



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
CADILLAC DISTRICT OFFICE



PHILLIP D. ROOS
DIRECTOR

TO: Agencies with Critical Dune Areas in their Jurisdictions

FROM: Water Resources Division

DATE: September 13, 2023

SUBJECT: Notice of Application Received
Brian Cook
17435 Tiller Court
Westfield, Indiana 46074
Site Name: 51-8379 S. Portage Point Drive-Onekama
Submission No. HPW-HRZH-YNEEF

Attachment for your information is an application for permit under consideration by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division (WRD), for a project in a Critical Dune Area in accordance with Section 35304(1)(b), found in Part 353, Sand Dunes Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

If you would like additional information regarding this application, contact the local staff reviewer, David Schuberg, at 231-429-0577; SchubergD@michigan.gov; or EGLE, WRD, Cadillac Office, 120 West Chapin Street, Cadillac, Michigan 49601-2158.

All correspondence should reference Submission No. HPW-HRZH-YNEEF.

Attachment

cc: Onekama Township Clerk
Manistee County Health Department
Manistee County Clerk
Manistee Conservation District
Manistee County Road Commission

Digital EGLE/USACE Joint Permit Application (JPA) for Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams, Environmental Areas, High Risk Erosion Areas and Critical Dune Areas

version 1.38

(Submission #: HPW-HRZH-YNEEF, version 1)

Details

Submission ID HPW-HRZH-YNEEF
Submission Reason New
Status In Process

Fees

Fee \$1,300.00
Payments/Adjustments \$0.00
Balance Due \$1,300.00 (Due)

Form Input

Instructions

[To download a copy or print these instructions, please click this link \(recommended\).](#)

Contact Information

Applicant Information (Usually the property owner)

First Name	Last Name	
Brian	Cook	
Organization Name		
NONE PROVIDED		
Phone Type	Number	Extension
Home	3179036755	
Email		
bacook@tradewinds.net		
Address		
17435 TILLER CT		
WESTFIELD, IN 46074		

Is the Property Owner different from the Applicant?
No

Has the applicant hired an agent or cooperating agency (agency or firm assisting applicant) to complete the application process?

Yes

Agent Contact

First Name **Last Name**

Lucas *Richardson*

Organization Name

Spicer Group Inc.

Phone Type **Number** **Extension**

Mobile 2316681107

Email

lucas.richardson@spicergroup.com

Address

302 River Street

Manistee, MI 49660

Upload Attachment for Authorization from Agent

Owner authorization letter Spicer Group_Brian Cook_Signed.pdf - 08/08/2023 02:23 PM

Comment

NONE PROVIDED

Are there additional property owners or other contacts you would like to add to the application?

Yes

Additional Contact Information (1 of 2)

Contact Role(s)

Consultant

Contact Information

Prefix

NONE PROVIDED

First Name **Last Name**

Brian *Boals*

Title

Project Manager

Organization Name

Spicer Group, Inc.

Phone Type **Number** **Extension**

Mobile 2313134863

Email

brian.boals@spicergroup.com

Address

1624 BUSINESS PARK DR

TRAVERSE CITY, MI 49686

Additional Contact Information (2 of 2)

Contact Role(s)

Consultant

Contact Information

Prefix

NONE PROVIDED

First Name Last Name

Lucas Richardson

Title

Project Engineer

Organization Name

Spicer Group Inc.

Phone Type Number Extension

Mobile 2316681107

Email

lucas.richardson@spicergroup.com

Address

302 River Street

Manistee, Michigan 49660

Project Location

EGLE Site Reference Number (Pre-Populated)

1994030055304284318

Project Location

44.365851048472564,-86.25826987342367

Project Location Address

8379 S. Portage Point Drive

Onkama, MI 49675

County

Manistee

Is there a Property Tax ID Number(s) for the project area?

Yes

Please enter the Tax ID Number(s) for the project location

51-11-410-055-00

Is there Subdivision/Plat and Lot Number(s)?

Yes

Subdivision/Plat and Lot Number(s)

5

Is this project within Indian Lands?

No

Local Unit of Government (LUG)

Onkama Township

Directions to Project Site

Travel on S. Portage Point Drive for 2.9 miles from M-22 in Onkama and arrive at 8379 S. Portage Point Drive.

Background Information

Has the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and/or United States Army Corps of Engineers (USACE) conducted a pre-application meeting/inspection for this project?

No

Has the EGLE completed a Wetland Identification Program (WIP) assessment for this site?

No

Environmental Area Number (if known):

NONE PROVIDED

Has the United States Army Corps of Engineers (USACE) completed either an approved or preliminary jurisdictional determination for this site?

No

Were any regulated activities previously completed on this site under an EGLE and/or USACE permit?

No

Have any activities commenced on this project?

No

Is this an after-the-fact application?

No

Are you aware of any unresolved violations of environmental law or litigation involving the property?

No

Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property?

No

Are there any other federal, interstate, state, or local agency authorizations associated with this project?

No

Permit Application Category and Public Notice Information

Indicate the type of permit being applied for.

Individual Permit for all other projects

This type of permit application requires that you include contact information for the adjacent landowners to this project. If you are only entering in a small number of bordering parcel owners contact information, please select "Enter list of recipients". If there is a rather large number of affected property owners such as a project that significantly affects lake levels, please upload a spreadsheet of the property owners. Please include names and mailing addresses.

Enter list of recipients.

This project may require public noticing. Please list the adjacent landowners to the project, along with any of the others that may apply:

Contact Type	Contact Person	Mailing Address	City	State	Zip Code
Adjacent Landowner	Catherine Bradford	8368 Portage Point Drive	Onekama	MI	49675
Adjacent Landowner	Windfalls Landings LLC	4927 Stariha Drive Suite C	Norton Shores	MI	49441

Project Description

Project Use: (select all that apply - Private, Commercial, Public/Government/Tribal, Receiving Federal/State Transportation Funds, Non-profit, or Other)

Private

Project Type (select all that apply):

Septic System

Private Residence

Drain - Private

Project Summary (Purpose and Use): Provide a summary of all proposed activities including the intended use and reason for the proposed project.

The project includes a new residential home, septic and well system, and new driveway. All east of the toe of the dune, outside of the critical dune area.

Project Construction Sequence, Methods, and Equipment: Describe how the proposed project timing, methods, and equipment will minimize disturbance from the project construction, including but not limited to soil erosion and sedimentation control measures.

Starting in April 2024 construction of the house to begin. Septic/Well installed by Fall 2024, and project site to be restored by Spring 2025. Heavy machinery landward of the water will be used to construct the project.

Project Alternatives: Describe all options considered as alternatives to the proposed project, and describe how impacts to state and federal regulated waters will be avoided and minimized. This may include other locations, materials, etc.

Alternatives proposed on the project are the following: Permeable pavement for the driveway and a perimeter French drain around the building on the waterward side to contain the runoff on site and locating the septic system as far from Portage Lake as possible. Lastly, the entire project will have minimal impact to the critical dune and is designed outside of any steep slopes in the area.

Project Compensation: Describe how the proposed impacts to state and federal regulated waters will be compensated, OR explain why compensatory mitigation should not be required for the proposed impacts. Include amount, location, and method of compensation (i.e., bank, on-site, preservation, etc.)

Arborvitae Nigra plantings are planned to be planted on the south side of the property to help establish the soils at the end of the seawall. All sand from on site will be re-used on site when backfilling and contained within the proposed silt fence. The site will then be revegetated when the project is complete.

Upload any additional information as needed to provide information applicable to your project regarding project purpose sequence, methods, alternatives, or compensation.

NONE PROVIDED

Comment

NONE PROVIDED

Resource and Activity Type

SELECT THE ACTIVITIES from the list below that are proposed in your project (check ALL that apply). If you don't see your project type listed, select "Other Project Type". These activities listed require additional information to be gathered later in the application.

Other Project Type

The Proposed Project will involve the following resources (check ALL that apply).

Critical Dune Area

Major Project Fee Calculation Questions

Is filling of 10,000 cubic yards or more proposed (cumulatively) within wetlands, streams, lakes, or Great Lakes?

No

Is dredging of 10,000 cubic yards (cumulatively) or more proposed within streams, lakes, or Great Lakes? (wetlands not included)

No

Is new dredging or adjacent upland excavation in suspected contamination areas proposed by this application?

No

Is a subdivision, condominium, or new golf course proposed?

No

Critical Dune Areas and High Risk Erosion Areas

PROPERTY INFORMATION

Year the current property boundaries were created:

2020

All property boundaries, proposed structure corners and uses must be staked before the WRD site inspection.

Provide the date the project was staked:

09/04/2020

SEWAGE DISPOSAL INFORMATION

Type of sewage disposal proposed, if any:

Private septic system

Attach a copy of the health department permit. Show the location and dimension of the septic system on the application plans.

[Manistee County septic permit.pdf - 08/08/2023 02:59 PM](#)

[Manistee County well permit.pdf - 08/08/2023 02:59 PM](#)

Comment

NONE PROVIDED

Critical Dune Areas

Select all activities that apply to this project:

Building: Construction of a single family home and associated infrastructure.

Decks: Cumulative area of greater than 225 square feet.

Driveway: serving one single family home.

Utilities: New, replacement or maintenance for a single family home, including septic system.

Building: Demolition or removal.

Project Information

Provide information about your project including the locations and sizes of proposed structures and the characteristics of the site.

Type of proposed activities including a home, utilities, and retaining walls. (*A home and garage are separate structures unless the garage is beneath the home)

Activity	Foundation type	Area (Length x Width) for activity (square feet):	Units
Building - residential new	Concrete Slab	1500	Square Feet
Deck/Platform	Pilings	835	Square Feet
Driveway	NA	1225	Square Feet
Grading	NA	8400	Square Feet
Restoration	NA	6300	Square Feet
Septic System	NA	1292	Square Feet
Well	NA	0	Linear Feet

Type of existing structures/uses on site (*a home and garage are separate structures unless the garage is beneath the home).

Existing structures/use:	Foundation type:	Area (Length x Width) for each existing structure/use (square feet):	Units
Building - accessory structure	Concrete Slab	63	Square Feet

Does this project include the placement of fill in a Critical Dune Area?

Yes

Complete this table for projects involving Fill Above the Ordinary High Water Mark (OHWM) in Critical Dune Areas. Enter each activity/ location that corresponds with each activity selected in the previous question and enter the dimensions. Activities may be entered in one line of the table if they occupy the same impact footprint and cannot be broken out separately (Example: Activity - Driveway and Riprap slope). Multiple activities in different locations should be listed on different lines of the table.

Activity	Length (feet)	Width (feet)	Depth (feet)	Area (square feet)	Volume (Square Feet)	Volume (Cubic Yards)	Corrected Value for complex fill areas (square feet)
Just items listed in the proposed activities will be proposed fill (driveway, building, septic, etc.)	0	0	0	0	0	0	NONE PROVIDED
				Sum: 0	Sum: 0	Sum: 0	Sum: NaN

Type of Fill

Other: Building materials

If retaining walls are proposed indicate the total linear feet. Remember to include all existing and proposed walls used for landscaping and driveways.

0

What is the maximum slope proposed to be impacted?

<25%

Is the project within 100 feet measured landward from the dune crest?

Yes

Is sand being relocated onsite? If so, show location and access route on site plans.

On-site

Soil Erosion and Sedimentation Control (Part 91)

[Local Soil Erosion and Sedimentation Control Agency](#)

Attach the permit or letter from the County Enforcing Agent stating the project complies with Part 91, Soil Erosion and Sedimentation Control.

[SESC Permit - Cook.pdf - 08/30/2023 07:14 AM](#)

Comment

NONE PROVIDED

Vegetation Assurance

The law requires the property owner provide an assurance that the cutting and removal of trees and other vegetation for a proposed use in a critical dune area will be in accordance with the Forest Management Guidelines prepared by the Michigan Society of American Foresters.

[Frequently Asked Questions about a Vegetation Assurance](#)

Dune habitat present where work is proposed, including access route(s) (check all that apply):

Already Impacted/Existing Use

Attach a copy of the vegetation assurance

[Vegetation Assurance.docx - 08/16/2023 11:32 AM](#)

Comment

NONE PROVIDED

Utilities

If utility lines are proposed indicate the installation method.

Open trench

Special Use

Is an application for special use being submitted as defined by MCL 324.35301 (j)?

No

Special Exception

For more information about Special Exceptions, please visit the following link.

[Click here for FAQs of a Special Exception Application in Critical Dune Areas](#)

Are you applying for a Special Exception?

No

Upload of Proposed Site Plans

Required on all Site Plan uploads. Please identify that all of the following items are included on your plans that you upload with this application.

Site Plan Features	Existing and Proposed Plan Set
Scale, Compass North, and Property Lines	Yes

Site Plan Features	Existing and Proposed Plan Set
Fill and Excavation areas with associated amounts in cubic yards	N/A
Any rivers, lakes, or ponds and associated Ordinary High Water Mark (OHWM)	Yes
Exterior dimensions of Structures, Fill and Excavation areas associated with the proposed project	Yes
Dimensions to other Structures and Lot Lines associated with the project	Yes
Topographic Contour Lines from licensed surveyor or engineer when applicable	Yes

Upload Site Plans and Cross Section Drawings for your Proposed Project

[D-5849-SITE.pdf - 08/30/2023 07:15 AM](#)

Comment

NONE PROVIDED

Additional Required and Supplementary Documents

[Onekama Lot - road commission license.pdf - 08/08/2023 03:18 PM](#)

[Manistee Cty Road Commission Letter.pdf - 08/08/2023 03:18 PM](#)

[SS-JD-1712.pdf - 08/30/2023 07:16 AM](#)

Comment

NONE PROVIDED

Fees

Critical Dune Areas Fee:
+\$1300.00

Total Fee Amount:

\$1300.00

Is the applicant or landowner a State of Michigan Agency?

