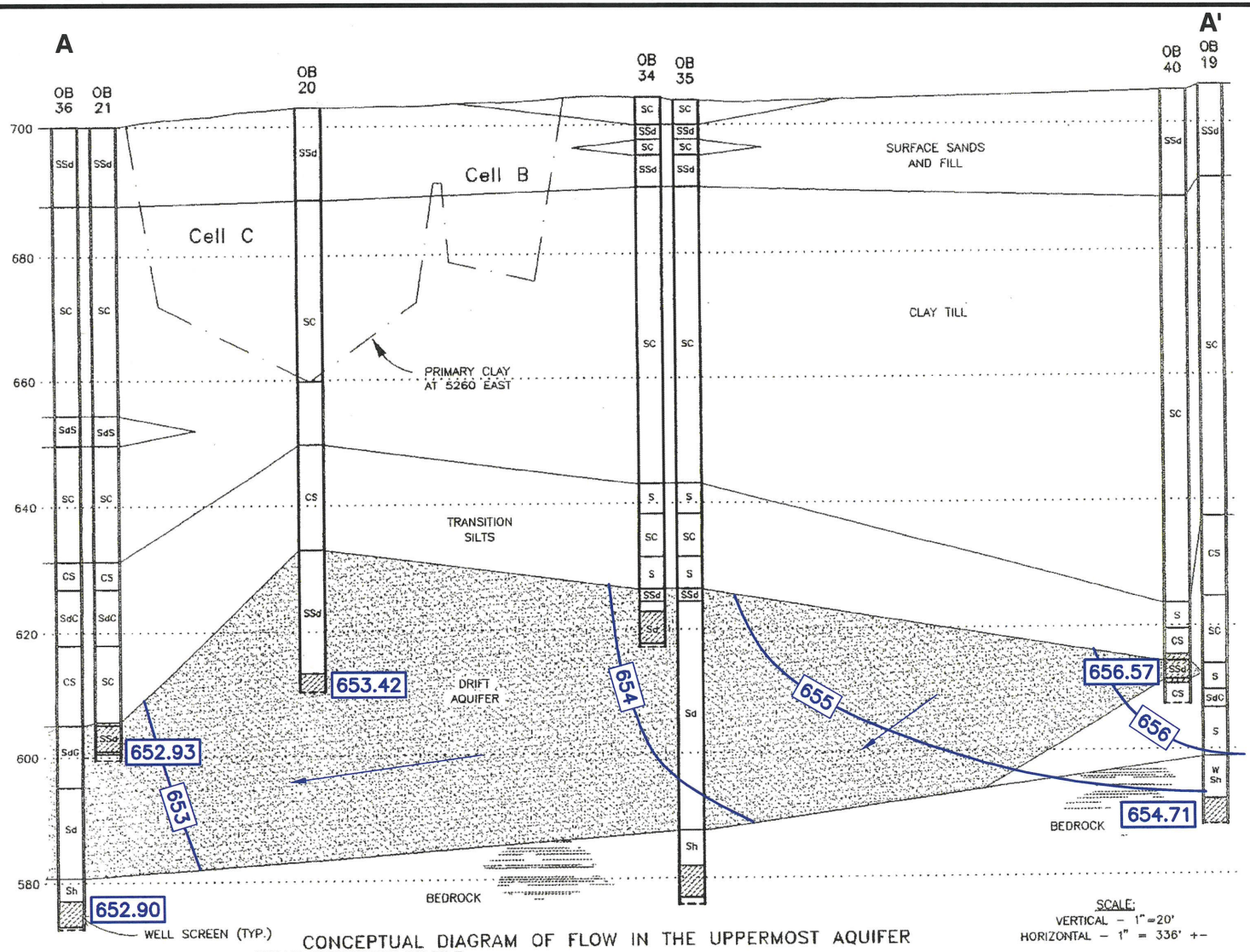
ROCK AQUIFER

GROUNDWATER CONTOUR MAP
OCTOBER 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	2
DATE:	FEBRUARY 2025	DWG SCALE:	1"=800'	PROJECT NO:	350-319		

APPENDIX C. GROUNDWATER FLOW CROSS-SECTIONS – 2024



CONCEPTUAL DIAGRAM OF FLOW IN THE UPPERMOST AQUIFER

*HAND SIGNATURE ON FILE

REFERENCE

1. Figure based on Figure 3: ConMJTtual Diagram of Flow in the Uppermost Aquifer, Cross-Section MCIV West Side for Wayne Disposal, Inc., Site No. 2, from The Environmental Quality Company. (Filename XSMCVIMT), dated August 25, 1997.

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One SeaGate
Suite 2050
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www.cecinc.com

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VAN BUREN TWP., WAYNE COUNTY MICHIGAN

CROSS SECTION A-A'
FEBRUARY 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	3
DATE:	MAY 2024	DWG SCALE:	AS NOTED	PROJECT NO:	337-032		

