BATH TOWNSHIP BOARD OF ZONING APPEALS

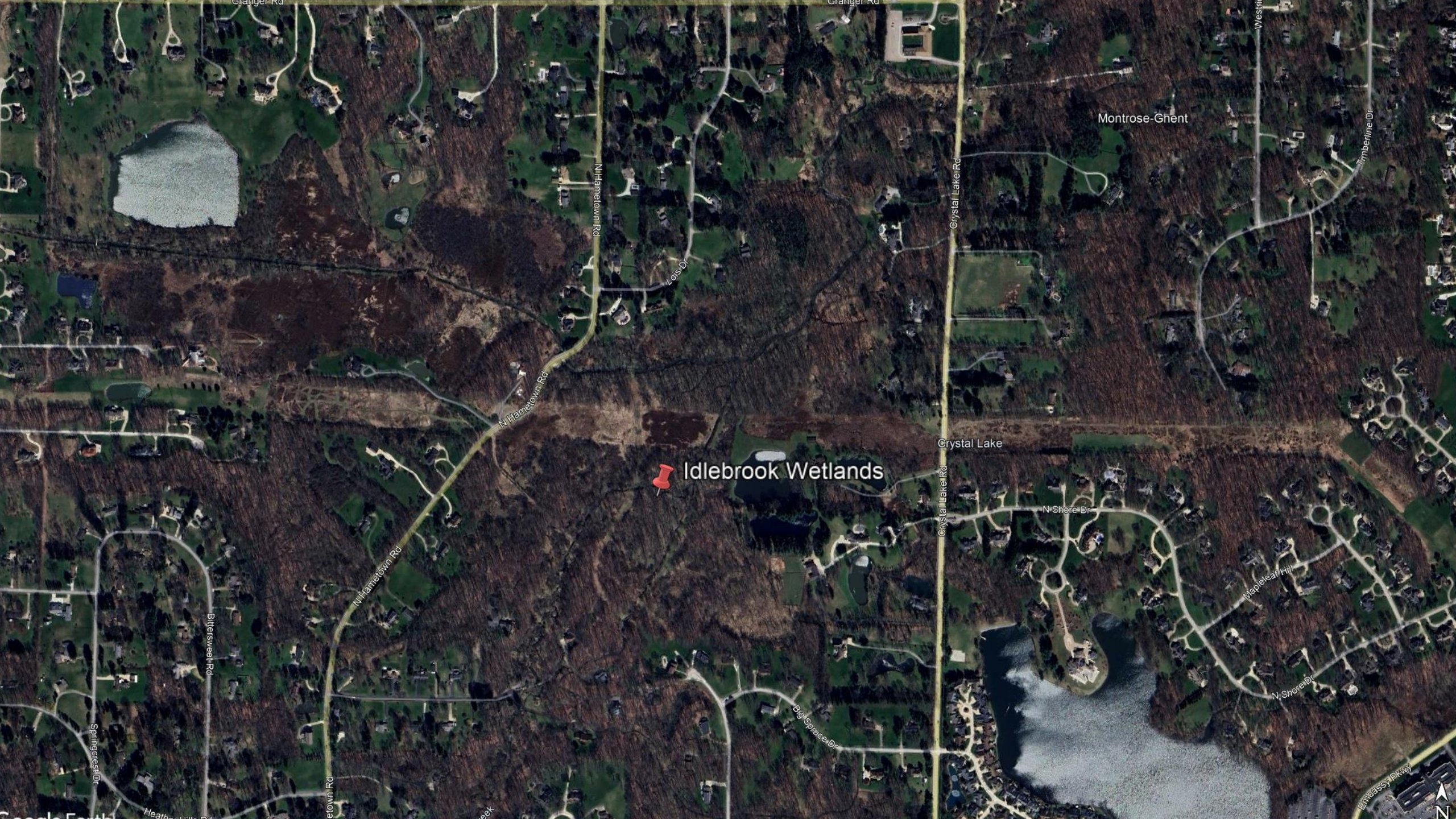
November 18, 2025

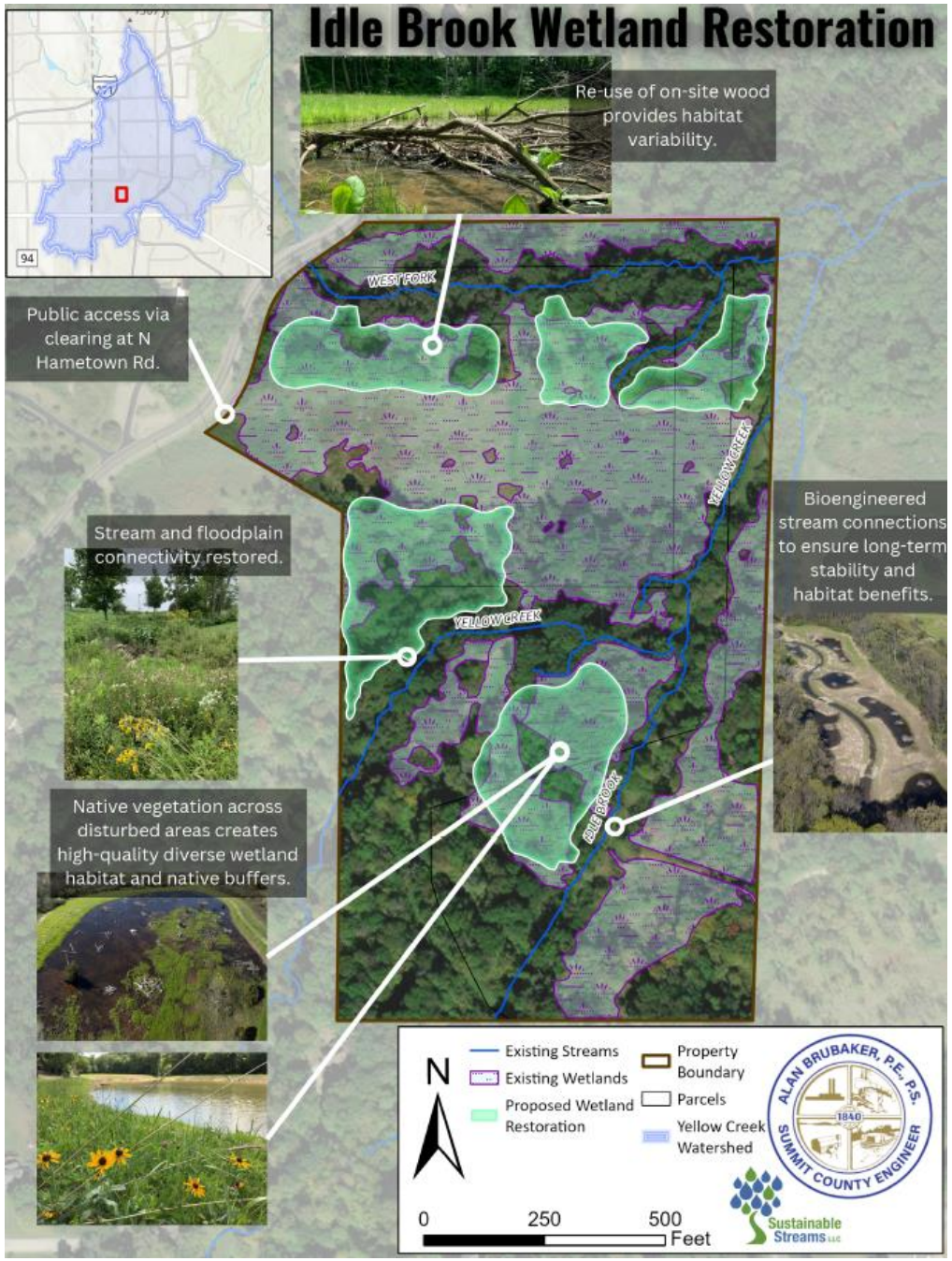
BATH TOWNSHIP

1818

BZA 25-15

- Dave Koontz, of Summit County Surface Water Management District
- 0402593, 0401179, and 0401180 on N. Hametown Road
- Requesting variance from Article 6, Section 602 to encroach upon the riparian setback requirements for construction of stormwater management facilities within the riparian setback area.


Granger Rd
Granger Rd
Montrose-Ghent
N Hametown Rd
Lois Dr
Crystal Lake Rd
Timberline Dr
N Hametown Rd
Crystal Lake
Idlebrook Wetlands
Crystal Lake Rd
N Shore Dr
N Hametown Rd
Bittersweet Rd
Maplelear Hill
N Shore Dr
Big Spruce Dr
Springcrest Dr
Embassy Pkwy



Idle Brook Floodplain Wetland Restoration Project

Bath Township

Board of Zoning Appeals Meeting

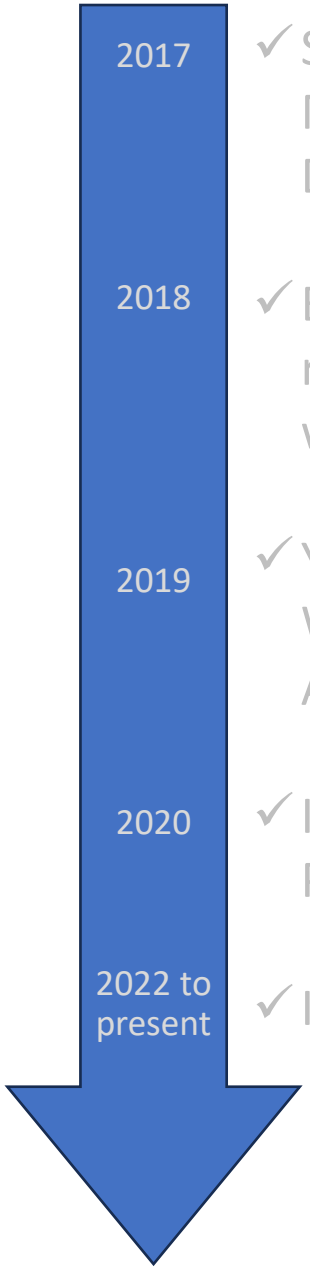
October 21, 2025

Dr. Bob Hawley, P.E.

Director and Principal

Sustainable Streams, LLC

Project Background



- ✓ Surface Water Management District Established
- ✓ Bath joins SWMD & requests assistance with SW problems
- ✓ Yellow Creek Watershed Assessment
- ✓ Implementation Plan
- ✓ Idle Brook Project

Project Background

2017
- ✓ **Surface Water Management District Established**

2018
- ✓ Bath joins SWMD & requests assistance with SW problems

2019
- ✓ Yellow Creek Watershed Assessment

2020
- ✓ Implementation Plan

2022 to present
- ✓ Idle Brook Project

The SWMD was originally created as an all voluntary program in 2017 to aide local communities in their efforts to address stormwater problems.

SUMMIT COUNTY
Surface Water Management District

Project Background

2017 ✓ Surface Water Management District Established

2018 ✓ **Bath joins SWMD & requests assistance with SW problems**

2019 ✓ Yellow Creek Watershed Assessment

2020 ✓ Implementation Plan

2022 to present ✓ Idle Brook Project

Bath Township joined the County's Surface Water Management District in 2018 when it was an opt-in program to address the needs of Yellow Creek.

SUMMIT COUNTY
Surface Water Management District

Project Background

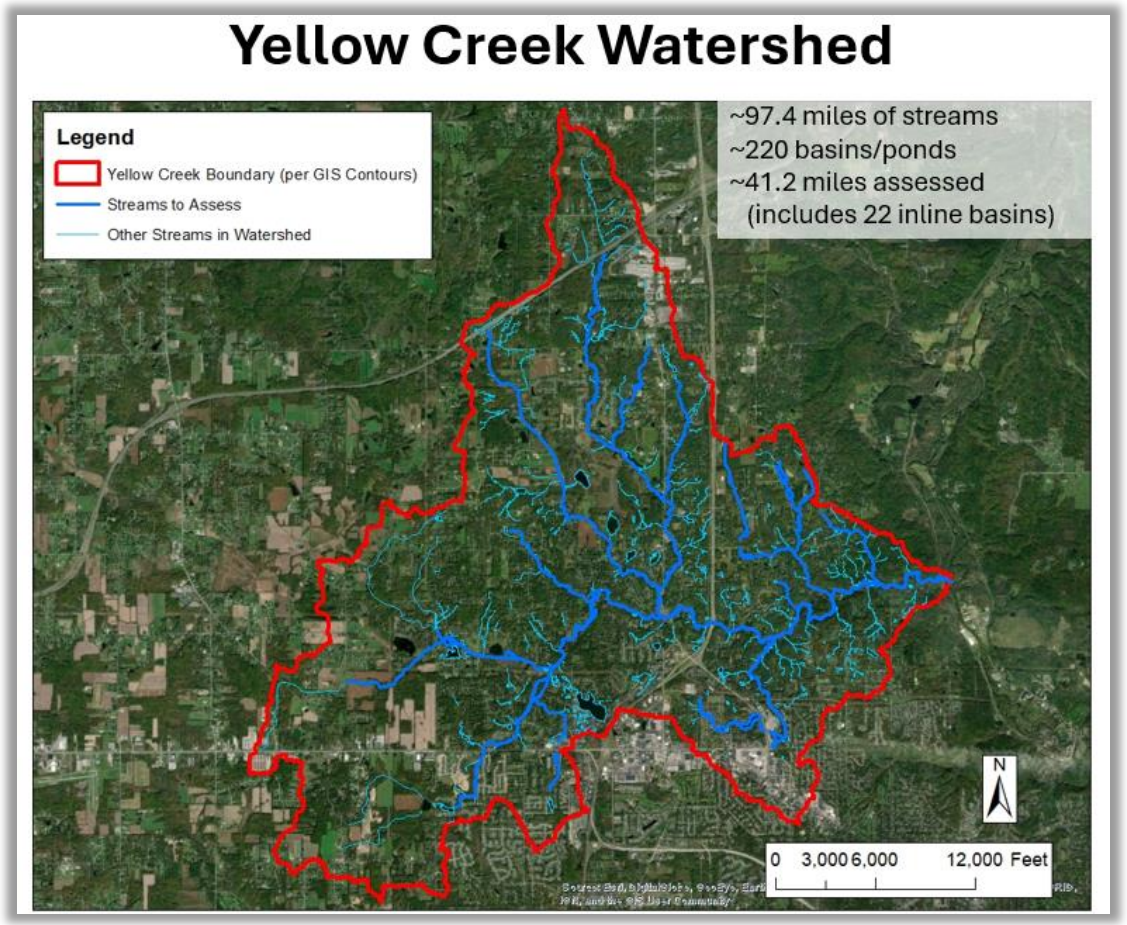
2017 ✓ Surface Water Management District Established

2018 ✓ Bath joins SWMD & requests assistance with SW problems

2019 ✓ Yellow Creek Watershed Assessment

2020 ✓ Implementation Plan

2022 to present ✓ Idle Brook Project



Project Background

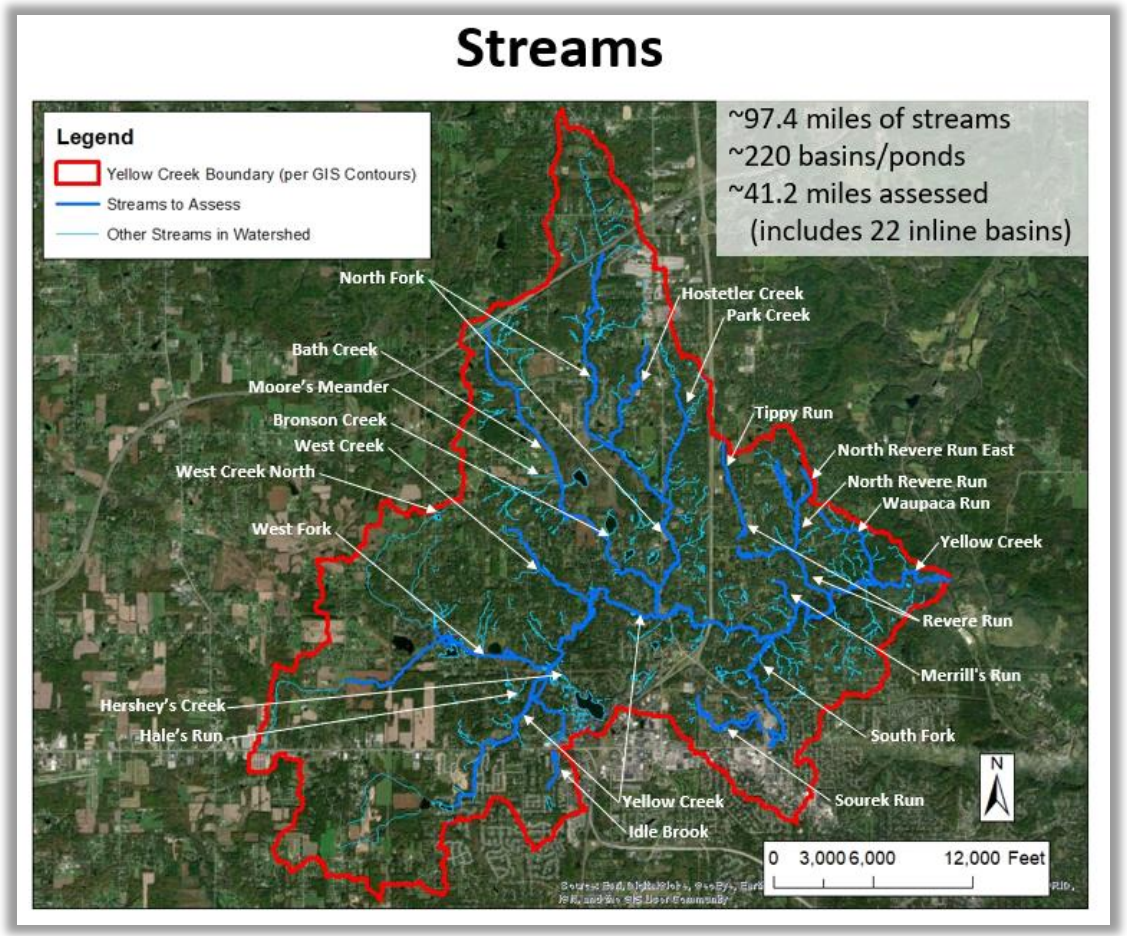
2017 ✓ Surface Water Management District Established

2018 ✓ Bath joins SWMD & requests assistance with SW problems

2019 ✓ **Yellow Creek Watershed Assessment**

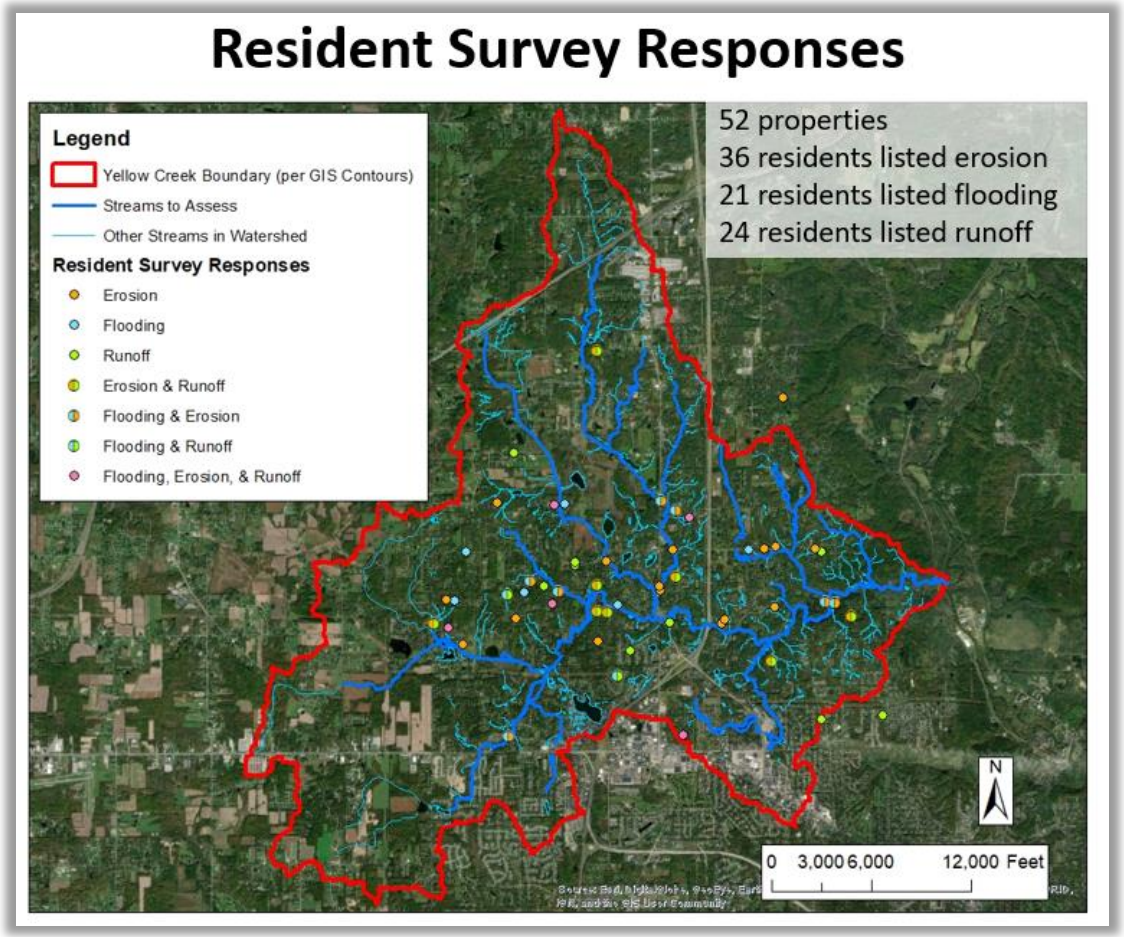
2020 ✓ Implementation Plan

2022 to present ✓ Idle Brook Project



Project Background

2017	✓ Surface Water Management District Established
2018	✓ Bath joins SWMD & requests assistance with SW problems
2019	✓ **Yellow Creek Watershed Assessment**
2020	✓ Implementation Plan
2022 to present	✓ Idle Brook Project



Project Background

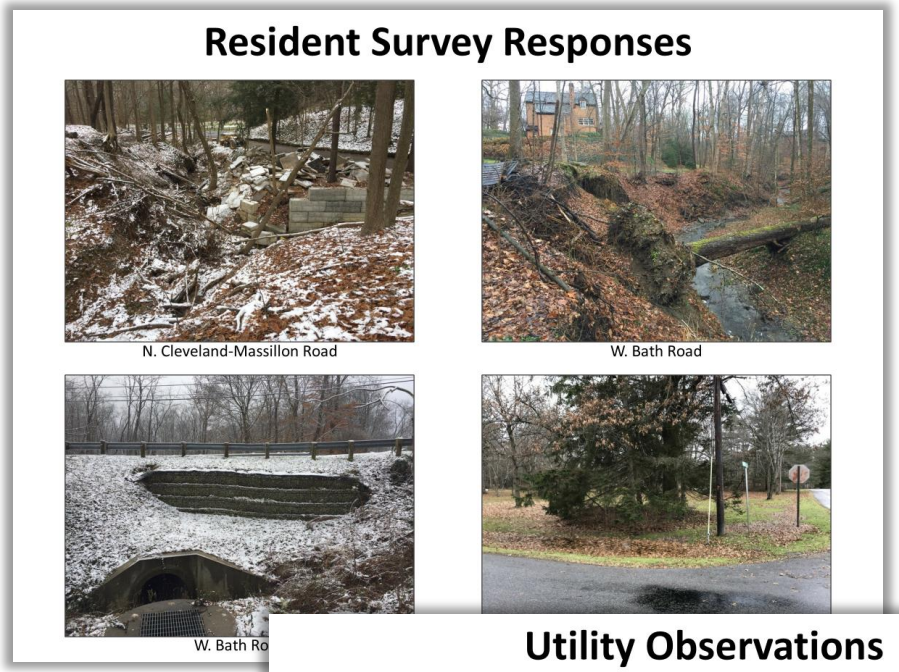
2017 ✓ Surface Water Management District Established

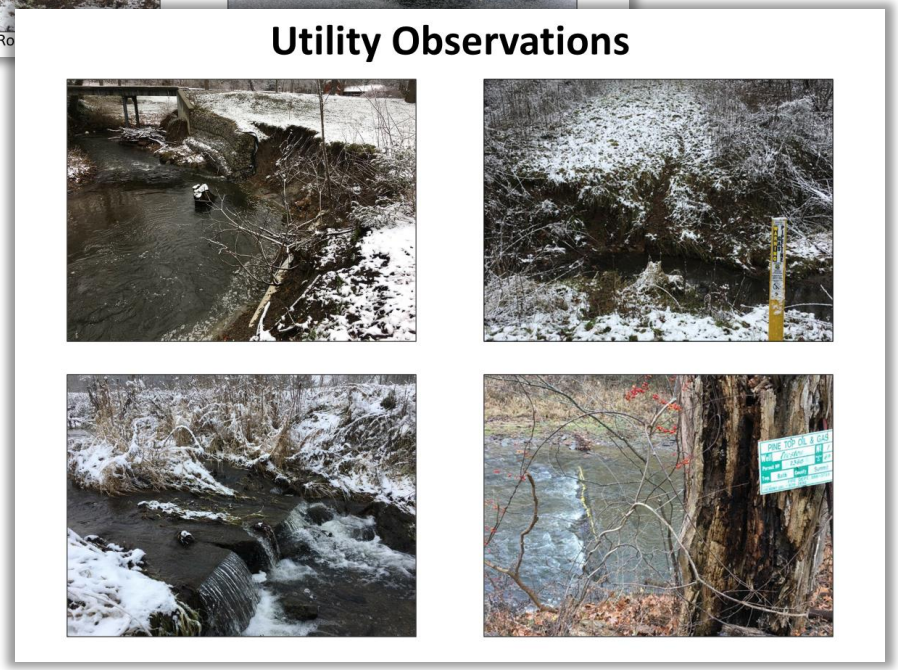
2018 ✓ Bath joins SWMD & requests assistance with SW problems

2019 ✓ **Yellow Creek Watershed Assessment**

2020 ✓ Implementation Plan

2022 to present ✓ Idle Brook Project





Project Background

2017
- ✓ Surface Water Management District Established

2018
- ✓ Bath joins SWMD & requests assistance with SW problems

2019
- ✓ **Yellow Creek Watershed Assessment**

2020
- ✓ Implementation Plan

2022 to present
- ✓ Idle Brook Project

Private Bridge and Culvert Observations




Public Bridge Observations

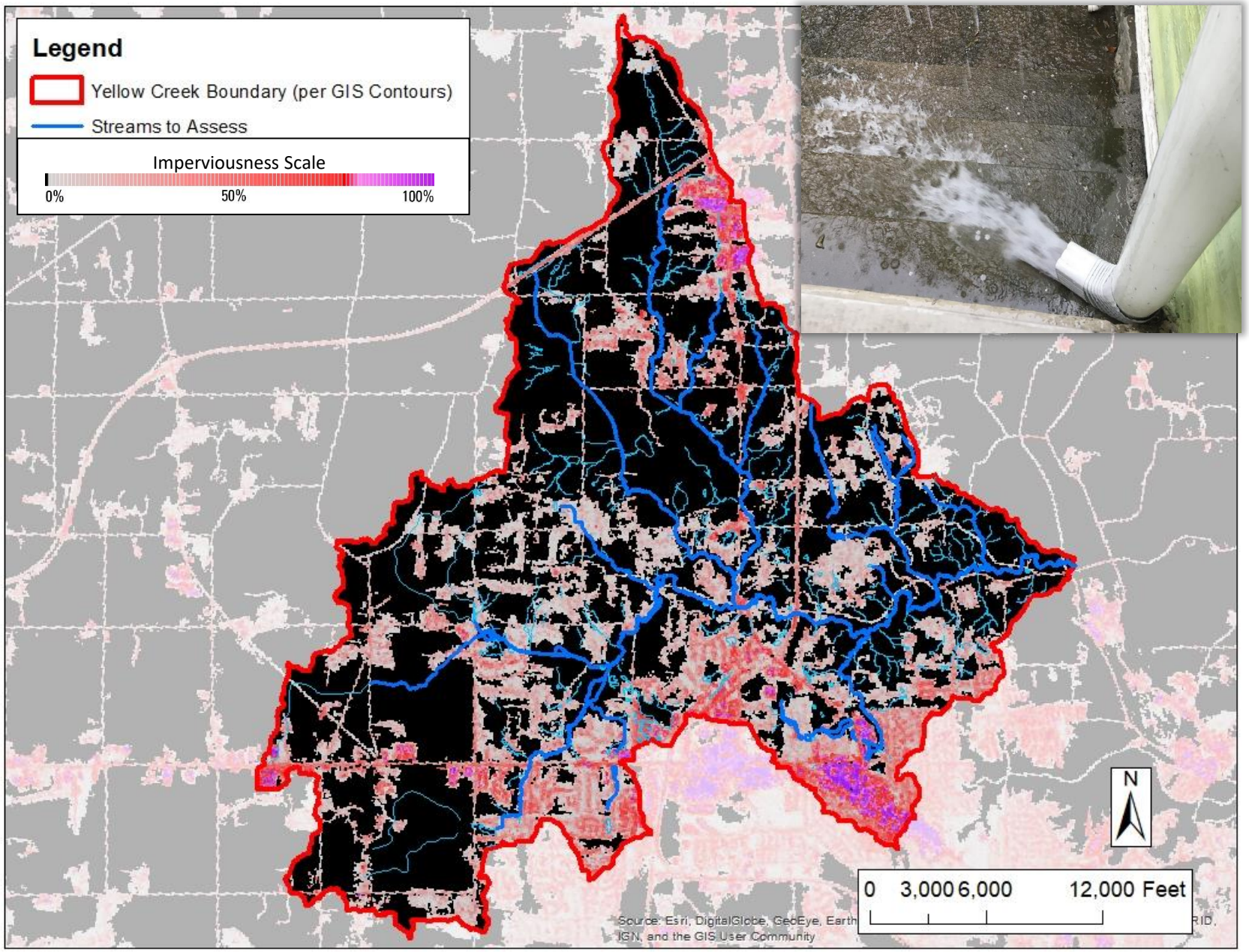


Project Background

2017	✓ Surface Water Management District Established
2018	✓ Bath joins SWMD & requests assistance with SW problems
2019	✓ **Yellow Creek Watershed Assessment**
2020	✓ Implementation Plan
2022 to present	✓ Idle Brook Project

Stream Erosion Throughout the Yellow Creek Stream Network Impacts Habitat, Water Quality, Infrastructure, and Property

Inadequately Managed Runoff from Impervious Cover Can Contribute to High Rates of Erosion



Stream Downcutting and Widening in the Yellow Creek Stream Network

- Predictable trajectory of channel downcutting, widening, and enlargement in response to channelization and watershed urbanization

JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION
VOL. 36, NO. 1 AMERICAN WATER RESOURCES ASSOCIATION FEBRUARY 2000

CHANNEL INSTABILITY IN THE LOESS AREA OF THE MIDWESTERN UNITED STATES[1]

Andrew Simon and Massimo Rinaldi[2]

ABSTRACT: The loess area of the midwestern United States contains thousands of miles of unstable stream channels that are undergoing system-wide channel-adjustment processes as a result of (1) modifications to drainage basins dating back to the turn of the 20th century, including land clearing and poor soil-conservation practices, which caused the filling of stream channels, and consequently (2) direct, human modifications to stream channels such as dredging and straightening to improve drainage conditions and reduce the frequency of out-of-bank flows. Today, many of these channels are still highly unstable and threaten bridges, other structures, and land adjacent to the channels. The most severe, widespread instabilities are in western Iowa where a thick cap of loess and the lack of sand- and gravel-sized bed sediments in many channels hinders downstream aggradation, bed-level recovery and the consequent reduction of bank heights, and renewed bank stability. In contrast, streams draining west-central Illinois, east-central Iowa, and other areas, where the loess cap is relatively thin and there are ample supplies of sand- and gravel-sized material, are closer to recovery. Throughout the region, however, channel widening by mass-wasting processes is the dominant adjustment process. (KEY TERMS: unstable channels; loess channels; degradation; bank instability; shear strength.)