No

Attachments

Date	Attachment Name	Context	User
8/30/2023 7:16 AM	SS-JD-1712.pdf	Attachment	Lucas Richardson
8/30/2023 7:15 AM	D-5849-SITE.pdf	Attachment	Lucas Richardson
8/30/2023 7:14 AM	SESC Permit - Cook.pdf	Attachment	Lucas Richardson
8/16/2023 11:32 AM	Vegetation Assurance.docx	Attachment	Lucas Richardson
8/8/2023 3:18 PM	Onekama Lot - road commission license.pdf	Attachment	Lucas Richardson
8/8/2023 3:18 PM	Manistee Cty Road Commission Letter.pdf	Attachment	Lucas Richardson
8/8/2023 2:59 PM	Manistee County well permit.pdf	Attachment	Lucas Richardson
8/8/2023 2:59 PM	Manistee County septic permit.pdf	Attachment	Lucas Richardson
8/8/2023 2:23 PM	Owner authorization letter Spicer Group_Brian Cook_Signed.pdf	Attachment	Lucas Richardson

7/31/2023

To whom it may concern,

As the Owner of the property located at 8379 S. Portage Point Drive, Onkama MI 49675, I hereby authorize Lucas Richardson, P.E. and Brian Boals, P.E. of Spicer Group, Inc. to prepare and submit a permit application & drawings on my behalf for my property.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Cook", with a long, sweeping flourish extending to the right.

Brian Cook



District Health Department #10

Healthy People, Healthy Communities

Serving Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana, and Wexford

Manistee County • 385 Third St • Manistee, MI 49660 • (231) 723-3595 • Fax: (231) 723-1477

Re: Permit to construct a Water Well

Dear Homeowner:

Enclosed is the water well permit for which you recently applied. The permit has been approved and you may begin installation at any time. If you have any questions regarding the specific requirements of the water well permit, please do not hesitate to call this office. I would also be happy to answer any questions you may have on proper construction techniques.

The Michigan Water Well Construction and Pump Installation code, Part 127-Act 368 of the Public Acts of 1978, requires all licensed water well drillers to adhere to rule 325.1675 by submitting water well and pump records (Well Logs) within sixty (60) days of completing a water well. A copy of the completed water well and pump record (Well Log) should be sent to you and be kept as a part of your permanent household records.

State law requires the homeowner to sample the well water prior to it being used and/or consumed. Water bottles for your sample can be obtained from this office, by contacting the DEQ Lab directly at 517-335-8184, or from a certified independent lab.

If you have any questions, please call (231) 723-3595. This office is open Monday through Friday, 8:00 a.m. to 4:30 p.m. (8:30-5:00 for Mecosta)

Sincerely,

Frank Palatka, REHS/RS
Environmental Health Division
DHD #10 - Manistee County County Office

Enclosure(s)

For more information on Environmental Health services or other public health information beneficial to you and your community, please visit our website: www.dhd10.org

District Health Department 10

Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta,
Missaukee, Newaygo, Oceana, and Wexford
385 Third St
Manistee MI 49660
(231) 723-3595

Well Permit Number: **51-8341**

Permit Type: Residential Well

Permit Expires: November 13, 2024

Permit issued to:

J Andrew Cook
17435 Tiller Ct
Westfield, IN 46074

Permit For Facilities at:

Portage Point Rd
Twp: Onekama (T23N R16W) Sec: 28
Subdivision: Portage Point Lot: 5
Tax ID Number: 51-11-410-055-00

Permit Requirements:

Well to be installed minimum of 10', inland, from natural shoreline. Well shall not be installed on "made land". Well location will be determined the day of installation. Well drilling contractor and Frank Palatka RS will measure 10' off the natural shoreline. Well to be installed before septic system. No deviation will be tolerated with this permit. Any deviation from permit requirements may result in permit being revoked. Homeowner to comply with EGLE requirements. Install the well per the well construction code. Submit the well record within sixty (60) days of the completion of the well. The water well driller is required to notify this office twenty-four (24) hours in advance of drilling the well. It is the homeowner's responsibility to have the water tested for coliform bacteria. The water sample results must be free of coliform bacteria. Satisfactory water samples must be submitted for final well approval. Bottles may be obtained from the health department or from a certified laboratory. Well must maintain a minimum of 50 ft isolation from septic tank and 75 ft from all drywell/trenches. The well may be located in a flowing well area. The well must be installed according to the well construction code.

Variances:

No Variances

Drawing:

See Next Page

Well Driller
Please call to
make arrangement

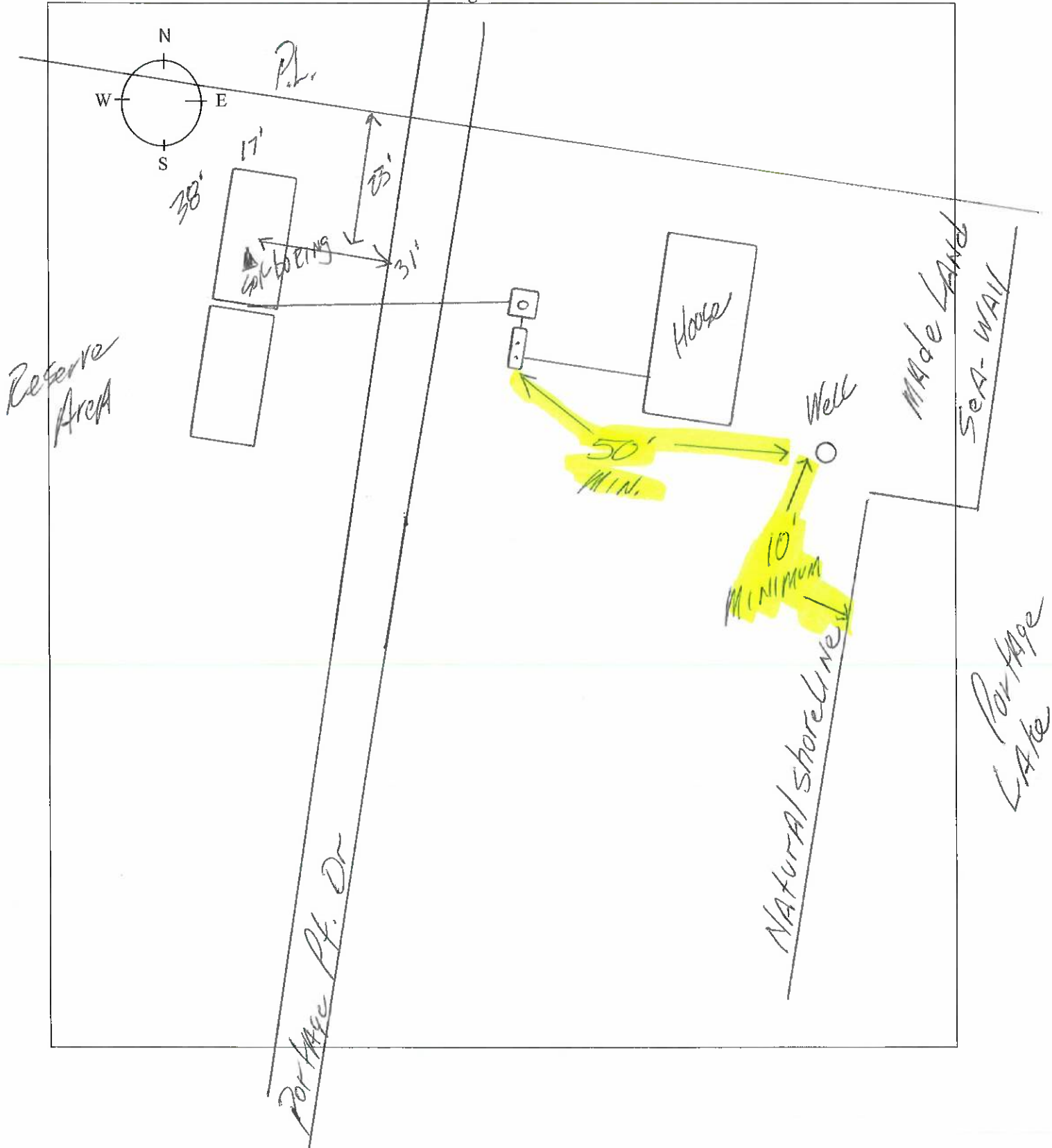
District Health Department #10

Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana and Wexford Counties

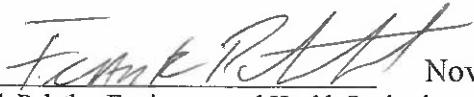
Site Plan

Permit # 51-8341 Well 51-8342 Septic
Address: Portage Pt Rd
Property Tax ID# 51-11-410-055-00

Drawing not to scale



Residential Well Isolation Distance in Feet			
Agriculture Chemical Storage	150	Septic Tank	50
Animal/poultry yard	50	Sewage Pump Chamber	50
Building	3	Sump Pit	10
Buried Gravity Sewer (unknown type)	50	Surface water	10
Buried Gravity Sewer (cast-iron with water tight joints)	10	Underground or above grade fuel tank (1,100 gal or larger, no secondary containment)	300
Buried Gravity Sewer (ductile-iron or plastic with watertight joints)	10	Underground or above grade fuel tank (1,100 gal or larger, secondary containment)	50
Buried Pressure Sewer	50	Underground or above grade fuel tank (less than 1,100 gal.)	50
Drainfield	50 (75 for Type III)	Outhouse	50
Drywell	75	Oil/gas Wells	300
Grease Trap	50	Domestic Sludge Disposal Site	800
Landfill	800	Municipal Sludge Disposal Site	300
Refer to Part 127, Act 368 PA 1978 for complete listing of minimum isolation distances.			


 November 14, 2022 Approved Denied Extended
 Frank Palatka, Environmental Health Sanitarian
 Well Permit Number: **51-8341**

Environmental Health Regulations require you to notify the Health Officer 24 hours prior to beginning construction of a septic system or drilling water well. Contractor/owner to be aware that other local or state permits maybe required (ie. soil erosion, natural rivers). This permit is for sanitary waste only.

Copies to: ___ Health Department ___ Property Owner ___ Sewage Contractor ___ Well Driller ___ Construction Codes ___ Zoning

REQUIREMENTS FOR INSTALLING A SINGLE FAMILY RESIDENTIAL WELL

The Michigan Public Health Code, Act 368, P.A. 1978, as amended, Part 127, and the Michigan Water Well and Pump Construction Code are the legal basis for residential water well construction in the state. The statute requires that water wells **MUST** be installed by a licensed well drilling contractor only! However, the Act does allow *one exception* for an unlicensed person to install a well for certain limited uses upon property "**WHICH IS THEIR PERMANENT RESIDENCE**", and which services **ONLY** their own single family residence (*provided that such "owner installed" well and pump installation must meet all* well and pump code construction requirements*). [* Persons who are legally eligible, and desiring to construct a well to serve their own residence **must FIRST contact the sanitarian** for license exemption requirements, and for **additional well construction and pump installation instructions!**]

{ **ATTENTION:** *Be advised that a driven well point well is NOT PERMITTED for use as a water supply well in Michigan without obtaining PRIOR written approval from the Health Officer!* }

The WELL INSTALLER IS RESPONSIBLE to assure that the well construction is completed in accordance with the requirements of the Well Construction Code including any special conditions and construction specifications which may be specified upon your well permit form.

IN ALL CASES OF WATER WELL CONSTRUCTION:

- a. The minimum depth of the well casing must be 25'. The top 25' of the well casing shall not be used as a suction line; unless protected as required via a drop pipe installed inside the casing, or a properly installed casing vent.
- b. The top of the well casing must terminate in a vertical line at least 12" above the land/ground surface. *Well pits are no longer approved in Michigan; the local health department no longer has the authority to grant deviations for the installation or the use of well pits.*
- c. All below grade casing connections must be made with water tight, metal to metal, welded or threaded connections or with an approved commercial pitless adapter unit.
- d. The well must be equipped with a properly installed vent; unless a single pipe packer jet is used, or on a flowing well where the flow rate exceeds the pump capacity. Again, the top 25' of well casing shall not be used as an unprotected suction line!

A WATER WELL SHALL BE LOCATED:

- a. 800' minimum away from landfills, or seepage waste land application sites.
- b. 300' minimum away from oil and gas wells, petroleum processing or storage facilities, wastewater or sludge land application sites, underground or above grade storage tanks of 1,100 gallons or more not equipped with secondary containment, etc..
- c. 150' minimum away from a preparation or storage area for fertilizers, agricultural chemicals, or other chemicals which may result in contamination of the soil or groundwater.
- d. 50' minimum away from septic tanks, sewage pump chambers, grease traps, a pressurized sewer line, subsurface disposal fields, dry wells, seepage pits, outhouses, animal or poultry yards, wastewater handling or disposal unit or site of liquid draining into the soil, underground or above grade storage tanks of 1,100 gallons or more with approved secondary containment, and underground (or basement) or above grade storage tanks of less than 1,100 gallons which store non-commercial motor or heating fuels for consumption/use on the same premises where the tank is located.
- e. 10' minimum away from a lake, pond, river, or stream, etc., a sump, pit or unfilled space below the ground surface, or a buried gravity-flow sewer constructed of schedule 40 pvc plastic with watertight joints, or of service weight or heavier ductile-iron pipe with watertight joints, or of other approved (by MDEQ) material.
- f. 3' minimum horizontally away from a building, pump room, or any projection thereof, except for a well house or a basement offset.
- g. In an area not subject to flooding, or seasonally standing (ponding) surface water.
- h. To be accessible for cleaning, treatment, repair, testing, inspection, etc..

After well installation is completed, the well owner shall be responsible for maintaining the required isolation distances upon the property owned by the well owner. The well owner shall also be responsible thereafter to maintain access to the well for access by a well drilling machine. The well owner shall be responsible to grade (and thereafter maintain) the ground surface immediately adjacent to the well casing so surface water is diverted away.

- { OVER PLEASE -- ADDITIONAL REQUIREMENTS ARE ON THE BACKSIDE! } -

GENERAL WELL CONSTRUCTION CODE REQUIREMENTS:

uring well construction, the open annular space in the ground around the well casing (or the space between the surface casing and protective casing) shall be properly grouted to prevent contaminants from moving downward to the aquifer. The grouting method, grouting material and amount used must be reported on the Michigan well record (well log) form which is provided along with your well construction permit.

Disinfect the well and pumping equipment (also the house plumbing system if finished) with a minimum of a 100 parts per million (PPM) chlorine solution and allow a minimum contact time of ten (10) hours prior to flushing out all traces of the chlorine. **The water supply owner is responsible for collecting a water sample and obtaining "safe" bacteriological laboratory analysis from a new, repaired, or from a reconditioned well PRIOR to use of the well.**

NOTE: A well drilling contractor is responsible for chlorinating only that portion of the water supply on which he/she has performed work.]