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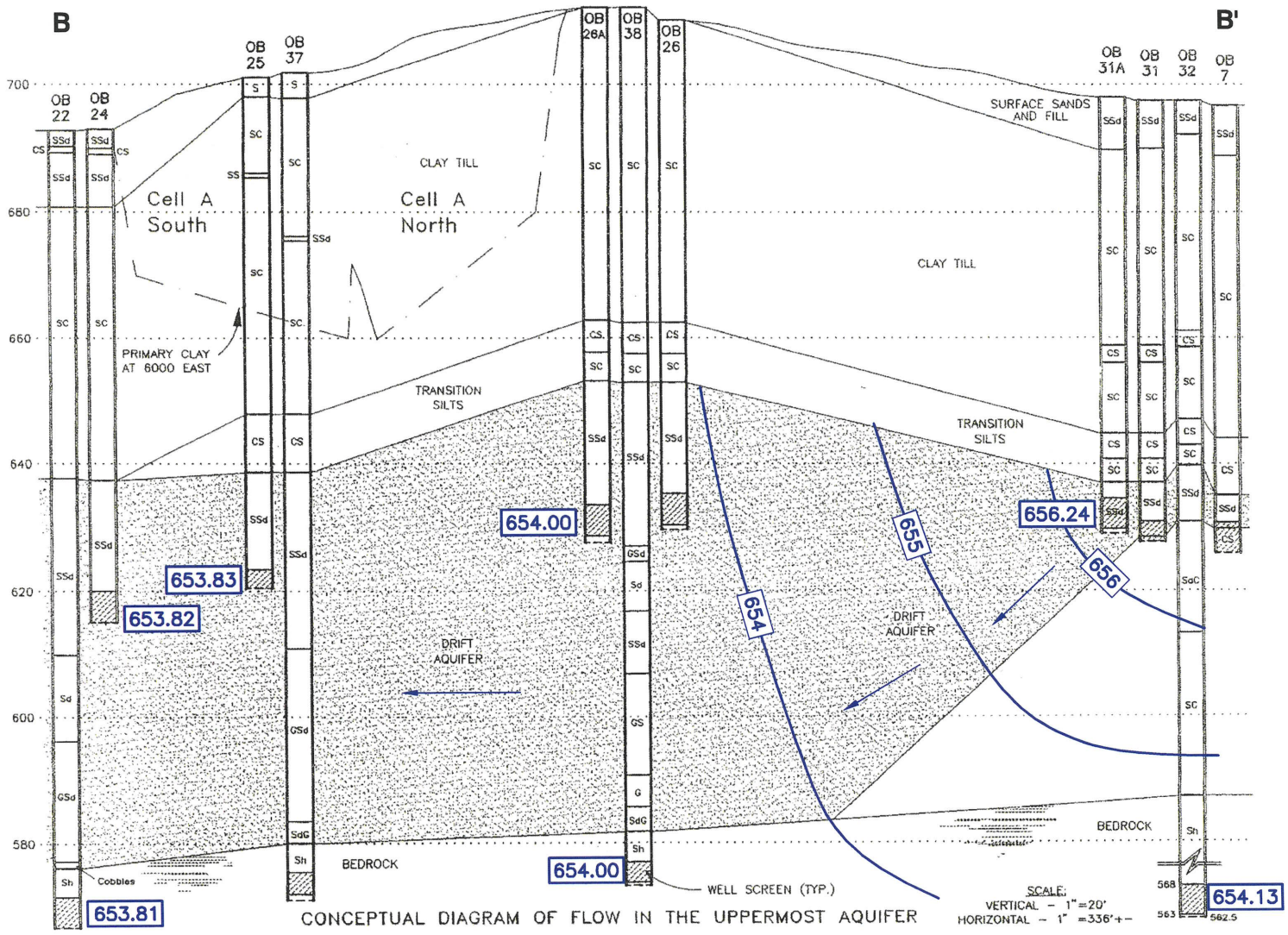

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CROSS SECTION B-B'
FEBRUARY 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	4
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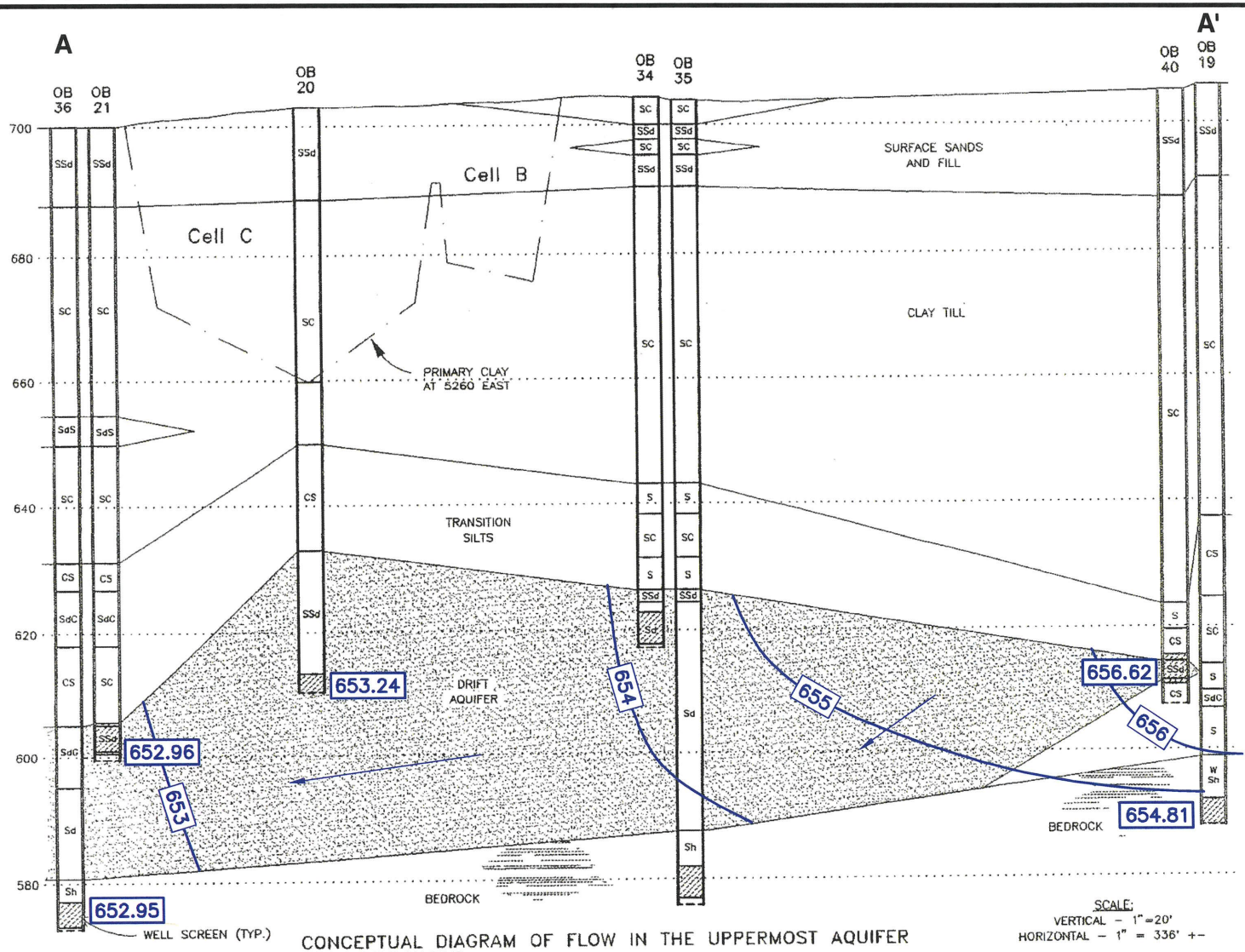