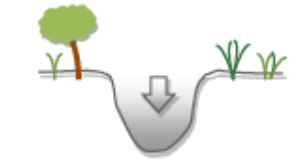
INTRODUCTION

The dynamic nature of alluvial streams signifies the ability to adjust to changes imposed on the fluvial system, be they natural or a result of human activities. Channel adjustments migrate upstream and downstream in an attempt to offset the disturbance by altering aspects of their morphology, sediment load, and hydraulic characteristics. Under "natural" conditions, in geologically stable areas such as the midwestern United States, the processes of erosion and deposition might occur at such low rates and over such extended periods of time, that they can be virtually imperceptible. Human and natural factors or disturbances, however, combine to accelerate and exacerbate these processes, and as a result, rapid and observable morphologic changes occur as the channel attempts to offset the disturbance and return to an equilibrium condition. Adjustments to human disturbances can involve short time scales (days) and limited spatial extents (a stream reach), or longer periods of time (scores to hundreds of years) and entire fluvial systems, depending on the magnitude, extent, and type of disturbance (Williams and Wolman, 1984; Simon, 1994).

In the highly erodible loess area of the midwestern United States (Figure 1), human disturbances to flood plains and upland areas culminating near the turn of the 20th century resulted in channels being choked with sediment and debris. Beginning about 1910, channels were enlarged and straightened throughout the region to alleviate frequent and prolonged flooding of bottomlands (Speer *et al.*, 1965). Over the next 80 years, accelerated channel erosion and the formation of canyon-like stream channels have resulted in severe damage to highway structures, pipelines, fiber-optic lines, and land adjacent to the stream channels. Accelerated stream-channel degradation has resulted in an estimated $1.1 billion in damages to infrastructure and the loss of agricultural lands since the turn of the century in western Iowa (Baumel, 1994). A survey of 15 counties in northwestern Missouri identified 957 highway structures as damaged by channel degradation. Degradation and channel widening in the loess area led to the collapse of several bridges in West Tennessee (Robbins and Simon, 1983), southwest Mississippi (Wilson, 1979), Missouri (Emerson,

[1]Paper No. 99012 of the *Journal of the American Water Resources Association*. **Discussions are open until October 1, 2000.**
[2]Respectively, USDA-Agricultural Research Service, National Sedimentation Laboratory, 598 McElroy Drive, P.O. Box 1157, Oxford, Mississippi 38655; and Universita degli Studi di Firenze, Florence, Italy (E-Mail/Simon: simon@sedlab.olemiss.edu).

Stage1 – Equilibrium



Stage 2– Incision

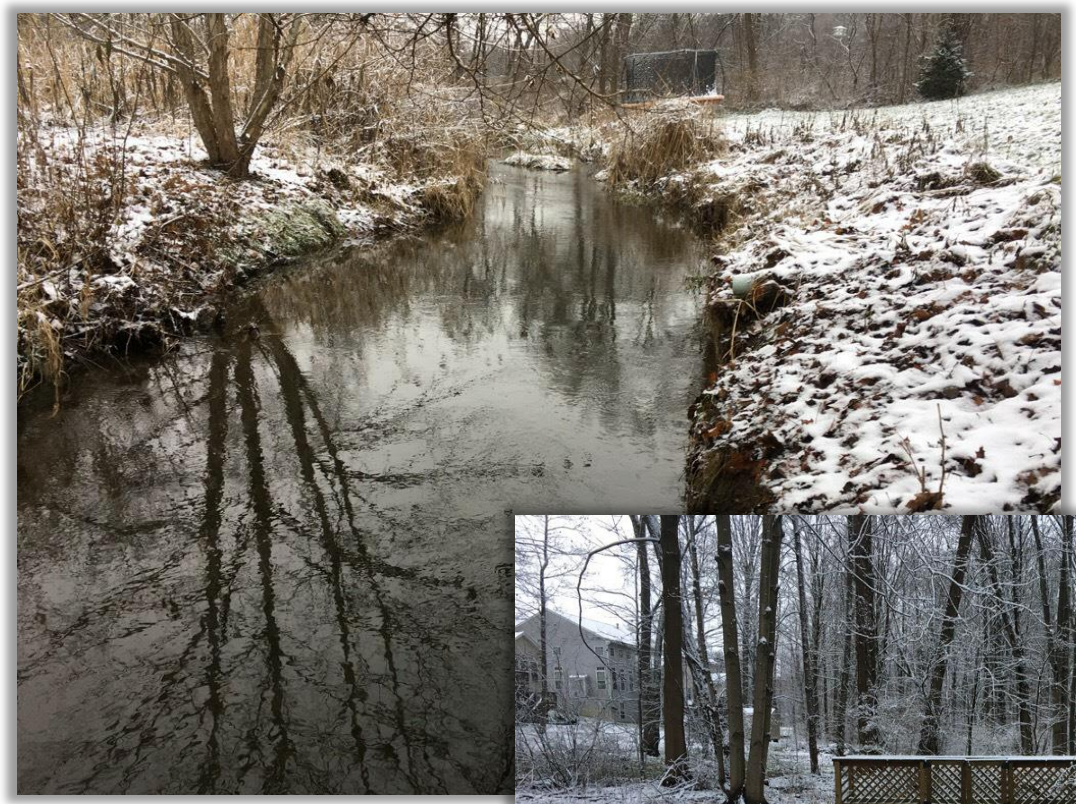
Stage 3 – Widening

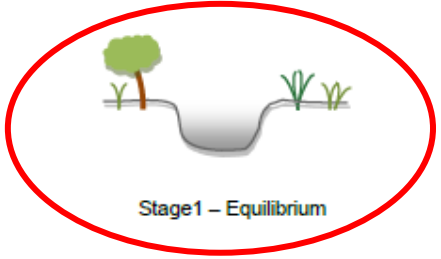
Stage 4– Aggradation

Stage 5 – Equilibrium

Channel Evolution Sequence in Response to Increased Flows from Urbanization, Adapted from Schumm et al. (1984) and Hawley et al. (2012)

Stage 1 – Equilibrium

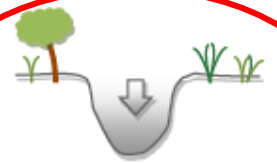




Channel Evolution Sequence in Response to Increased Flows from Urbanization, Adapted from Schumm et al. (1984) and Hawley et al. (2012)

Stage 2 – Incision (Downcutting)

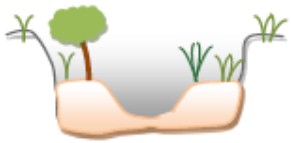
Stage1 – Equilibrium



Stage 2– Incision

Stage 3 – Widening

Stage 4– Aggradation

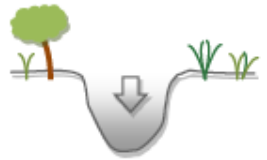


Stage 5 – Equilibrium

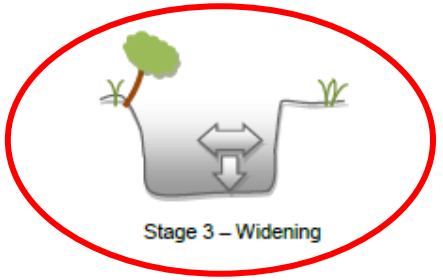
Channel Evolution Sequence in Response to Increased Flows from Urbanization, Adapted from Schumm et al. (1984) and Hawley et al. (2012)

Stage 3 – Widening

Stage1 – Equilibrium



Stage 2– Incision



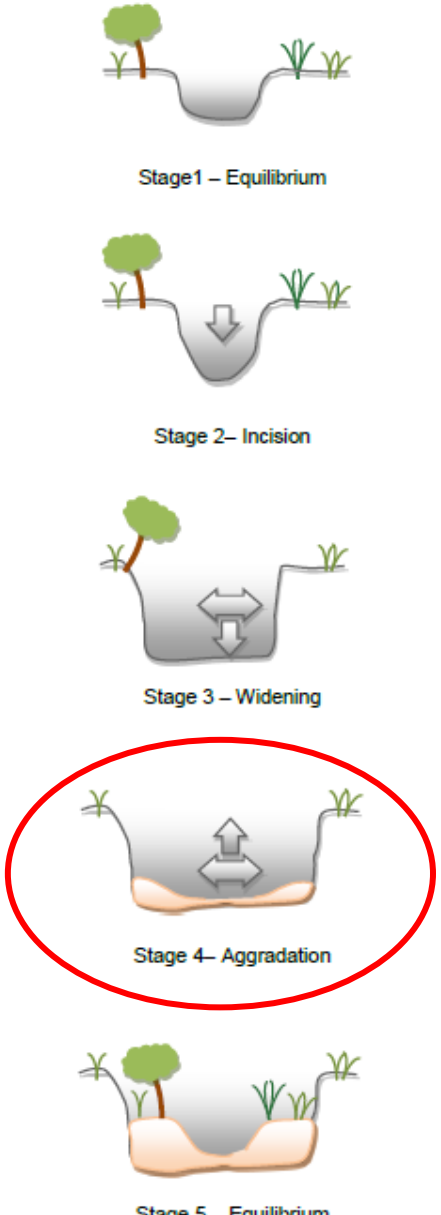
Stage 3 – Widening

Stage 4– Aggradation

Stage 5 – Equilibrium

Channel Evolution Sequence in Response to Increased Flows from Urbanization, Adapted from Schumm et al. (1984) and Hawley et al. (2012)

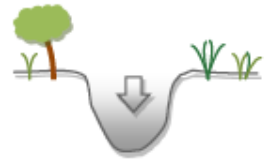
Stage 4 – Aggradation



Channel Evolution Sequence in Response to Increased Flows from Urbanization, Adapted from Schumm et al. (1984) and Hawley et al. (2012)

Stage 5 – Equilibrium (Recovered)

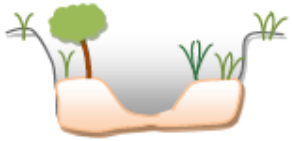
Stage1 – Equilibrium



Stage 2– Incision

Stage 3 – Widening

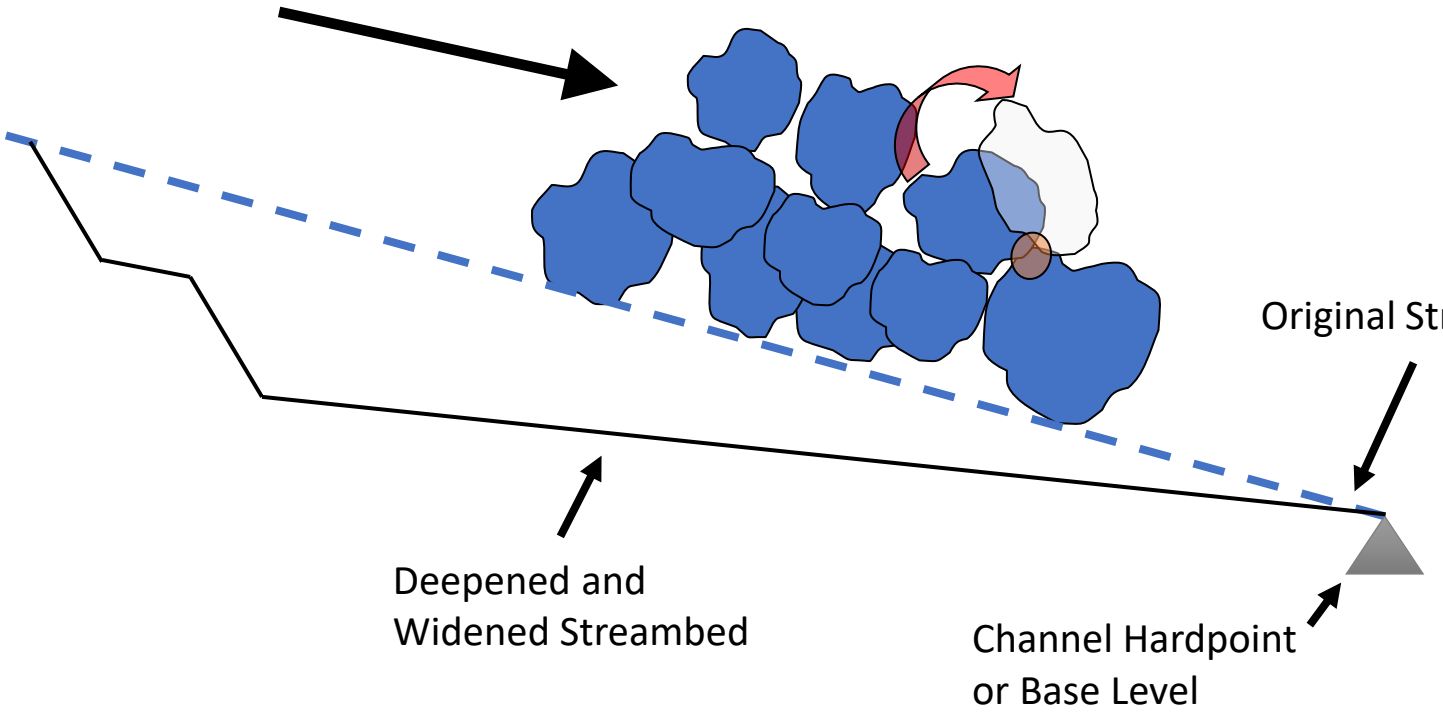
Stage 4– Aggradation

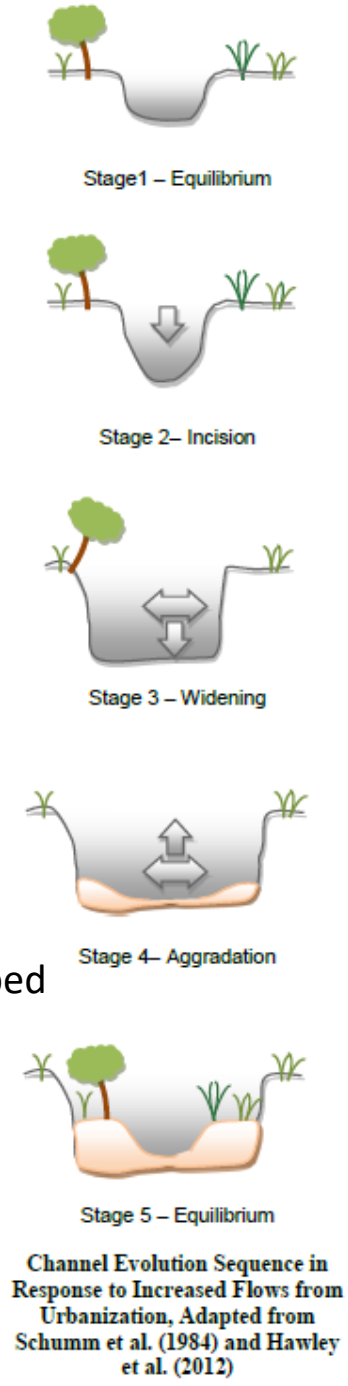


Stage 5 – Equilibrium

Channel Evolution Sequence in Response to Increased Flows from Urbanization, Adapted from Schumm et al. (1984) and Hawley et al. (2012)

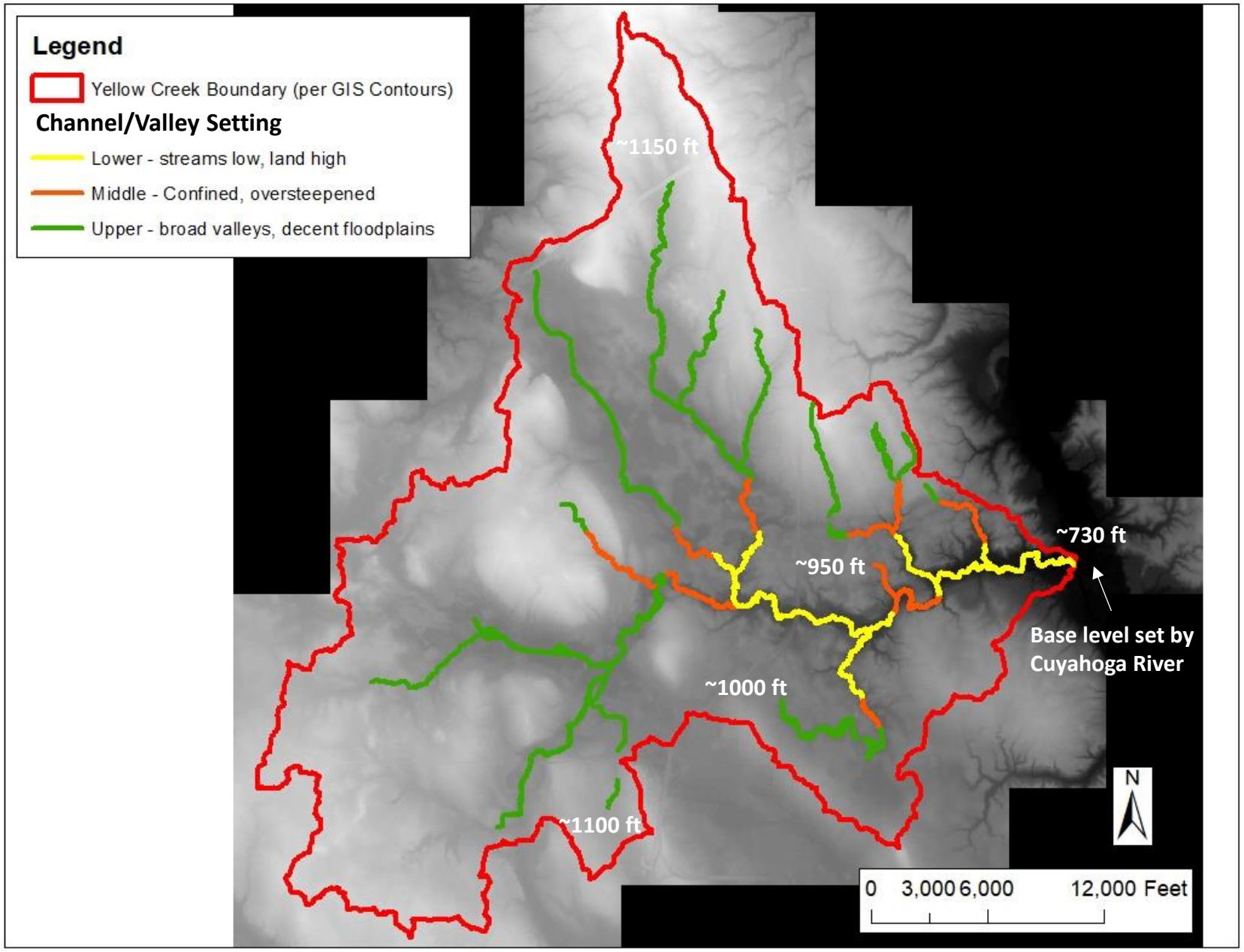
How Does A Stream Get Deeper?



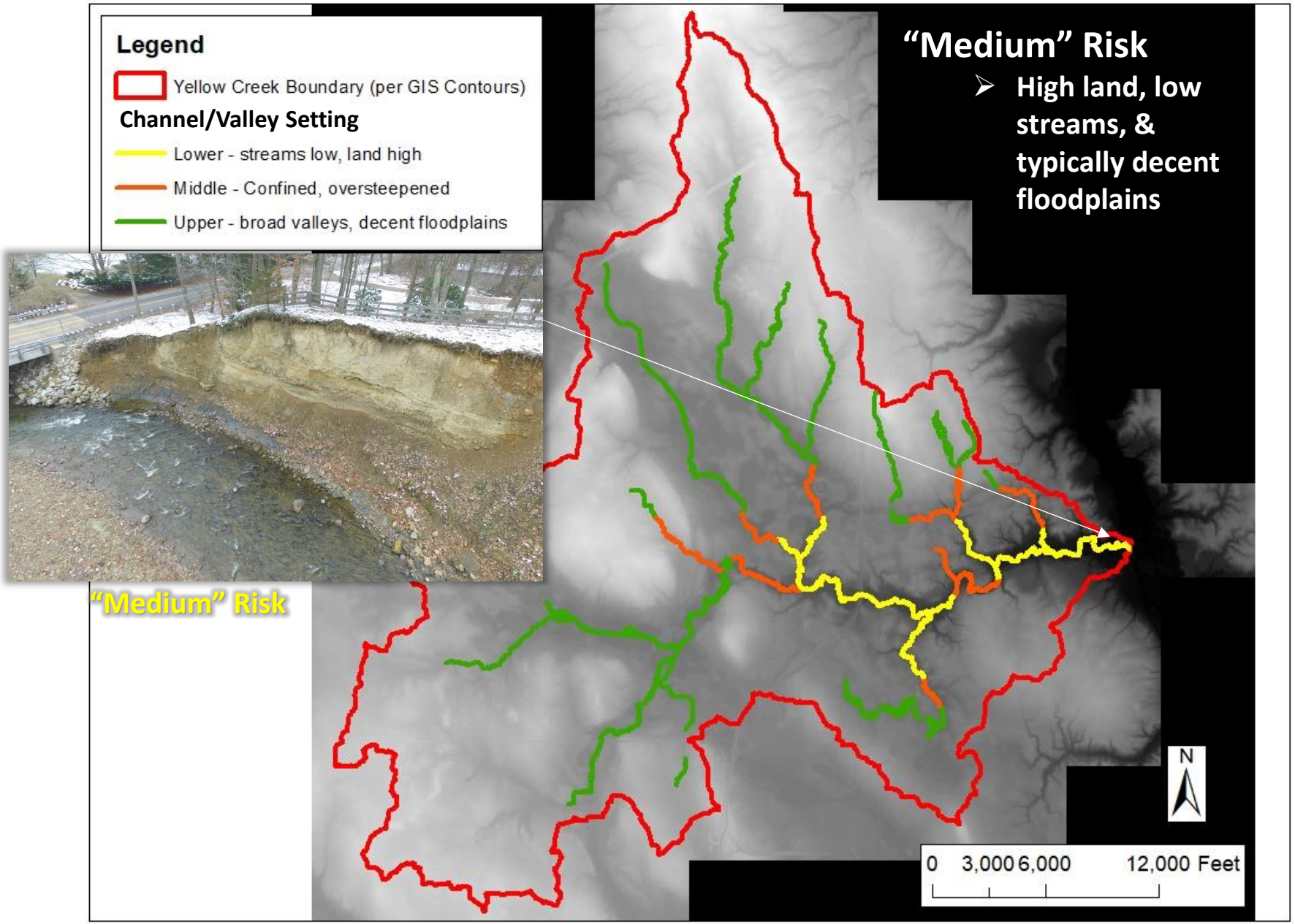


Channel Evolution Sequence in Response to Increased Flows from Urbanization, Adapted from Schumm et al. (1984) and Hawley et al. (2012)

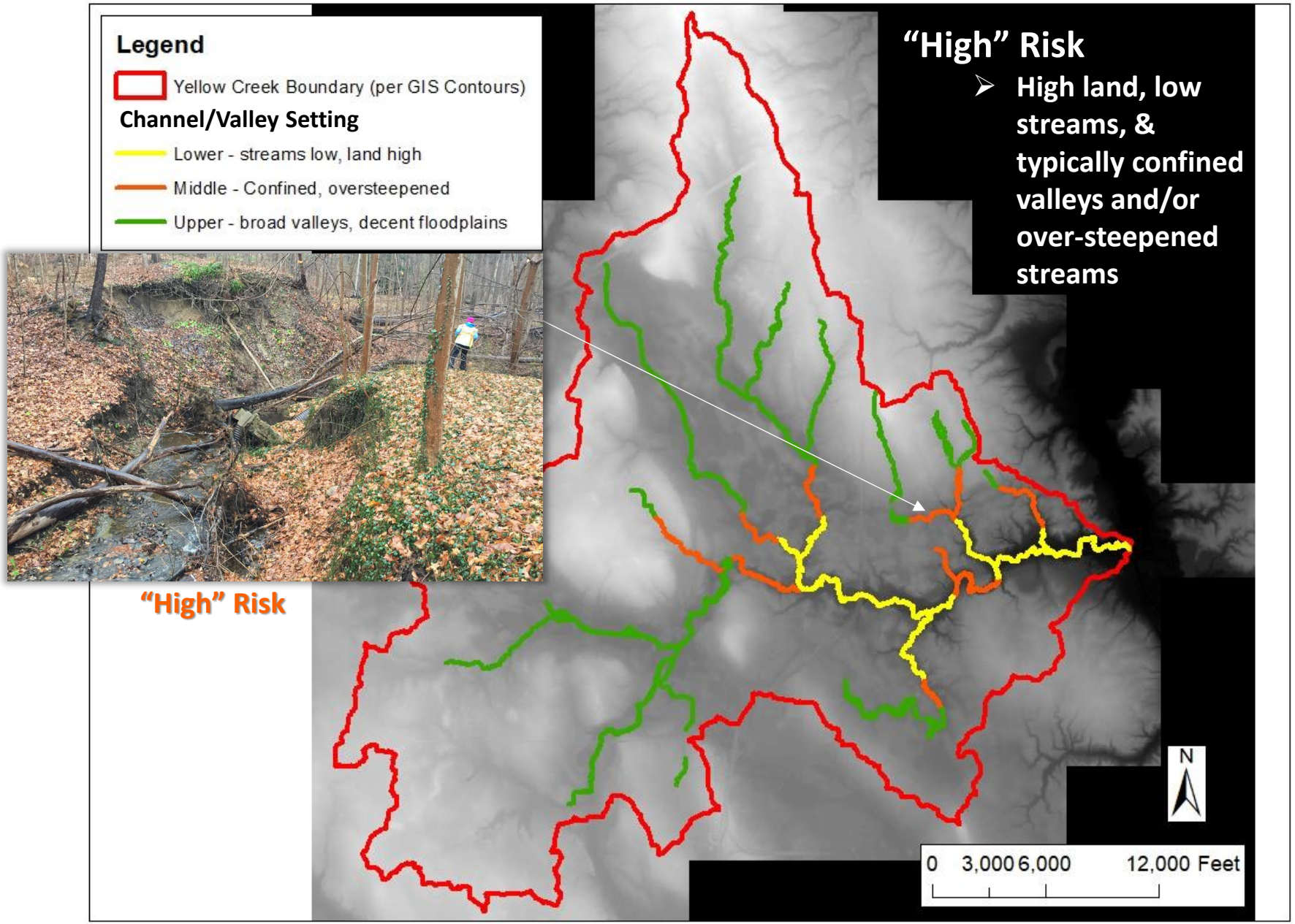
The Worst Erosion Is Migrating Upstream



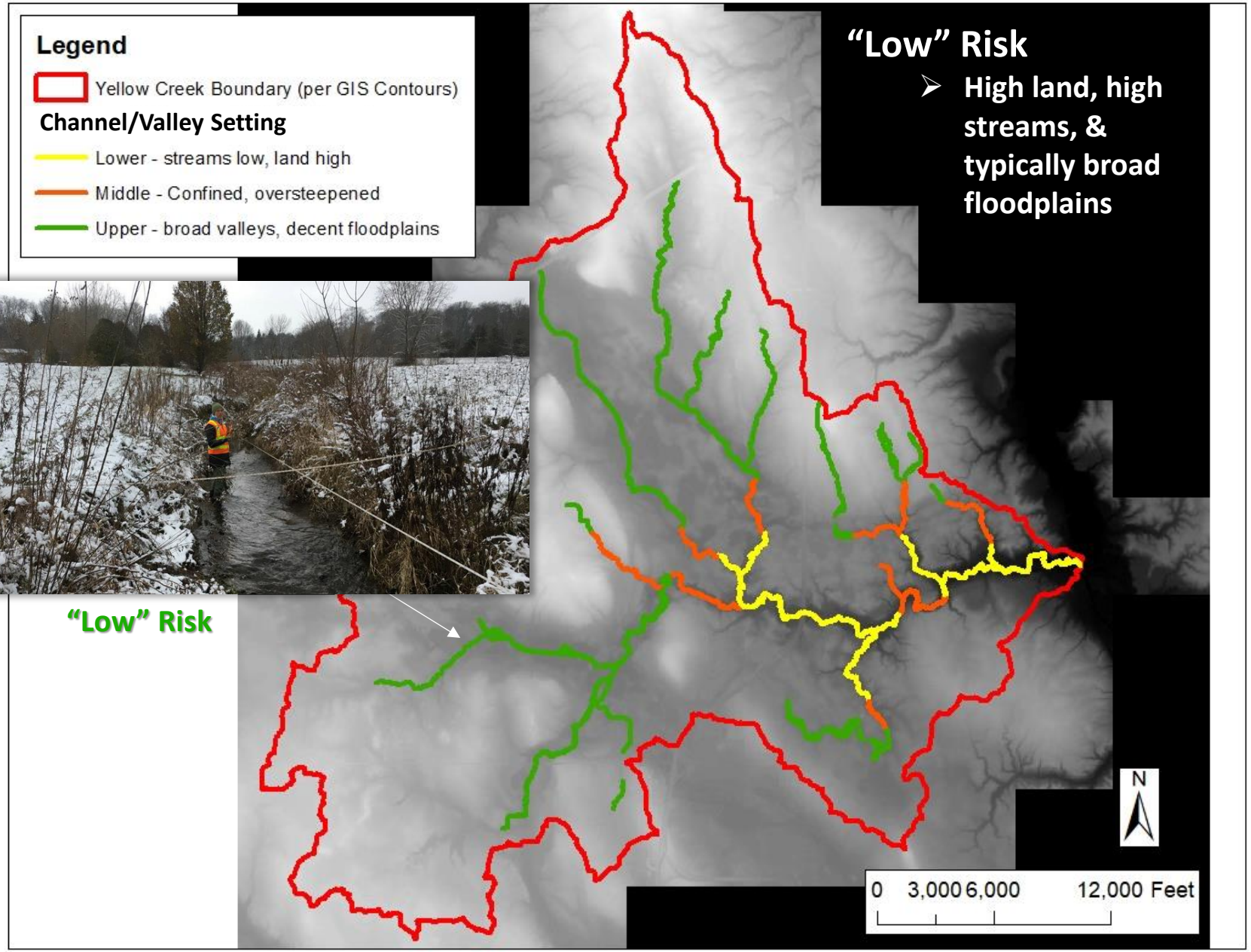
Medium Erosion Risks
Lower Downcutting but High Widening Rates