UNLESS the well owner submits **PRIOR documentation** to the health officer that the old water well (or wells) existing on the property **is (are) properly constructed [i.e. meets minimum State Well Construction Code specifications]**, **is (are) properly isolated from contamination sources**, and **is (are) currently operational**, this **WELL CONSTRUCTION PERMIT REQUIRES** that the well owner shall abandon and that the Well Drilling Contractor employed shall properly plug the old water well(s) **immediately upon completion of the new water well hereby authorized**. The old water well(s) plugging documentation shall be properly recorded upon the Well Log {or upon a separate Abandoned Well Plugging Record(s)} form. The well owner **is not authorized** plug the old water well(s) himself/herself **UNLESS** he/she first consults with the health officer, and receives **written authorization and instructions** from the health officer before starting! The Well Drilling Contractor **is not excused** from properly plugging the old water well(s) **UNLESS** the well owner receives written authorization from the health officer to plug the old well(s) himself/herself! It is unlawful for **anyone other than a licensed well drilling contractor or the actual well owner** to abandon a well.

The **WELL INSTALLER** is responsible for the proper abandonment and plugging of a dry hole (or holes); i.e. a well bore hole where water is not found. The method used to plug the dry hole must be recorded on a well log along with the **same information** as is required for any abandoned well.

★ The **WELL INSTALLER BY LAW** must submit the properly completed and signed Michigan well record (well log form), and the pump installation record, to the owner **and** to the local health department **within sixty (60) days** after well construction and pump installation completion.

★ **ATTENTION:** This well permit addendum provides only a general supplemental outline of requirements set forth in the **MICHIGAN WELL CONSTRUCTION AND PUMP INSTALLATION CODE**. A well owner **and** a well installer are **both** fully responsible for compliance with all other requirements mandated in the state rules.

★ Please be advised that the information contained in this permit addendum is applicable **only to single family residential well construction**. A well serving two (2) or more residential units, or for **any public or commercial use**, must meet the stricter requirements of the Michigan Safe Drinking Water Act / Act 399, P.A. 1976, as amended.

MICHIGAN PLUMBING CODE AND OTHER WELL CONSTRUCTION CODE REQUIREMENTS

Plastic water line used from the well to the house must be at least 160 P.S.I. and must be marked "NSF-PW" on the pipe.

Only Michigan Department of Environmental Quality APPROVED frost proof yard hydrants may be used. Yard hydrants constructed with below grade stop-and-waste valves (weep holes) to allow drainage into the surrounding soils are prohibited in Michigan.

Where hand pumps are to be used, they **must be of the M.D.E.Q. APPROVED design**; i.e. must have a closed spout directed downward, and have a pump rod that operates through a stuffing box and packing nut. A protective hand pump shroud is also recommended.

[Rev.d 10/2000]

Your new private water well is your personal source for cold, clear, and healthful drinking water. It provides water for all of your other household needs, including cooking, bathing, laundry, and gardening. In many ways, your well water is the life-blood of your home. Today's water wells are designed and constructed to provide decades of reliable service. They are installed by state registered water well industry professionals in accordance with stringent standards in the state well code.

Having a private well gives you a degree of independence. You will not have treatment chemicals (such as chlorine or fluoride) automatically added to your drinking water unless you choose to install a water treatment device. You will never be without water because of a water main break. Monthly or quarterly water bills will not arrive in the mail. The minimal electrical cost to run the water pump and any water treatment devices that you choose will hardly be noticed in your electric bill.

But along with that independence comes responsibility. Since your water does not come from a city, village, or township public water supply, no one automatically checks your water quality. Local power outages can leave you without water. And you are responsible for maintenance and operation of your water system and monitoring of water quality.

You have invested several thousand dollars in your new private water supply. Protect your investment and your family's wellbeing by taking an active role to ensure the safety of your drinking water source. This brochure gives some suggestions on operation and maintenance that will help keep your water system in a sanitary condition. By following these suggestions, you will also be doing your part to protect Michigan's valuable natural resource.....ground water.

Recordkeeping

Your water well drilling contractor should have given you a Water Well Record. This record (required by state law) shows the construction details of the well and pumping equipment. The well depth, pumping rate, geologic formations penetrated, static water level, and drilling method are among the items featured on the well record. If your builder or developer hired the well driller, be sure you get a copy of the record from them. Copies can also be obtained from the local health department. Keep all records pertaining to your well (well record, billing invoice, equipment warranties, water sample results, and maintenance records) in a secure location.

Water Sampling

Having safe drinking water is a basic human need. Every well owner wants the peace-of-mind that comes from knowing that their drinking water is safe. Individual property owners are responsible for sampling the water from private wells.

An initial sample to detect coliform bacteria (a type of bacteria associated with feces, sewage, and surface water) must be collected before a new or repaired well is placed into service.

The well driller was required to disinfect your new water system upon completion. If a chlorine bleach taste or odor is present in the water, flush the system (not into your septic tank) until the taste/odor disappears. Sometimes the system must be redisinfecting and refilled to rid the well of bacteria introduced during the installation process.

Coliform bacteria testing and additional testing for some chemicals may have been done after the well was completed. Elevated nitrate in drinking water can cause serious illness in infants less than six months of age, and high levels of chloride can corrode water pipes and fixtures.

Therefore, it is important to obtain a partial chemical water test. In some counties, the local health department collects the samples as part of the well permitting/inspection process. Some well drillers include water sampling with their well installation package. If your new home was financed by a mortgage lender, more extensive chemical testing may have been done.

Be sure you have the water test results. Annual water testing for coliform bacteria is advised. Immediate testing is recommended if there is a sudden change in your water's taste, odor, or appearance. Obtain water sample containers and advice on which tests to run from your local health department.

Ground Water Quality

Drinking untreated groundwater is different from drinking water from a municipal pipeline. If you relocated into your present home from a city or village, you may notice that your water tastes different. Many well owners prefer well water to chlorinated city water. Naturally occurring minerals can affect the taste, odor, and appearance of well water. Hardness, iron, chloride, tannins, manganese, sulfates, and hydrogen sulfide are compounds that can affect the aesthetic quality of the water. If your water's taste, odor, or appearance is objectionable, you may want to consider purchasing a water treatment unit. A reputable water treatment specialist can diagnose and treat the problem.

Maintain the Wellhead

The wellhead is the portion of the water well extending above ground. Because of a contamination risk, state law prohibits buried wellheads. If you intend to landscape around your well, be sure the casing remains at least 12 inches above ground.

Do not plant shrubs or trees near the well if their growth will eventually cover the well.

The cap on the top of your well was designed to keep rainwater, insects, and small animals out of the well. Newer well caps have screened air vents that allow atmospheric air to enter the well as water is withdrawn from the well. This results in a more sanitary water supply. Periodically, the well cap should be checked to see that it is securely affixed to the casing. Any debris that has accumulated on the well vent screen should be removed. Broken well caps or damaged screens should be replaced.

Grading of the ground surface to drain surface water away from the well is the owner's responsibility. Keeping rainwater, meltwater, and floodwater away from the well reduces contamination risk. The area surrounding the well should be mowed, but caution is advised to prevent damage from lawn mowers or tractors. If you plow snow or ride a snowmobile near your well, make sure your well is staked before the snow flies. Not only can the well be severely damaged (resulting in contaminants entering the well) when the casing pipe is struck, but serious personal injury can occur.

Plan your driveway or parking area away from the well site. If close placement to a road or parking area cannot be avoided, it is wise to install protective vertical steel piping around the well. Costly repairs to the well and vehicle can result if precautions are not taken.

Control Contamination Sources

When the location of your new well was selected, contamination sources in the vicinity were taken into consideration by the contractor and local health department sanitarian. Minimum isolation distances from various contamination sources (e.g., sewage systems, sewer lines, chemical or fuel storage tanks, etc.) are specified in the state well construction code. After the well

is installed, maintain the isolation and keep contamination sources away and downhill from the well.

Some points to remember are:

- Store bulk containers of hazardous chemicals, such as motor oil, gasoline, fertilizers, pesticides, herbicides, degreasers, cleaners, paints, thinners, agricultural chemicals, and pharmaceuticals at least 150 feet from your well.
- Do not use hazardous chemicals near the well if it can be avoided.
- Do not establish an animal feedlot around the well.
- Never keep a pet tethered to a well casing.
- Do not fuel vehicles or lawnmowers near your well.
- Snow, wood chips, straw, leaves or other debris should not be piled around your well.

Unused, abandoned wells can be a direct pathway for contaminants to reach the ground water. Plugging abandoned wells is a worthwhile and logical means of protecting your new well. The closer the abandoned well is to your new well, the greater the contamination hazard. State law requires abandoned wells to be plugged by filling them from the bottom up with impermeable grout materials.

Cross-connections are another means of contaminating a water system. A cross-connection is a connection between a water system and a sewage system or between a water supply and a pipe or device that contains a contaminant. Most cross-connections are associated with older plumbing systems. Water softener discharge piping connected directly to a sewer line is an example of an unapproved

cross-connection. Because of plumbing code requirements, new homes should not have cross-connections. Vacuum breakers, air gaps on outlet pipes, anti-siphon devices and backflow preventers are common means of preventing contamination from cross-connections.

Keep the Well Accessible

Today's new water wells are reliable and trouble-free. However, occasionally a pump may need replacement due to normal wear or a lightning strike. Other maintenance is rarely needed. To service the well, a well drilling contractor may need to drive a pump hoist truck or well rig near the well. Therefore, keeping the well accessible is a must. Do not build around or over the well. If you plan to build an addition, garage, pole barn, deck, or other structure, plan to maintain access to your well.

Well Performance

Usually, water quality remains fairly consistent over the life of a well. As your well ages, slight changes may occur. Naturally occurring minerals in the water can build up and reduce well yield. Biofilms due to harmless ground water microorganisms can form within the well casing, well screen, drop pipe, or well bore. These films or silty deposits can occasionally dislodge and show up in the water. They can also plug the water intake. Mineral build-up or biofilm formation is a result of local ground water quality, which varies across the state. Over the life of your well, rehabilitation may be needed to improve your well's performance.

Sudden water quality changes (taste, odor, appearance, or sand pumping, etc.) may signal a serious problem. Water sampling and a thorough diagnosis of the problem is advised. If the volume of water or the water pressure decreases suddenly, if the area surrounding the well becomes wet, or if the pump runs when no water is being used, immediately contact a well driller (preferably the one who installed your

well). Water well drilling contractors have the specialized skills and equipment needed to solve your well problem.

A common question from new well owners is "How long is my well warranted?" The state well code does not address warranty coverage. The general industry standard is one year from the date of installation. Manufacturers generally warranty submersible pumps for at least one year and pressure tanks for at least five years. Many contractors offer extended coverage.

Michigan Water Well Facts

- An average of 18,000 water wells are drilled each year in Michigan.
- Michigan has 1.25 million private household wells—more than any other state (based on US Census and adjustment for wells drilled since 1990).
- 2.6 million Michigan citizens are served by private household wells (Source:USGS).
- The total ground water use in Michigan is about 700 million gallons per day.

For further information contact your local health department or Michigan Department of Environmental Quality Office of Drinking Water and Municipal Assistance Environmental Health Section Noncommunity and Private Drinking Water Supplies Unit Constitution Hall, 525 West Allegan P. O. Box 30241 Lansing, Michigan 48909-7741 Phone: 517-284-6542 Fax: 517-241-1328 Internet: <http://www.michigan.gov/deq>

The Michigan Department of Environmental Quality (MDEQ) will not discriminate against any individual on the basis of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. Questions or concerns should be directed to the Quality of Life Human Resources, PO Box 30475, Lansing, MI 48919.

Your New Water Well



- Water Sampling
- Groundwater Quality
- Maintaining the Wellhead
- Controlling Contamination Sources
- Keeping the Well Accessible
- Well Performance
- Recordkeeping
- Contact Information



Department of
Environmental Quality
PURE MICHIGAN

Office of Drinking Water and
Municipal Assistance

EQC 2105 (Rev. 12/2013)



District Health Department #10

Healthy People, Healthy Communities

Manistee County • 385 Third Street • Manistee, MI 49660
Phone: 231-723-3595 • Fax: 231-723-1477 • www.dhd10.org

Serving Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana, and Wexford

Re: Permit to construct a Sewage Treatment System

Dear Homeowner:

Enclosed is the sewage treatment permit for which you recently applied. The permit has been approved and you may begin installation at any time. If you have any questions regarding the specific requirements of the sewage system permit, please do not hesitate to call this office. I would also be happy to answer any questions you may have on proper construction techniques. Local codes require notification to this office prior to back filling or covering the septic system.

Sewage Disposal Contractor Licensing

The Sanitary Code for District Health Department #10 requires that "Any person, firm, company, or corporation who shall engage in the business of installation of a sewage disposal system, or any part thereof under the provisions of this sanitary code MUST be licensed by District Health Department #10."

If you have any questions, please call (231)723-3595. This office is open Monday through Friday, 8:00 a.m. to 4:30 p.m.

Sincerely,

Frank Palatka
Environmental Health Division
DHD #10-Manistee County Office

Enclosure(s)

For more information on Environmental Health services or other public health information beneficial to you and your community, please visit our website: www.dhd10.org



Manistee County Road Commission

ORIGINAL

425 Parkdale Avenue • Manistee, Michigan 49660 • (231) 723-6522 • (231) 723-1480

July 27, 2005

Mr. Andy Cook
15959 Bridgewater Club Blvd.
Carmel, IN 46033

Re: Lot 5, Block 25,
Al Turner Amended License Agreement

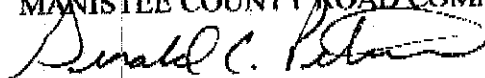
Dear Mr. Cook:

Enclosed is a copy of the Amended License Agreement between the Board of County Road Commissioners for Manistee County and Al and Susan Turner concerning Lot 5, Block 25, Plat of Portage Point. The original has been recorded with the Manistee County Register of Deeds.

This letter is to confirm for you that it is understood and acknowledged by the Manistee County Road Commission that if the terms and conditions of the Turner License Agreement dated January 16, 1994, as amended by the Amended License Agreement, are satisfied, the drain field or dry well you install West of Portage Point Drive, as constructed, will be located in Avenue A, a platted but unopened street in the Plat of Portage Point. The Road Commission does not certify Avenue A in this location to be open to public travel and has no objection to the installation of equipment allowed under the license agreement in the platted street, so long as the setbacks from Portage Point Drive as constructed and the terms and conditions of the license agreement, as amended, are maintained.