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CROSS SECTION A-A'
APRIL 8, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP	FIGURE NO.:	3
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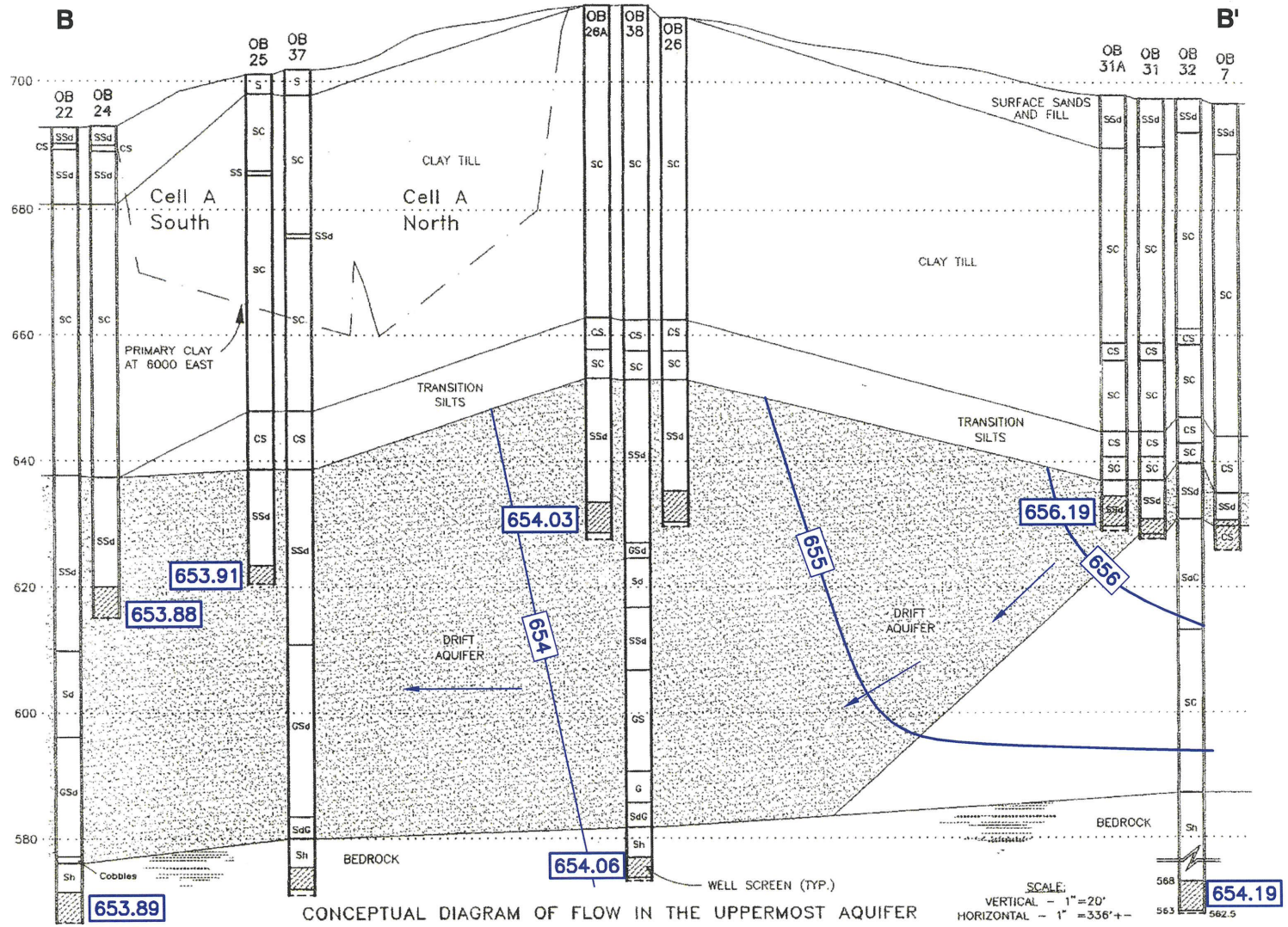

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*HAND SIGNATURE ON FILE

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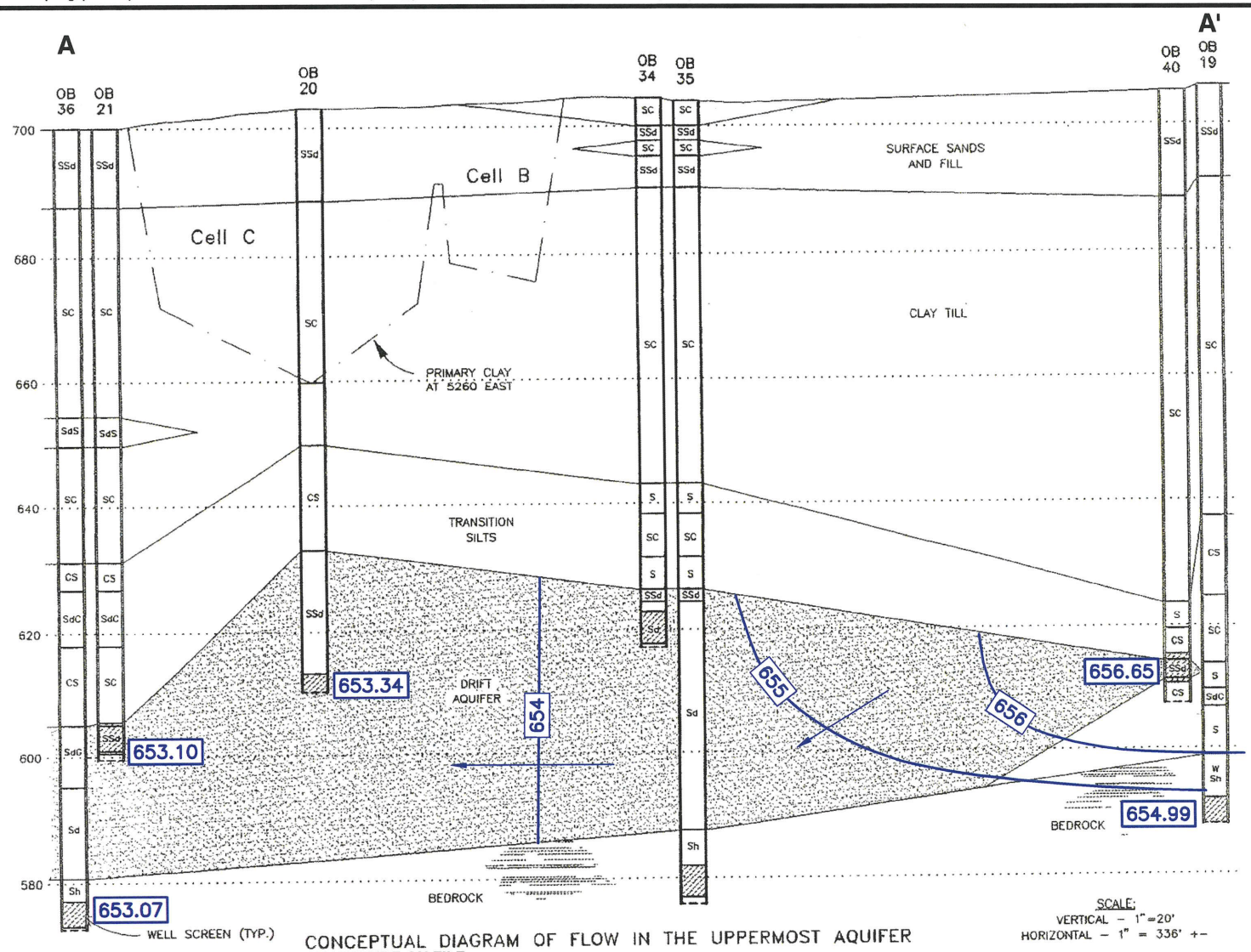
CROSS SECTION B-B'
APRIL 8, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP	FIGURE NO.:	4
DATE:	AUGUST 2024	DWG SCALE:	AS NOTED	PROJECT NO:	337-032		