Highest Erosion Risks
High Downcutting and Widening Rates

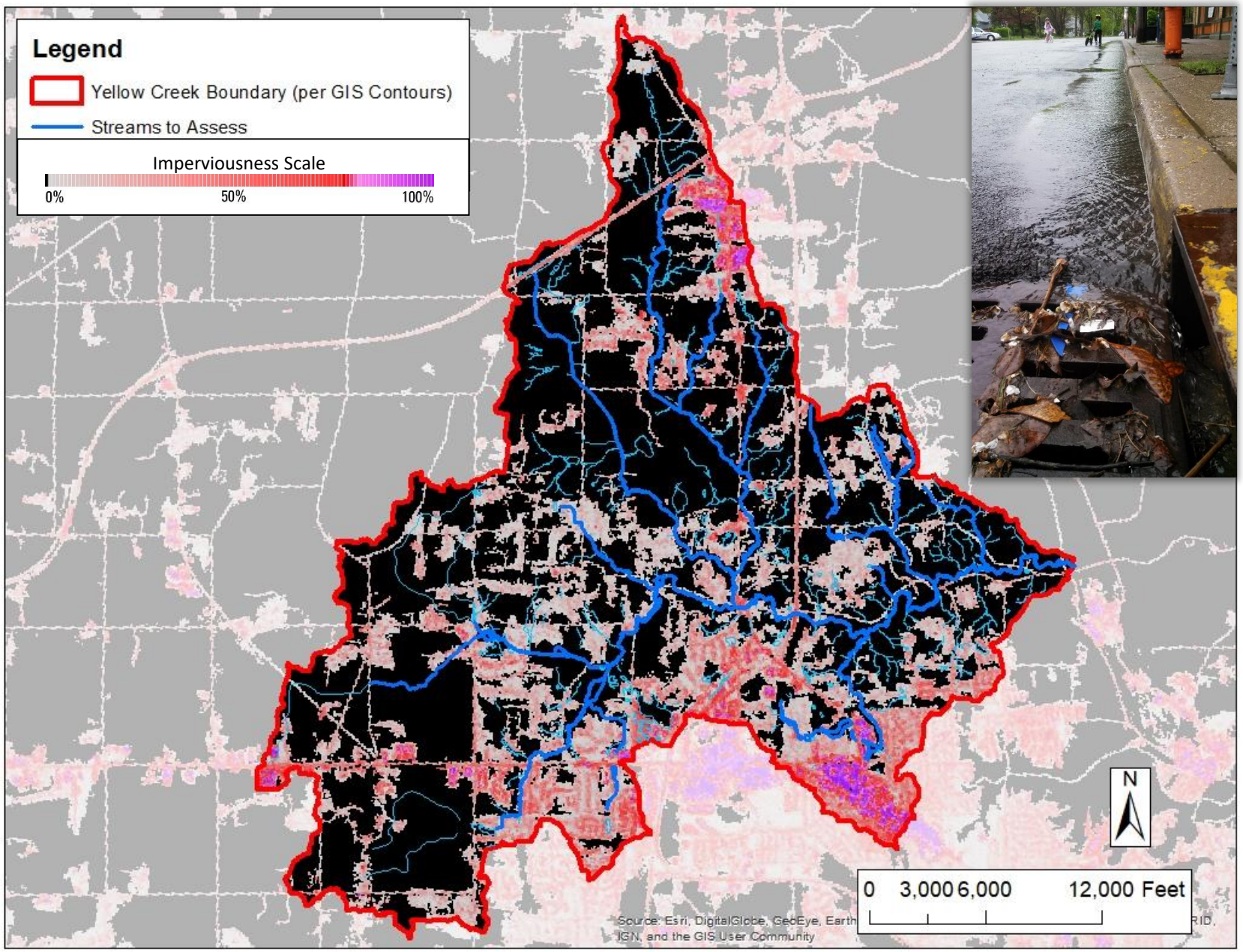


Lowest Erosion Risks
Lower Downcutting and Widening Rates




“Low” Risk Does NOT Equal No Risk

Bath Needs to Intercept and Hold Back Stormwater Wherever It Can to Reduce Erosion Rates in Streams



Project Background

2017 ✓ Surface Water Management District Established

2018 ✓ Bath joins SWMD & requests assistance with SW problems

2019 ✓ **Yellow Creek Watershed Assessment**

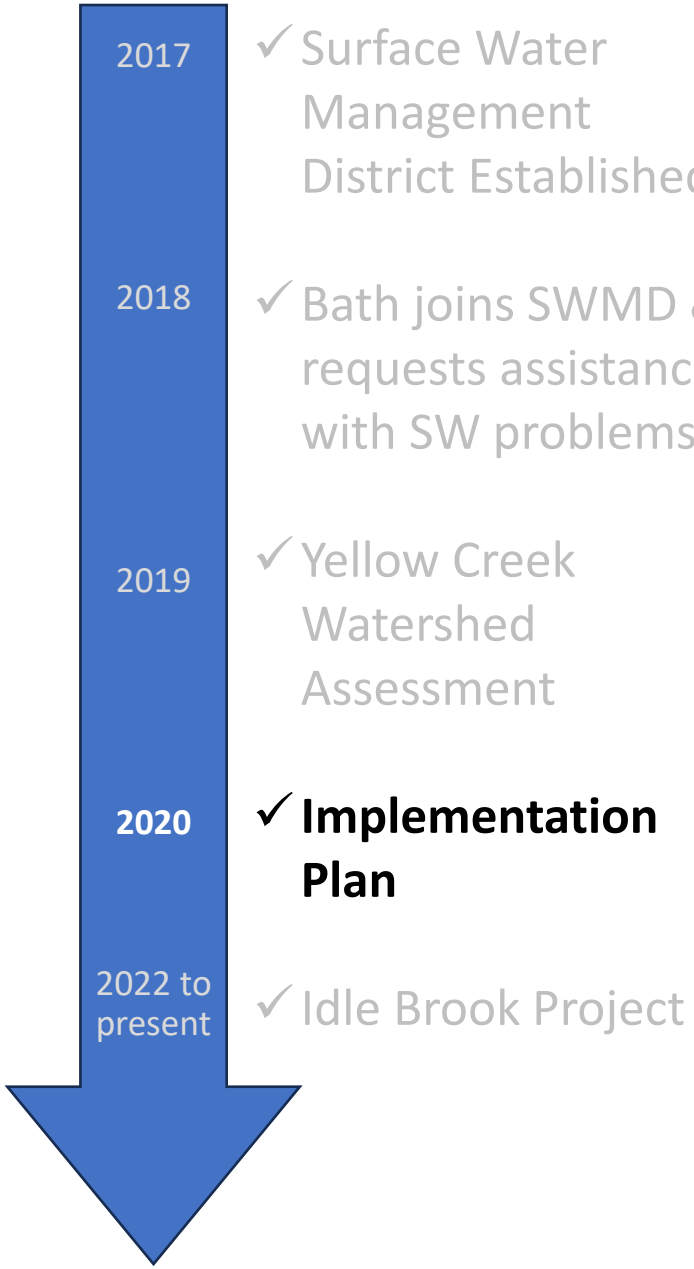
2020 ✓ Implementation Plan

2022 to present ✓ Idle Brook Project

- Assessment included public presentations, reports, and appendices available on the SWMD Bath Special District webpage

- Yellow Creek State of the Watershed public meeting – August 19, 2019
  - Attended by three Bath Township Trustees

Project Background



- ~$40M in conceptual-level projects identified in the Yellow Creek Watershed Assessment (Table in Appendix D)
- ~$25M in projects included in Yellow Creek Implementation Plan (intended to expand the potential for grant funding for some projects – see Chapter 4 in Implementation Plan)
- Advisory Committee of **Bath Township Residents** & **Volunteers** provides regular input to help prioritize Bath needs and projects

Project Background

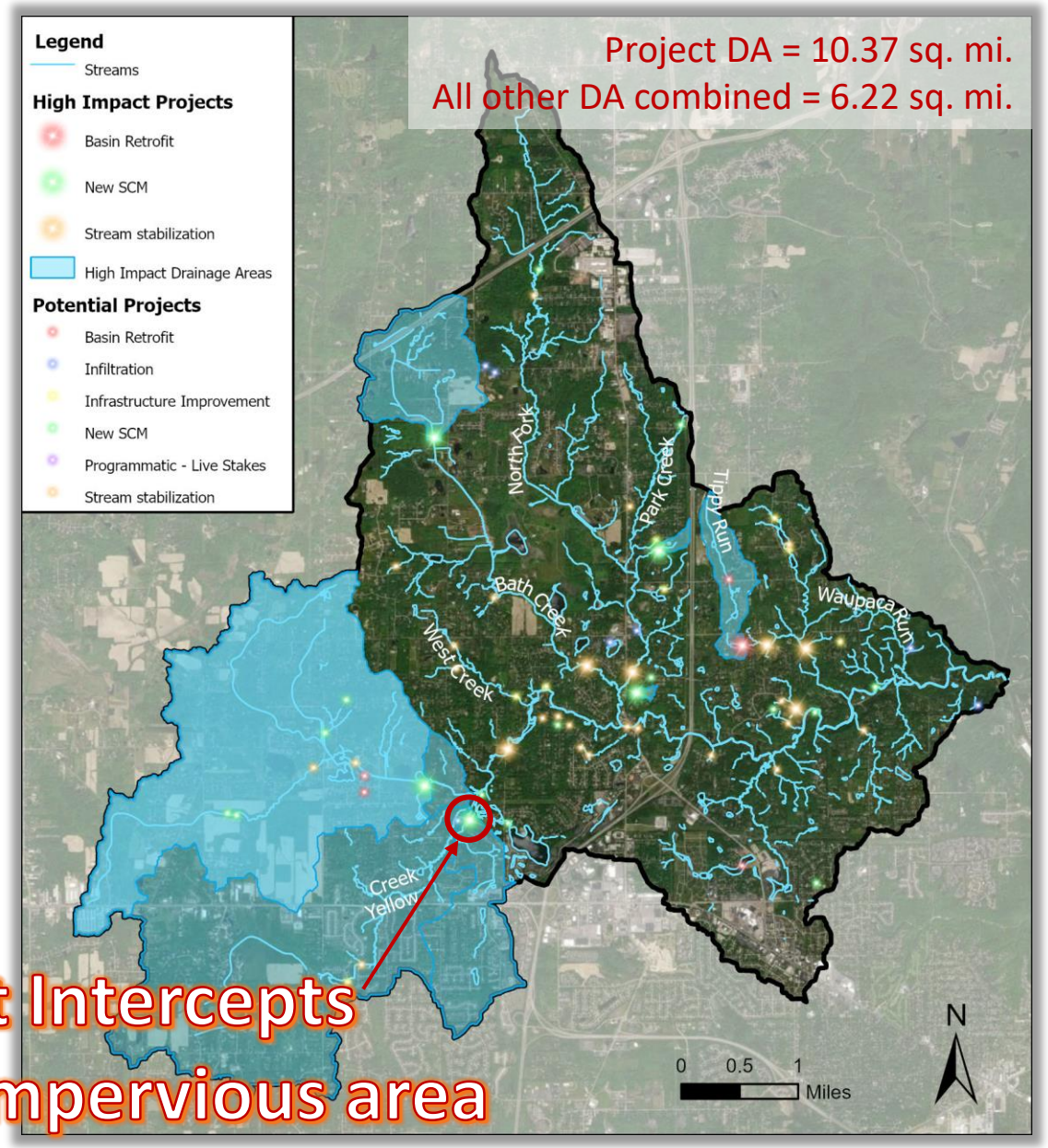
2017 ✓ Surface Water Management District Established

2018 ✓ Bath joins SWMD & requests assistance with SW problems

2019 ✓ Yellow Creek Watershed Assessment

2020 ✓ **Implementation Plan**

2022 to present ✓ Idle Brook Project



Idle Brook Project Intercepts 31% of watershed's impervious area

Project Background

2017 ✓ Surface Water Management District Established

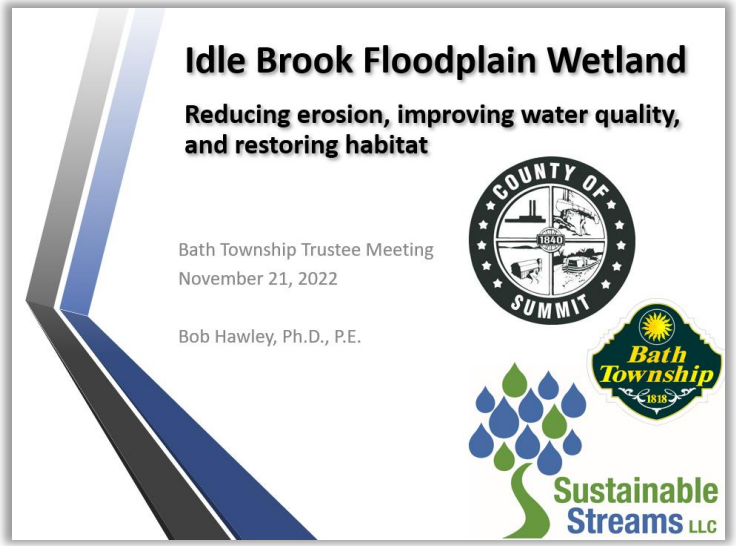
2018 ✓ Bath joins SWMD & requests assistance with SW problems

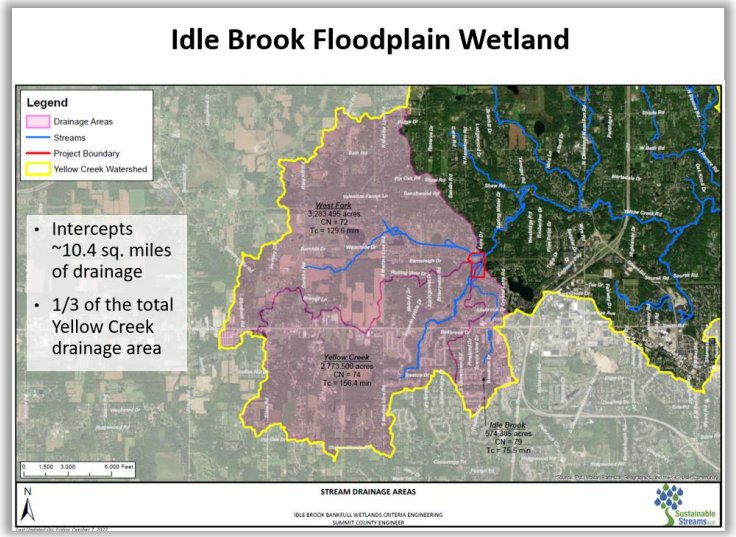
2019 ✓ Yellow Creek Watershed Assessment

2020 ✓ Implementation Plan

2022 to present ✓ **Idle Brook Project**

- Idle Brook Project presented at the Bath Township Trustee Meeting – November 21, 2022





Project Background

2017 ✓ Surface Water Management District Established

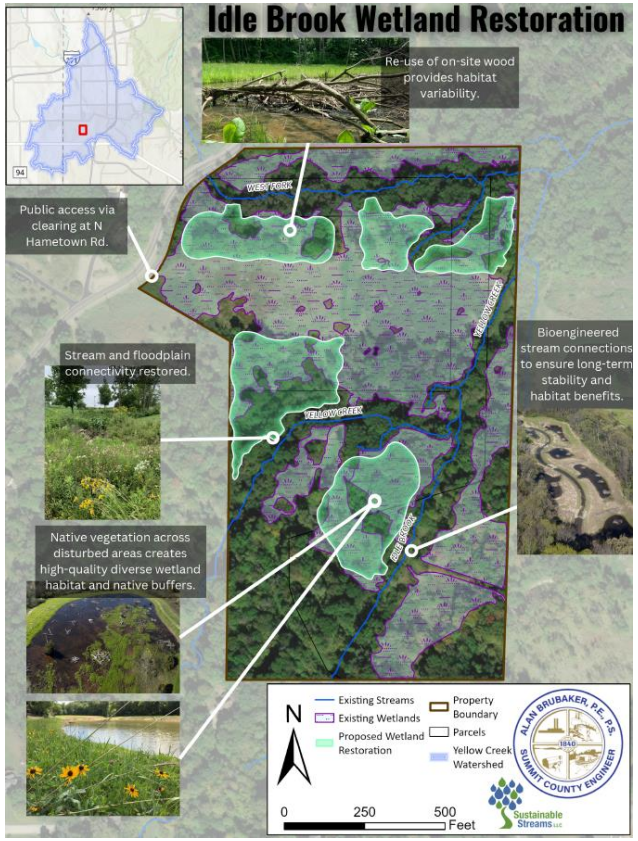
2018 ✓ Bath joins SWMD & requests assistance with SW problems

2019 ✓ Yellow Creek Watershed Assessment

2020 ✓ Implementation Plan

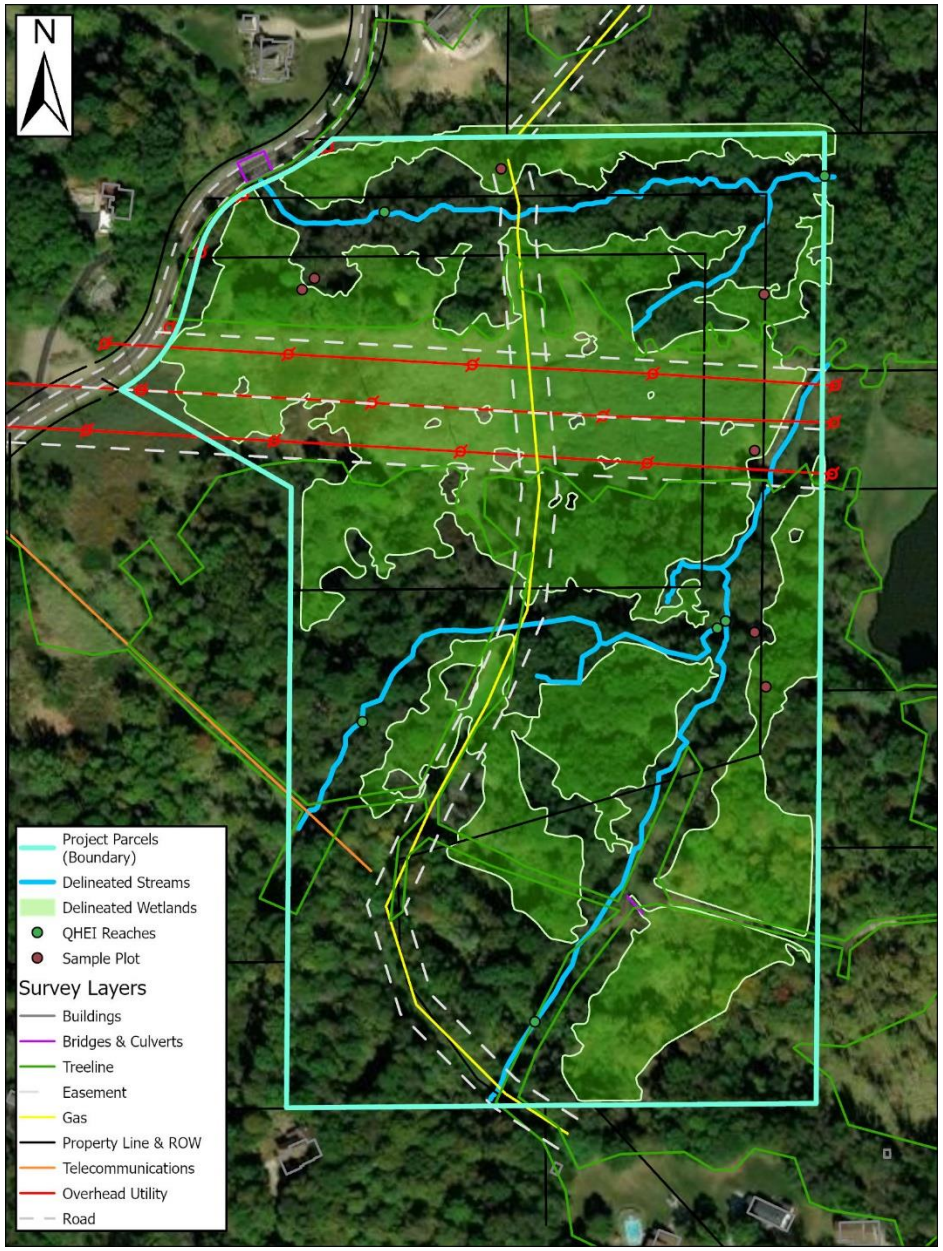
2022 to present ✓ **Idle Brook Project**

Idle Brook Project has consistently been a high priority project for SWMD – Bath Special District



- ✓ Publicly-owned land
- ✓ Intercepts 31% of the impervious area in the entire Yellow Creek watershed
- ✓ high value for the cost
- ✓ Permitted by Army Corps and Ohio EPA as a habitat restoration project

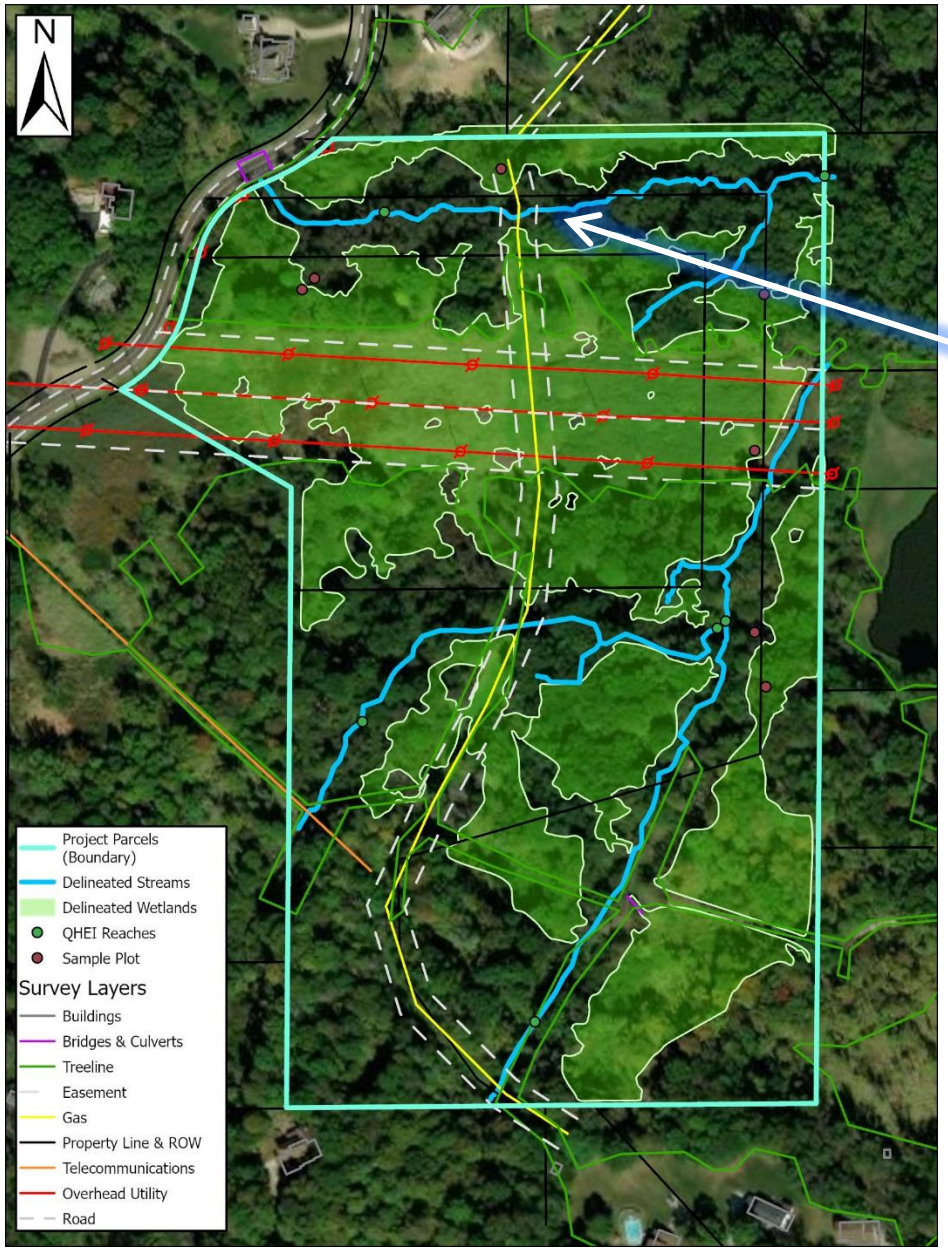
Idle Brook Project – Existing Conditions



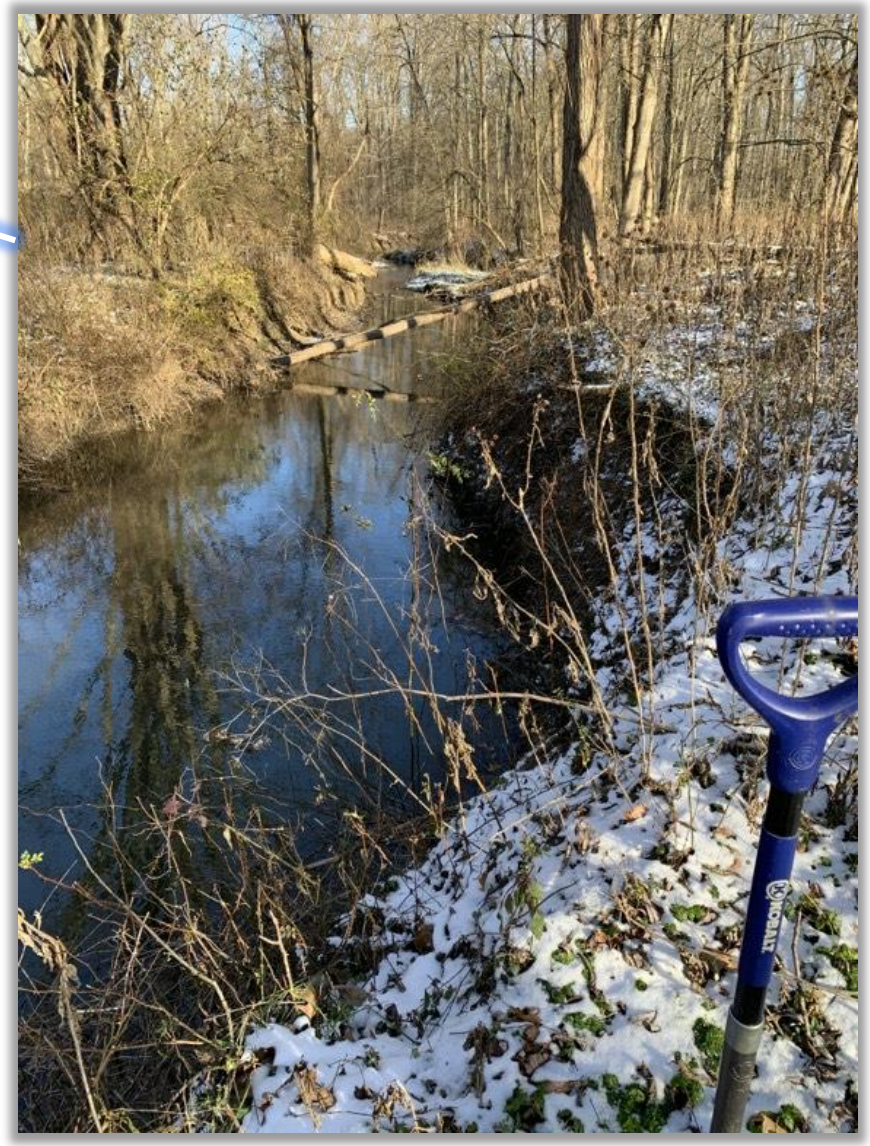
- Total Stream Length = ~4,084 ft
  - Habitat assessments:
    - West Fork – Fair
    - Yellow Creek – Good
    - Idle Brook – Fair, limited riparian buffer on the east bank

- Total Wetland Area = 17.7 ac
  - All Category 2 (median class)
  - Wetlands/Floodplain hydrologically disconnected from the streams due to stream downcutting, potential historic channelization, etc.
  - Numerous utility crossings
  - Apparent fill and drainage infrastructure in the wetland on the east side of Idle Brook