Very truly yours

MANISTEE COUNTY ROAD COMMISSION



Gerald C. Peterson, Manager

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Duane T. Anderson, Chairman
Manistee, Michigan
Sylvester C. Flerity, Vice-Chairman
Manistee, Michigan
Jerry R. Ware, Member
Manistee, Michigan

Gerald C. Peterson, Manager
Manistee, Michigan
James M. Albee, P.E.
Manistee, Michigan
Jeffrey T. Gardner, Board Secretary
Manistee, Michigan

PERMIT TO CONSTRUCT

PERMIT NUMBER **51-3436**

DISTRICT HEALTH DEPARTMENT NO. 10

Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana, and Wexford Counties

Permit Type:
New - Residential Sewage

PERMIT FOR FACILITIES AT:

STREET ADDRESS Portage Point Drive
TOWNSHIP Onekama COUNTY Manistee
SECTION 28 TOWN 23 RANGE 16
SUBDIVISION Portage Point Lot 5 Block 25
TAX ID NUMBER 51-11-410-055-00

PERMIT ISSUED TO:

Andy Cook
15959 Bridgewater Club
Carmel, IN 46033
TELEPHONE NUMBER 317/903-6744
PROPERTY OWNER Andy Cook

DESIGN CRITERIA:

- SINGLE FAMILY, NO. OF BEDROOM 3
- GARBAGE GRINDER
- BASEMENT PLUMBING
- OTHER, GAL/DAY _____ gal
- SEASONAL WATER TABLE _____ 5+ ft

SOIL BORINGS
60" MEDIUM SAND

PERMIT TO INSTALL, CONSTRUCT, OR REPLACE

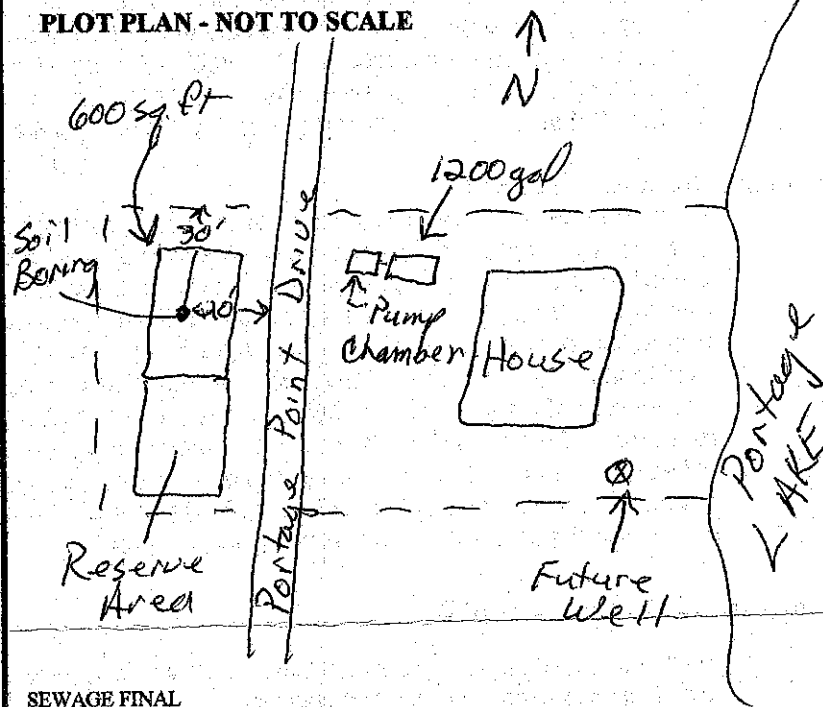
DATE PERMIT EXPIRES 7/7/06

SEPTIC TANK SIZE	<u>1200</u> gal min
DRAINAGE SYSTEM	<u>600</u> sq ft
MIN WELL ISOLATION	<u>50</u> ft

SPECIAL CONDITIONS OF PERMIT

WELL PERMIT REQUIRED BEFORE THE WELL IS PUT IN.

PLOT PLAN - NOT TO SCALE



SEWAGE FINAL

INSP. TYPE _____ DATE _____ BY _____
INSP. TYPE _____ DATE _____ BY _____

TYPE OF TREATMENT SYSTEM _____
SYS. DIMENSIONS _____ ISOL. DIST. _____ S. TANK _____

NOTES _____
INSPECTION DATE _____ CONTRACTOR _____
TYPE A=Affidavit P=Partial F=Final

WELL FINAL
WELL INSPECTION DATE _____ BY _____

CASING DIAMETER _____ CASING MATERIAL _____
APPROVED CAP YES _____ NO _____ PUMP TYPE _____

COMMENTS _____

- SEWAGE PERMIT ISSUED DENIED
- WELL PERMIT ISSUED DENIED
- WELL TO BE ABANDONED

Don Thompson 7/7/05
HEALTH DEPARTMENT REPRESENTATIVE DATE

Vegetation Assurance for 8379 S Portage Pt Drive – 8/16/2023

Type of Plant Community: Dune - Sparse trees/low growing vegetation

No trees within the critical dune will need to be removed to construct the septic system.

The site will be reestablished with natural vegetation at the completion of the project.

To protect the natural appearance of the area, a very minimal amount of fill material will be brought to the site. Other than the pavement materials for the driveway, the project will be constructed mostly by relocating the existing soil on site.

District Health Department 10

Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana, and Wexford

385 Third St
Manistee MI 49660
(231) 723-3595

Sewage Permit Number: **51-8342**

Permit Type: Residential Septic

Permit Expires: November 13, 2024

Permit issued to:

J Andrew Cook
17435 Tiller Ct
Westfield, IN 46074

Permit For Facilities at:

Portage Point Rd
Twp: Onekama (T23N R16W) Sec: 28
Subdivision: Portage Point Lot: 5
Tax ID Number: 51-11-410-055-00

Design Criteria:

Permit Type Residential Septic
No of Bedroom: 4
Other, Gal/Day: 600 gal

Basement Plumbing: No
Garbage Disposal: Yes
Seasonal High Water Table: >84 inches

Soil Boring:

Hole	Starting Depth	Ending Depth	Texture	Color	Comments
1	0	84	LS (Loamy Sand)	Tan	Topsoil removed

Components Table(s):

Septic Tank; Volume: 2000 gal;
Bed/Pad Dispersal Area; Length: 38 ft; Width: 17 ft;

Permit Requirements:

Septic tank to be installed after well has been installed. Contractor to install an EIJen GSF system. Homeowner to obtain proper permits from the Manistee County Road Commission to bore effluent line under Portage Point Drive. No deviation will be tolerated with this permit. Any deviation from permit requirements may result in permit being revoked. Homeowner to comply with EGLE requirements. Contractor/installer is required to notify this office 24 hour in advance of backfilling or covering the septic system. System shall not be covered until final approval has been granted by this department.

Variances:

Variance granted to allow a reduction in drainfield size, due to lack of space. Advanced treatment will be installed. Variance granted to allow a septic system to be less than 10' to property line, due to lack of space.

Drawing:

See next page

District Health Department #10

Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana and Wexford Counties

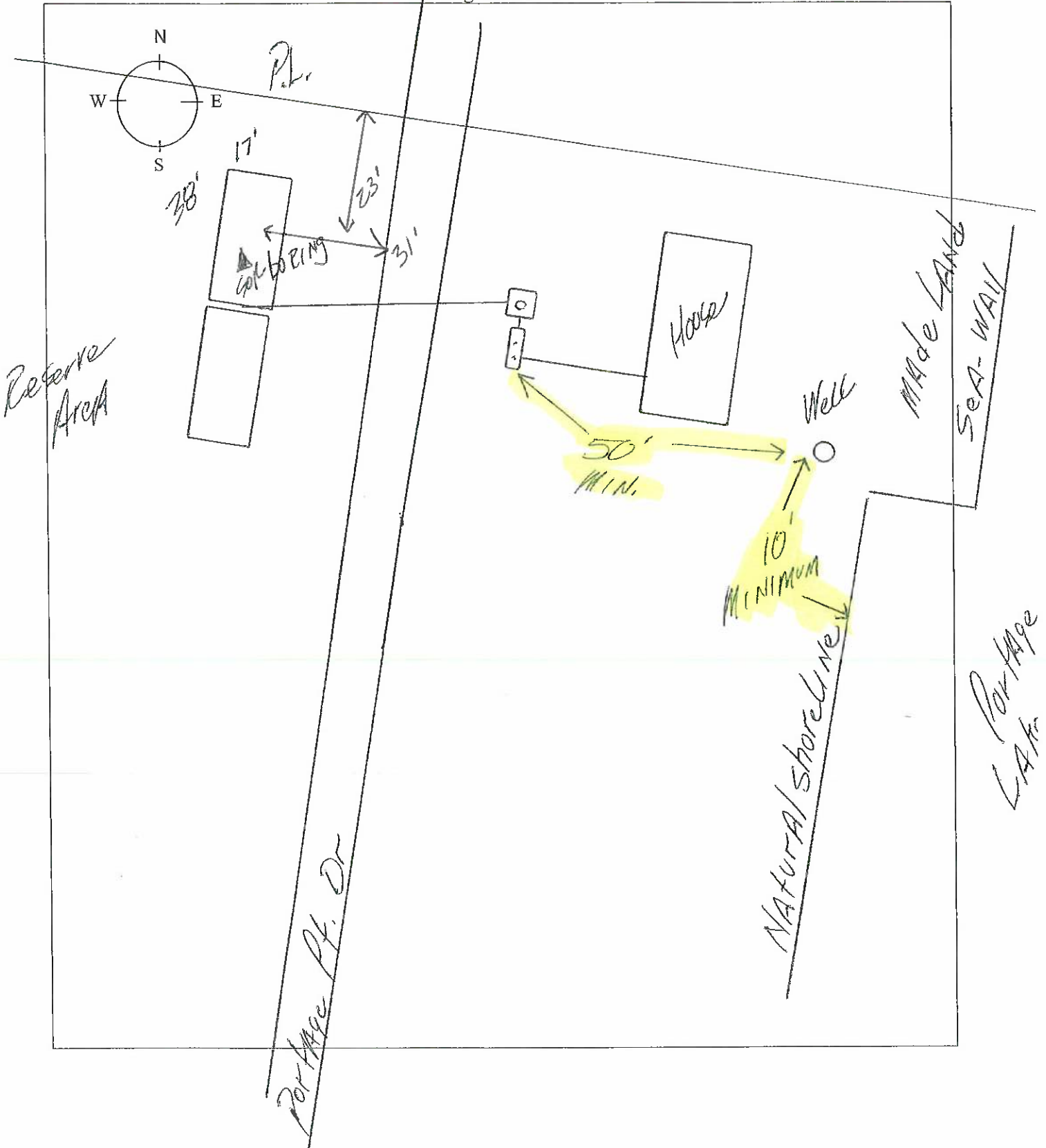
Site Plan

Permit # 51-8341 Well 51-8342 Septic


Address: Portage Pt Rd

Property Tax ID# 51-11-40-055-00

Drawing not to scale



Required Isolation Distances in Feet				
	Septic Tank	Drainfield (Bed/Trench)	Dry Well or Block Trench	Sewer Line **
Private Wells	50	50	75	10
Type II/III	75	75	75	75
Properly Lines	5	10	10	5
Basement Walls	10	10	15	--
Lake Streams	50	100	100	10
Pressurized Water Lines	10	10	10	5
Ravines Banks, Drop offs	10	15	20	5
Swimming Pools	10	10	10	10
* see section 5.3.09				
** closed pipe, sealed joints				


 November 14, 2022 Approved Denied Extended
 Frank Palatka, Environmental Health Sanitarian
 Sewage Permit Number: **51-8342**

Environmental Health Regulations require you to notify the Health Officer 24 hours prior to beginning construction of a septic system or drilling water well. Contractor/owner to be aware that other local or state permits maybe required (ie. soil erosion, natural rivers). This permit is for sanitary waste only.

Copies to: ___ Health Department ___ Property Owner ___ Sewage Contractor ___ Well Driller ___ Construction Codes ___ Zoning

Signs of a Failing System

The most obvious septic system failures are easy to spot. Check for pooling water or muddy soil on or around your septic system. Notice whether your toilet or sink backs up or drains slowly when you flush or do laundry. You might also notice strips of bright green grass over the drainfield.

When partially treated wastewater contaminates either surface water or groundwater, it can result in the pollution of wells or nearby lakes, rivers and streams. This type of failure is not easy to detect. Check with a septic system professional or the local health department if you suspect such a failure.

Special Considerations

Garbage Disposals

A garbage disposal is not recommended for use with a septic system, but if it is absolutely necessary to install one, a larger capacity septic tank will be required.

Other water discharges

Your septic system is not designed to treat short term large quantities of water. Divert water softener, roof drains, house footing drains, hot tub, swimming pool and sump pump water discharges to lawn areas away from the location of the septic system.

Why are we concerned about Septic Systems?

District Health Department #10 lies within many watersheds. Currently the vast majority of the homes that lie within the boundaries of District Health Department #10 are served by on-site private septic systems. Failing septic systems are suspected to be a significant contributing source of pollution in our watersheds. Unfortunately, septic systems are often neglected and not routinely maintained after the initial installation. A malfunctioning system can contaminate our waterways and groundwater supply.

Remember...

Your septic system is your responsibility! Follow a few simple rules and it can provide you with many years of safe and effective wastewater treatment.