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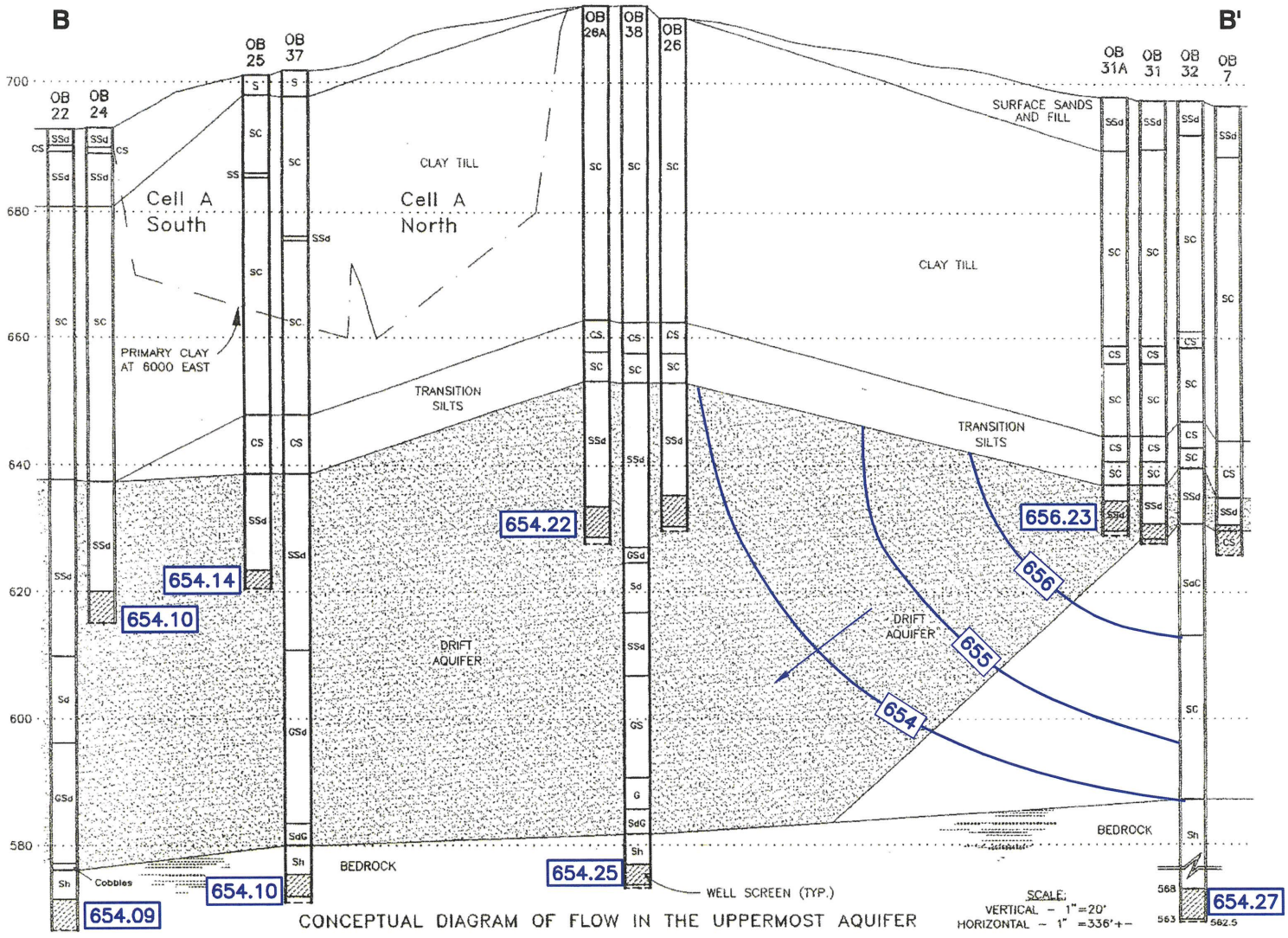
CROSS SECTION A-A'
JULY 3, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	3
DATE:	AUGUST 2024	DWG SCALE:	AS NOTED	PROJECT NO:	337-032		



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CROSS SECTION B-B'
JULY 3, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	4
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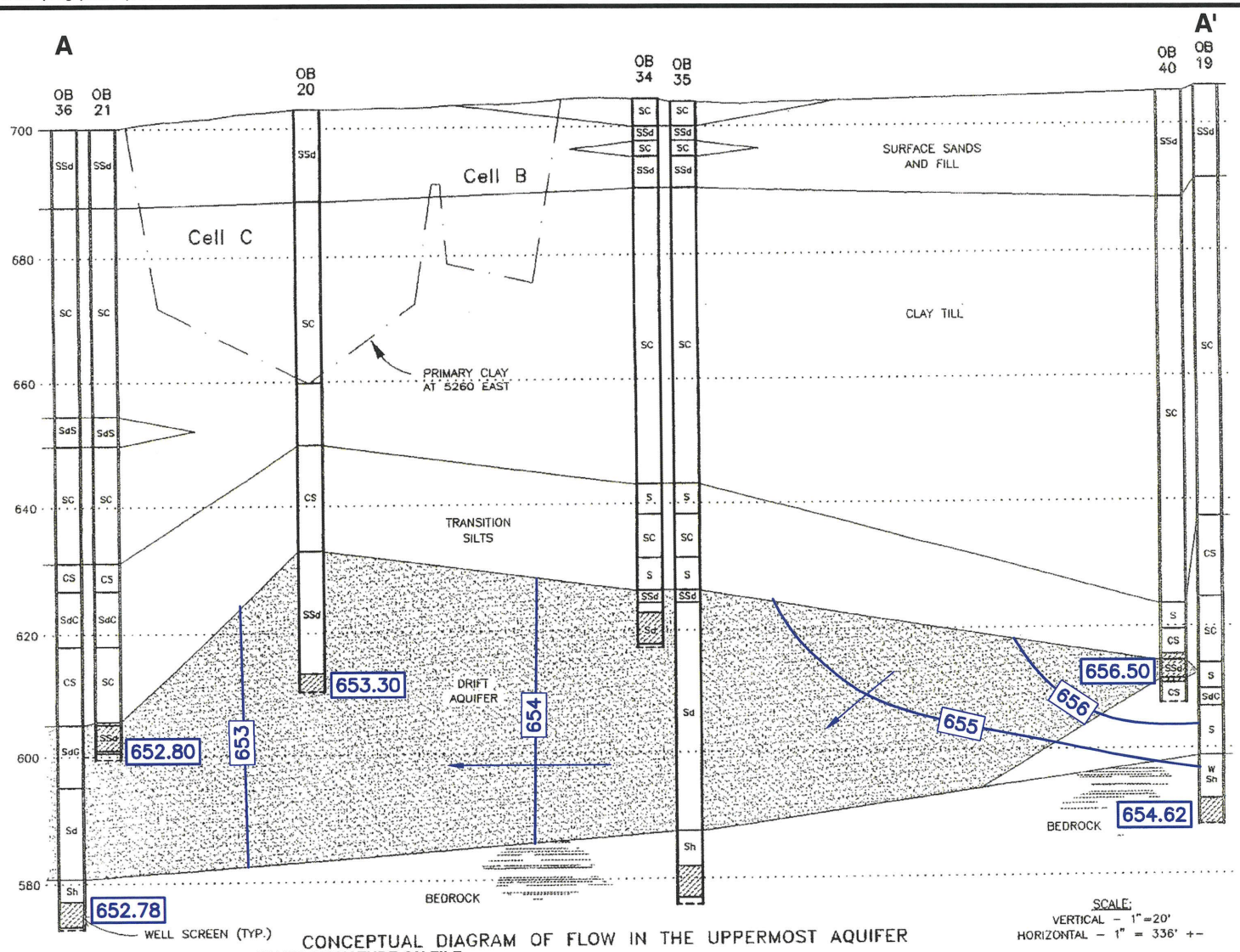