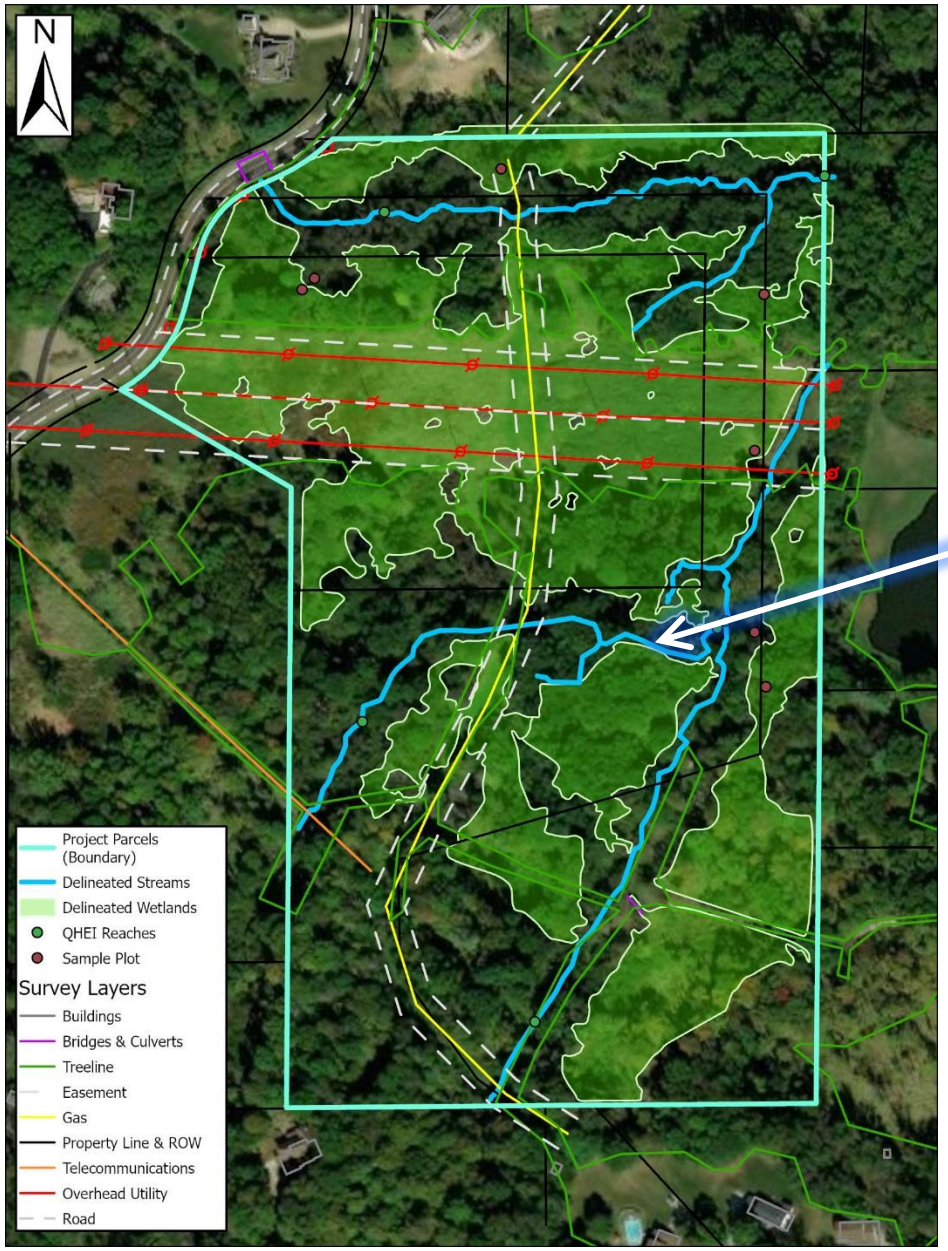
Idle Brook Project – Existing Conditions



West Fork

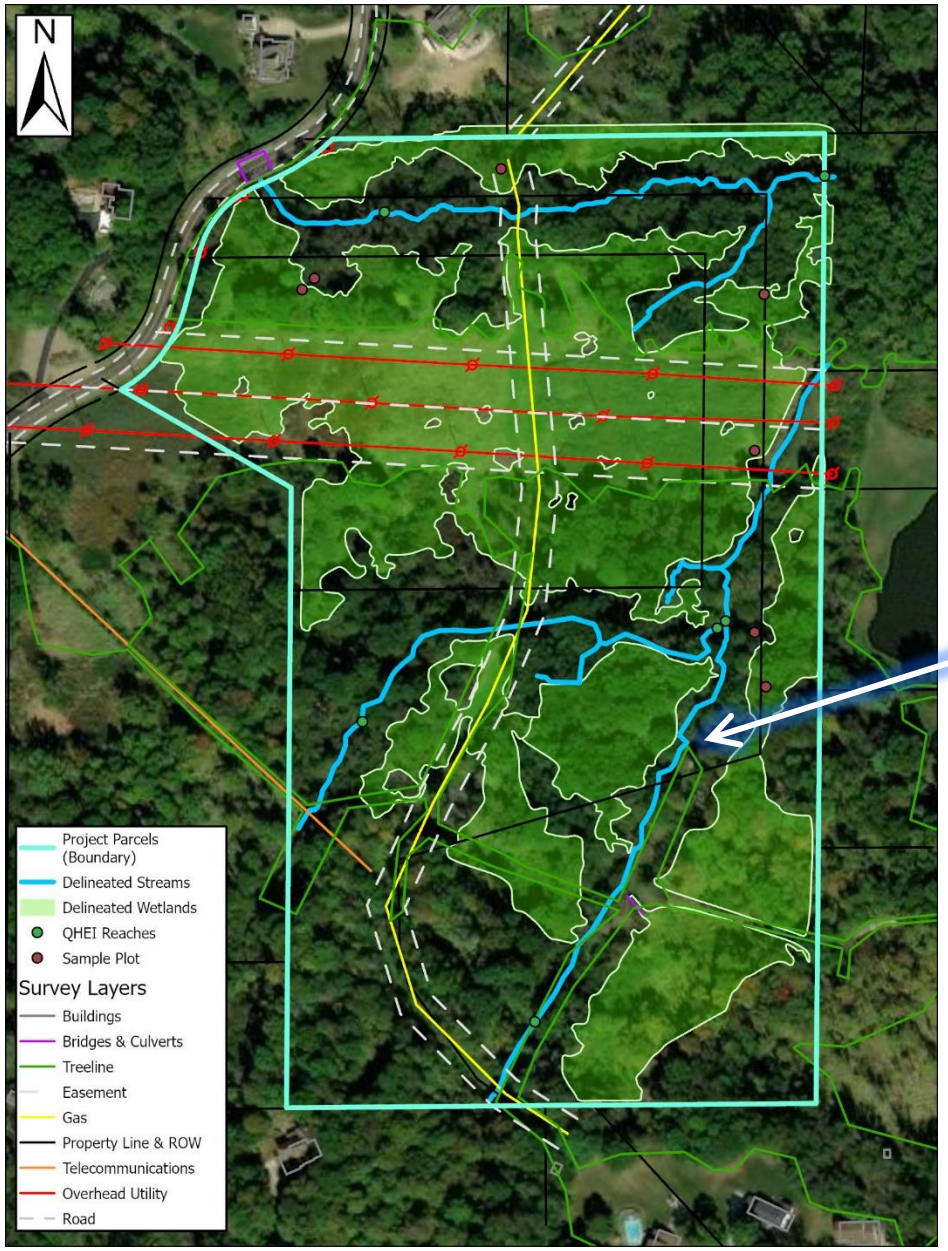


Idle Brook Project – Existing Conditions

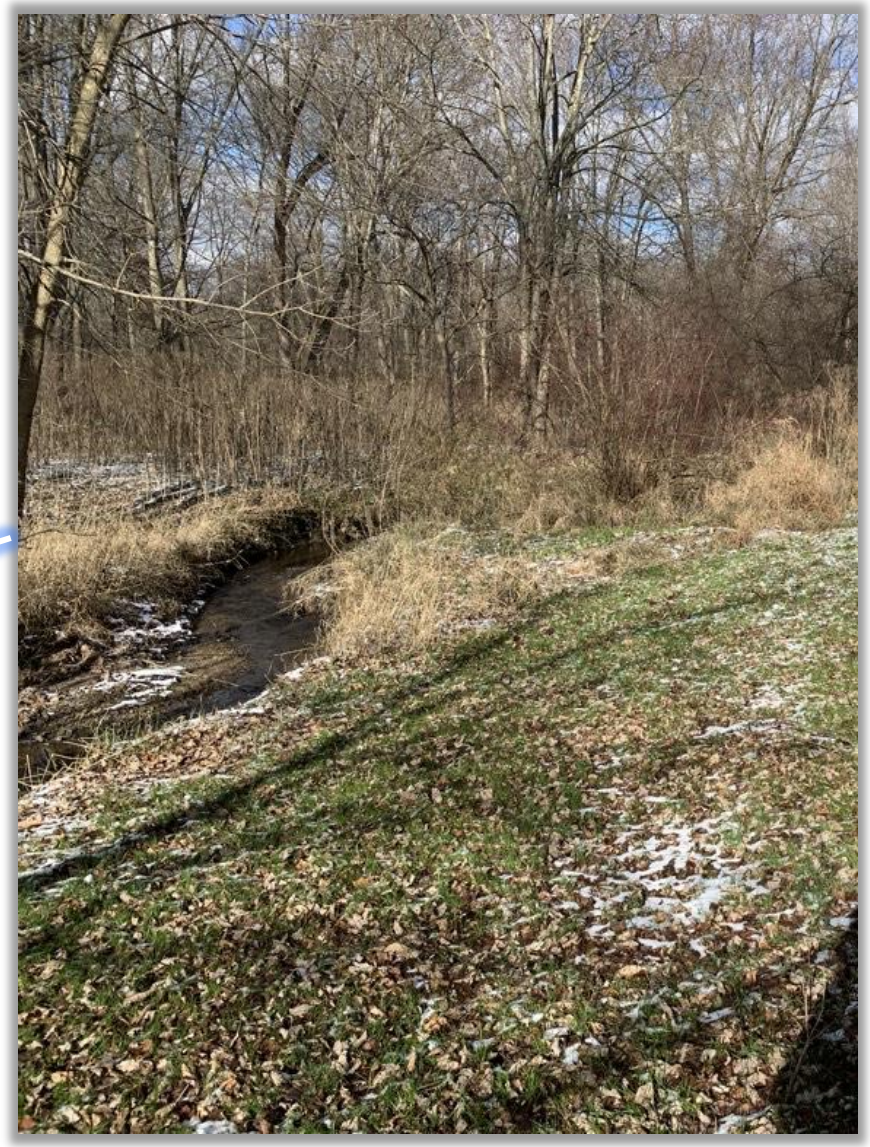


Yellow Creek

Idle Brook Project – Existing Conditions



Idle Brook



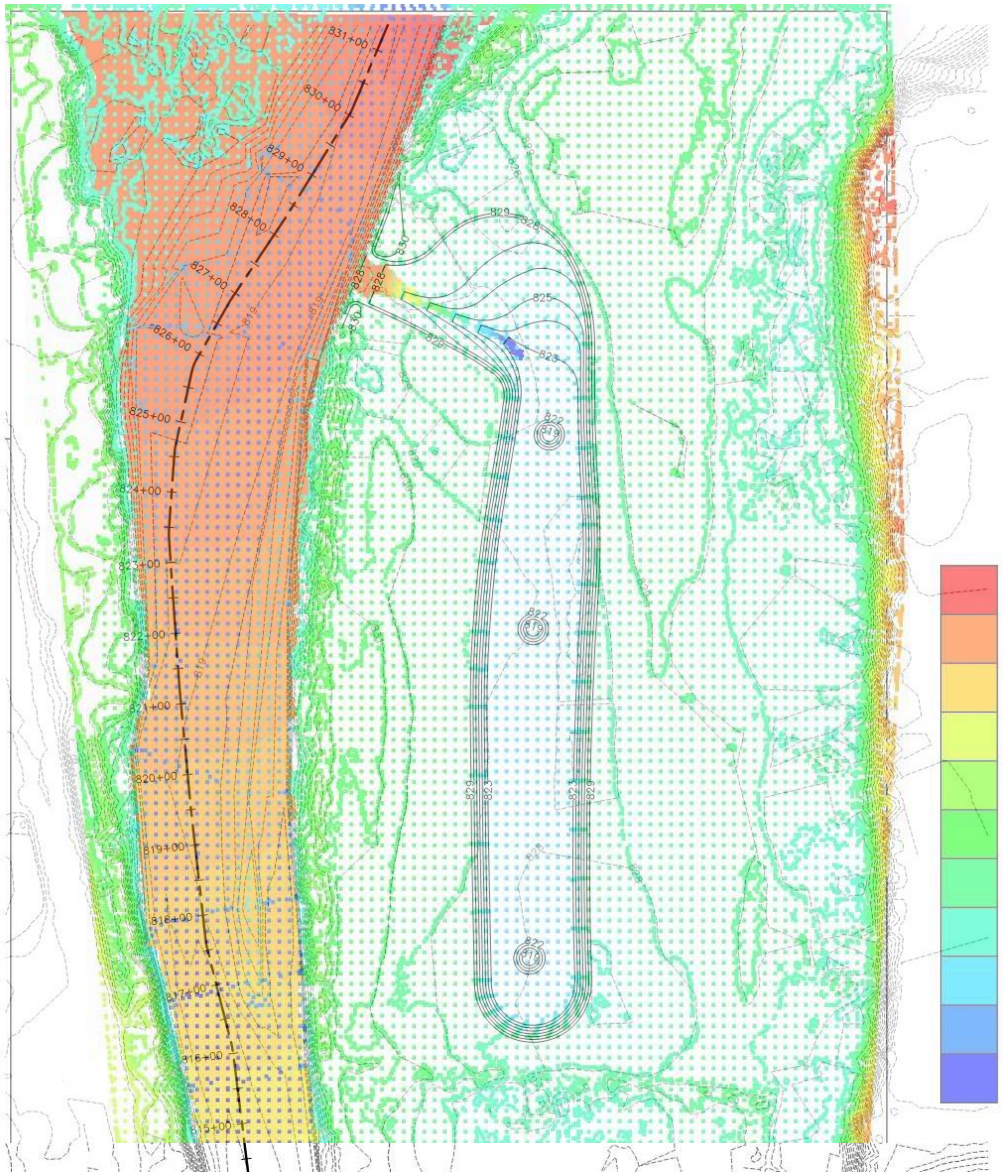
Idle Brook Project – Proposed Conditions

Wetland Restoration permitted by the US Army Corps of Engineers (Nationwide Permit 27):

- ✓ ~4 acres of wetland enhancement
  - ✓ Hydrologic enhancement by removing sediment from the floodplain and restoring a more natural connection between the streams and the wetlands
- ✓ ~2 acres of wetland creation
  - ✓ Creating wetland habitat in areas that are not currently wetlands

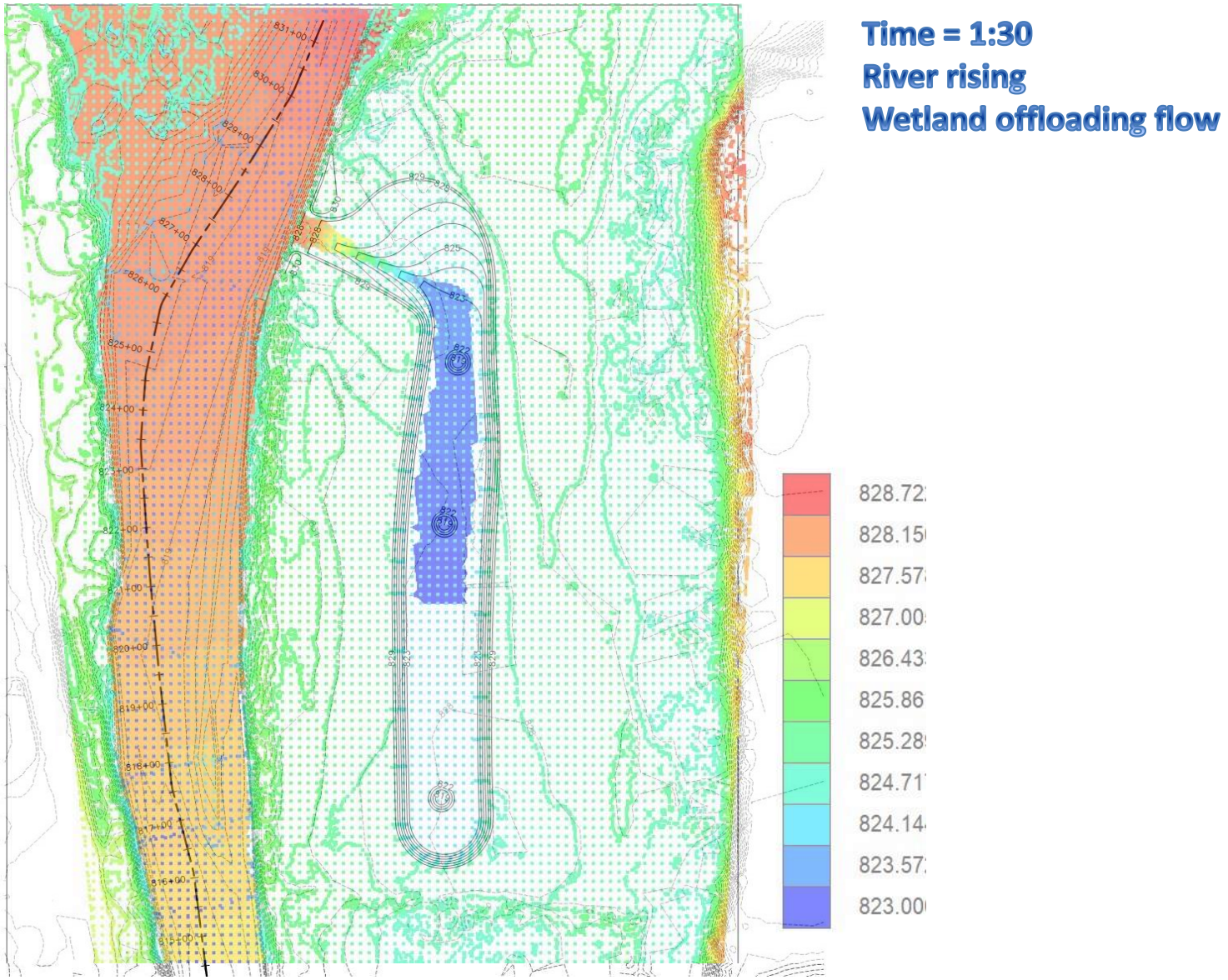
- ✓ Restoring varied elevations to diversify habitat
- ✓ Reusing cleared trees as habitat elements
- ✓ Planting more than 250 trees

2D Modeling Exemplifies Flood Reduction Benefits



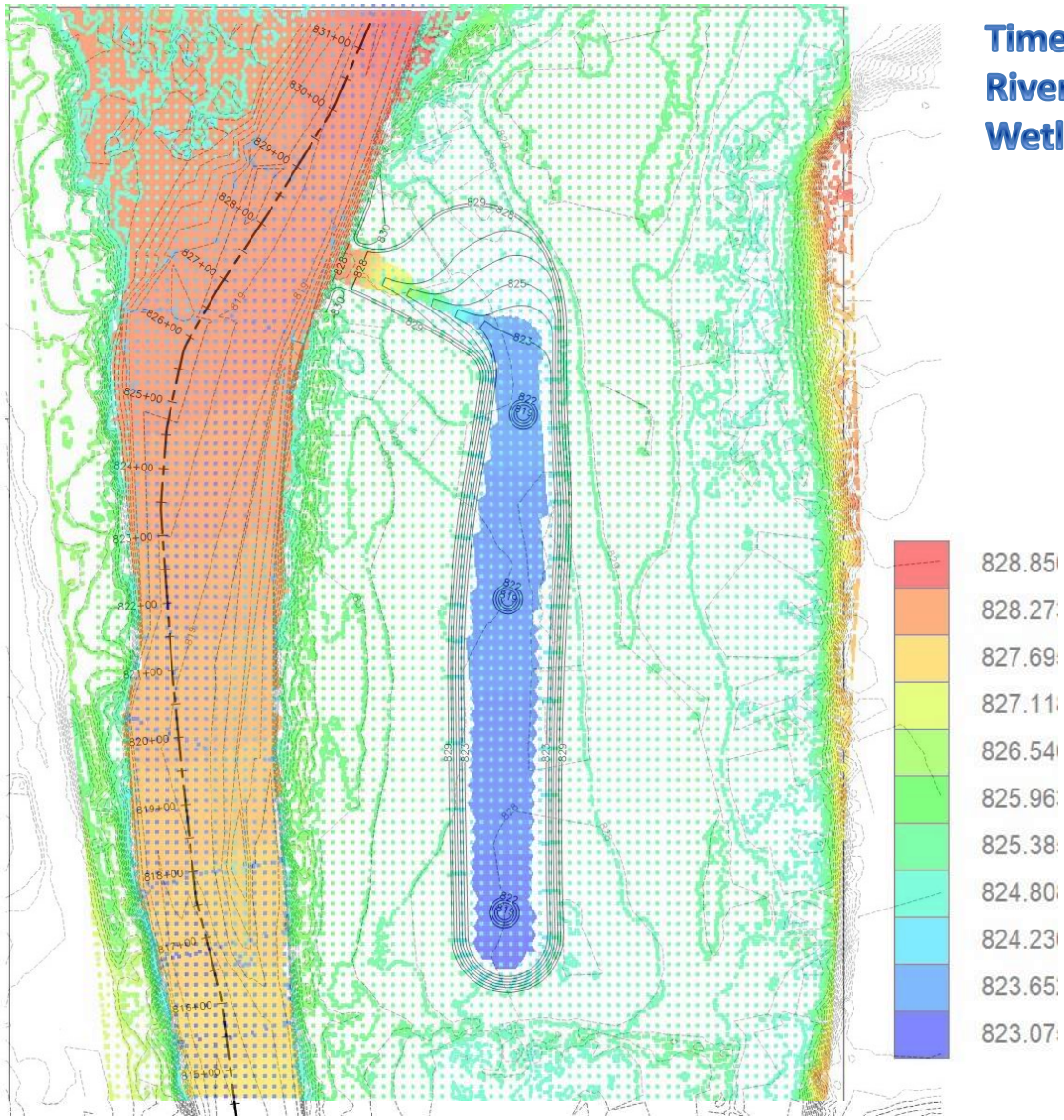
Adapted from Hawley et al. (In review, PLOS Water)

2D Modeling Exemplifies Flood Reduction Benefits



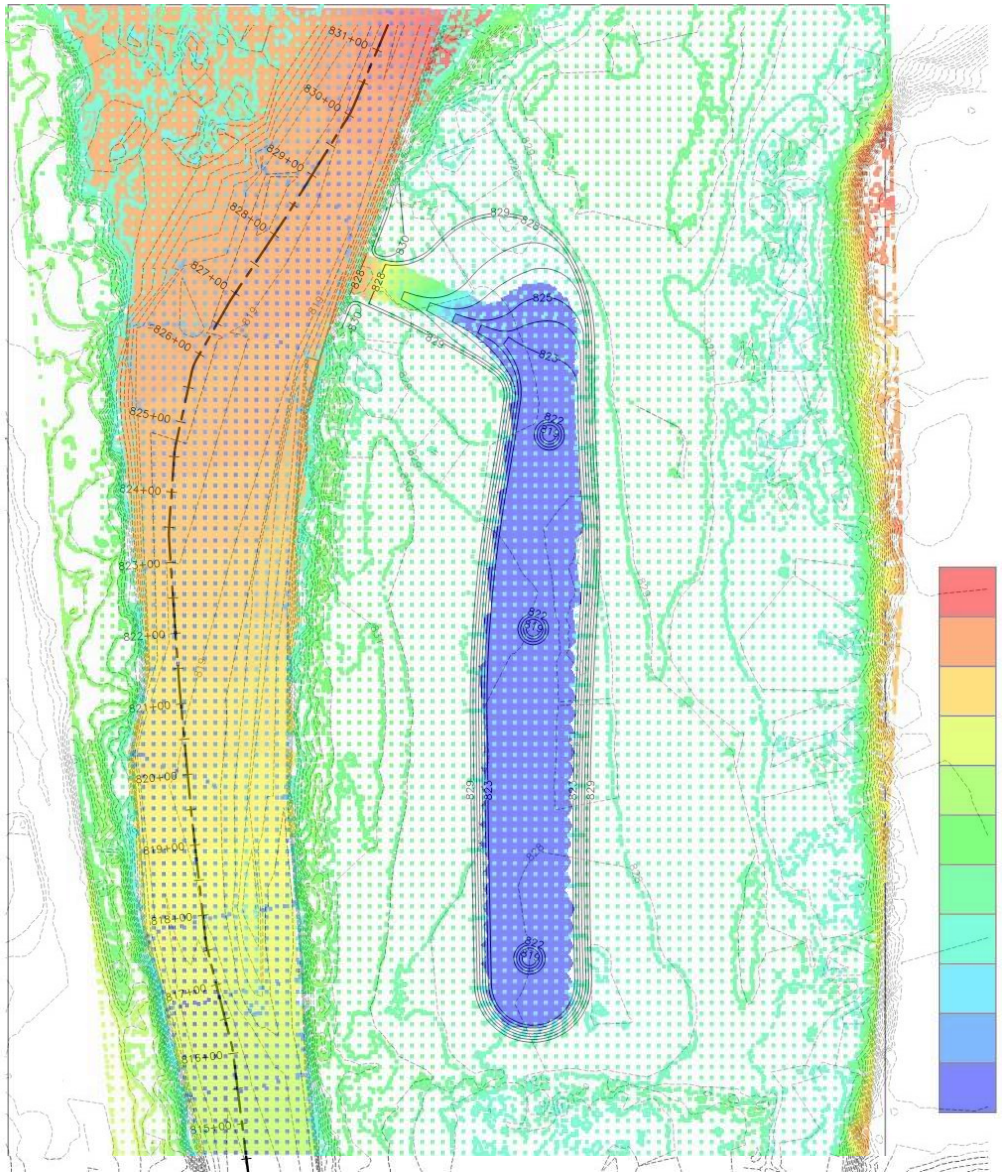
Adapted from Hawley et al. (In review, PLOS Water)

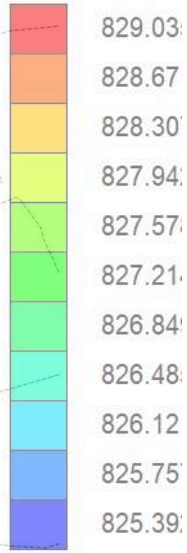
2D Modeling Exemplifies Flood Reduction Benefits



Adapted from Hawley et al. (In review, PLOS Water)

2D Modeling Exemplifies Flood Reduction Benefits



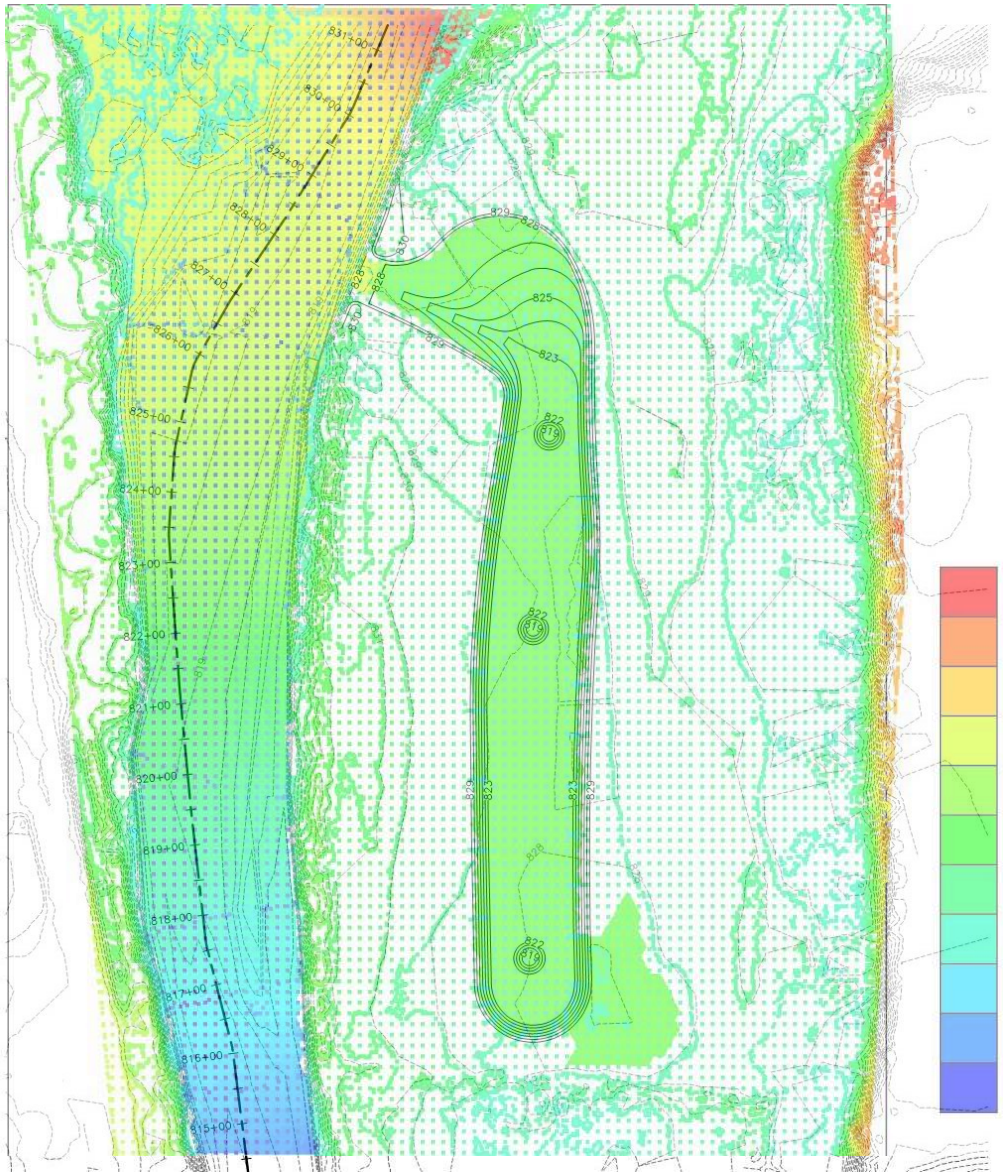


829.03
828.67
828.30
827.94
827.57
827.21
826.84
826.48
826.12
825.75
825.39

Time = 4:00
River crests
Wetland still offloading

Adapted from Hawley et al. (In review, PLOS Water)

2D Modeling Exemplifies Flood Reduction Benefits



Time = 11:45
River recedes
Wetland retains water

828.49
828.35
828.21
828.07
827.93
827.78
827.64
827.50
827.36
827.22
827.07

Adapted from Hawley et al.
(In review, PLOS Water)