For more information please call the local office of District Health Department #10:

Crawford County Office: 989-348-7800

Kalkaska County Office: 231-258-8669

Lake County Office: 231-745-4663

Manistee County Office: 231-723-3595

Mason County Office 231-845-7381

Mecosta County Office: 231-592-0130

Missaukee County Office: 231-839-7167

Newaygo County Office: 231-689-7300

Oceana County Office: 231-873-2193

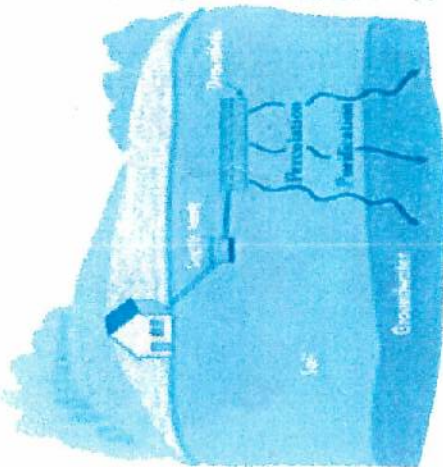
Wexford County Office: 231-775-9942

This brochure is brought to you by:

The Environmental Health Division
of District Health Department #10

A Homeowner's Guide To:

SEPTIC SYSTEM Use & Maintenance



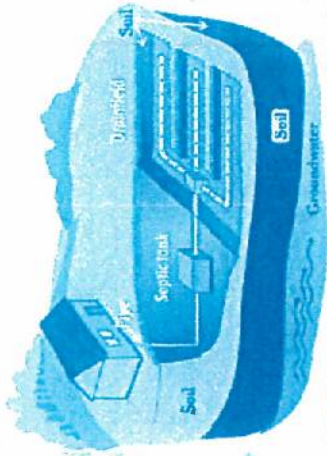
District Health Department #10



dhd10.org

Overview

In the absence of a municipal sewer system, a properly designed, constructed, and maintained septic system can provide a safe and adequate means of treating residential sewage. All waste water from toilets, sinks, laundry and bath tubs & showers need to drain into the septic system.

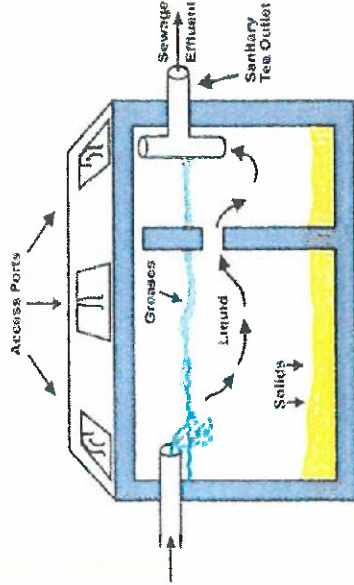


Poorly maintained and failing septic systems can cause serious problems. Sewage from overloaded systems can pond on the ground near the drainfield or back up into buildings. These systems can contaminate ditches, creeks and shallow drinking water supplies. Animals and people may become ill from contact with these polluted waters.

If you have further questions regarding your septic system please contact your local County Health Department branch office.

How Septic Systems Work

Your septic system has two main components. The septic tank provides the first step in treatment; holding all waste for a period of time in which the sewage is conditioned and treated by anaerobic bacteria. The septic tank settles out solids so only liquid reaches the drain field.



The second step is the drainfield. The drainfield receives the septic tank effluent where aerobic treatment begins. It is typically a network of perforated pipes laid in individual gravel-filled trenches, or in rectangular stone beds, in dry permeable soils; sometimes stone-less H.D.P.E. leach chambers are also utilized. As sewage effluent is distributed through the drainfield, the aerobic biological action of microscopic bacteria, mold, fungi, and minerals in the soil all help to "purify" the waste water.

Do's and Don'ts

- Learn the location of your septic tank and drainfield. Keep a sketch of it with your maintenance record for future service visits and inspect the septic tank annually.
- Pump out septic tank sludge every 3 to 4 years.
- Your septic system is not a trash can. Do not put grease, disposable diapers, sanitary products, toxic chemicals, paints, prescription drugs, paper towels or pet litter into your septic system.
- Do not use commercial septic tank additives. Contrary to their claims, additives may not make your septic system work better and some additives may be harmful to septic system operation.
- Keep vehicles and "heavy" equipment off the drainfield area and do not cover the septic system with impervious surfaces (asphalt or cement).
- Keep trees and rooted plants at least 10' away from the drainfield.



Jul 20 3 04 PM '05

LIBER 0955 PAGE 0835

Penny A. Popora
Register of Deeds
Manistee, Michigan 49660

AMENDED LICENSE AGREEMENT

Now come **The Board of County Road Commissioners of Manistee County, Michigan**, a public body corporate, organized and existing under the laws of the State of Michigan, of 465 E. Parkdale Avenue, Manistee, MI 49660 (hereinafter referred to as the "Licensor"), and **Alfred A. Turner and Susan Turner**, husband and wife, as tenants by the entireties, of 5620 Queens Kew, Bonita Springs, Florida 34134 (hereinafter referred to as the "Licensee");

WITNESSETH:

WHEREAS, previously the Licensor has granted a license to Henry Beneke, Jr., dated September 21, 1973, and recorded at Liber 321, pages 61-63, Manistee County Records, (the "Beneke License"); and

WHEREAS, Licensor has previously granted a license to Licensee dated December 16, 1993, and Licensee accepted the license, on January 16, 1994, as disclosed by those instruments recorded at Liber 587, pages 718-720, Manistee County Records, (collectively, the "Turner License"); and

WHEREAS, Licensee is presently the owner of the following described property described in the Turner License, to-wit:

Situated in the Township of Onekama, Manistee County, Michigan, and further described as follows, to-wit: Lot Five (5), Block Twenty-five (25), Plat of Portage Point, according to the recorded plat thereof.

(the "Property"); and

WHEREAS, the Property is bisected by Portage Point Drive, f/k/a Portage Point Road; and

WHEREAS, the parties desire to amend the Turner License on the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

1. Notwithstanding anything to the contrary contained in the Turner License, the Turner License shall be and is hereby made assignable, transferable and descendible by the Licensee and all future owners of the Property and shall be considered an appurtenance to the Property such that no one other than Licensee, or their heirs, successors or assigns who become owners of the Property, shall have any right, title, claim or interest in the Turner License.

2. Notwithstanding anything to the contrary contained in the Turner License, the Turner License shall not be revocable by Licensor, except upon a violation of one or more of the terms and conditions contained in the Turner License. In the event Licensor claims that a violation of one or more of the terms and conditions contained in the Turner License has occurred, Licensor shall give written notice by first class mail, postage prepaid, to the then current owner of the Property as disclosed by, and to the address listed on, the most recent Onekama Township tax roll, specifying the nature of the violations not less than 21 days prior to taking action to revoke the License. Licensor shall give the owner of the Property, within such 21-day period, an opportunity to appear before Licensor, in person or by agent or attorney, at a regular meeting of Licensor, or at a special meeting called for that purpose. Licensor shall not

revoke the Turner License if, within such 21 day notice period, the owner of the Property cures the alleged violations for which notice has been given.

3. Notwithstanding anything to the contrary contained in the Turner License, no drain field or dry well, or part of a drain field or dry well will be constructed within the established right of way of Portage Point Drive. Licensor shall not be liable to Licensee, or their, heirs, successors or assigns who become owners of the Property for any damages occurring to the steel pipe, steel sleeve or bore bit that may be located within the right-of-way of Portage Point Drive as the result of Licensor's routine maintenance and snow plowing activities. In the event Licensor determines to make improvements to Portage Point Drive and such improvements cannot reasonably be accomplished without the relocation of the steel pipe, steel sleeve, or bore bit located within the right-of-way of Portage Point Drive, then, at the request of Licensor, Licensee, or their heirs, successors or assigns who become owners of the Property, at his, her, their or its sole cost and expense, shall relocate the steel pipe, steel sleeve or bore bit, as the case may be, to accommodate Licensor's improvements to Portage Point Drive.

4. Licensee or their heirs, successor and assigns who become owners of the Property shall indemnify and defend Licensor and hold it harmless from any and all claims for injury to the natural environment, injury to persons (including death) or damage to property, including costs and attorneys fees, resulting from the construction, installation, repair or maintenance or failure to repair or maintain, the steel pipe, steel sleeve or bore pit located in the right of way of Portage Point Drive pursuant to the Turner License, as herein amended.

LIBER 0955 PAGE 0838

5. Except as otherwise expressly modified herein, the Turner License is hereby restated and reaffirmed as if fully set forth herein and the Beneke License is hereby declared to be null and void.

6. This agreement and the Turner License, as modified and amended by this agreement, shall inure to and be binding upon the parties hereto, their heirs, successors and assigns, and may not be further altered, modified or amended, except by another instrument, in writing, and signed by both parties.

IN WITNESS WHEREOF, the parties have herunto set their hands on the dates indicated below.

Dated: July 18th, 2005

The Board of County Road
Commissioners of Manistee County,
Michigan,

By: Sylvester C. Flarity
Sylvester C. Flarity

By: Duane Anderson
Duane Anderson

Dated: July 14 -, 2005

By: Jerry Ware
Jerry Ware

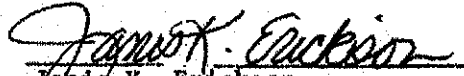
Alfred A. Turner
Alfred A. Turner

Susan Turner
Susan Turner

INDEX 0955 PAGE 0839

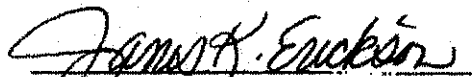
STATE OF MICHIGAN)
: SS.
COUNTY OF MANISTEE)

On this 18th day of July, 2005, before me, the undersigned, a Notary Public in and for said county, in the State aforesaid, personally appeared Sylvester C. Flarity to me personally known, who, by me being duly sworn, did say that he is a member of the Board of County Road Commissioners of Manistee County, Michigan, a public body corporate, and that the said instrument was signed in behalf of said corporation by authority of its board of directors, and said Sylvester C. Flarity acknowledged said instrument to be the free act and deed of said corporation.


Janis K. Erickson
Notary Public, Manistee County, MI
Acting in Manistee County, MI
My Commission Expires: 6/3/12

STATE OF MICHIGAN)
: SS.
COUNTY OF MANISTEE)

On this 18th day of July, 2005, before me, the undersigned, a Notary Public in and for said county, in the State aforesaid, personally appeared Duane Anderson to me personally known, who, by me being duly sworn, did say that he is a member of the Board of County Road Commissioners of Manistee County, Michigan, a public body corporate, and that the said instrument was signed in behalf of said corporation by authority of its board of directors, and said Duane Anderson acknowledged said instrument to be the free act and deed of said corporation.


Janis K. Erickson
Notary Public, Manistee County, MI
Acting in Manistee County, MI
My Commission Expires: 6/3/12

INDEX 0955 ENCL 0840

STATE OF MICHIGAN)
) SS.
COUNTY OF MANISTEE)

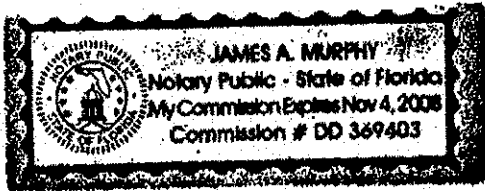
On this 18th day of July, 2005, before me, the undersigned, a Notary Public in and for said county, in the State aforesaid, personally appeared Jerry Ware to me personally known, who, by me being duly sworn, did say that he is a member of the Board of County Road Commissioners of Manistee County, Michigan, a public body corporate, and that the said instrument was signed in behalf of said corporation by authority of its board of directors, and said Jerry Ware acknowledged said instrument to be the free act and deed of said corporation.

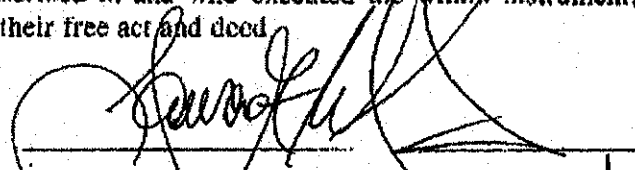

Janis K. Erickson

Notary Public, Manistee County, MI
Acting in Manistee County, MI
Comm. Expires 6/3/12

STATE OF Florida)
) SS.
COUNTY OF Lee)

On 7/14, 2005, before me, a Notary Public in and for said County, personally appeared Alfred A. Turner and Susan Turner, husband and wife, to me known to be the same persons described in and who executed the within instrument, and they acknowledged the same to be their free act and deed.




Notary Public, Lee County, Florida
Acting in Lee County, Florida
My Commission Expires: 11/4/2008

Prepared by:
GOCKERMAN, WILSON, SAYLOR & HESSLIN, P.C.
By: Richard M. Wilson, Jr. (P29717)
Attorneys at Law
414 Water Street
Manistee, MI 49660
(231) 723-8333

IF:\Data2_MURPHYR-2\Firm\REVISED LICENSE AGREEMENT.doc

Penny A. Pepera
Register of Deeds
Manistee, Michigan 49660

LICENSE

THE BOARD OF COUNTY ROAD COMMISSIONERS, of Manistee County, Michigan, a body corporate, of the State of Michigan, hereinafter referred to as the "Licensor", does hereby grant unto ALFRED A. TURNER and SUSAN TURNER, husband and wife, as tenants by the entireties, with full rights of survivorship, of 2150 Iroquois, Detroit, Michigan 48214, hereinafter referred to as the "Licensee", a License to continue the usage of a steel pipe from their premises, being Lot Five (5), Block Twenty-five (25), Portage Point, Onkama Township, Manistee County, Michigan, under Portage Point Road; that the License is personal to the Licensee, and, as such, same is not transferrable or assignable by the Licensee or his or her estate, to any person, firm or corporation, and said License is granted subject to the following terms and conditions, to-wit:

1. The steel pipe above referred to, is a minimum of two (2) inches wide and has been placed inside a four (4) inch wide steel sleeve.
2. The bore pit for said steel pipe and steel sleeve shall continue to be a minimum of ten (10) feet east of the easterly traveled part of Portage Point Road to the termination point of the bore pit which is a minimum of ten (10) feet west of the westerly traveled part of Portage Point Road.
3. For purposes of this License the traveled part of Portage Point Road shall be defined as the easterly and westerly boundary of the black top.
4. The bore pit shall continue to be a minimum of four (4) feet below the centerline of the black top part of Portage Point Road.
5. At the termination point of the bore pit the dry well or any part of same that is within the road right-of-way shall not disrupt or damage the road or road right-of-way or interfere

with the usage of the road or road right-of-way by the Licensor.

6. That repair or maintenance of the bore pit and dry well or drain field shall not, in any way, disrupt or damage the black top part of Portage Point Road.
7. That this License is a revokable License and, may be revoked at any time by the Licensor, and, as such, no matter how long said License continues, the Licensee shall have no vested right, title or interest in same, and shall, at the request of the Licensor, remove the dry well, drain field, steep pipe, steel sleeve and bore pit without cost to the Licensor and shall restore the right-of-way to like condition as same existed prior to the within installation.