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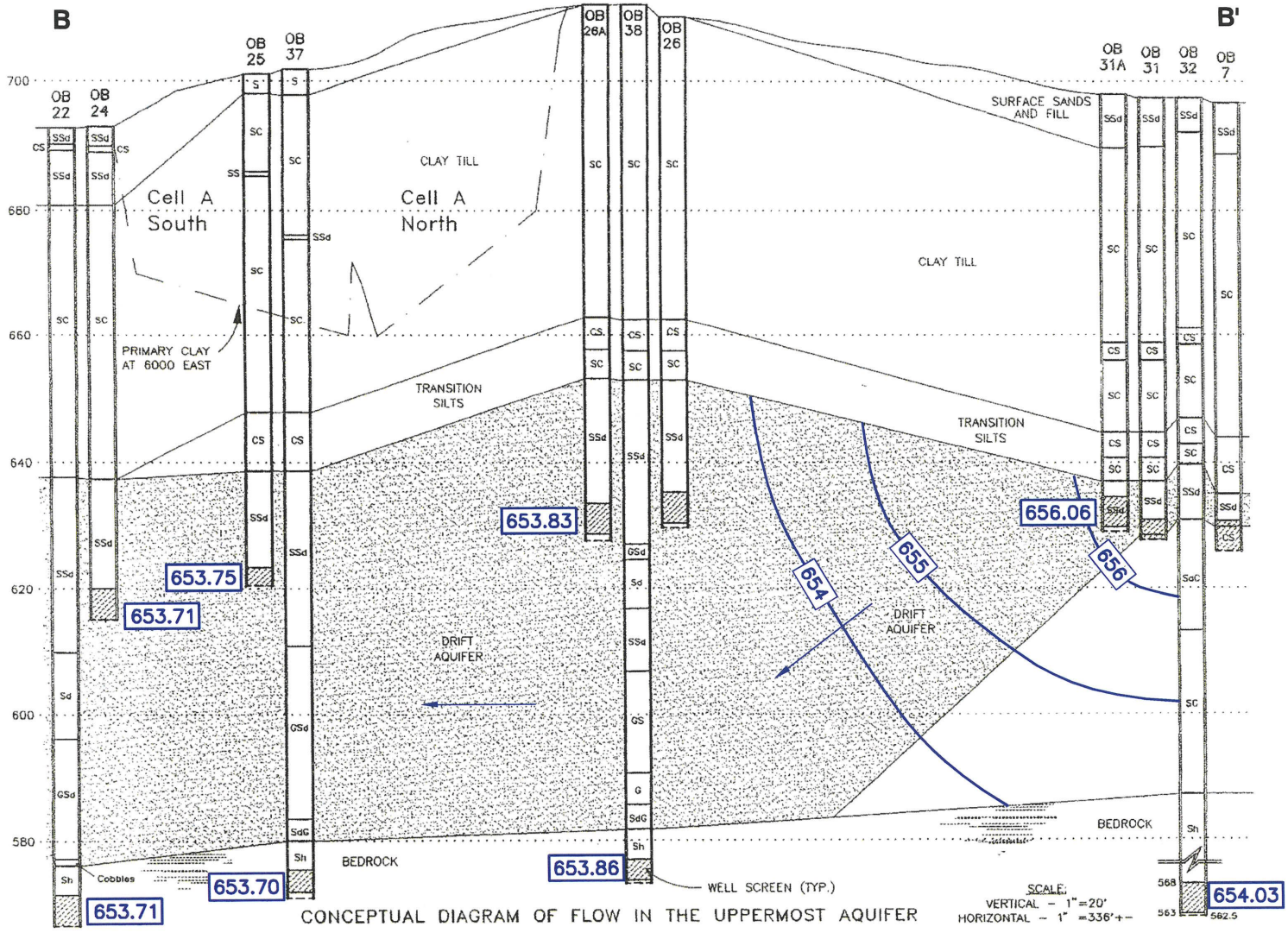
CROSS SECTION A-A'
OCTOBER 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	3
DATE:	FEBRUARY 2025	DWG SCALE:	AS NOTED	PROJECT NO:	350-319		