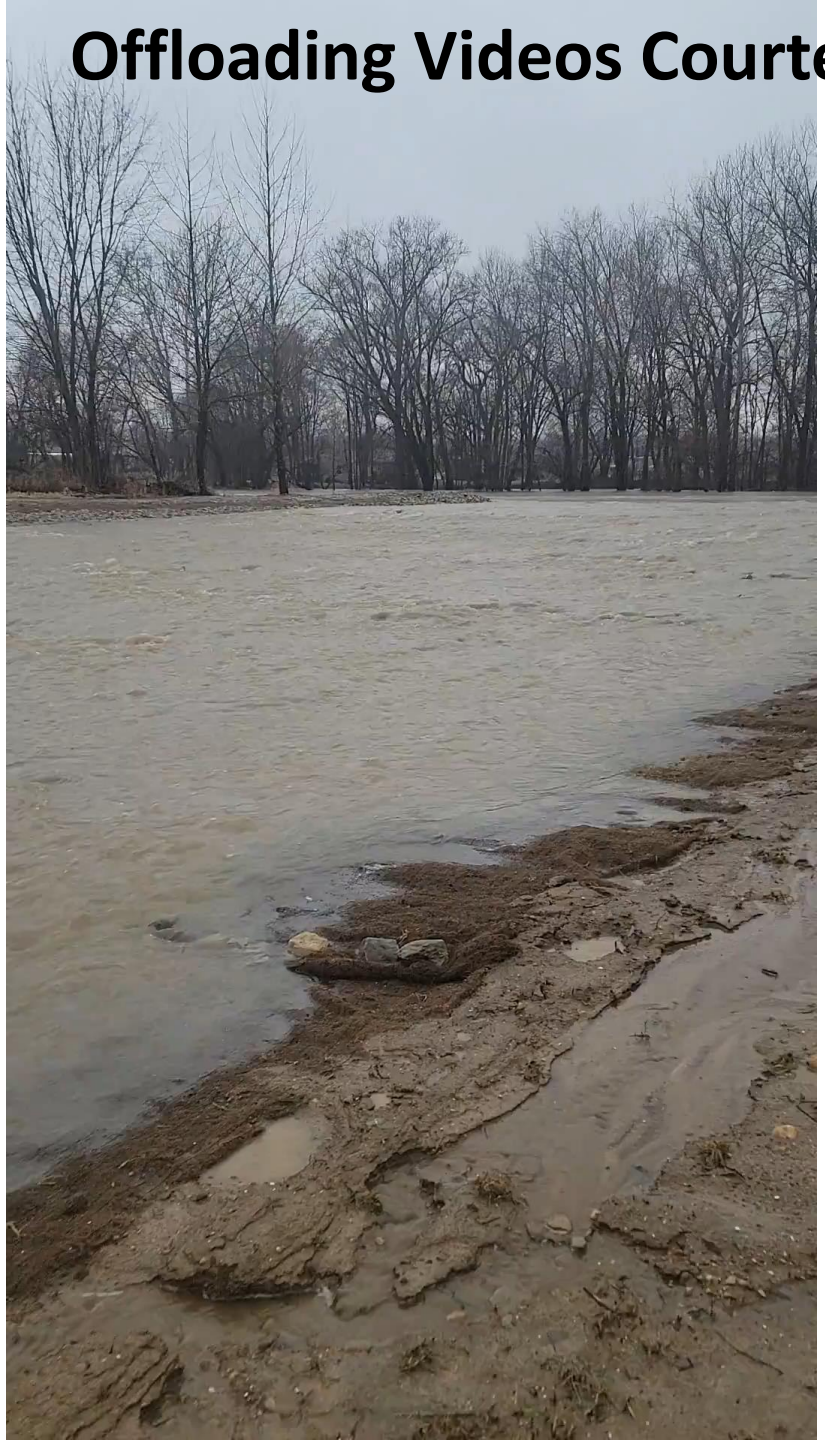
Constructed Project Offloading Erosive Flows

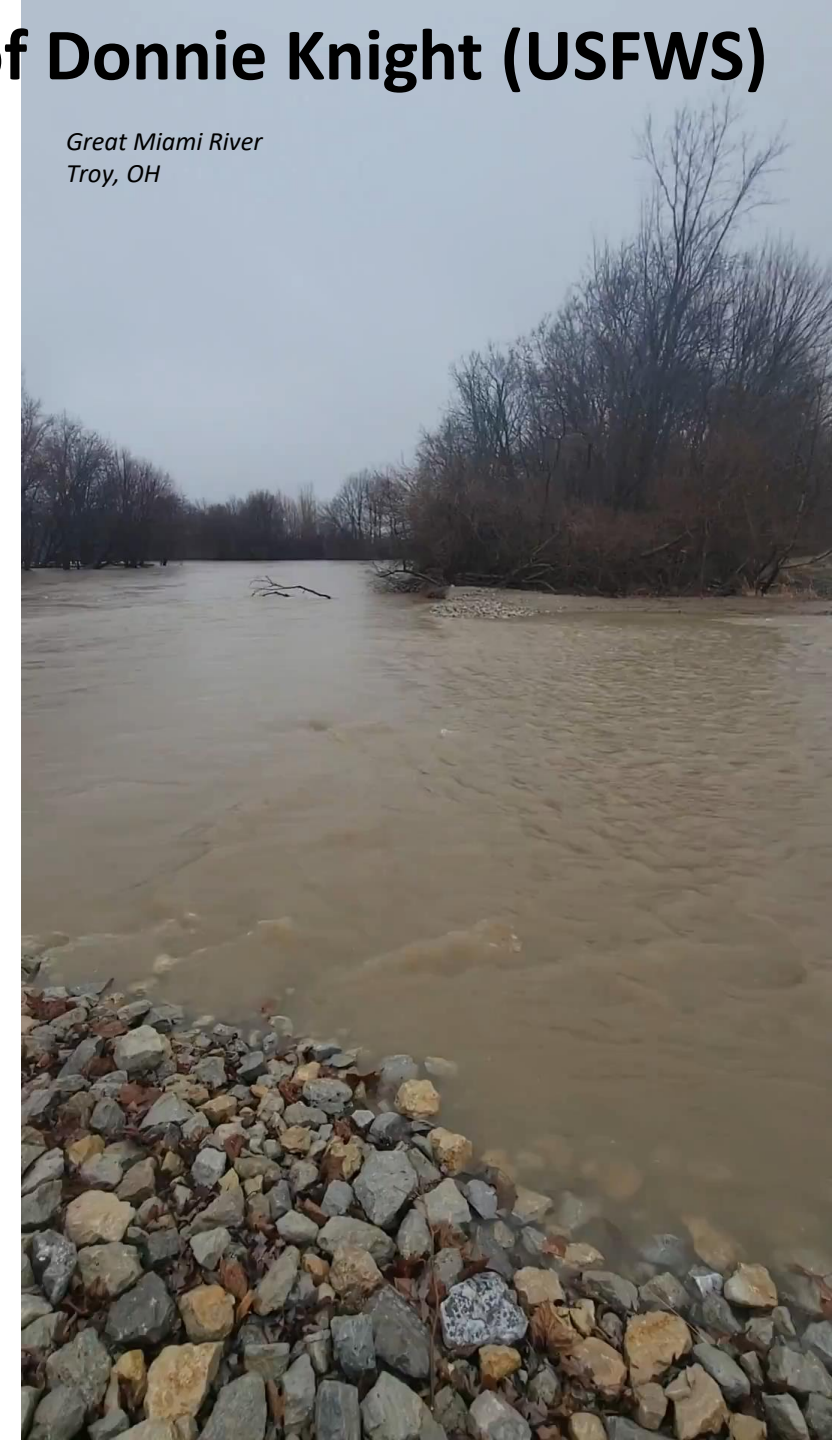
Gunpowder Creek
Boone County, KY

Constructed Project Offloading Erosive Flows

Great Miami River
Troy, OH

Offloading Videos Courtesy of Donnie Knight (USFWS)





Great Miami River
Troy, OH

Constructed Project Offloading Erosive Flows

East Fork Little Miami River
Williamsburg, OH

Constructed Project Offloading Erosive Flows

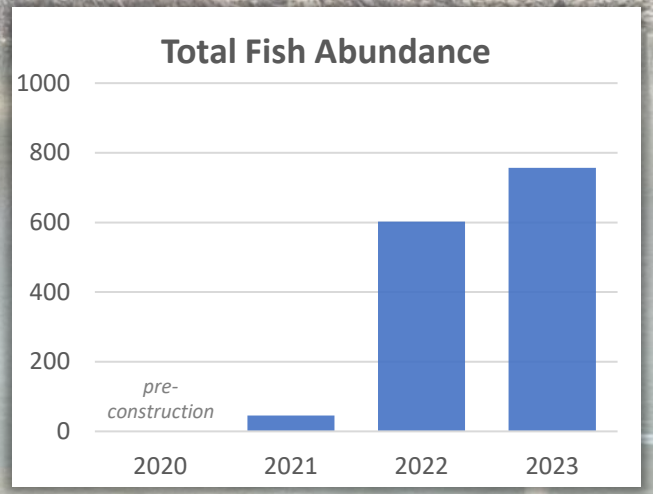
East Fork Little Miami River
Williamsburg, OH

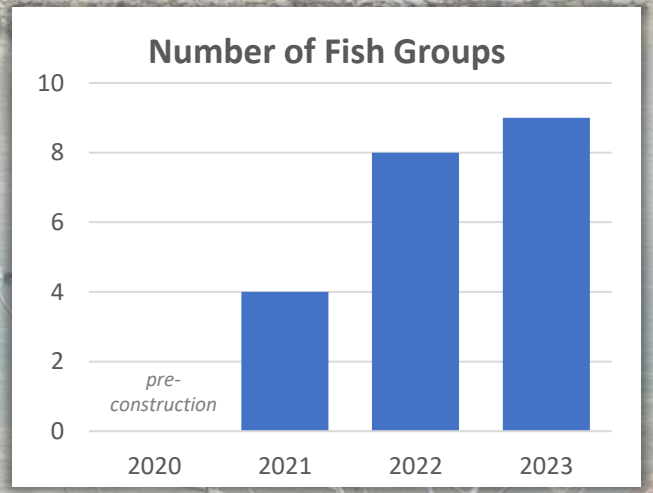

Reduced Erosion in the River
Algae on riffle rocks = stable habitat
East Fork Little Miami River
Williamsburg, OH

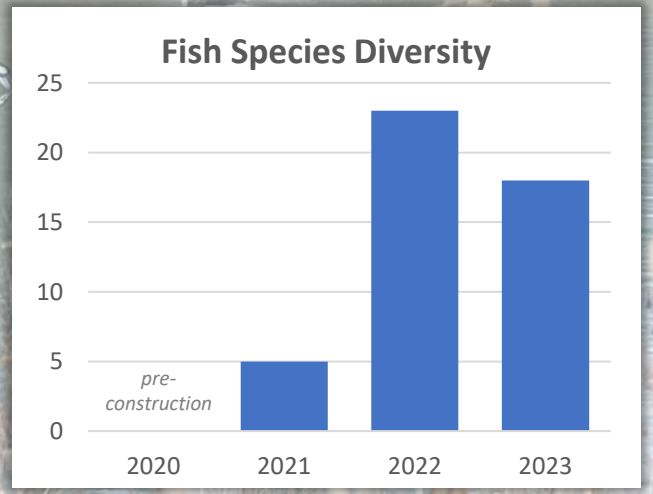
Constructed Project Improving Water Quality

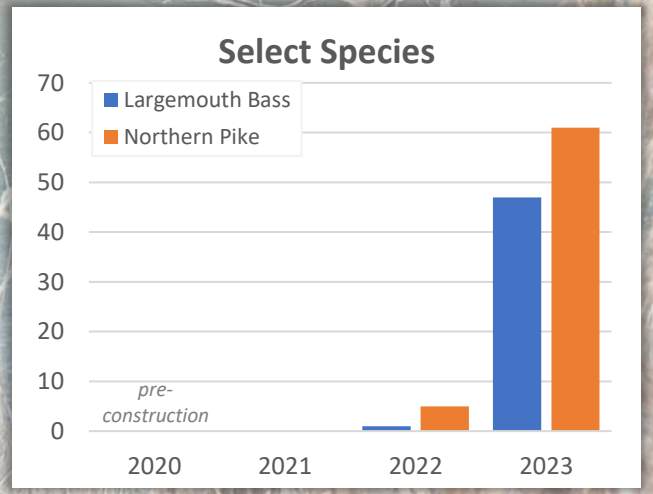
Great Miami River
Tipp City, OH

How Do the Fish Like Restored Floodplain Wetlands?
Troy – Constructed in Summer/Fall 2020









How Do the Birds Like Restored Floodplain Wetlands?

Tecumseh Land Trust
13h ·

Just weeks after the excavation of the wetland on Rainbow Run, an H2Ohio funded project, seven sandhill cranes made their way to it and took a rest! We can't wait to see what other creatures use the site.

Rainbow Run
Springfield, OH

Proposed Idle Brook Project

In every respect, the Idle Brook Wetland Restoration Project is consistent with the expressed purpose of Bath's [riparian corridor overlay district]

Sec. 602 RC-O Riparian Corridor Overlay District

Sec. 602-A Purpose

(1) It is hereby determined that the system of rivers, streams, and other natural watercourses contributes to the health, safety, and general welfare of the residents of Bath Township and the protection of such resources are aligned with the purposes of this zoning resolution and the vision established in the Bath Township Comprehensive Plan. The specific purpose and intent of the Riparian Corridor Overlay District (RC-O) is to implement the provisions of the Bath Township Comprehensive Plan and is based on subsequent analysis of point and non-point pollution and ecological studies of riparian systems in Bath Township as contained in the Bath Township Natural Resources Protection Study. In accordance with these documents and this resolution, the specific purpose of the RC-O is to regulate land use and construction within riparian areas to:

✓ **(A)** Reduce flood impacts by absorbing peak flows, slowing the velocity of floodwaters, and regulating base flow;

✓ **(B)** Stabilize the banks of watercourses to reduce bank erosion and downstream transport of sediments eroded from watercourse banks;

✓ **(C)** Reduce pollutants in watercourses during periods of high flows by filtering, settling, and transforming pollutants in runoff before they enter watercourses;

✓ **(D)** Provide habitat to a wide array of wildlife by maintaining diverse and connected riparian vegetation; and

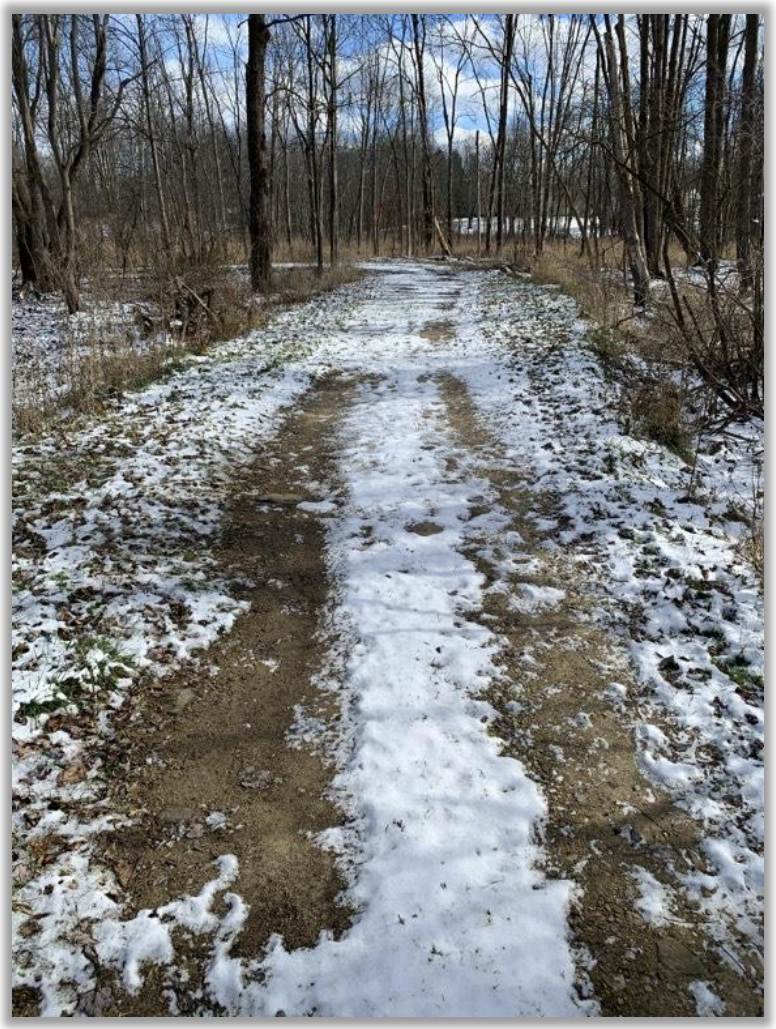
✓ **(E)** Minimize encroachment on watercourse channels and the need for costly engineering solutions such as dams, retention basins, and rip rap to protect structures, reduce property damage and threats to the safety of watershed residents, and preserve the character and property values of the township.

SWMD – Bath Special District is proposing to use public funding on a public property for a public benefit to improve the ecological health of waterways

(2) It is the policy of Bath Township to encourage the establishment of naturally vegetated riparian setbacks along watercourses. Property owners who own land beside watercourses are encouraged to assume responsibility for helping to maintain water quality and the environmental health of riparian systems within Bath Township. Riparian setback requirements defined herein represent only minimal protection to water quality and property owners are encouraged to do more to protect the ecological health of waterways. Guidance regarding characteristics of riparian setbacks can be found in the Bath Township Design Guidelines.

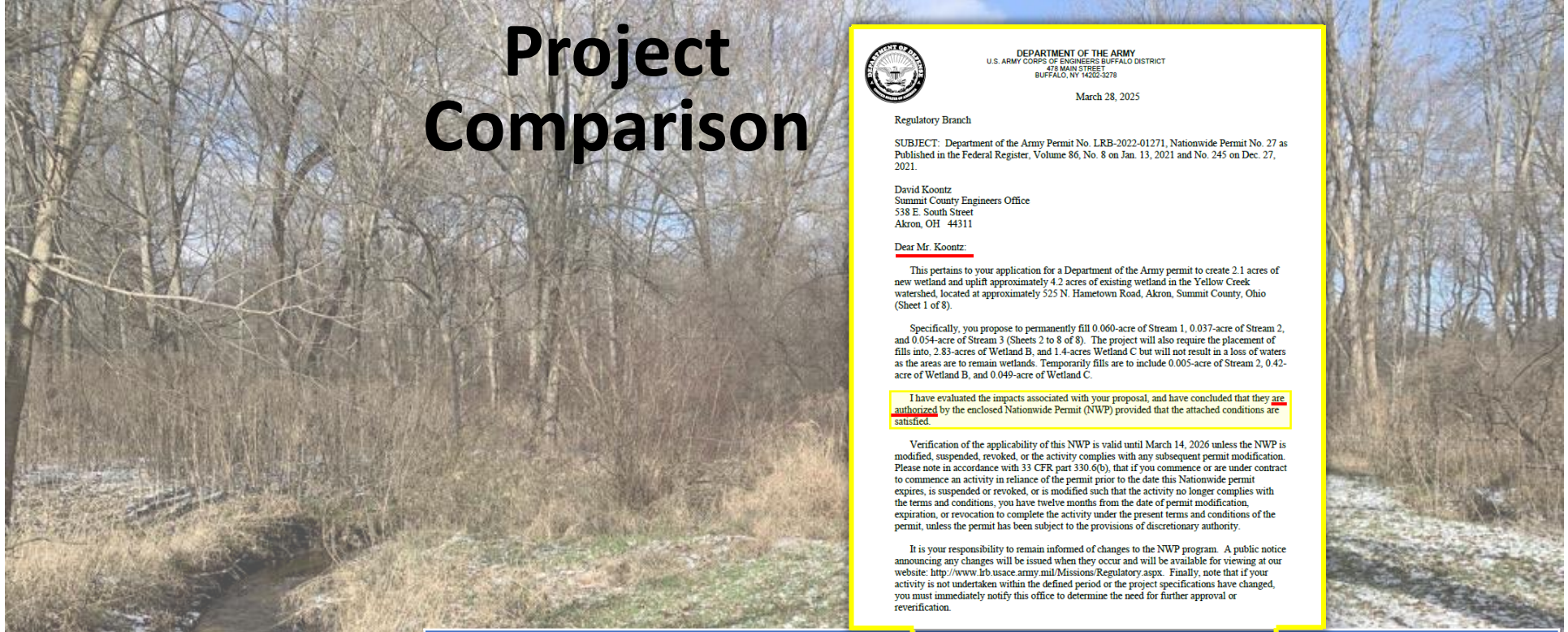
Neighboring Encroachments

The apparent unsanctioned clearing of the riparian corridor, apparent unpermitted fill in wetlands and drainage activities by the encroaching neighbor are inconsistent with the **Clean Water Act** and **Ohio Law**, and are incompatible with **Bath Township's** riparian corridor overlay district



Neighboring Encroachments

Project Comparison



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS BUFFALO DISTRICT
478 MAIN STREET
BUFFALO, NY 14202-3278

March 28, 2025

Regulatory Branch

SUBJECT: Department of the Army Permit No. LRB-2022-01271, Nationwide Permit No. 27 as Published in the Federal Register, Volume 86, No. 8 on Jan. 13, 2021 and No. 245 on Dec. 27, 2021.

David Koontz
Summit County Engineers Office
538 E. South Street
Akron, OH 44311

Dear Mr. Koontz:

This pertains to your application for a Department of the Army permit to create 2.1 acres of new wetland and uplift approximately 4.2 acres of existing wetland in the Yellow Creek watershed, located at approximately 525 N. Hametown Road, Akron, Summit County, Ohio (Sheet 1 of 8).

Specifically, you propose to permanently fill 0.060-acre of Stream 1, 0.037-acre of Stream 2, and 0.054-acre of Stream 3 (Sheets 2 to 8 of 8). The project will also require the placement of fills into, 2.83-acres of Wetland B, and 1.4-acres Wetland C but will not result in a loss of waters as the areas are to remain wetlands. Temporarily fills are to include 0.005-acre of Stream 2, 0.42-acre of Wetland B, and 0.049-acre of Wetland C.

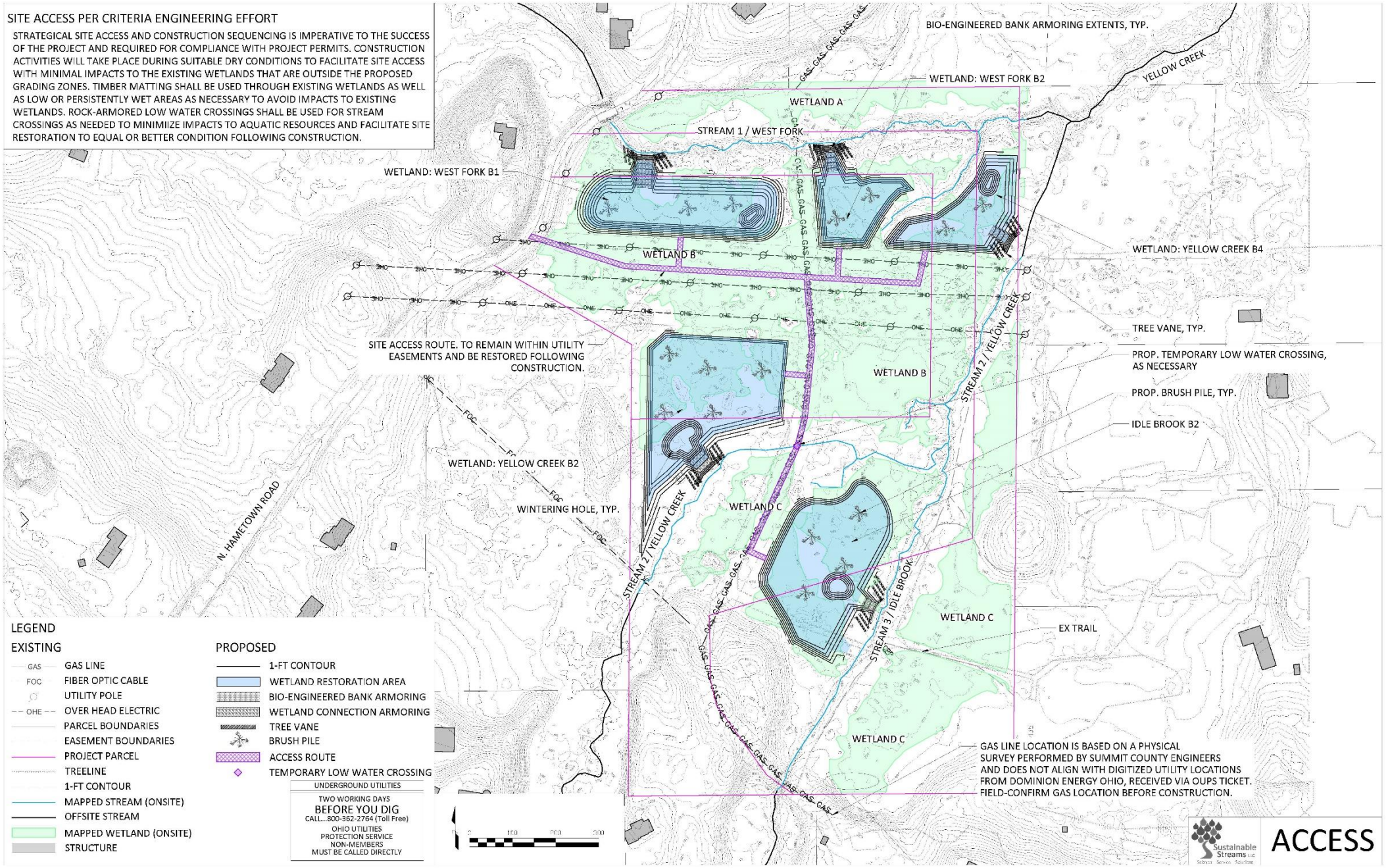
I have evaluated the impacts associated with your proposal, and have concluded that they are authorized by the enclosed Nationwide Permit (NWP) provided that the attached conditions are satisfied.

Verification of the applicability of this NWP is valid until March 14, 2026 unless the NWP is modified, suspended, revoked, or the activity complies with any subsequent permit modification. Please note in accordance with 33 CFR part 330.6(b), that if you commence or are under contract to commence an activity in reliance of the permit prior to the date this Nationwide permit expires, is suspended or revoked, or is modified such that the activity no longer complies with the terms and conditions, you have twelve months from the date of permit modification, expiration, or revocation to complete the activity under the present terms and conditions of the permit, unless the permit has been subject to the provisions of discretionary authority.

It is your responsibility to remain informed of changes to the NWP program. A public notice announcing any changes will be issued when they occur and will be available for viewing at our website: http://www.lrb.usace.army.mil/Missions/Regulatory.aspx. Finally, note that if your activity is not undertaken within the defined period or the project specifications have changed, you must immediately notify this office to determine the need for further approval or reverification.

	Proposed Idle Brook Floodplain Wetland Restoration Project	Observed Neighboring Encroachments
Permitted by the Army Corps	Yes	No
Reduces flood impacts	Yes	No
Reduces bank erosion	Yes	No
Reduces water pollutants	Yes	No
Enhances habitat	Yes	No
Minimizes encroachment	Yes	No

Questions


SITE ACCESS PER CRITERIA ENGINEERING EFFORT
STRATEGICAL SITE ACCESS AND CONSTRUCTION SEQUENCING IS IMPERATIVE TO THE SUCCESS OF THE PROJECT AND REQUIRED FOR COMPLIANCE WITH PROJECT PERMITS. CONSTRUCTION ACTIVITIES WILL TAKE PLACE DURING SUITABLE DRY CONDITIONS TO FACILITATE SITE ACCESS WITH MINIMAL IMPACTS TO THE EXISTING WETLANDS THAT ARE OUTSIDE THE PROPOSED GRADING ZONES. TIMBER MATTING SHALL BE USED THROUGH EXISTING WETLANDS AS WELL AS LOW OR PERSISTENTLY WET AREAS AS NECESSARY TO AVOID IMPACTS TO EXISTING WETLANDS. ROCK-ARMORED LOW WATER CROSSINGS SHALL BE USED FOR STREAM CROSSINGS AS NEEDED TO MINIMIIZE IMPACTS TO AQUATIC RESOURCES AND FACILITATE SITE RESTORATION TO EQUAL OR BETTER CONDITION FOLLOWING CONSTRUCTION.
BIO-ENGINEERED BANK ARMORING EXTENTS, TYP.
YELLOW CREEK
WETLAND: WEST FORK B2
WETLAND A
STREAM 1 / WEST FORK
WETLAND: WEST FORK B1
WETLAND B
WETLAND: YELLOW CREEK B4
TREE VANE, TYP.
PROP. TEMPORARY LOW WATER CROSSING, AS NECESSARY
PROP. BRUSH PILE, TYP.
IDLE BROOK B2
SITE ACCESS ROUTE. TO REMAIN WITHIN UTILITY EASEMENTS AND BE RESTORED FOLLOWING CONSTRUCTION.
WETLAND B
STREAM 2 / YELLOW CREEK
WETLAND: YELLOW CREEK B2
WINTERING HOLE, TYP.
WETLAND C
N. HAMETOWN ROAD
STREAM 2 / YELLOW CREEK
STREAM 3 / IDLE BROOK
WETLAND C
EX TRAIL
WETLAND C
GAS LINE LOCATION IS BASED ON A PHYSICAL SURVEY PERFORMED BY SUMMIT COUNTY ENGINEERS AND DOES NOT ALIGN WITH DIGITIZED UTILITY LOCATIONS FROM DOMINION ENERGY OHIO, RECEIVED VIA OUPS TICKET. FIELD-CONFIRM GAS LOCATION BEFORE CONSTRUCTION.
LEGEND
EXISTING
GAS LINE
FIBER OPTIC CABLE
UTILITY POLE
OVER HEAD ELECTRIC
PARCEL BOUNDARIES
EASEMENT BOUNDARIES
PROJECT PARCEL
TREELINE
1-FT CONTOUR
MAPPED STREAM (ONSITE)
OFFSITE STREAM
MAPPED WETLAND (ONSITE)
STRUCTURE
PROPOSED
1-FT CONTOUR
WETLAND RESTORATION AREA
BIO-ENGINEERED BANK ARMORING
WETLAND CONNECTION ARMORING
TREE VANE
BRUSH PILE
ACCESS ROUTE
TEMPORARY LOW WATER CROSSING
UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL...800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY
0
100
200
300
Sustainable Streams LLC
ACCESS

BZA 25-26

- Bath Township Trustees
- North Fork Preserve
- 4400 Everett Rd.
- Requesting conditional use approval per Article 5, Table 502-1 for a Park and a variance from Article 5, Section 503-N for a reduction in the minimum setback for an existing structure.