Dated at Manistee, Michigan, this 16th day of December, 1993.

WITNESSES:

Donald Grant
Donald Grant

Jack Dinsen
Jack Dinsen

BOARD OF COUNTY ROAD COMMISSIONERS
OF MANISTEE COUNTY, MICHIGAN, A
BODY CORPORATE OF THE STATE OF
MICHIGAN:

BY: Sylvester C. Flarity
Sylvester C. Flarity

BY: Irwin M. Johnson
Irwin M. Johnson

BY: William A. Green
William A. Green

ACCEPTANCE OF LICENSE

We, ALFRED A. TURNER and SUSAN TURNER, husband and wife, the Licensee named in the within and foregoing License, do hereby acknowledge receipt of an executed and duplicate original of said License and do further certify that we have read the same and understand the same is a revokable License and we hereby agree to the terms and conditions of same and that at the request of the Board of County Road Commissioners of Manistee County, Michigan, or its successors, that we shall remove the dry well, drain field, steel pipe, steel sleeve and bore pit within the right-of-way to like condition as same existed prior to the within installation, and, in particular, we understand and agree that said License is a personal License to us and that same is not assignable or transferrable from us or our estates to any person, firm or corporation.

Dated at Detroit, Michigan, this 16 day of ~~December~~ ^{JANUARY}, 1997.4 ^{ART} ^{SR}

WITNESSES:

Frances Reinhardt
 Frances Reinhardt

Alfred A. Turner
 Alfred A. Turner

Victoria L. Bonus-Rowsey
 Victoria L. Bonus-Rowsey

Susan Turner
 Susan Turner

Drafted by:
 GOCKERMAN, WILSON, SAYLOR & HESSLIN, P.C.
 BY: DANIEL D. HESSLIN
 Attorneys at Law

414 Water Street
 Manistee, MI 49660
 (616) 723-8333

Turner/DDH2

PERMIT TO CONSTRUCT

PERMIT NUMBER **51-3456**

DISTRICT HEALTH DEPARTMENT NO. 10

Crawford, Kalkaska, Lake, Manistee, Mason, Mecosta, Missaukee, Newaygo, Oceana, and Wexford Counties

Permit Type:
New Residential Water Well

PERMIT FOR FACILITIES AT:

STREET ADDRESS PORTAGE POINT DRIVE
TOWNSHIP ONEKAMA COUNTY Manistee
SECTION 28 TOWN 23N RANGE 16W
SUBDIVISION Lot 5
TAX ID NUMBER 51-11-410-055-00

PERMIT ISSUED TO:

KYLE LOHMAN, AGENT
11285 HARRIS ROAD
MONTAGUE, MI 49437
TELEPHONE NUMBER 231-893-0473
PROPERTY OWNER ALFRED A. TURNER, JR.

Andy Cook

DESIGN CRITERIA:

- SINGLE FAMILY, NO. OF BEDROOM _____
 - GARBAGE GRINDER _____
 - BASEMENT PLUMBING _____
 - OTHER, GAL/DAY _____ gal
- SEASONAL WATER TABLE _____ ft

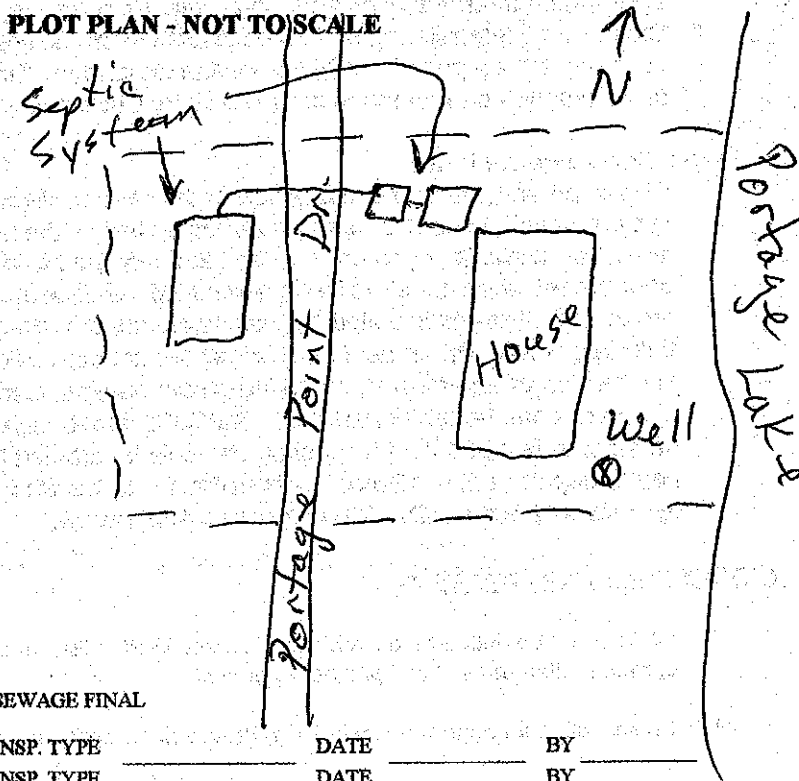
SOIL BORINGS

PERMIT TO INSTALL, CONSTRUCT, OR REPLACE

DATE PERMIT EXPIRES 7/11/06 *7/11/08* *7/11/07*

SEPTIC TANK SIZE _____	gal min
DRAINAGE SYSTEM _____	sq ft
MIN WELL ISOLATION _____	50 ft

PLOT PLAN - NOT TO SCALE



SPECIAL CONDITIONS OF PERMIT

THE OWNER IS RESPONSIBLE FOR COLLECTING A BACTERIA WATER SAMPLE FROM THE NEW WELL. SAMPLE BOTTLES ARE AVAILABLE AT THE HEALTH DEPT.

SEPTIC PERMIT 51-3436, ANDY COOK *Good until*
Permit renewed 7/11/07
W. Thompson

renewed 7/25/09 for 1 yr.

Permit valid to

07/07/09

Frank Polata

SEWAGE FINAL

INSP. TYPE _____ DATE _____ BY _____
 INSP. TYPE _____ DATE _____ BY _____
 TYPE OF TREATMENT SYSTEM _____
 SYS. DIMENSIONS _____ ISOL. DIST. _____ S. TANK _____
 NOTES _____
 INSPECTION DATE _____ CONTRACTOR _____
 TYPE A=Affidavit P=Partial F=Final

WELL FINAL

WELL INSPECTION DATE _____ BY _____
 CASING DIAMETER _____ CASING MATERIAL _____
 APPROVED CAP YES _____ NO _____ PUMP TYPE _____
 COMMENTS _____

SEWAGE PERMIT ISSUED DENIED

WELL PERMIT ISSUED DENIED

WELL TO BE ABANDONED

Don Thompson
HEALTH DEPARTMENT REPRESENTATIVE DATE 7/11/05



Manistee County Planning Building • 395 Third Street • Manistee, Michigan 49660

SOIL EROSION AND SEDIMENTATION CONTROL PERMIT

(Issued under the authority of Part 91, Soil Erosion and Sedimentation Control,
of the Natural Resources and Environmental Protection Act,
1994 PA 451, as amended)

Permittee: Brian Cook
Address: 17435 Tiller Court
Westfield IN 46074

Permit No.: 23-810
Issued: 08/24/2023
Expires: 08/24/2024
Extended:

On-Site Responsible Person: owner

Company _____ Phone Number: 317-903-6755

Permitted Activity:

New home, septic and drive

Property Tax ID Number: 51-11-410-055-00

Project Location: Town 23N Range 16W Section 28

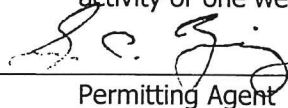
City or Township: Onekama Township

8379 S Portage Point Dr

Onekama MI

Permit Conditions:

1. The permitted activity shall be completed in accordance with the approved plans and specifications, and the **attached** general and specific conditions.
2. This permit does not waive the necessity for obtaining all other required federal, state, or local permits.
3. Permittee shall notify the permitting agency within one week after completing the permitted activity or one week prior to the permit expiration date, whichever comes first.

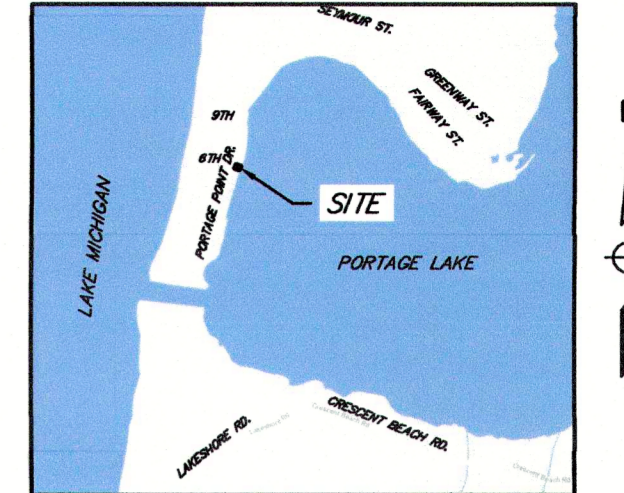
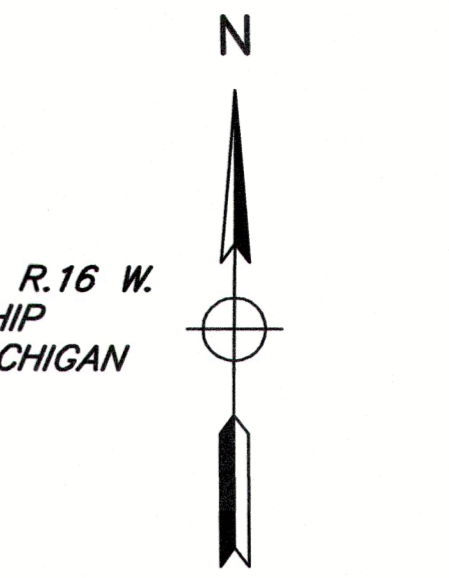


Permitting Agent

(231) 398-3576

**THIS PERMIT MUST BE POSTED AT THE PROJECT SITE
NOTIFY THIS OFFICE (231-723-6041) WHEN PROJECT BEGINS AND IS COMPLETED.
(Over)**

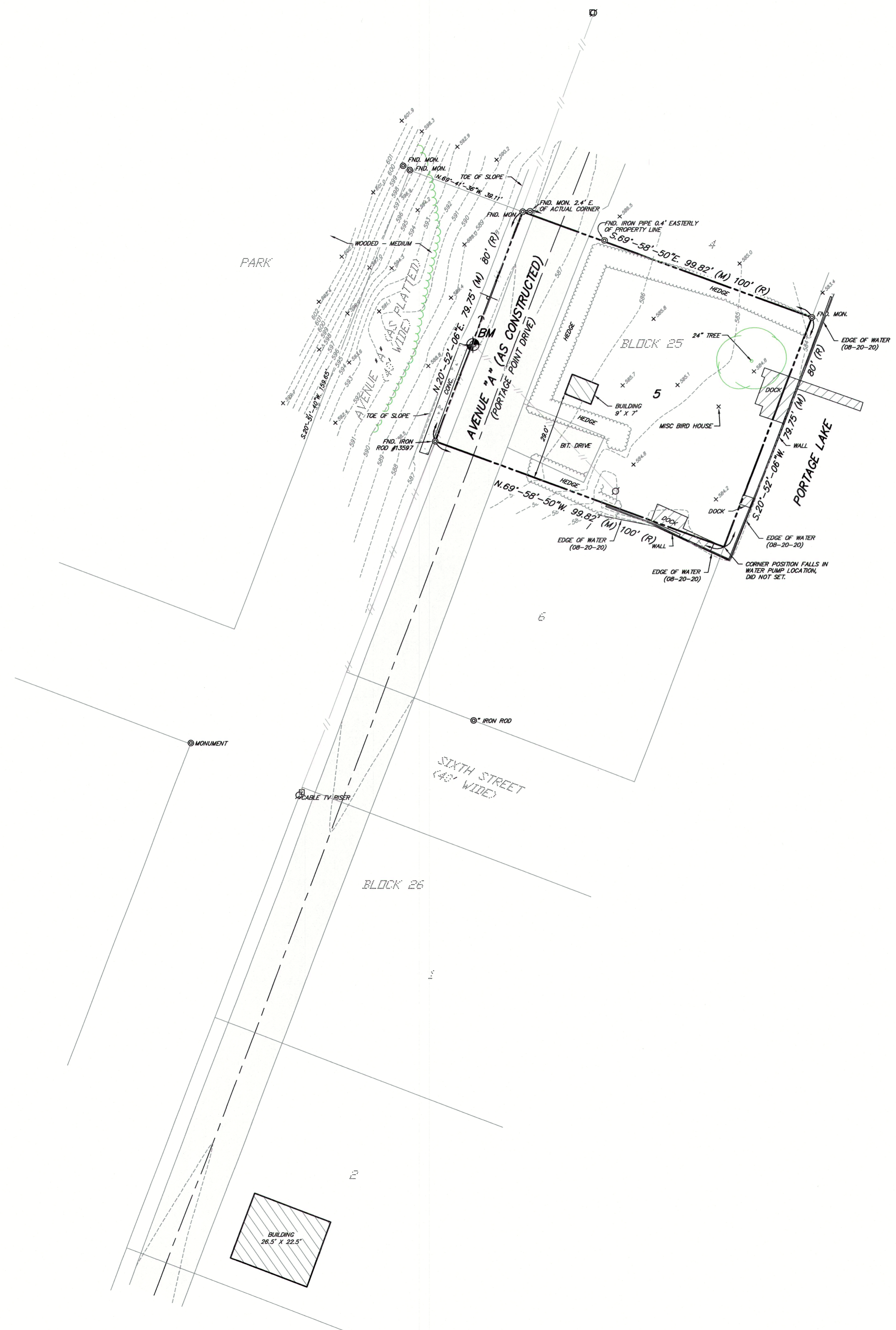
SECTION 28, T.23 N. - R.16 W.
ONEKAMA TOWNSHIP
MANISTEE COUNTY, MICHIGAN



SCALE: 1" = 20'
Contour Interval = 1 foot

LEGEND

- - MANHOLE
- ⊖ - CATCHBASIN
- ⊞ - CURB CATCHBASIN
- ⊕ - FIRE HYDRANT
- ⊙ - WATER VALVE
- ⊗ - GAS VALVE
- ⊚ - TELEPHONE POLE
- - POWER POLE
- ⊕ - POWER AND TELEPHONE POLE
- ⊛ - LIGHT POLE
- ⊞ - MAIL BOX
- ⊞ - SIGN
- ⊕ - SPRINKLER
- ⊕ - RAILROAD SIGNAL
- ⊕ - TRANSFORMER
- ⊕ - BARRIER FREE PARKING
- ▭ - BITUMINOUS SURFACE
- ▭ - CONCRETE SURFACE
- ▭ - CONCRETE CURB
- ▭ - FENCE LINE
- ▭ - OVERHEAD POWER LINES
- ▭ - TREE LINE
- ▭ - STUMP
- ✳ - PINE
- ✳ - BUSH
- ✳ - TREE
- ⊙ - TELEPHONE PEDESTAL
- ⊙ - FOUND SURVEY CORNER
- ⊙ - SET 1/2" IRON ROD
- ⊙ - SET WOOD LATH
- ⊙ - SET P.K. NAIL
- ⊙ - GUY ANCHOR AND POLE
- ⊙ - NOT FIELD LOCATED
- ⊙ - CABLE TV PEDESTAL
- ⊙ - ANTENNA
- ⊙ - SATELLITE DISH
- ⊙ - AIR CONDITIONING UNIT
- ⊙ - SOIL BORING
- ⊙ - ELECTRICAL PEDESTAL
- ⊙ - BURIED CABLE LINES
- ⊙ - BURIED ELECTRIC LINES
- ⊙ - GASMAINS
- ⊙ - SANITARY SEWER LINES
- ⊙ - STORM SEWER LINES
- ⊙ - TELEPHONE LINES
- ⊙ - WATERMAINS



PARCEL DESCRIPTION

Lot 5, Block 25, Plat of Portage Point, as recorded in Manistee County Records, T.23 N.-R.16 W., Onekama Township, Manistee County, Michigan.