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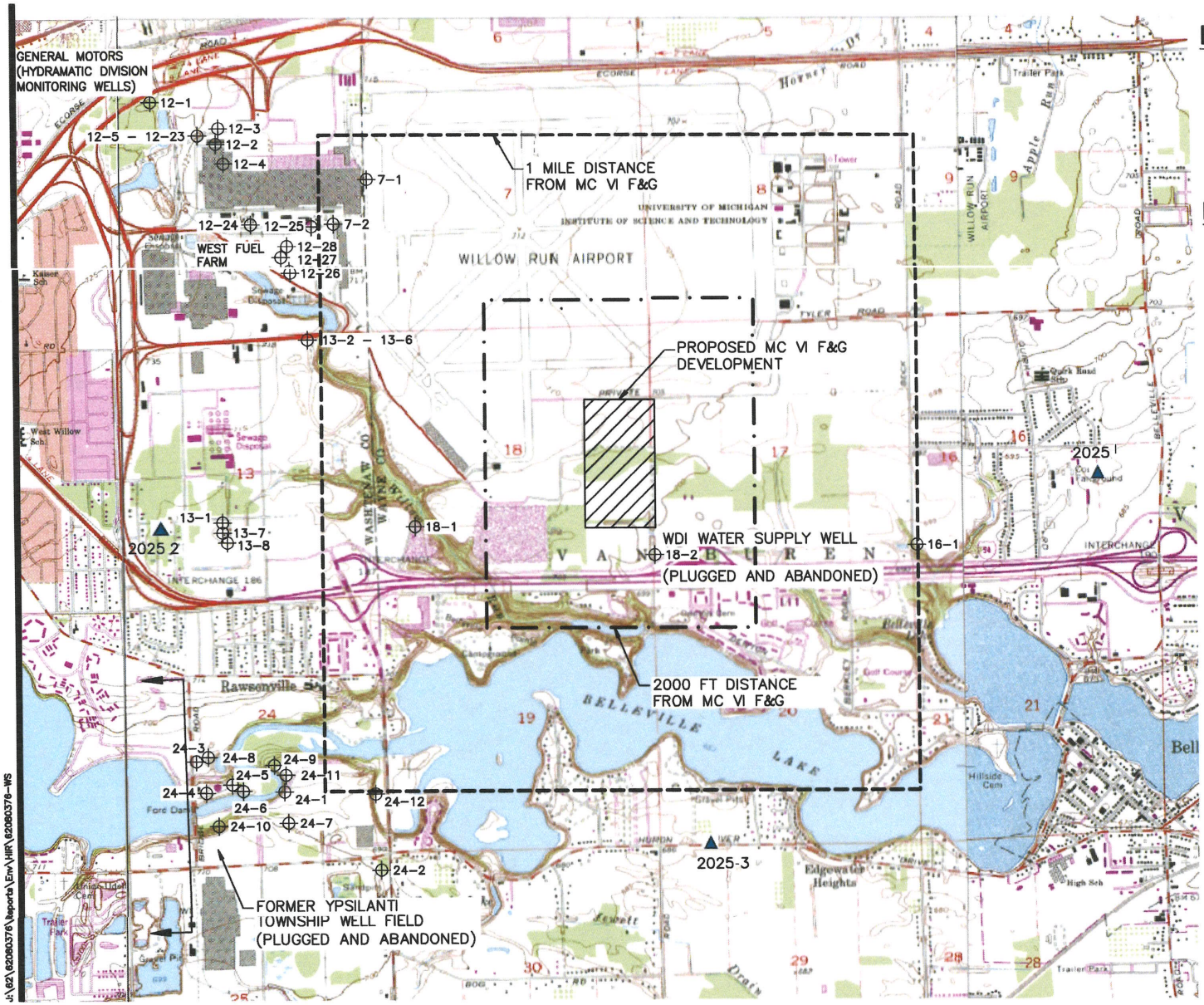
CROSS SECTION B-B'
OCTOBER 2, 2024

DRAWN BY:	RGS	CHECKED BY:	MJT	APPROVED BY:	SCP*	FIGURE NO.:	4
DATE:	FEBRUARY 2025	DWG SCALE:	AS NOTED	PROJECT NO:	350-319		

APPENDIX D. MAP OF WELL LOCATIONS AND WELL LOGS



LEGEND:

18-2 WELL LOCATION

APPROX. LOCATION OF REGIONAL GEOLOGIC PROFILE (FIG. 4)

NOTE:

1. BASE MAP TAKEN FROM U.S.G.S YPSILANTI EAST AND BELLEVILLE MICHIGAN QUADRANGLES (1983).
2. A 1 MILE RADIUS BEYOND PROPOSED MASTER CELLS VI F&G HAS BEEN INCLUDED ON THIS MAP TO IDENTIFY WELLS WITHIN 1 MILE OF THE FACILITY FOR WHICH LOGS ARE AVAILABLE TO MEET REQUIREMENT IN R299.9506(1)(f).
3. IN ACCORDANCE WITH R.299.9506(1)(b), (c) and (d), A 2000 FT RADIUS BOUNDARY IS INCLUDED TO IDENTIFY ALL AQUIFERS USED BY PUBLIC AND PRIVATE WELLS WITHIN 2000 FT OF THE SITE.
4. REGIONAL WATER SUPPLY WELL LOGS PRESENTED IN APPENDIX D.
5. ORIGINAL FIGURE INCLUDES COLOR GRAPHICS WHICH SHOULD NOT BE OMITTED IN REPRODUCTION

N

0 1000' 2000'

NTH Consultants, Ltd.
Infrastructure Engineering and Environmental Services

NTH PROJECT No.: 62080376
DESIGNED BY: DLP
CAD FILE NAME: 62080376-WS
PLOT DATE: 2/3/2011
DRAWING SCALE: AS SHOWN
DRAWN BY: KRO
CHECKED BY: DLP
INCEPTION DATE: 02/16/09

REGIONAL WATER SUPPLY WELL LOCATION MAP

WAYNE DISPOSAL, INC. SITE NO. 2 - MC VI F&G
VAN BUREN TWP., WAYNE COUNTY, MICHIGAN

FIGURE: 6

J:\62\62080376\Reports\Env\HIR\62080376-WS

Water Well And Pump Record

Completion is required under authority of Part 127 Act 368 PA 1978.
Failure to comply is a misdemeanor.

Wellogic

Import ID:

Tax No:	Permit No: 6396	County: Wayne	Township: Van Buren		
		Town/Range: 03S 08E	Section: 16	Well Status: Active	WSSN:	Source ID/Well No:

Well ID: 82000002962

Elevation:
Latitude: 42.22479
Longitude: -83.49311
Method of Collection: GPS Std Positioning Svc SA Off

Distance and Direction from Road Intersection: 1/2 MILE NORTH OF I-94 AND EAST OF QUIRK ROAD

Well Owner: WAYNE COUNTY FAIRGROUND

Well Address:
10871 QUIRK ROAD
BELLEVILLE, MI 48111

Owner Address:
10871 QUIRK ROAD
BELLEVILLE, MI 48111

Drilling Method: Rotary
Well Depth: 131.00 ft. **Well Use:** Irrigation
Well Type: New **Date Completed:** 10/21/2020

Casing Type: PVC plastic **Height:**
Casing Joint: Welded
Casing Fitting:

Diameter: 5.00 in. to 123.00 ft. depth SDR: 21.00

Borehole: 8.75 in. to 135.00 ft. depth

Static Water Level: 42.00 ft. Below Grade
Well Yield Test: **Yield Test Method:** Air
Pumping level 120.00 ft. after 1.00 hrs. at 60 GPM

Screen Installed: Yes **Filter Packed:** Yes
Screen Diameter: 3.00 in. **Blank:**
Screen Material Type: Stainless steel-wire wrapped
Screen Installation Type: Attached

Slot	Length	Set Between
25.00	4.00 ft.	123.00 ft. and 127.00 ft.
35.00	4.00 ft.	128.00 ft. and 131.00 ft.