4400 Everett
Everett Rd
Everett Rd
Everett Rd
Everett Rd
Everett Rd
47
47
Southern Rd
Brecksville Rd
Grant Way
N Cleveland Massillon Rd
N Cleveland Massillon Rd
Bridle TR
Bridle TR
Bridle TR
Ridge TR
Chuckery Ln
Motz Dr
Motz Dr

NORTH FORK PRESERVE BARN RENOVATION

ARCHITECT

PENINSULA ARCHITECTS
1775 MAIN STREET
PENINSULA, OHIO 44264
P: 330.657.2800

CONTACT: LIZ SWEARINGEN

STRUCTURAL

TTR ENGINEERS
450 GRANT STREET, SUITE 130
AKRON, OHIO 44311
P: 330.733.8332

CONTACT: ZACH BINGHAM

CIVIL

LEWIS LAND PROFESSIONALS
8691 WADSWORTH ROAD, SUITE 100
WADSWORTH, OHIO 44281
P: 330.335.8232

CONTACT: KYLE SALISBURY

MECHANICAL, ELECTRICAL, PLUMBING

DENK ASSOCIATES
503 EAST 200TH STREET
CLEVELAND, OH 44119
P: 216.531.8880

CONTACT: CARLO VALLETTA

ABBREVIATIONS

ABV	ABOVE	HC	HOLLOW CORE
A/C	AIR CONDITIONING	HDWR.	HARDWARE
AFF	ABOVE FINISHED FLOOR	HM	HOLLOW METAL
ALT	ALTERNATE	HVAC	HEATING, VENTILATION, AIR COND.
AHJ	AUTHORITY HAVING JURISDICTION	HT	HEIGHT
ALUM	ALUMINUM		
APPROX.	APPROXIMATELY	INSUL	INSULATION
ARCH	ARCHITECTURAL		
ASPH	ASPHALT	JST	JOIST
BD	BOARD	LAM	LAMINATED
BLDG	BUILDING	LF	LINEAR FOOT
BOTT	BOTTOM OF		
BRG	BEARING	MAS	MASONRY
BOT	BOTTOM	MAT	MATERIAL
BTW	BETWEEN	MAX	MAXIMUM
		MECH	MECHANICAL
CF	CUBIC FEET	MFG.	MANUFACTURER
CIP	CAST IN PLACE	MIN	MINIMUM
CJ	CONTROL JOINT	MISC	MISCELLANEOUS
CLG	CEILING	MO	MASONRY OPENING
CLR	CLEAR	MTD	MOUNTED
CMU	CONCRETE MASONRY UNIT	MTL	METAL
CONC	CONCRETE		
CO	CLEAN OUT	NOM	NOMINAL
CONT	CONTINUOUS	NTS	NOT TO SCALE
DBL	DOUBLE	O/	OVER
DEPT	DEPARTMENT	O.C.	ON CENTER
DIA	DIAMETER	OPN	OPENING
DIM	DIMENSION		
DN	DOWN	PREFAB	PREFABRICATED
DR	DOOR	PLYWD	PLYWOOD
DS	DOWNSPOUT	P. LAM	PLASTIC LAMINATE
DTL	DETAIL	PR	PAIR
DWG	DRAWING	PSI	POUNDS PER SQUARE INCH
EA	EACH	REF	REFERENCE
ELEC	ELECTRICAL	RM	ROOM
EQ	EQUAL	RO	ROUGH OPENING
EXH	EXHAUST	REQ	REQUIRED
EXST	EXISTING		
EXP	EXPOSED	SC	SOLID CORE
EXT	EXTERIOR	SECT	SECTION
		SIM	SIMILAR
FD	FLOOR DRAIN	STRUC	STRUCTURAL
FDN	FOUNDATION		
FE	FIRE EXTINGUISHER	TYP	TYPICAL
FEC	FIRE EXTINGUISHER CABINET		
FIN.	FINISHED	UNO	UNLESS NOTED OTHERWISE
FLR	FLOOR		
FT	FOOT	W/	WITH
FTG	FOOTING	WWF	WELDED WIRE FABRIC
FUR	FURRING		
GALV	GALVANIZED		
GA	GAUGE		
GC	GENERAL CONTRACTOR		
GYP. BD	GYPSUM BOARD		
GYP	GYPSUM		

SYMBOLS

- DETAIL
- EXTERIOR ELEVATION
- BUILDING SECTION
- INTERIOR ELEVATION
- WALL SECTION
- CENTER LINE
- GRID
- KEYNOTE
- DOOR TAG
- WINDOW TAG
- SPOT ELEVATION

MATERIALS LEGEND

- DIMENSIONAL LUMBER
- PLYWOOD
- FINISH WOOD
- GYPSUM BOARD
- BRICK
- EARTH
- STONE VENEER
- BLOCKING
- GRAVEL
- CONCRETE
- CONCRETE BLOCK
- STEEL
- RIGID INSULATION
- SPRAY FOAM INSULATION
- MINERAL WOOL INSULATION
- METAL DECK

PROJECT GENERAL NOTES

THE CONTRACTOR WILL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, PERMITS, TAXES, AND INSURANCE NECESSARY TO COMPLETE THE WORK INDICATED AND/OR IMPLIED IN THE CONSTRUCTION DOCUMENTS UNLESS NOTED OTHERWISE AND WILL COORDINATE THE WORK RESPONSIBILITIES OF ALL SUBCONTRACTORS. ALL LABOR AND MATERIALS TO CARRY OUT FULLY THE INTENTIONS OF THE PLANS AND SPECIFICATIONS ARE PART OF THE CONTRACT, WHETHER OR NOT SPECIFICALLY DOCUMENTED.

ALL WORK WILL CONFORM TO THE CURRENT OHIO BUILDING, MECHANICAL & PLUMBING CODES, AS WELL AS THE CURRENT NATIONAL BOARD OF FIRE UNDERWRITERS AND ALL OTHER APPLICABLE CITY CODES, LOCAL LAWS AND AUTHORITIES HAVING JURISDICTION. CODE STANDARDS AND PUBLICATIONS OF PRIVATE AND PUBLIC BODIES MENTIONED WITHIN THE SPECIFICATIONS OR ON THE DRAWINGS WILL BE CONSIDERED TO BE THOSE IN EFFECT AT THE TIME OF THE CONTRACT AWARD.

THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONTROLLED INSPECTIONS AND ANY TECHNICAL TESTING REQUIRED FOR CONTROLLED INSPECTIONS AS STIPULATED BY ALL APPLICABLE CODES.

ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT WILL BE NEW AND FREE OF DEFECTS AND WILL BE SUPPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED, AND CONDITIONED AS DIRECTED BY THE RESPECTIVE MANUFACTURERS, UNLESS SPECIFIED OTHERWISE.

THE CONTRACTOR WILL NOTIFY THE ARCHITECT OF ANY ERRORS, OMISSIONS, CONFLICTS, OR AMBIGUITIES IN AND BETWEEN THE DRAWINGS AND THE SPECIFICATIONS PRIOR TO PROCEEDING WITH THE WORK. IF SUCH NOTICE IS NOT FURNISHED TO THE ARCHITECT, THE CONTRACTOR WILL BE DEEMED TO HAVE INSPECTED THE DRAWINGS AND SPECIFICATIONS AND TO HAVE FOUND THEM IN PROPER FORM FOR EXECUTION.

THE CONTRACTOR REPRESENTS THAT HE HAS HAD ADEQUATE ACCESS TO THE JOB SITE AND BUILDING AREA IN WHICH THE WORK IS TO BE PERFORMED, THAT HE HAS SATISFIED HIMSELF AT TO THE NATURE AND LOCATION OF WORK, INCLUDING ANY OBSTRUCTIONS, SCOPE OF WORK, ACTUAL LEVELS, THE EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING THE EXECUTION OF THE WORK AND ALL OTHER MATTERS, WHICH CAN IN ANY WAY AFFECT THE WORK OR THE COST THEREOF UNDER THIS CONTRACT, AND THAT HE HAS STUDIED THE CONTRACT DOCUMENTS AND ALL OTHER DOCUMENTS PERTAINING TO THE INSTALLATION OF OTHER TRADES WHICH MAY INFLUENCE HIS WORK.

THE CONTRACTOR WILL ASSUME FULL RESPONSIBILITY, INCLUDING RESPONSIBILITY FOR ALL RELATED COSTS FOR ANY AND ALL WORK DONE WITHOUT THE APPROVAL OF THE ARCHITECT IF SUCH WORK IS IN CONFLICT WITH THE CONTRACT, DRAWINGS, OR SPECIFICATIONS.

THE OWNER WILL ESTABLISH THE LIMITS OF THE CONSTRUCTION SITE IN ADDITION TO ANY CONTRACT LIMIT LINES SHOWN IN THE DRAWINGS. THE CONTRACTOR WILL CONTINUE HIS OPERATIONS WITHIN THESE LIMITS, UNLESS UPON WRITTEN REQUEST AND REPLY, A VARIANCE IS AGREED TO BY THE OWNER. THE CONTRACTOR WILL BE RESPONSIBLE FOR TRESPASS ON AND/OR DAMAGE TO OTHER PROPERTY BY ANY OF HIS EMPLOYEES OR HIS SUBCONTRACTOR'S EMPLOYEES.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE SAFE WORKING CONDITIONS AT THE SITE. THE ARCHITECT AND OWNER WILL NOT BE DEEMED TO HAVE ANY RESPONSIBILITY OR LIABILITY IN CONNECTION HEREWITH.

CONSTRUCTION OPERATIONS WILL NOT INVOLVE INTERRUPTION OF HEATING, WATER, ELECTRICAL, OR OTHER SERVICES TO ANY PORTION OF THE BUILDING OUTSIDE THE LIMITS OF THE CONSTRUCTION SITE.

THE CONTRACTOR WILL BE RESPONSIBLE FOR CORRECTING ANY DEFICIENCIES CAUSED BY DEFECTIVE OR ILL TIMED WORK AT NO ADDITIONAL COST TO THE OWNER.

NO SUBSTITUTIONS ARE PERMITTED EXCEPT WHERE THE TERM "APPROVED EQUAL" APPEARS. ALL SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE ARCHITECT. THE CONTRACTOR IS TO SUBMIT SAMPLES OR CATALOG CUTS OF ALL VISIBLE MATERIALS AND EQUIPMENT FOR THE ARCHITECT'S APPROVAL PRIOR TO INSTALLATION.

DRAWING INDEX

Peninsula
www.pa-architects.com

PROGRESS NOT FOR CONSTRUCTION

PROJECT TEAM

ARCHITECT: PENINSULA ARCHITECTS

CIVIL ENGINEER: LEWIS LAND PROFESSIONALS — Civil Engineering & Land Surveying

STRUCTURAL ENGINEER: TTR Engineers

MEP ENGINEER: DENK ASSOCIATES

BATH TOWNSHIP

NORTH FORK PRESERVE BARN RENOVATION
4400 EVERETT ROAD, AKRON, OH 44333

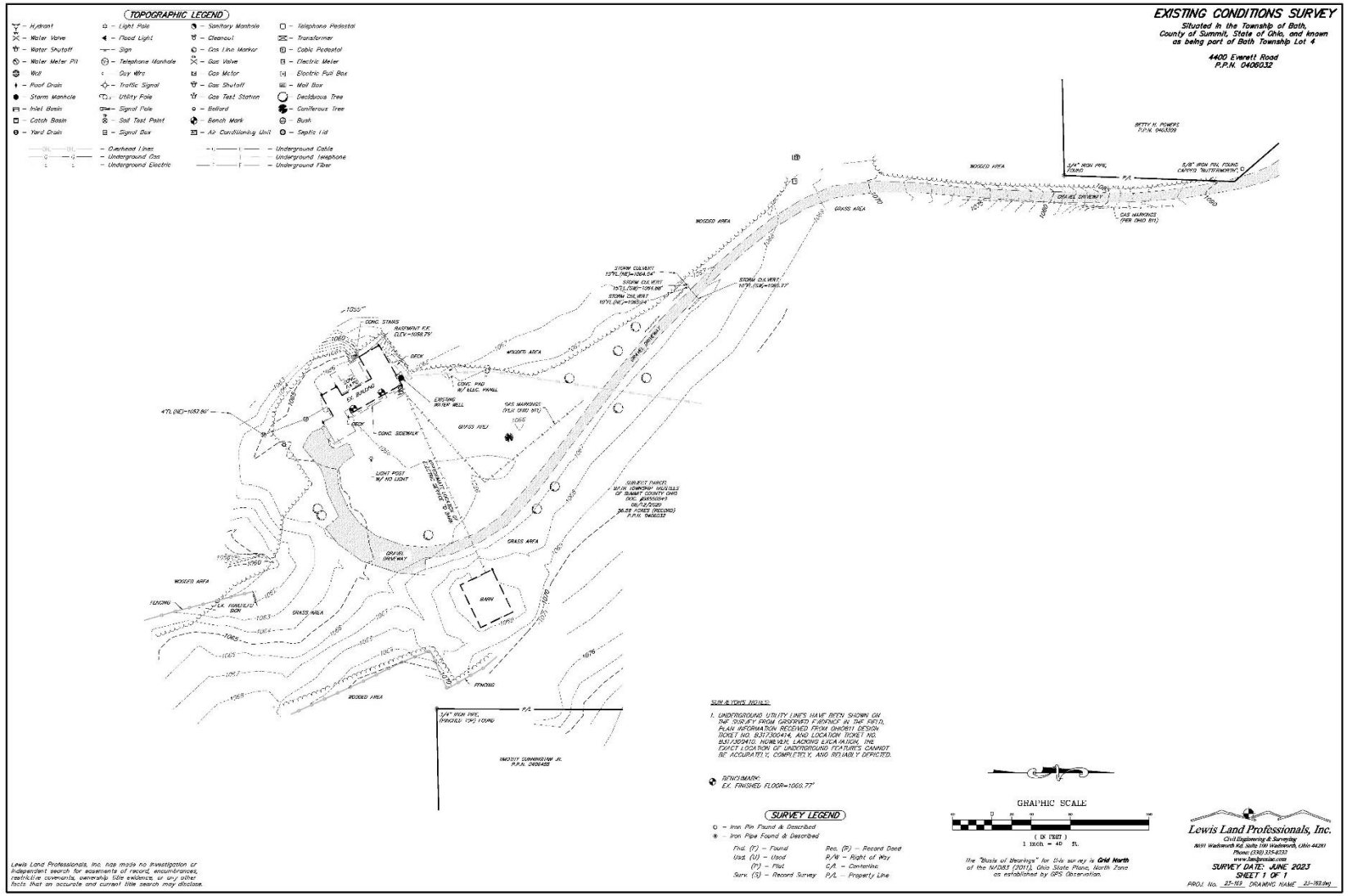
PROJECT # 2324

ISSUE:

SD REVIEW	11-08-2024
DD REVIEW	12-20-2024
DD REVIEW	02-04-2025
FINAL REVIEW	03-07-2025

COVER

G10.1



Peninsula

www.pa-architects.com

PROGRESS NOT FOR CONSTRUCTION

PROJECT TEAM

ARCHITECT: PENINSULA ARCHITECTS

CIVIL ENGINEER: LEWIS LAND PROFESSIONALS

STRUCTURAL ENGINEER: TTR Engineers

MEP ENGINEER: DENK ASSOCIATES

BATH TOWNSHIP

NORTH FORK PRESERVE BARN RENOVATION

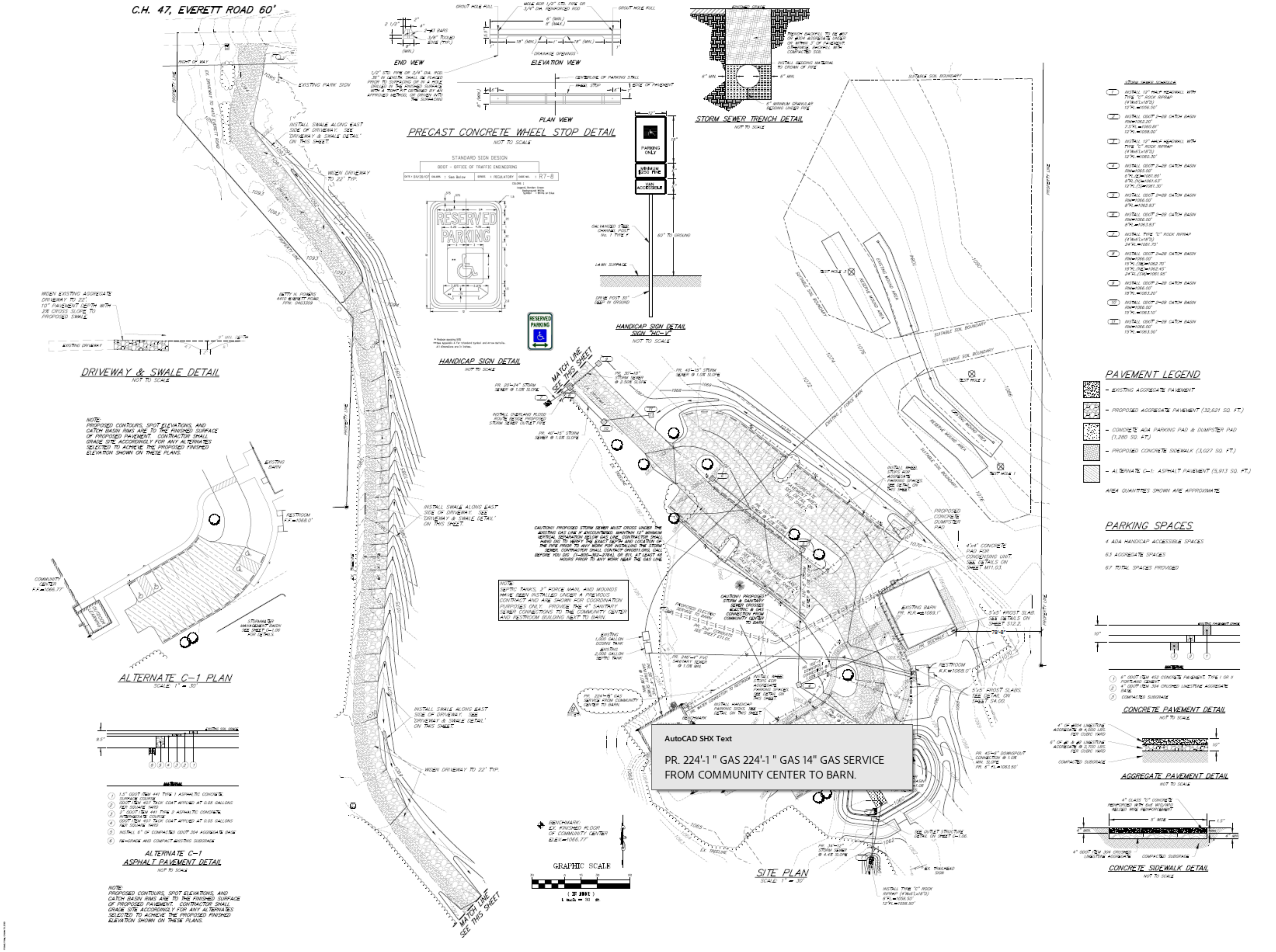
4400 EVERETT ROAD, AKRON, OH 44333

PROJECT #2324

ISSUE	
SD REVIEW	11-08-2024
DD REVIEW	12-20-2024
CD SUBMISSION	02-04-2025
FINAL REVISIONS	03-05-2025

EXISTING CONDITIONS

C10.1



Peninsula

www.perarchitects.com

PROJECT TEAM

ARCHITECT: PENINSULA ARCHITECTS

CIVIL ENGINEER: LEWIS LAND PROFESSIONALS

STRUCTURAL ENGINEER: DANMARK ENGINEERING

MEP ENGINEER:

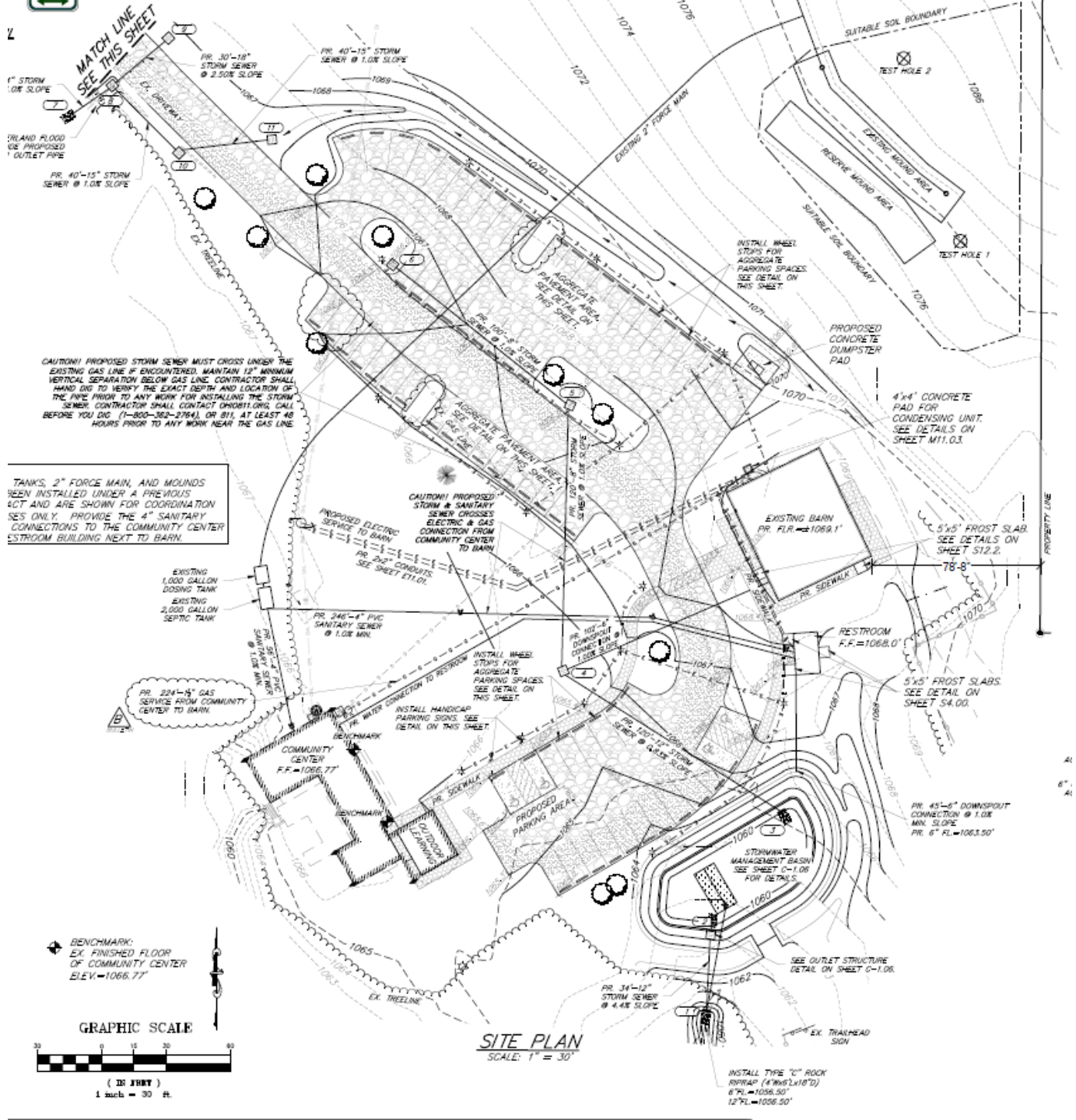
BATH TOWNSHIP

NORTH FORK PRESERVE RENOVATION

4400 EVERETT ROAD, AKRON, OH 44333

CIVIL SITE PLAN

C-1.02

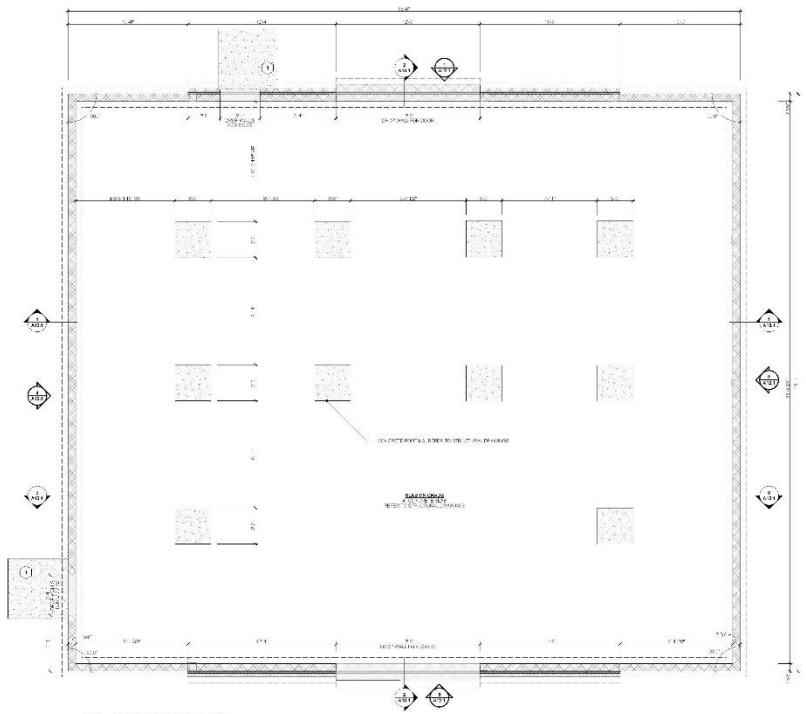

MATCH LINE SEE THIS SHEET
PR. 30"-18" STORM SEWER @ 2.50% SLOPE
PR. 40"-15" STORM SEWER @ 1.0% SLOPE
EX. DRIVEWAY
EX. TREELINE
EXISTING 2" FORCE MAIN
SUITABLE SOIL BOUNDARY
TEST HOLE 2
EXISTING MOUND AREA
RESERVE MOUND AREA
TEST HOLE 1
INSTALL WHEEL STOPS FOR AGGREGATE PARKING SPACES. SEE DETAIL ON THIS SHEET.
AGGREGATE PAVEMENT AREA. SEE DETAIL ON THIS SHEET.
PROPOSED CONCRETE DUMPSTER PAD
4'x4' CONCRETE PAD FOR CONDENSING UNIT. SEE DETAILS ON SHEET M11.03.
CAUTION!! PROPOSED STORM SEWER MUST CROSS UNDER THE EXISTING GAS LINE IF ENCOUNTERED, MAINTAIN 12" MINIMUM VERTICAL SEPARATION BELOW GAS LINE. CONTRACTOR SHALL HAND DIG TO VERIFY THE EXACT DEPTH AND LOCATION OF THE PIPE PRIOR TO ANY WORK FOR INSTALLING THE STORM SEWER. CONTRACTOR SHALL CONTACT OHIO811.ORG, CALL BEFORE YOU DIG (1-800-362-2764), OR 811, AT LEAST 48 HOURS PRIOR TO ANY WORK NEAR THE GAS LINE.
TANKS, 2" FORCE MAIN, AND MOUNDS BEEN INSTALLED UNDER A PREVIOUS ACT AND ARE SHOWN FOR COORDINATION SES ONLY. PROVIDE THE 4" SANITARY CONNECTIONS TO THE COMMUNITY CENTER ESTROOM BUILDING NEXT TO BARN.
PROPOSED ELECTRIC SERVICE TO BARN
PR. 2x2" CONDUITS. SEE SHEET E11.01.
CAUTION!! PROPOSED STORM & SANITARY SEWER CROSSES ELECTRIC & GAS CONNECTION FROM COMMUNITY CENTER TO BARN
EXISTING BARN PR. FLR.=1069.1'
5'x5' FROST SLAB. SEE DETAILS ON SHEET S12.2.
78'-8"
PROPERTY LINE
EXISTING 1,000 GALLON DOSING TANK
EXISTING 2,000 GALLON SEPTIC TANK
PR. 24"-4" PVC SANITARY SEWER @ 1.0% MIN.
PR. 10"-4" PVC SANITARY SEWER @ 1.0% MIN.
PR. 10"-4" DOWNSPOUT CONNECTION @ 1.00% SLOPE
RESTROOM F.F.=1068.0'
5'x5' FROST SLABS. SEE DETAIL ON SHEET S4.00.
PR. 224'-1½" GAS SERVICE FROM COMMUNITY CENTER TO BARN.
PR. WATER CONNECTION TO RESTROOM
INSTALL HANDICAP PARKING SIGNS. SEE DETAIL ON THIS SHEET.
BENCHMARK
COMMUNITY CENTER F.F.=1066.77'
PR. 120'-12" STORM SEWER @ 4.43% SLOPE
PR. SIDEWALK
PROPOSED PARKING AREA
OUTDOOR LEARNING
PR. 45'-6" DOWNSPOUT CONNECTION @ 1.0% MIN. SLOPE PR. 6" FL.=1063.50'
STORMWATER MANAGEMENT BASIN SEE SHEET C-1.06 FOR DETAILS.
SEE OUTLET STRUCTURE DETAIL ON SHEET C-1.06.
PR. 34'-12" STORM SEWER @ 4.4% SLOPE
EX. TRAILHEAD SIGN
INSTALL TYPE "C" ROCK RIPRAP (4'Wx6'Lx18"D) 6"FL.=1056.50' 12"FL.=1056.50'
BENCHMARK: EX. FINISHED FLOOR OF COMMUNITY CENTER ELEV.=1066.77'
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.
SITE PLAN
SCALE: 1" = 30'