BENCHMARKS

BM - SET 60D SPIKE IN E. FACE OF POWER POLE, POWER POLE ON NW SIDE OF AVENUE 'A' (PORTAGE POINT DR.) AND E. OF END OF CONC. NAVD83 EL. 568.24

UTILITY NOTE

The utility locations as hereon shown are based on field observations. However, it is not possible to determine the precise location and depth of underground utilities without excavation. Therefore, we cannot guarantee the accuracy or completeness of the buried utility information hereon shown. The contractor shall call "MISS DIG" (1-800-482-7171 or 811) within three working days prior to any excavation. The contractor is responsible for verifying these utility locations prior to construction and shall make every effort to protect and or relocate them as required. The contractor shall notify the Engineer/Surveyor as soon as possible in the event a discrepancy is found.

BY	MARK	REVISIONS	DATE

THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.

BEN & ALISON COOK
17435 TILER COURT
WESTFIELD, IN 46704

BOUNDARY AND TOPOGRAPHIC SURVEY OF LOT 5, BLOCK 25, PLAT OF PORTAGE POINT

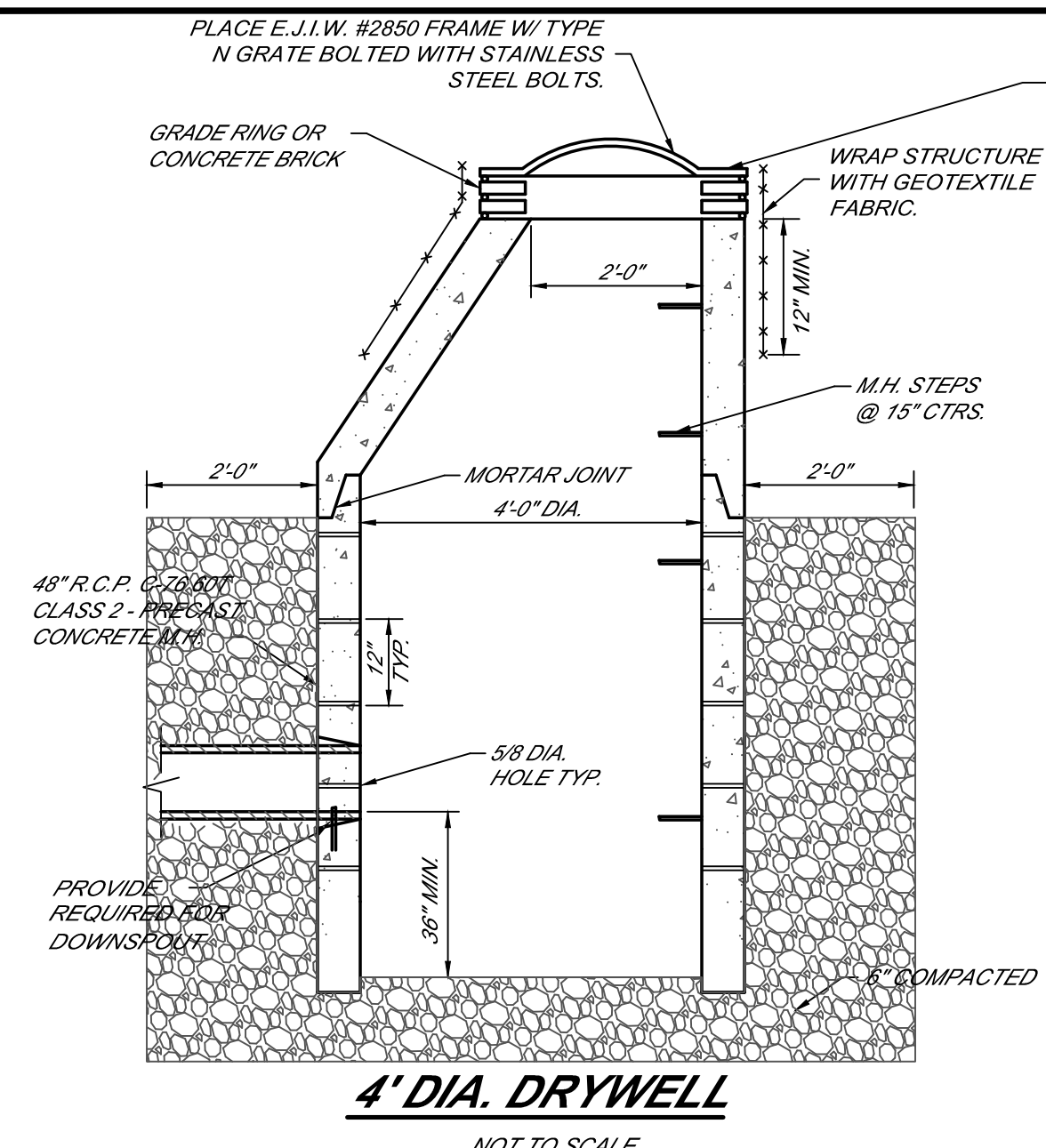
Spicer group
MANISTEE OFFICE
302 River Street
Manistee, MI 49660
Tel. 231-794-5620
www.SpicerGroup.com



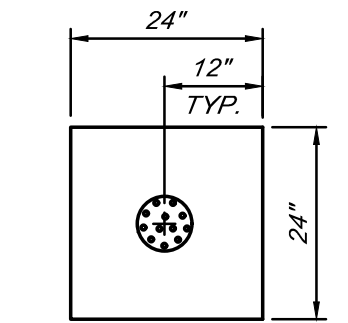
I hereby certify that I have surveyed the parcel of land hereon shown and described.

Patrick G. Bentley Date: 9-9-20
Professional Surveyor No. 47944

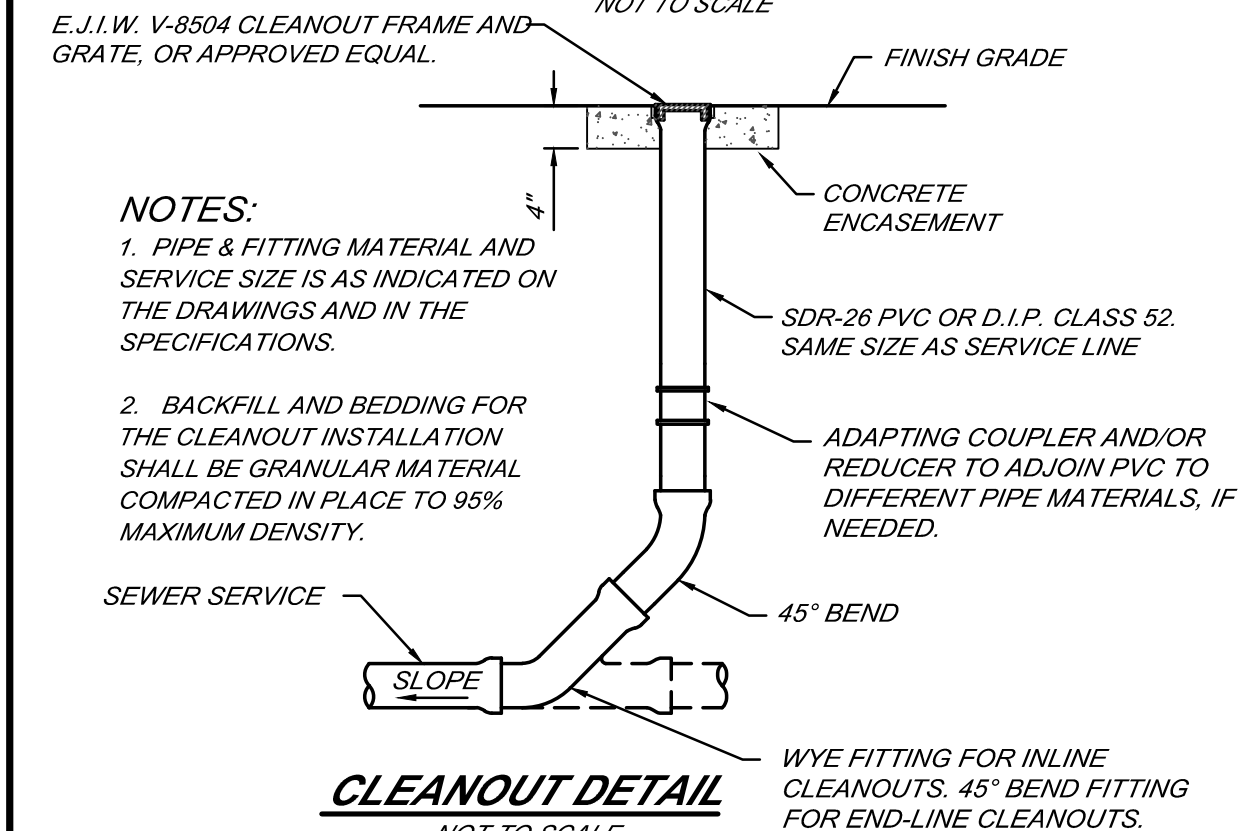
DE. BY: MLW	CH. BY: PCB	PROJECT NO. 129166.20
DR. BY: MLW	APP. BY:	
STDS.	SHEET 1 OF 1	
DATE 09-03-20	FILE NO. JD-1712	
SCALE 1" = 20'		



4" DIA. DRYWELL
NOT TO SCALE

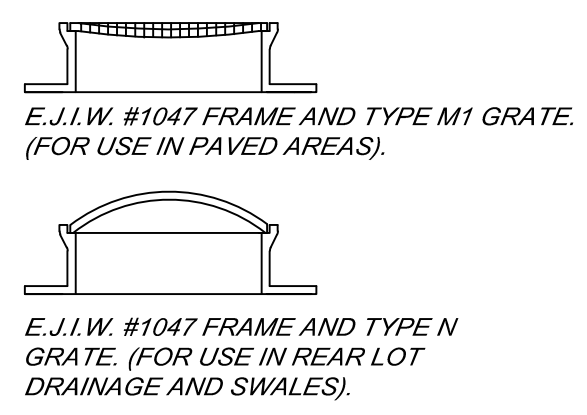


PLAN
NOT TO SCALE

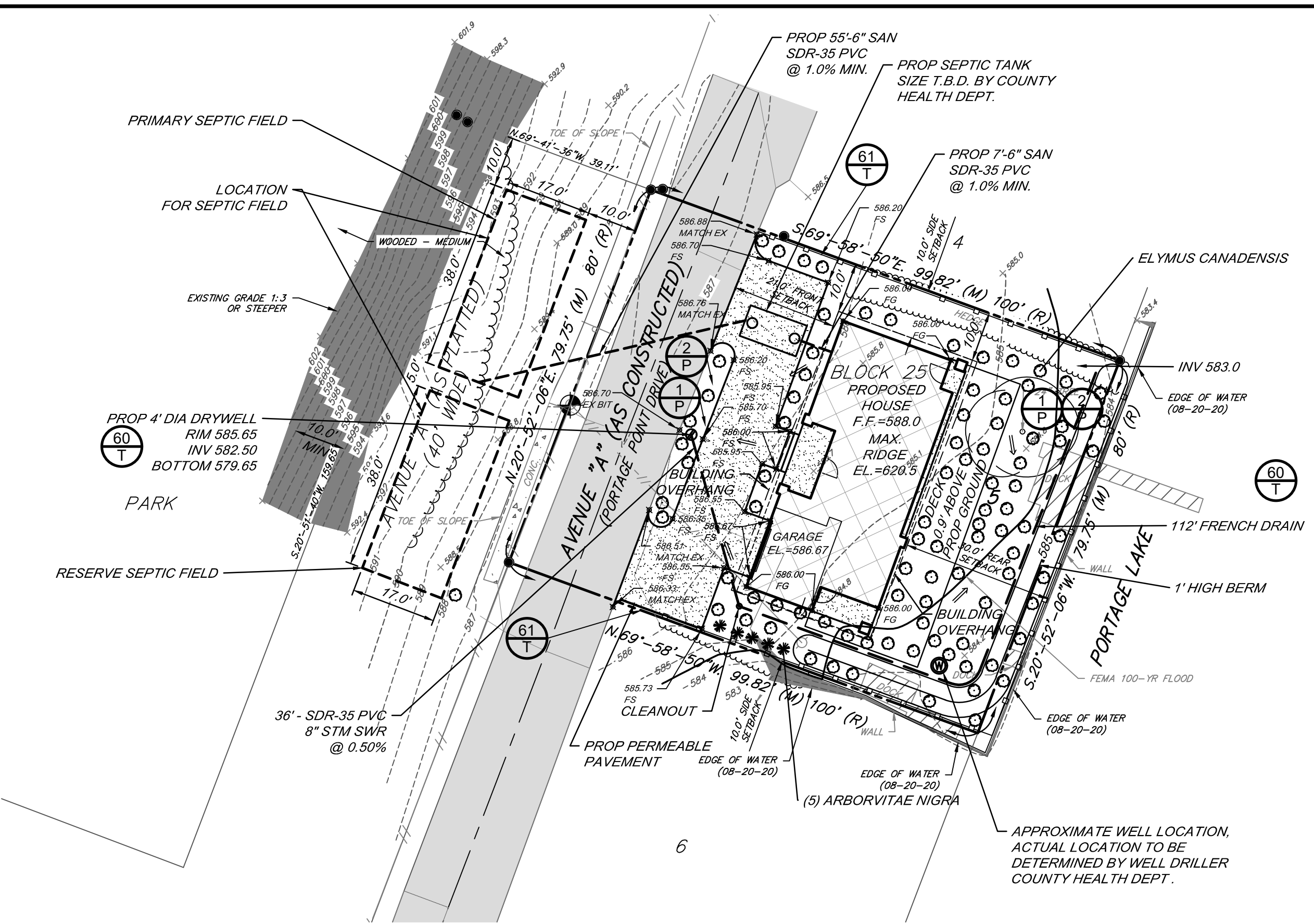


CLEANOUT DETAIL
NOT TO SCALE

- NOTES:**
- PIPE & FITTING MATERIAL AND SERVICE SIZE IS AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
 - BACKFILL AND BEDDING FOR THE CLEANOUT INSTALLATION SHALL BE GRANULAR MATERIAL COMPACTED IN PLACE TO 95% MAXIMUM DENSITY.