Fittings: Coupling

Well Grouted: Yes **Grouting Method:** Grout pipe outside casing

Grouting Material	Bags	Additives	Depth
Bentonite slurry	8.00	None	0.00 ft. to 113.00 ft.

Wellhead Completion: Pitless adapter, 12 inches above grade

Nearest Source of Possible Contamination:

Type	Distance	Direction
Sewer line	50 ft.	West

Pump Installed: Yes **Pump Installation Only:** No
Pump Installation Date: 5/11/2021 **HP:** 1.00
Manufacturer: AquaDuty **Pump Type:** Submersible
Model Number: 20-100 **Pump Capacity:** 20 GPM
Drop Pipe Length: 80.00 ft. **Pump Voltage:** 230
Drop Pipe Diameter: 1.25 in. **Drilling Record ID:**
Draw Down Seal Used: No

Pressure Tank Installed: Yes
Pressure Tank Type: Diaphragm/bladder
Manufacturer: Goulds
Model Number: V200 **Tank Capacity:** 65.1 Gallons
Pressure Relief Valve Installed: Yes

Formation Description	Thickness	Depth to Bottom
Yellow Sand & Clay	6.00	6.00
Gray Clay	41.00	47.00
Sand Fine	1.00	48.00
Gray Clay	73.00	121.00
Gravel	14.00	135.00

Geology Remarks:

Drilling Machine Operator Name: GEORGE DUGDALE
Employment: Employee
Pump Installer: WILLIAM WITT

Contractor Type: Water Well Drilling Contractor **Reg No:** 47-2072
Business Name: Brown Drilling Co Inc
Business Address: 7215 Highland Rd, Howell, MI, 48843

Water Well Contractor's Certification

This well and/or pump installation was performed under my registration.

Signature of Registered Contractor **Date**

General Remarks:
Other Remarks:

Pump Added 5/13/2021 1:24 PM Contractor 11/30/2020 11:54 AM

2025-1

Water Well And Pump Record

Completion is required under authority of Part 127 Act 368 PA 1978.
Failure to comply is a misdemeanor.

Wellogic

Import ID:

Tax No:	**Permit No:** 2008 00198	**County:** Washtenaw		**Township:** Ypsilanti	
		Town/Range: 03S 07E	**Section:** 13	**Well Status:** Active	**WSSN:**

Source ID/Well No:

Well ID: 81000018539

Elevation:

Latitude: 42.22206

Longitude: -83.56007

Method of Collection: GPS Std Positioning Svc SA Off

Distance and Direction from Road Intersection:

Well Owner: TREE HOUSE REALITY GROUP TERRI

Well Address:
1705 WATSON
YPSILANTI, MI

Owner Address:
1002 GOTT ST
ANN ARBOR, MI 48103

Drilling Method: Rotary
Well Depth: 50.00 ft. **Well Use:** Household
Well Type: Replacement **Date Completed:** 5/7/2008

Casing Type: PVC plastic **Height:**
Casing Joint: Solvent welded/glued
Casing Fitting: None

Diameter: 5.68 in. to 40.00 ft. depth SDR: 21.00

Borehole: 9.00 in. to 50.00 ft. depth

Pump Installed: Yes **Pump Installation Only:** No
Pump Installation Date: 5/7/2008 **HP:** 0.50
Manufacturer: Franklin Electric **Pump Type:** Submersible
Model Number: T5L4Y10P9 **Pump Capacity:** 10 GPM
Drop Pipe Length: 40.00 ft. **Pump Voltage:**
Drop Pipe Diameter: 1.00 in. **Drilling Record ID:**
Draw Down Seal Used: No

Pressure Tank Installed: Yes
Pressure Tank Type: Diaphragm/bladder
Manufacturer: Well-Rite-Flexcon
Model Number: PC122R **Tank Capacity:** 32.0 Gallons
Pressure Relief Valve Installed: Yes

Static Water Level: 33.00 ft. Below Grade
Well Yield Test: **Yield Test Method:** Air
Pumping level 50.00 ft. after 2.00 hrs. at 10 GPM

Formation Description	Thickness	Depth to Bottom
Black Topsoil	3.00	3.00
Gravel	3.00	6.00
Sand	6.00	12.00
Gray Clay	20.00	32.00
Sand Fine	18.00	50.00

Screen Installed: Yes **Filter Packed:** No
Screen Diameter: 5.00 in. **Blank:**
Screen Material Type: PVC-slotted
Screen Installation Type: Unknown

Slot	Length	Set Between
12.00	10.00 ft.	40.00 ft. and 50.00 ft.

Fittings: Unknown

Well Grouted: Yes **Grouting Method:** Unknown

Grouting Material	Bags	Additives	Depth
Bentonite slurry	5.00	None	0.00 ft. to 40.00 ft.

Geology Remarks:

Wellhead Completion: Pitless adapter

Nearest Source of Possible Contamination:

Type	Distance	Direction
Septic tank	100 ft.	Southeast

Drilling Machine Operator Name: KEN PEARCE
Employment: Employee
Pump Installer: TOD STEVENS

Abandoned Well Plugged: Yes

Casing Diameter: 4 in. **Casing Removed:** No
Plugging Material: Bentonite slurry
No. of Bags: 3.00 **Well Depth:** 107 ft.

Contractor Type: Water Well Drilling Contractor **Reg No:** 81-2014
Business Name: CRIBLEY DRILLING CO
Business Address:

Water Well Contractor's Certification

This well was drilled under my supervision and this report is true to the best of my knowledge and belief.

Signature of Registered Contractor **Date**

General Remarks:

Other Remarks:

2025-2

Water Well And Pump Record

Completion is required under authority of Part 127 Act 368 PA 1978.
Failure to comply is a misdemeanor.

Wellogic

Import ID:

Tax No:	Permit No: 6407	County: Wayne	Township: Van Buren

Town/Range:	Section:	Well Status:	WSSN:	Source ID/Well No
03S 08E	20	Active		

Well ID: 82000003007

Elevation:

Latitude: 42.204267

Longitude: -83.522411

Method of Collection: GPS Std Positioning Svc SA Off

Distance and Direction from Road Intersection:
NORTH OF W. HURON RIVER DR. AND WEST OF MISSION BLVD.