FOUNDATION PLAN GENERAL NOTES

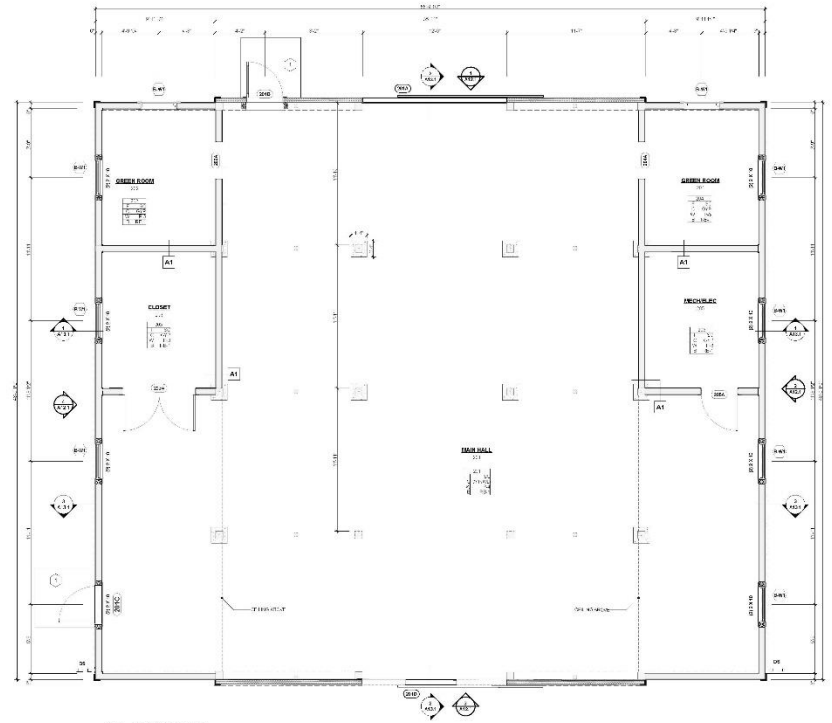
FLOOR PLAN GENERAL NOTES

FLOOR PLAN CODED NOTES

INTERIOR STUD WALL SYMBOL KEY



1 FOUNDATION PLAN



2 FLOOR PLAN

FINISH PLAN LEGEND

FINISH PLAN GENERAL NOTES

FINISH SCHEDULE

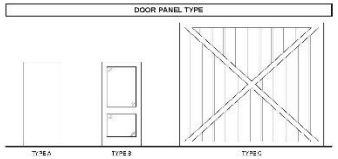
DOOR AND HARDWARE GENERAL NOTES

DOOR HARDWARE SETS

DOOR SCHEDULE

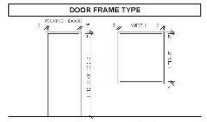
ID	ROOM NAME	NOMINAL WIDTH	NOMINAL HEIGHT	DOOR LEAF MATERIAL	DOOR LEAF PANEL TYPE	DOOR LEAF FINISH	OPERATION	REMARKS
201A	MAIN HALL	4	3	SC WOOD	C	PNT	EXTERIOR BARN	VERIFY OPENING SIZE IN FIELD
201B	MAIN HALL	1	2	ALUM / GLASS	B	PF	ENTRY	
201C	MAIN HALL	1	2	ALUM / GLASS	B	PF	ENTRY	
201D	MAIN HALL	4	3	SC WOOD	C	PNT	EXTERIOR BARN	VERIFY OPENING SIZE IN FIELD
202A	GREEN ROOM	1	2	SC WOOD	A	PF	INTERIOR BARN	
205A	CLOSET	2	2	SC WOOD	A	PNT	STORE/ROOM	
204A	GREEN ROOM	1	2	SC WOOD	A	PNT	INTERIOR BARN	
205A	MECH/ELEC	1	2	SC WOOD	A	PNT	STORE/ROOM	

DOOR PANEL TYPE



TYPE A TYPE B TYPE C

DOOR FRAME TYPE



TYPE F1 TYPE F2

Peninsula

www.pa-architects.com

PROGRESS NOT FOR CONSTRUCTION

PROJECT TEAM

ARCHITECT: PENINSULA ARCHITECTS

CIVIL ENGINEER: LEWIS LAND PROFESSIONALS

STRUCTURAL ENGINEER: TTR Engineers

MEP ENGINEER: DENK ASSOCIATES

BATH TOWNSHIP

NORTH FORK PRESERVE BARN RENOVATION

4400 EVERETT ROAD, AKRON, OH 44333

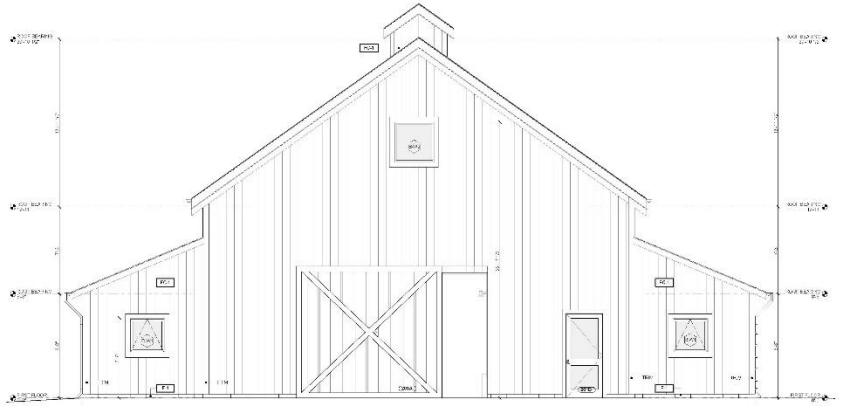
N

PROJECT #2324

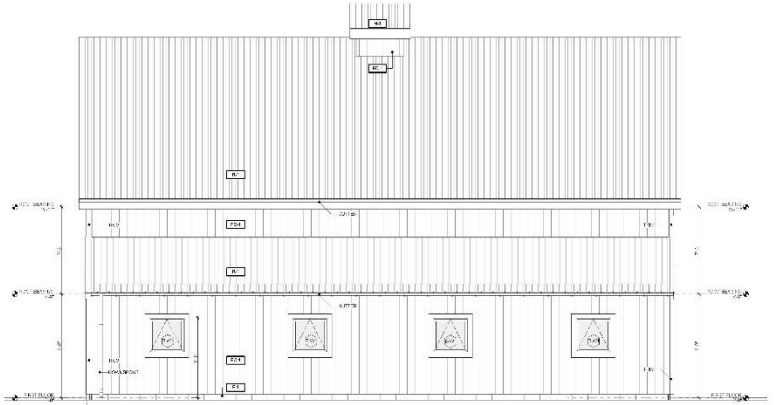
ISSUE	
SD REVIEW	11-08-2024
DD REVIEW	12-20-2024
CD SUBMISSION	02-04-2025
FINAL REVISION	05-02-2025

PLANS

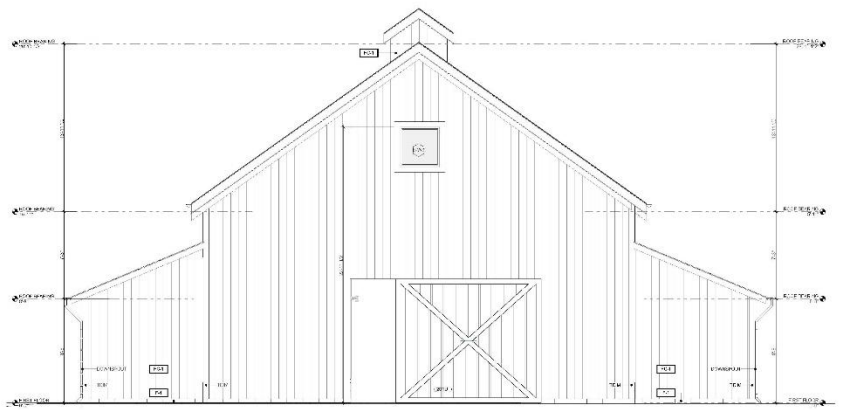
A11.1



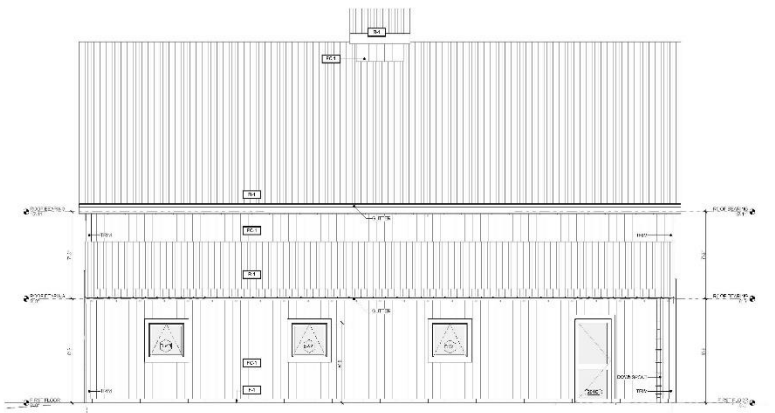
1 WEST ELEVATION
SCALE: 1/8" = 1'-0"



2 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



3 EAST ELEVATION
SCALE: 1/8" = 1'-0"



4 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

MATERIAL SCHEDULE

EXTERIOR ELEVATION GENERAL NOTES

WINDOW LEGEND

WINDOW SCHEDULE		
ID	W x H	REMARKS

Peninsula
www.pa-architects.com

PROGRESS NOT FOR CONSTRUCTION

PROJECT TEAM
ARCHITECT
PENINSULA ARCHITECTS
CIVIL ENGINEER:
LEWIS LAND PROFESSIONALS
STRUCTURAL ENGINEER:
TTR Engineers
MEP ENGINEER:
DENK ASSOCIATES

BATH TOWNSHIP

NORTH FORK PRESERVE BARN RENOVATION

4400 EVERETT ROAD, AKRON, OH 44333

PROJECT #2324

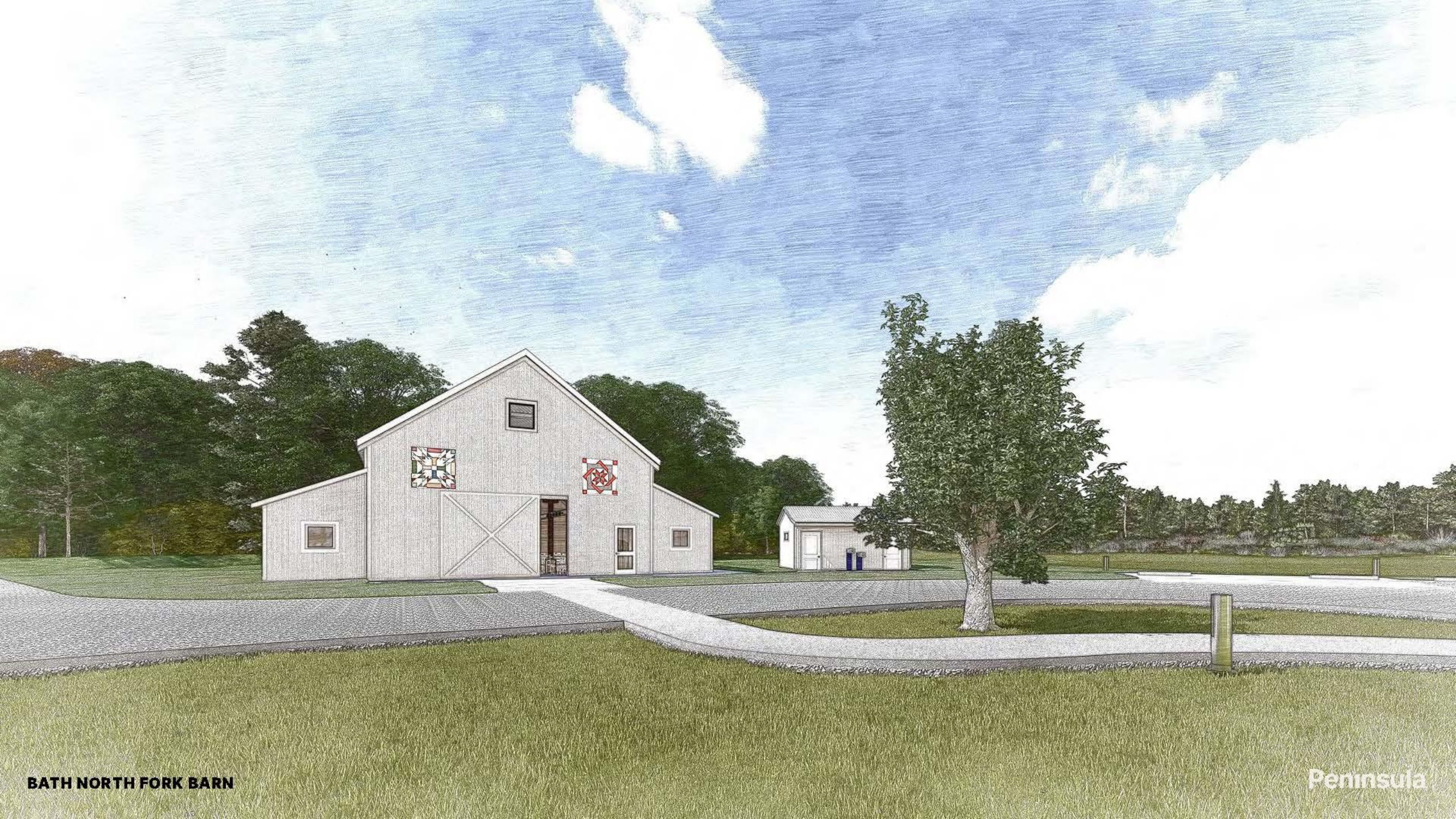
ISSUE	
SD REVIEW	11-08-2024
DD REVIEW	12-20-2024
CD SUBMISSION	02-04-2025
FINAL REVIEWS	03-07-2025

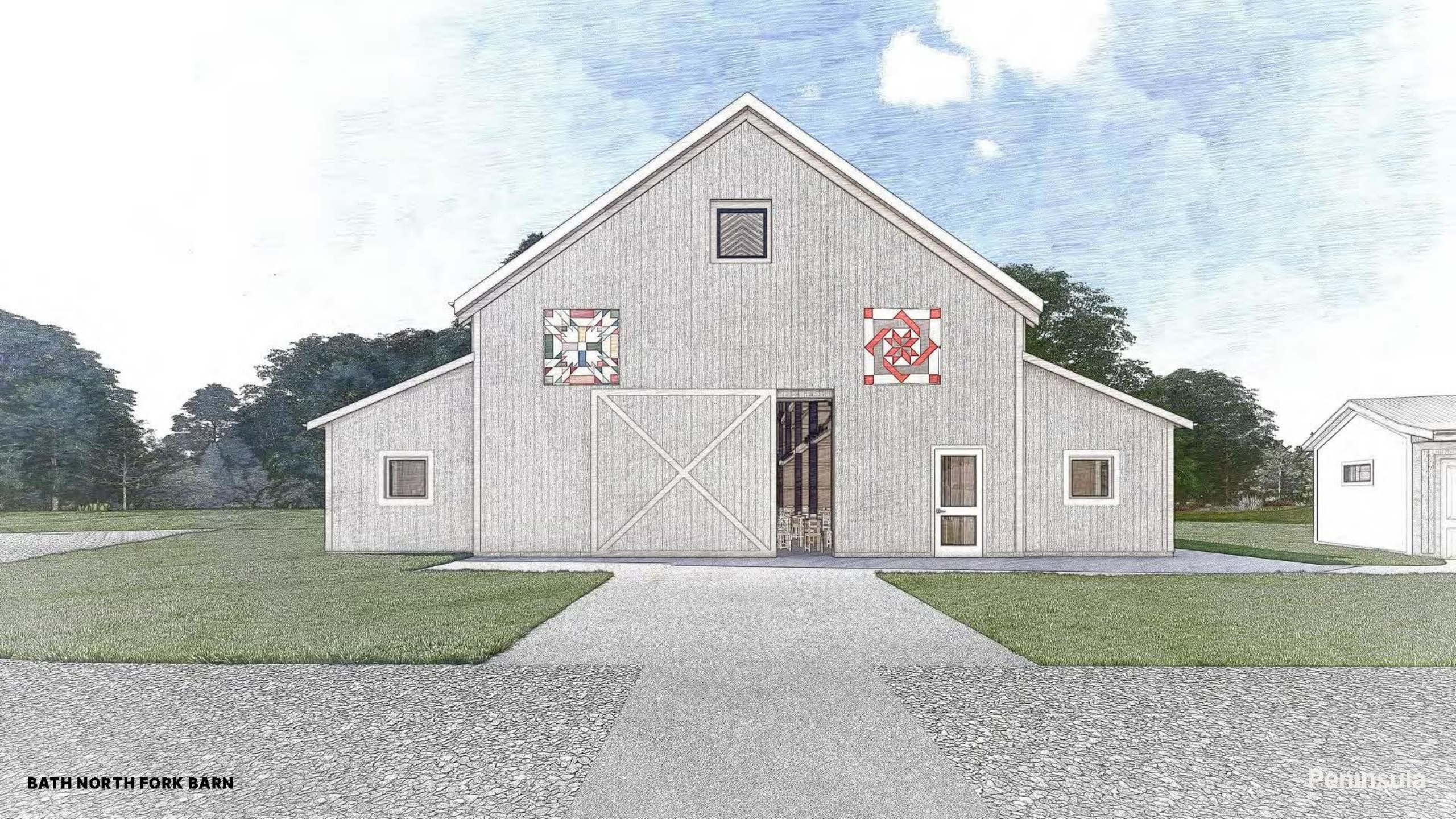
EXTERIOR ELEVATIONS

A12.1

BATH NORTH FORK BARN

BATH NORTH FORK BARN


BATH NORTH FORK BARN
Peninsula

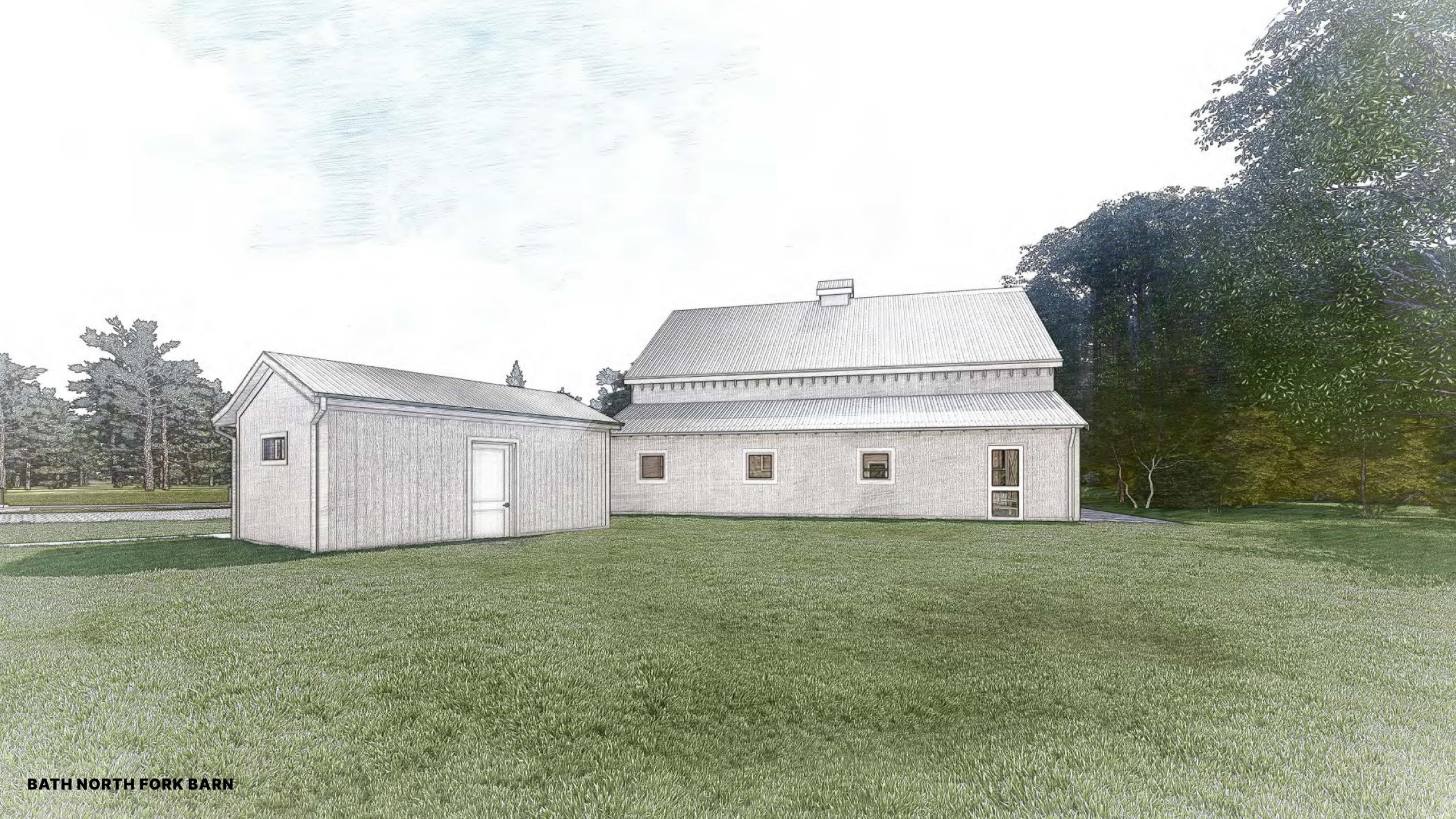


BATH NORTH FORK BARN

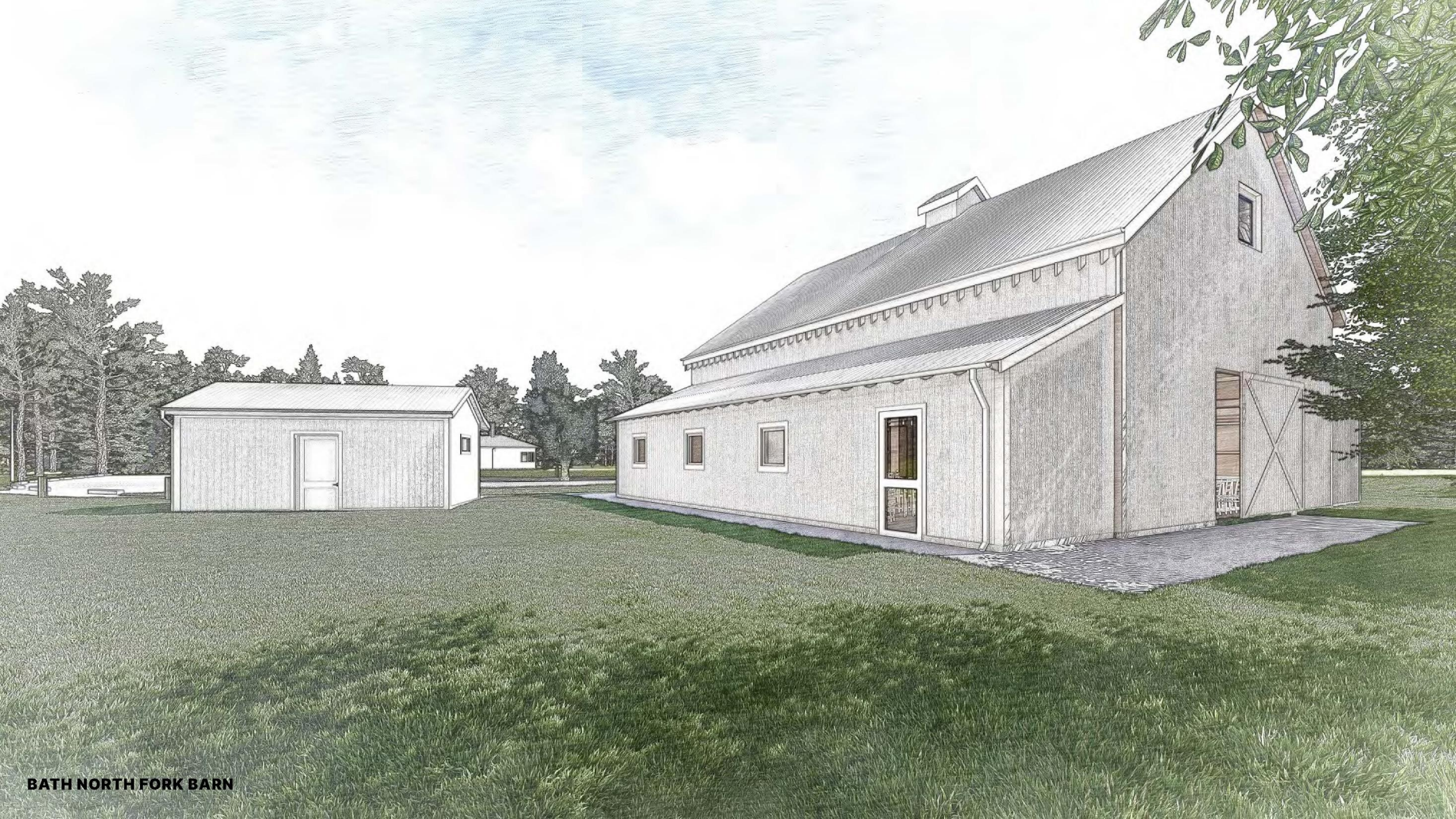
Peninsula

BATH NORTH FORK BARN

Peninsula



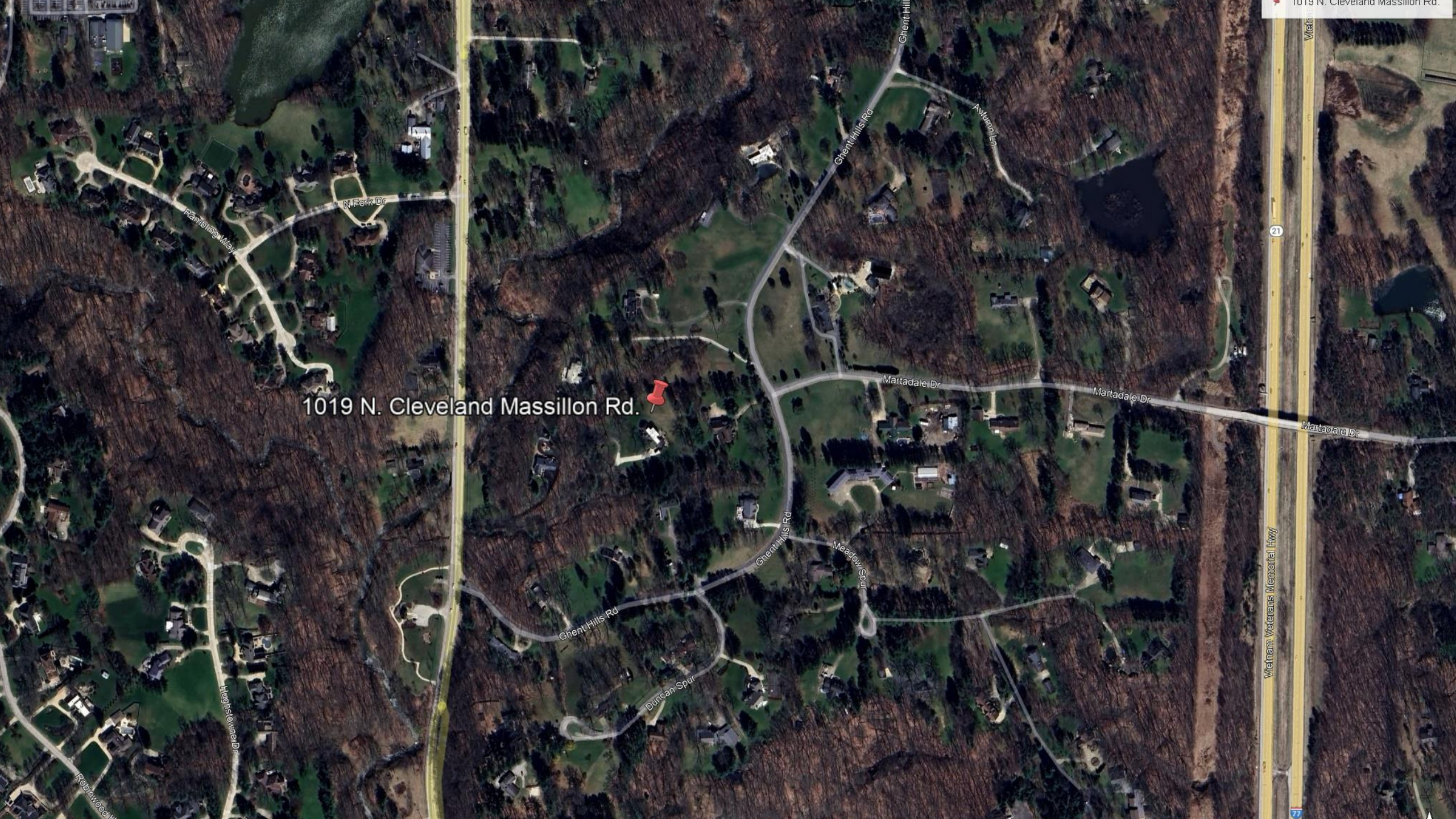
BATH NORTH FORK BARN



BATH NORTH FORK BARN

BZA 25-27

- Eddie Alarcon of EnSMARRT
- 1019 N. Cleveland Massillon Rd.
- Requesting conditional use per Article 7, Table 701-1 to install ground mounted solar panels and requesting variances from Article 7, Section 701-D(17)(A) to exceed the allowed square footage and for a reduction in the rear yard setback for ground mounted solar panels.