E.I.I.W. #1047 FRAME AND TYPE M1 GRATE. (FOR USE IN PAVED AREAS).
E.I.I.W. #1047 FRAME AND TYPE M1 GRATE. (FOR USE IN REAR LOT DRAINAGE AND SWALES).



SITE PLAN
SCALE: 1" = 20'

LANDSCAPING NOTES:

- LANDSCAPE STONES SHALL BE WASHED RIVER STONES 2" TO 3" DIA. INSTALLED OVER 3 OZ. WEED BARRIER FABRIC.
- HARDWOOD MULCH SHALL CONSIST OF SHREDDED MAPLE AND OAK INSTALLED 3" DEEP OVER 3 OZ. WEED BARRIER FABRIC. INSTALL AROUND ALL TREES.
- THE REMAINDER OF THE SITE SHALL BE HYDROSEED AND MULCHED.

EXISTING LANDSCAPE LEGEND

- EVERGREEN TREE
- SHRUB
- DECIDUOUS TREE
- TREE LINE

PROPOSED LANDSCAPE LEGEND

- SHRUB
- DUNE GRASS PLUGS

DEMOLITION NOTES

- PROTECT TREES, PLANT GROWTH, AND FEATURES DESIGNATED TO REMAIN, AS FINAL LANDSCAPING.
- CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE THE TAGGING OF SPECIFIC TREES/SHRUBS TO BE PRESERVED PRIOR TO BEGINNING DEMOLITION.
- REMOVE TREES AND SHRUBS WITHIN LIMITS OF CONSTRUCTION AS NOTED. REMOVE STUMPS, MAIN ROOT BALL, ROOT SYSTEM TO A DEPTH OF 12 INCHES AND SURFACE ROCK.
- CLEAR AREAS REQUIRED FOR ACCESS TO SITE AND EXECUTION OF WORK.
- REMOVE NOTED WALLS, FOUNDATIONS, PAVING, CURBS, AND SIDEWALKS.
- SAWCUT ALL PAVEMENT, CURBS AND WALKS NOTED FOR REMOVAL FOR A CLEAN EDGE.
- REMOVE ALL CLEARED ITEMS FROM SITE AND PROPERLY DISPOSE OF.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDING ALL DISTURBED AREAS.

DEMOLITION ITEMS

- REMOVE ASPHALT PAVEMENT.
- REMOVE EXISTING TREE/SHRUB.
- REMOVE SHED AND FOUNDATION.
- REMOVE/RELOCATE BIRD HOUSE. SEE OWNER FOR NEW LOCATION.

EROSION & SEDIMENT CONTROL MEASURES

KEY	SESC MEASURE	SYMBOL	WHERE USED
1	SEEDING		When bare soil is exposed, temporarily or permanently, to erode forces from wind and/or water on flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosion forces from wind or water.
2	MULCH		On flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosion forces from wind or water.
60	STORM DRAIN INLET PROTECTION		Around the entrance to a newly constructed catch basin or an inlet that will capture runoff from an earth change activity.
61	SILT FENCE		As a temporary measure used to capture sediment from sheet flow. May also divert small volumes of sheet flow to protected outlets.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION.
- EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAS BEEN ACCOMPLISHED AND APPROVED BY THE AGENCY WITH JURISDICTION.
- DEBRIS FROM THE PROJECT SHALL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME INEFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXITS.
- IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDING AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY SPREAD UNIFORMLY AT THE RATE OF 1-2 TO 2 TONS PER ACRE. ANCHOR MULCH WITH DISC-TYPE MULCH ANCHORING TOOL OR OTHER MEANS AS APPROVED BY THE AGENCY WITH JURISDICTION.
- ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED. ALL DRAIN BANKS DISTURBED BY CONSTRUCTION SHALL BE RESTORED WITHIN FIVE CALENDAR DAYS AND SOD PEGGED IN PLACE.
- PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
- SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO DEWATER THE GROUND IN THE COURSE OF CONSTRUCTING THE PROPOSED UTILITY, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY SOIL EROSION CONTROL DEVICE IN A MANNER THAT WILL FILTER ALL DISCHARGED WATER FROM THE DEWATERING OPERATION IN NO INSTANCE SHALL THE DEWATERING DISCHARGE BE PERMITTED TO FLOW UNFILTERED FROM THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL CONTROL THE DUST ON THE SITE DURING THE LIFE OF THE CONTRACT. IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE COMMUNITY THIS DUST CONTROL SHALL BE ACCOMPLISHED BY THE APPLICATION OF A POSITIVE DUST PICK-UP METHOD WITH WATERS ON HARD SURFACES. SUCH DUST CONTROL MATERIALS SHALL BE APPLIED AS OFTEN AS IS NECESSARY IN THE OPINION OF THE COMMUNITY TO CONTROL THE DUST.

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL.

SYMBOLS FOR INSERTION INTO CONSTRUCTION DRAWINGS:

- # P = PERMANENT MEASURE
- # T = TEMPORARY MEASURE
- o — o — = SILT FENCE

Contractor shall conform to Soil Erosion and Sedimentation Control Act, Part 91 of Public Act 451 of 1994, as amended. All catch basins, on the site and adjacent to the site, shall be covered with cloth filters for Soil Erosion and Sedimentation Control.

NEAREST WATER BODY

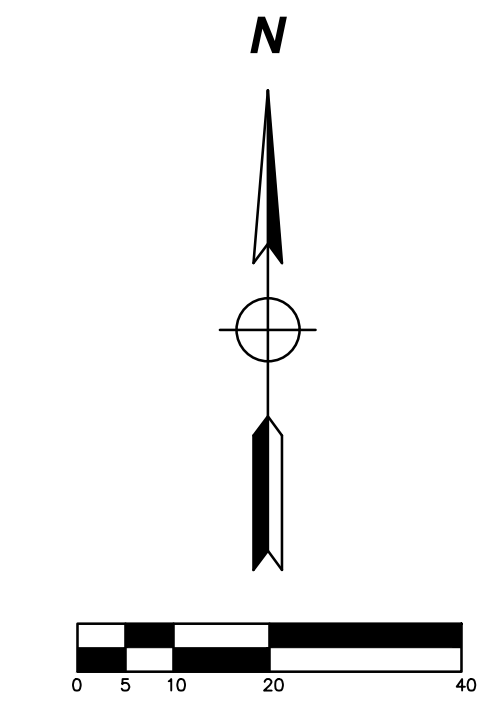
PORTAGE LAKE

TIMING SEQUENCE

OPERATION	SCHEDULE
TEMPORARY CONTROL MEASURES	
STRIPPING/STOCKPILING OF SOIL	
ROUGH GRADING/SEDIMENTATION CONTROL	
STORM UTILITIES	
PERMANENT CONTROL MEASURE	
SITE CONSTRUCTION	
FINISH GRADING	
* SCHEDULE TO BE FILLED OUT BY CONTRACTOR/PERMITEE.	

SOILS INFORMATION

SYMBOL	TYPE
96C	GOODHARBOR SAND, 1 TO 12 PERCENT SLOPES



SECTION 28, T.23 N. - R.16 W.
ONEKAMA TOWNSHIP
MANISTEE COUNTY, MICHIGAN

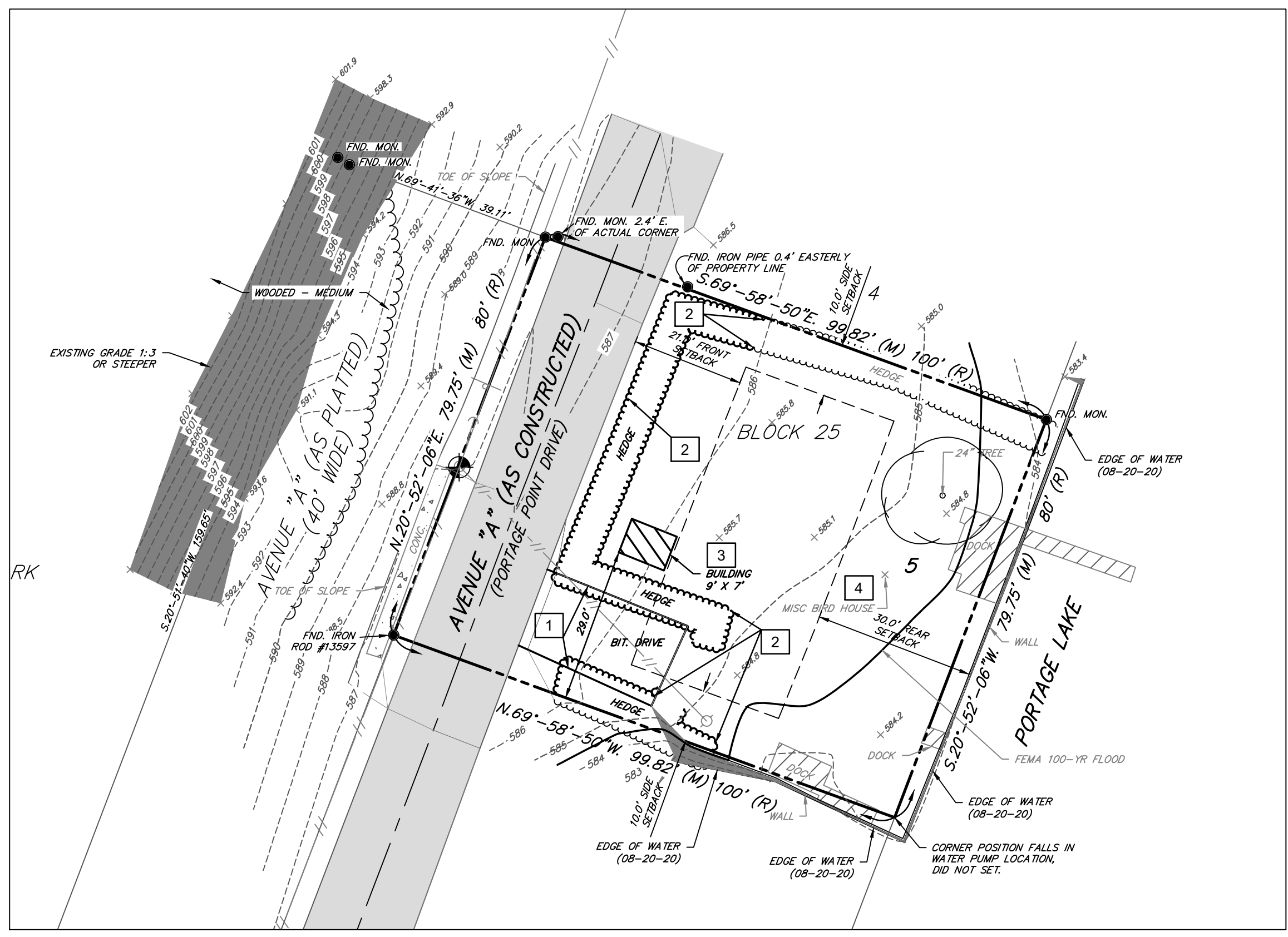
PARCEL DATA
0.18 ACRES, 8,000 S.F.

BENCHMARKS

BM - SET 60D SPIKE IN E. FACE OF POWER POLE, POWER POLE ON NW SIDE OF AVENUE 'A' (PORTAGE POINT DR.) AND E. OF END OF CONC. NAVD83 EL. 588.24

FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY MAPS, COMMUNITY PANEL #26101C0232D, EFFECTIVE DATE OF JUNE 6, 2021, THE SUBJECT PROPERTY LIES WITHIN ZONE X, AREAS SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. THE BASE FLOODPLAIN ELEVATION HAS BEEN DETERMINED TO BE 583.0 (NAVD83).



DEMOLITION PLAN
SCALE: 1" = 20'

PG. ACAD FILE: RET. F.B. PLOTTING SCALE:

MTS	BY	MARK	REVISIONS PER EGLE PERMIT REVIEW	REVISIONS	DATE
					08/16/23

THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.

BRIAN COOK
17435 TILLER COURT
WESTFIELD, IN 46074

GRADING PLAN
RESIDENTIAL SITE PLAN
ONEKAMA TOWNSHIP
MANISTEE COUNTY, MICHIGAN

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DE. BY: CAR	CH. BY: BMB	PROJECT NO:
DR. BY: CAR	APP. BY: BMB	131922SG2022
STDS.	SHEET 1 OF 1	C
DATE: FEBRUARY 22, 2022	FILE NO. D-5849-1	1
SCALE: 1" = 20'		