Well Owner: MISSION POINTE ON THE LAKE HOA

Well Address:	Owner Address:
APPROX 49101 LAGUNA DR. BELLEVILLE, MI 48111	49101 LAGUNA DR. BELLEVILLE, MI 48111

Drilling Method: Rotary
Well Depth: 106.00 ft. **Well Use:** Irrigation
Well Type: New **Date Completed:** 7/26/2021

Casing Type: PVC plastic **Height:** 2.00 ft. above grade
Casing Joint: Solvent welded/glued
Casing Fitting: None

Diameter: 5.68 in. to 86.00 ft. depth SDR: 21.00

Borehole: 9.00 in. to 106.00 ft. depth

Pump Installed: Yes **Pump Installation Only:** No
Pump Installation Date: 8/13/2021 **HP:** 3.00
Manufacturer: Franklin Electric **Pump Type:** Submersible
Model Number: 35SDQP-3.0HP **Pump Capacity:** 35 GPM
Drop Pipe Length: 80.00 ft. **Pump Voltage:** 230
Drop Pipe Diameter: 2.00 in. **Drilling Record ID:**
Draw Down Seal Used: No

Pressure Tank Installed: Yes
Pressure Tank Type: Diaphragm/bladder
Manufacturer: Well-Rite-Flexcon
Model Number: WR60 **Tank Capacity:** 20.0 Gallons
Pressure Relief Valve Installed: Yes

Static Water Level: 40.00 ft. Below Grade
Well Yield Test: **Yield Test Method:** Air
Pumping level 86.00 ft. after 2.00 hrs. at 60 GPM

Formation Description	Thickness	Depth to Bottom
Sand & Gravel	17.00	17.00
Gray Clay	48.00	65.00
Gray Sand Fine	25.00	90.00
Gray Sand	16.00	106.00

Screen Installed: Yes **Filter Packed:** Yes
Screen Diameter: 5.00 in. **Blank:**
Screen Material Type: PVC-slotted
Screen Installation Type: Attached

Slot	Length	Set Between
12.00	20.00 ft.	86.00 ft. and 106.00 ft.

Fittings: None

Well Grouted: Yes **Grouting Method:** Grout pipe outside casing

Grouting Material	Bags	Additives	Depth
Bentonite slurry	6.00	None	0.00 ft. to 80.00 ft.

Geology Remarks:

Wellhead Completion: 12 inches above grade

Nearest Source of Possible Contamination:

Type	Distance	Direction
Sewer line	60 ft.	South

Drilling Machine Operator Name: Kurt Wing
Employment: Employee
Pump Installer: Larry Clark, David Podvoyski

Contractor Type: Water Well Drilling Contractor **Reg No:** 81-2014
Business Name: Cribley Drilling Co Inc
Business Address: 8300 Dexter Chelsea, Dexter, MI, 48130

Water Well Contractor's Certification

This well and/or pump installation was performed under my registration.

Signature of Registered Contractor **Date**

General Remarks: USED 800# SAND PACK. 5" X 2" WELL SEAL WITH BREATHER INSTALLED. CONSTANT PRESSURE PUMPING SYSTEM INSTALLED.

Other Remarks:

2025-3

Table 1. Calculated Groundwater Flow Velocities - WDI - 2024

Date	Stratum	Well Pair	Head Difference (ft)	Distance Between Wells(ft)	Gradient	Hydraulic Conductivity (cm/sec)	Effective Porosity (%)	Flow Velocity (cm/sec)	Flow Velocity (ft/year)
2/2/2024	Sand	OB-31AR/OB-10	2.33	3200	0.00073	0.001	10	7.281E-06	7.5
	Sand	OB-40R/OB-13	3.72	3300	0.00113	0.001	10	1.127E-05	11.7
	Rock	OB-19R/OB-36	1.81	2400	0.00075	0.001	10	7.542E-06	7.8
4/8/2024	Sand	OB-31AR/OB-10	2.44	3200	0.00076	0.001	10	7.625E-06	7.9
	Sand	OB-40R/OB-13	3.84	3300	0.00116	0.001	10	1.164E-05	12.0
	Rock	OB-19R/OB-36	1.86	2400	0.00078	0.001	10	7.750E-06	8.0
7/3/2024	Sand	OB-31AR/OB-10	2.28	3200	0.00071	0.001	10	7.125E-06	7.4
	Sand	OB-40R/OB-13	3.78	3300	0.00115	0.001	10	1.145E-05	11.9
	Rock	OB-19R/OB-36	1.87	2400	0.00078	0.001	10	7.792E-06	8.1
10/2/2024	Sand	OB-31AR/OB-10	2.44	3200	0.00076	0.001	10	7.625E-06	7.9
	Sand	OB-40R/OB-13	3.98	3300	0.00121	0.001	10	1.206E-05	12.5
	Rock	OB-19R/OB-36	1.75	2400	0.00073	0.001	10	7.292E-06	7.5
								Average	9.2

LEGEND:

NEW CELL BOUNDARY LOCATION	
OLD CELL BOUNDARY LOCATION	
PROPERTY LINE LOCATION	
EXISTING CONTOUR (2 FT INTERVAL)	
EXISTING STRUCTURE / BUILDING	
PAVED / GRAVEL — EXISTING ROAD	
GRID COORDINATES	
OB-54	PROPOSED MC VI F/G WELL LOCATIONS
OB-54	WELLS COMPLETED IN SAND AQUIFER
OB-54	WELL COMPLETED IN BEDROCK

NOTES:

1. THE BASE MAP WAS CREATED USING AN AERIAL SURVEY TAKEN IN FEBRUARY 03, 2025.
   UPDATED WITH FLYOVER FROM MARCH 31, 2025..

SCALE 0' 100' 200' 400'

DATE:	04-14-25
DESIGNED BY:	XZ
DRAWN BY:	BDA
CHECKED BY:	AN
APPROVED BY:	XZ

cti
CTI and Associates, Inc.
28001 Cabot Drive, Ste. 250
Novi, Michigan 48377
248.486.5100 (fax)248.486.5050
www.cticompanies.com

REV	DATE	REVISION DESCRIPTION	DRN	APP

REVISIONS

WAYNE DISPOSAL SITE NO. 2
WAYNE, MICHIGAN

GROUNDWATER MONITORING WELL LOCATION MAP

PROJECT NUMBER 23L023
SCALE 1" = 200'
DRAWING NO **01**

TIME PLOTTED: 11:20:08 AM
DATE PLOTTED: 4/14/2025
FILENAME: C:\Shared\Box\Commercial\US Ecology\WDI\CAD\Site\Monitoring Plans\GROUNDWATER MONITORING WELL LOCATION MAP (20250414).dgn
DRAWING SIZE: 24" X 36"