1019 N. Cleveland Massillon Rd.
N Fork Dr
Rambling Way
Ghent Hills Rd
Autumn Ln
Martadale Dr
Martadale Dr
Martadale Dr
Ghent Hills Rd
Meadow Spur
Ghent Hills Rd
Duncan Spur
Highstown Dr
Vietnam Veterans Memorial Hwy
21
77


950
1010
1000
990
990
980
970
960
0400461
0400460
0403371
0402650
0402649

PHOTOVOLTAIC GROUND MOUNT SYSTEM

52 MODULES - SYSTEM SIZE STC (21.32 kW DC / 19.97 kW AC)

1019 N CLEVELAND MASSILLON RD, AKRON, OH 44333, USA (41.1635712, -81.6344023)

SYSTEM SUMMARY STC (21.32 kW DC / 19.97 kW AC)

STC DC: (52) 410W = 21.32 kW
STC AC: (52) 384W = 19.97 kW

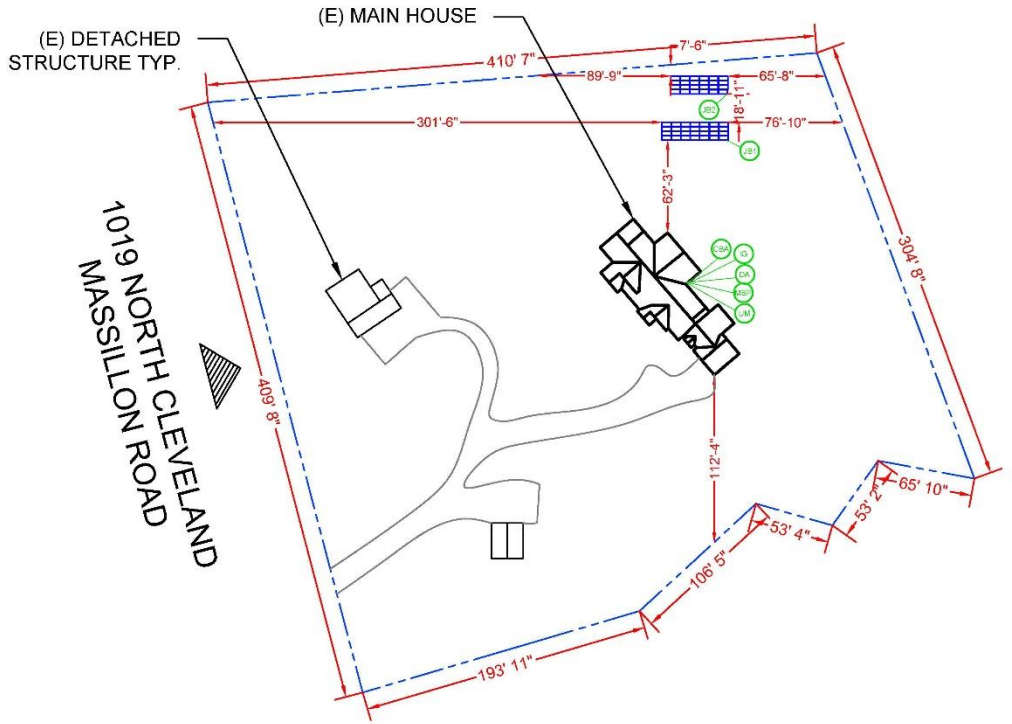
- (52) HYUNDAI ENERGY SOLUTIONS CO., LTD. HIS-S410YH(BK) MODULES
- (52) ENPHASE ENERGY INC. IQ7HS-66-M-US (240V) MICROINVERTERS

- 2x BRANCHES OF 9 CONNECTED IN PARALLEL
- 1x BRANCH OF 10 CONNECTED IN PARALLEL
- 3x BRANCHES OF 8 CONNECTED IN PARALLEL

GOVERNING CODES

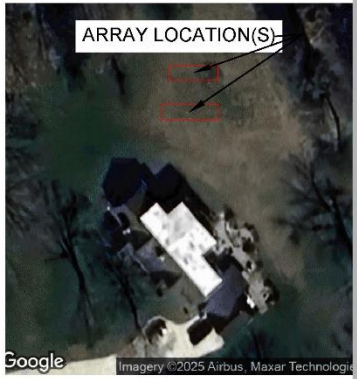
- 2017 OHIO FIRE CODE
- 2019 RESIDENTIAL CODE OF OHIO
- 2024 OHIO BUILDING CODE
- 2023 NFPA 70 - NATIONAL ELECTRICAL CODE

AHJ: SUMMIT (COUNTY OF), OHIO
UTILITY: OHIO EDISON CO



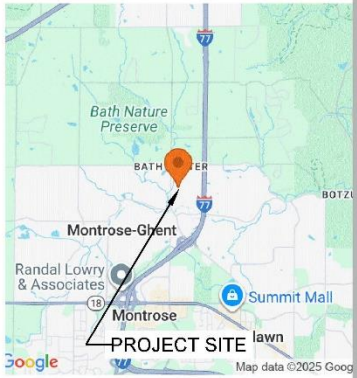
SITE PLAN

SCALE: 1/88" = 1'-0"



HOUSE PHOTO

SCALE: NTS



VICINITY MAP

SCALE: NTS

LEGEND

- NEW PV MODULE
- FRONT OF HOUSE
- DIMENSIONS
- PROPERTY LINE
- OBSTRUCTION
- FENCE
- GATE
- DRIVEWAY
- POOL
- IG — IQ GATEWAY (NEW)
- JB1 — AC JUNCTION BOX (NEW)
- JB2 — AC JUNCTION BOX (NEW)
- CBA — AC COMBINER PANEL (NEW)
- DA — AC DISCONNECT FUSED (NEW)
- MSP — MAIN SERVICE PANEL (EXISTING, 200A)
- UM — UTILITY METER (EXISTING)

CONTRACTOR: PDJ ENTERPRISES LLC DBA ENSMARRT
ADDRESS: 5555 COUNTY ROAD 203 SUITE C1
MILLERSBURG, OHIO 44654
PHONE: 8667938075
EMAIL: savings@ensmarrt.com
LICENSE #: 26969
ELECTRICAL LICENSE #: 26969

REVISIONS

DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

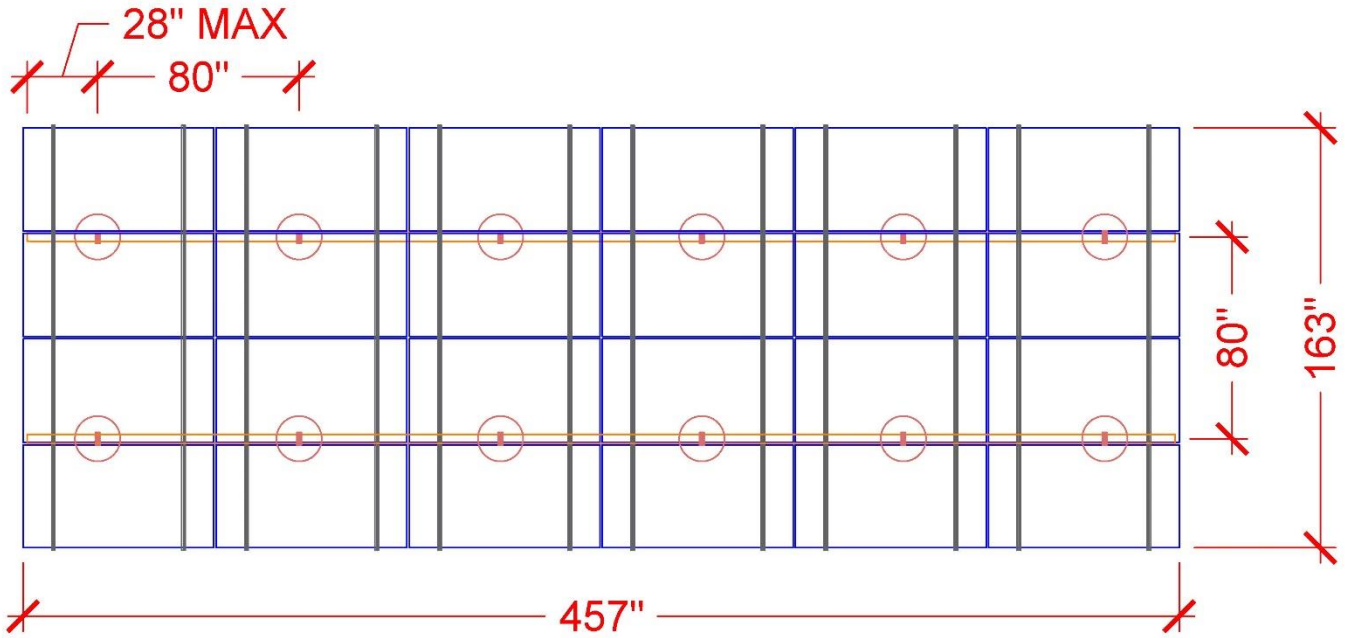
CHRIS CHELOVITZ
1019 N CLEVELAND MASSILLON RD,
AKRON, OH 44333, USA
APN: 04004460
PHONE: +13308872173
EMAIL: CHELOVITZ@YAHOO.COM

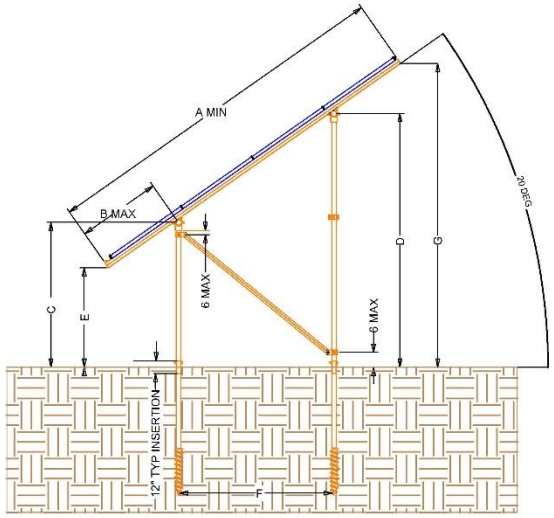
SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

ARRAY-#2





DIMENSIONS IN INCHES	
A	168.0
B	38.0
C	31.0
D	77.0
E	18.0
F	80.0
G	95.0

GROUND SCREW = 63"

RACKING DETAIL
SCALE: NTS

CONTRACTOR: PDJ ENTERPRISES LLC DBA ENSMARRT
ADDRESS: 5555 COUNTY ROAD 203 SUITE C1
MILLERSBURG, OHIO 44654
PHONE: 8667938075
EMAIL: savings@ensmarrt.com
LICENSE #: 28969
ELECTRICAL LICENSE #: 28969

REVISIONS

DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

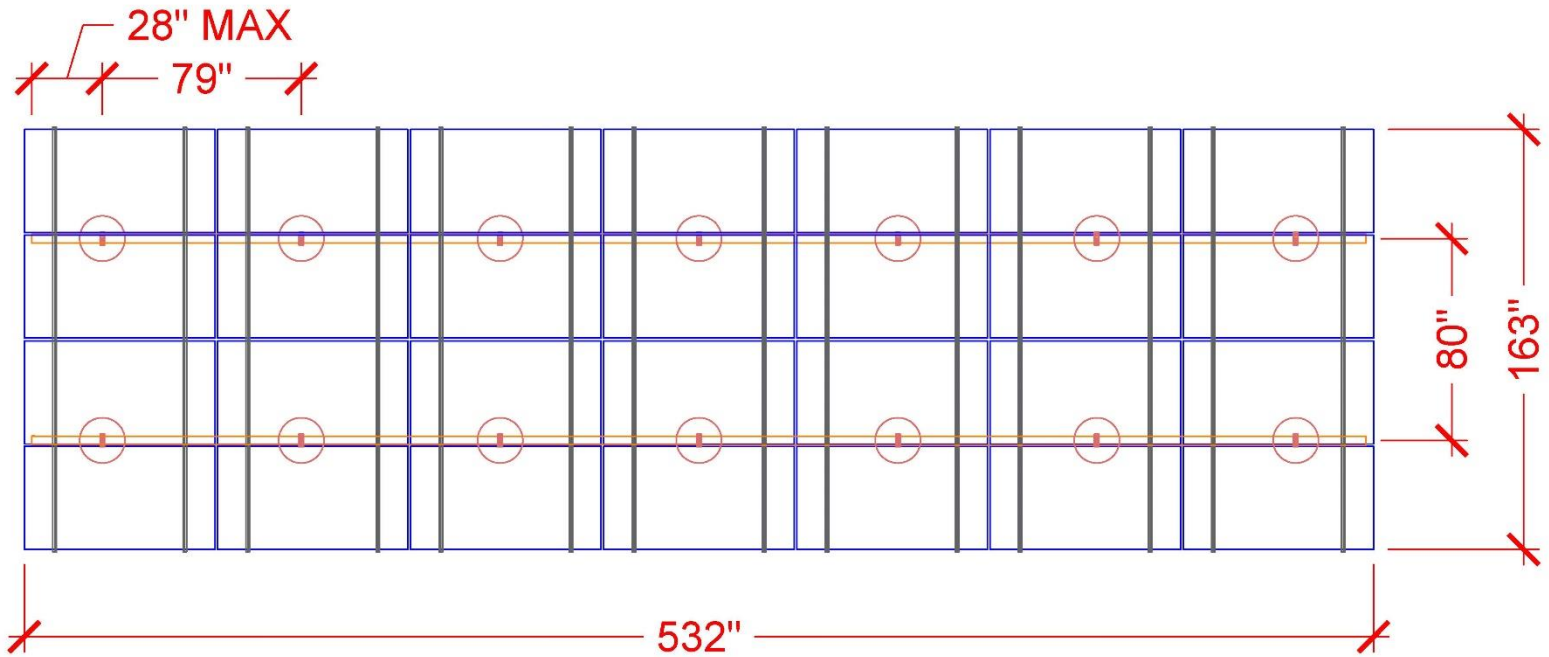
CHRIS CHELOVITZ
1019 N CLEVELAND MASSILLON RD,
AKRON, OH 44333, USA
APN: 0400460
PHONE: +13308872173
EMAIL: CHELOVITZ@YAHOO.COM

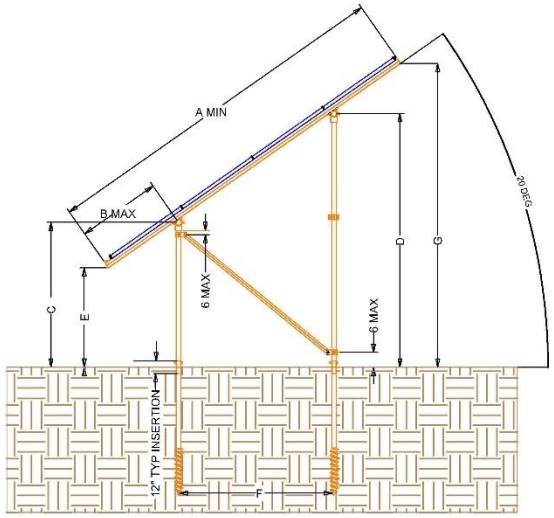
SHEET NAME
RACKING DETAIL

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER

ARRAY-#1





DIMENSIONS IN INCHES	
A	168.0
B	38.0
C	31.0
D	77.0
E	18.0
F	80.0
G	95.0

GROUND SCREW = 63"

RACKING DETAIL

SCALE: NTS

CONTRACTOR: PDJ ENTERPRISES LLC DBA ENSMARRT
ADDRESS: 5668 COUNTY ROAD 203 SUITE C1
MILLERSBURG, OHIO 44654
PHONE: 8667838075
EMAIL: savings@ensmarrt.com
LICENSE #: 28969
ELECTRICAL LICENSE #: 28969

REVISIONS

DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

CHRIS CHELOVITZ
1019 N CLEVELAND MASSILLON RD,
AKRON, OH 44333, USA
APN: 0400460
PHONE: +13308872173
EMAIL: CHELOVITZ@YAHOO.COM

SHEET NAME

RACKING DETAIL

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

SYSTEM SUMMARY STC (21.32 kW DC / 19.97 kW AC)

STC DC: (52) 410W = 21.32 kW
STC AC: (52) 384W = 19.97 kW

- (52) HYUNDAI ENERGY SOLUTIONS CO., LTD. HIS-S410YH(BK) MODULES
- (52) ENPHASE ENERGY INC. IQ7HS-66-M-US (240V) MICROINVERTERS
- 2x BRANCHES OF 9 CONNECTED IN PARALLEL
- 1x BRANCH OF 10 CONNECTED IN PARALLEL
- 3x BRANCHES OF 8 CONNECTED IN PARALLEL

INTERCONNECTION 120% RULE
(MAIN PANEL)

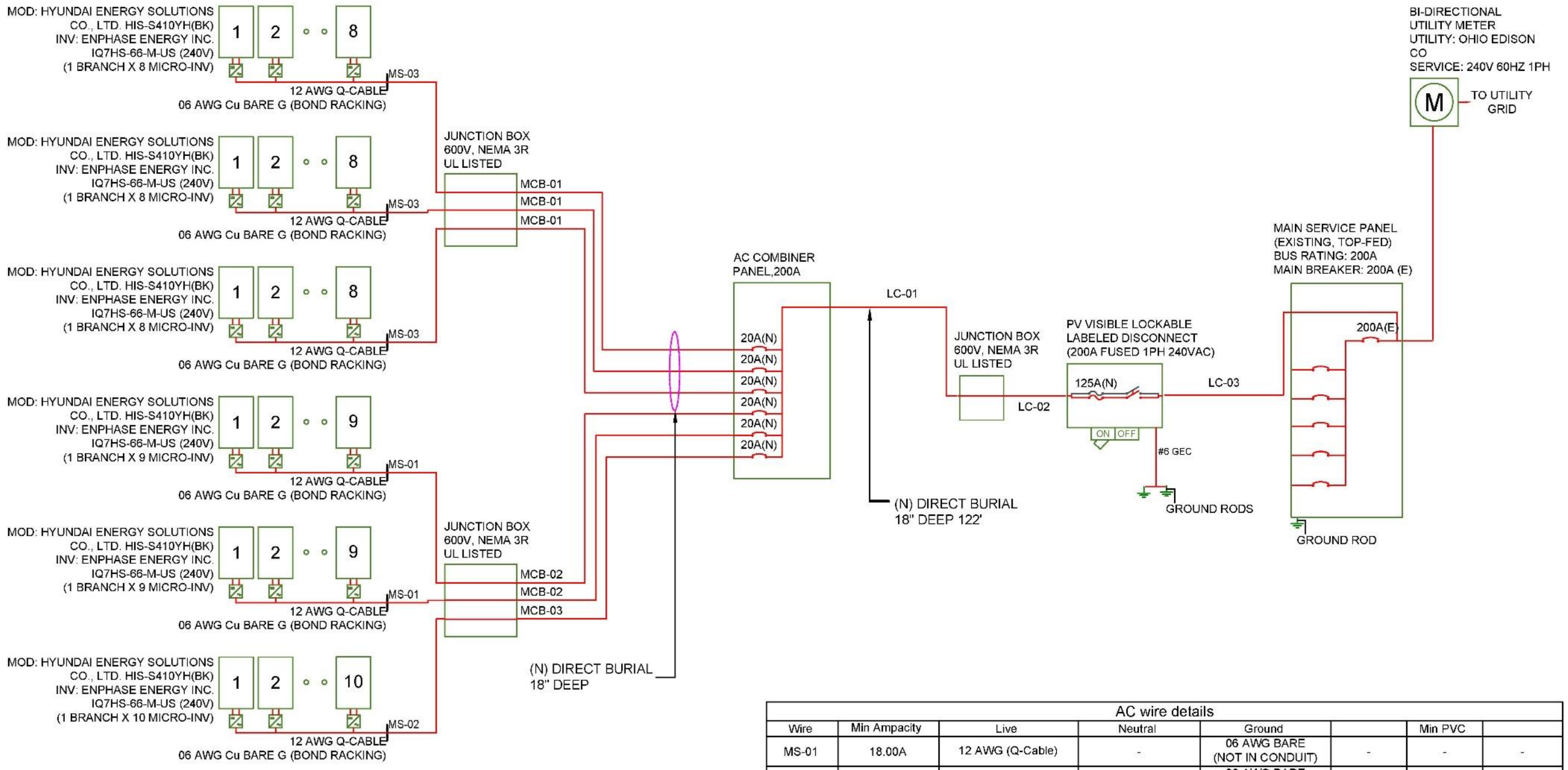
INTERCONNECTION
120% RULE
NOT APPLICABLE

LINE-SIDE TAP DOES NOT AFFECT
MAIN PANEL

EXTREME CASE MODULE OUTPUT
(HYUNDAI ENERGY SOLUTIONS CO., LTD. HIS-S410YH(BK))

Isc(25°C) = 11.40A, Tisc = 0.032%/°C
Isc(T) = Isc(25°C) x [1 + Tisc x (T-25°C)]
Isc(-19°C) = 11.24A, Isc(31°C) = 11.42A

Voc(25°C) = 45.90V, Tvoc = -0.268%/°C
Voc(T) = Voc(25°C) x [1 + Tvoc x (T-25°C)]
Voc(-19°C) = 51.31V, Voc(31°C) = 45.16V



AC wire details							
Wire	Min Ampacity	Live	Neutral	Ground		Min PVC	
MS-01	18.00A	12 AWG (Q-Cable)	-	06 AWG BARE (NOT IN CONDUIT)	-	-	-
MS-02	20.00A	12 AWG (Q-Cable)	-	06 AWG BARE (NOT IN CONDUIT)	-	-	-
MS-03	16.00A	12 AWG (Q-Cable)	-	06 AWG BARE (NOT IN CONDUIT)	-	-	-
MCB-01	16.00A	(2) 10 AWG UF-B	-	10 AWG THWN-2	-	-	-
MCB-02	18.00A	(2) 10 AWG UF-B	-	10 AWG THWN-2	-	-	-
MCB-03	20.00A	(2) 10 AWG UF-B	-	10 AWG THWN-2	-	-	-
LC-01	104.00A	(2) 1/0 AWG-URD	-	02 AWG URD			
LC-02	104.00A	(2) 1/0 AWG-SE		02 AWG URD			
LC-03	104.00A	(2) 1/0 AWG-SE	1/0 AWG-SE				

ELECTRICAL SINGLE LINE DIAGRAM

SCALE: NTS

SOLAR

CONTRACTOR: FDJ ENTERPRISES LLC DBA
ENSMARRT
ADDRESS: 5555 COUNTY ROAD 203 SUITE C1
MILLERSBURG, OHIO 44654
PHONE: 8667630075
EMAIL: savings@ensmarrt.com
LICENSE #: 26969
ELECTRICAL LICENSE #: 26969

REVISIONS

DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

CHRIS CHELOVITZ
1019 N CLEVELAND MASSILLON RD,
AKRON, OH 44333, USA
APN: 0400460
PHONE: +13306872173
EMAIL: CHELOVITZ@YAHOO.COM

SHEET NAME
SINGLE LINE DIAGRAM

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER

SUNMODO

GO BIG ON TURF

SunTurf™ Ground Mount System

SunModo offers the next generation Ground Mount System with SunTurf™. The streamlined design combines the strength of Helio Rails with steel pipes to create the perfect ground mount solution.

SurTurf™ is ideal for solar installers looking for a durable and cost-effective system that can accommodate a wide variety of soil conditions.

The SunTurf™ Ground Mount Advantage

- ✓ Easily scalable from kilowatts to multimegawatts PV Arrays.
- ✓ Foundation design solution for every soil condition.
- ✓ Online configuration tool available to streamline design process.
- ✓ Components optimized for strength, durability and fast installation.
- ✓ UL 2703 Listed by Intertek.

Key Features of SunTurf™ Ground Mount System

SUNMODO
We've Got Your Rack!

SunTurf™ Ground Mount System easily integrate Helio Rails with 2-inch Schedule 40 steel pipes. No drilling is required to attach the aluminum rails to the horizontal pipe. Optional bracing can provide additional structural rigidity for sites with high snow or wind load conditions. Anchor any ground mount installation using one of our fountain types including helical piles, precast ballasts and concrete piers.

Technical Data

Application	Ground Mount
Material	High grade aluminum, galvanized steel and 304 stainless steel hardware
Module Orientation	Portrait and landscape
Tilt Angle	Range between 10 to 50 degrees
Foundation Types	Post in concrete, helical earth auger, ground screw anchor and ballast
Structural Integrity	Stamped engineering letters available
Certification	UL 2703 Listed by ETL
Warranty	20 Years

SunModo, Corp. Vancouver, WA., USA • www.sunmodo.com • 360.844.0048 • info@sunmodo.com

E SOLAR

CONTRACTOR: PDJ ENTERPRISES LLC DBA ENSMARRT
ADDRESS: 8668 COUNTY ROAD 203 SUITE C1
MILLERSBURG, OHIO 44654
PHONE: 8667838075
EMAIL: savings@ensmarrt.com
LICENSE #: 28969
ELECTRICAL LICENSE #: 28969

REVISIONS

DESCRIPTION	DATE	REV

SIGNATURE & SEAL

HOMEOWNER INFO

CHRIS CHELOVITZ
1019 N CLEVELAND MASSILLON RD,
AKRON, OH 44333, USA
APN: 0400460
PHONE: +13308872173
EMAIL: CHELOVITZ@YAHOO.COM

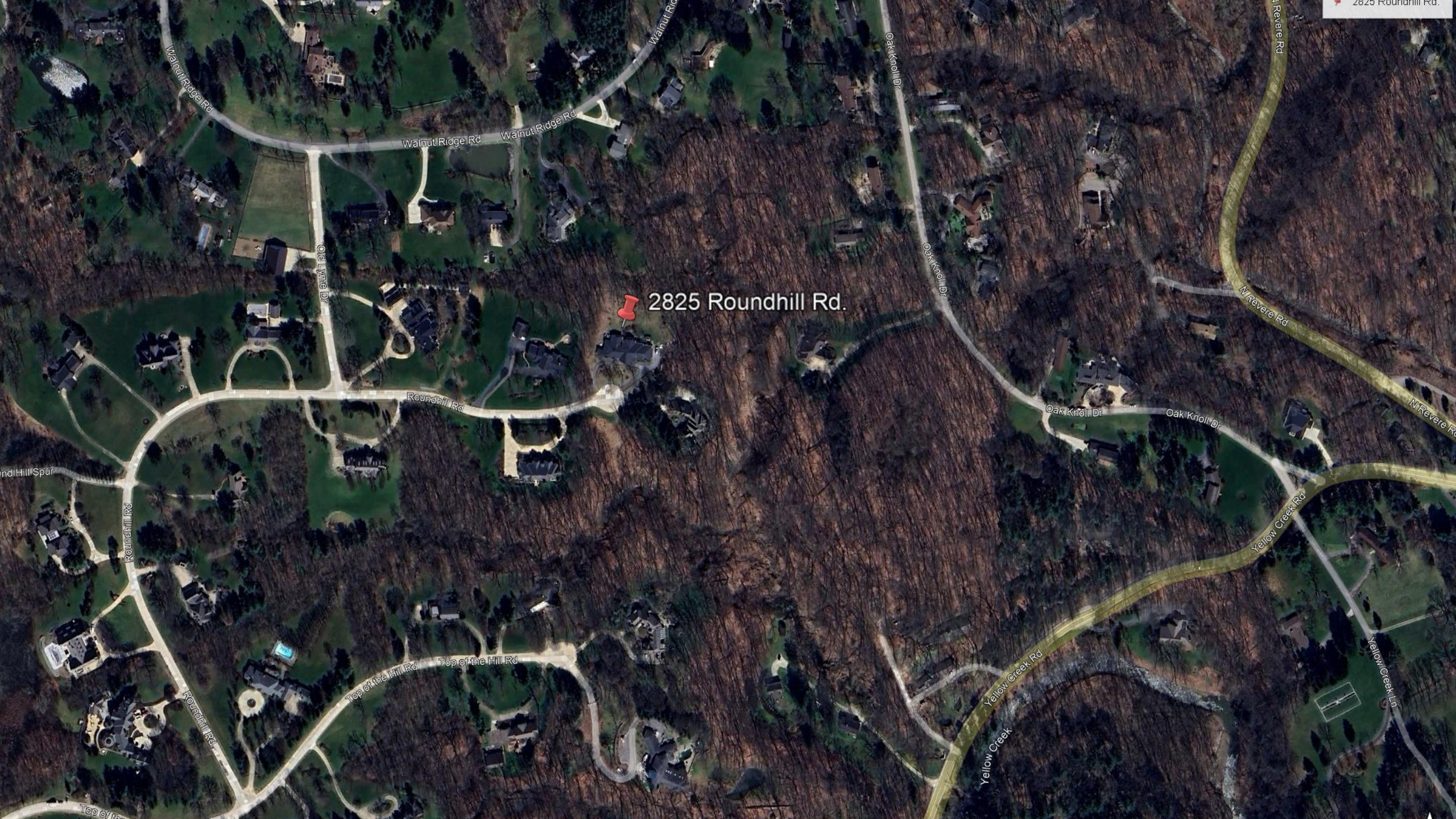
SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER

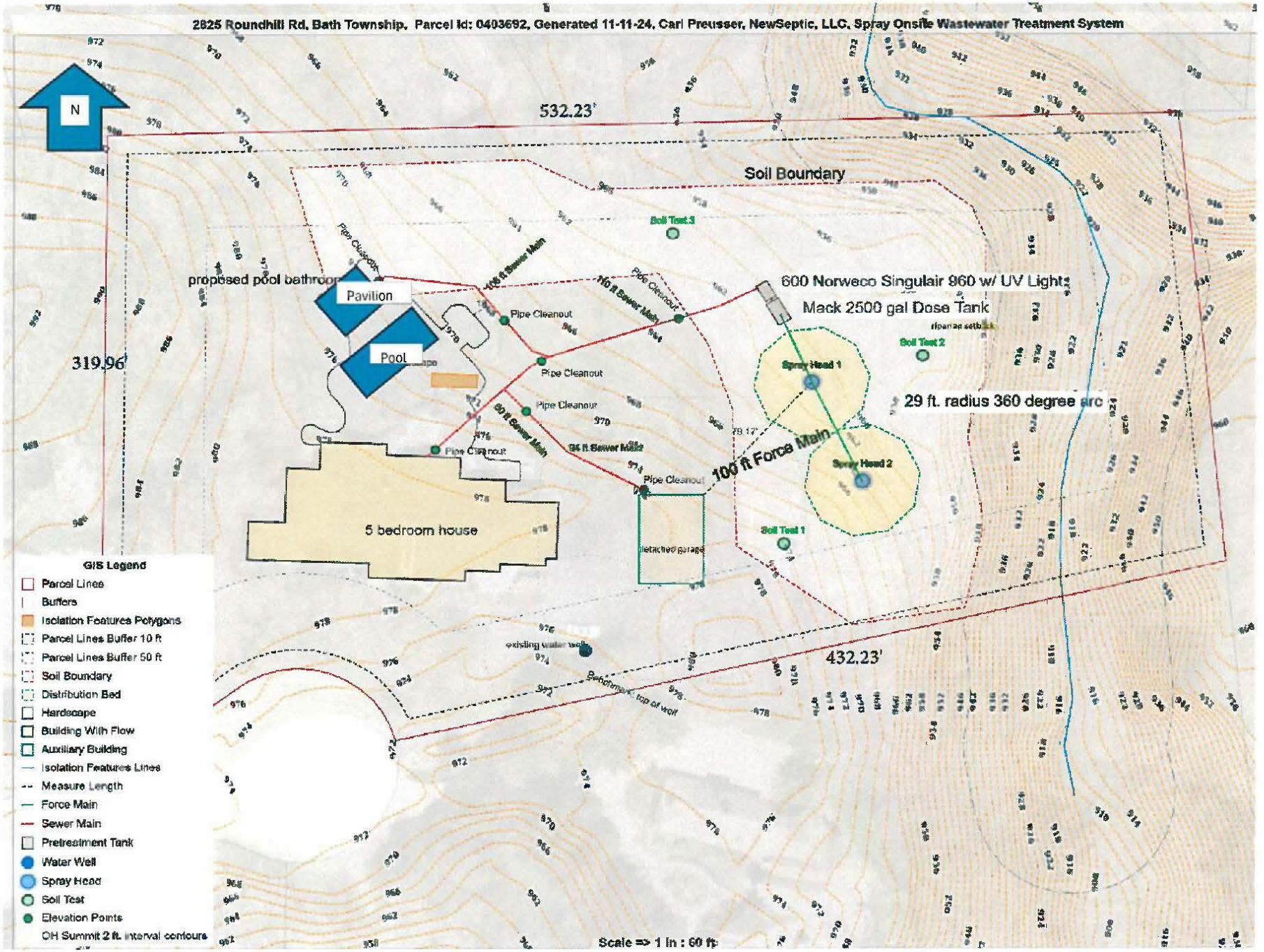
BZA 25-28

- Eric Henkel
- 2825 Roundhill Rd.
- Requesting variance from Article 701-B(11) to exceed the allowed square footage for an accessory structure.

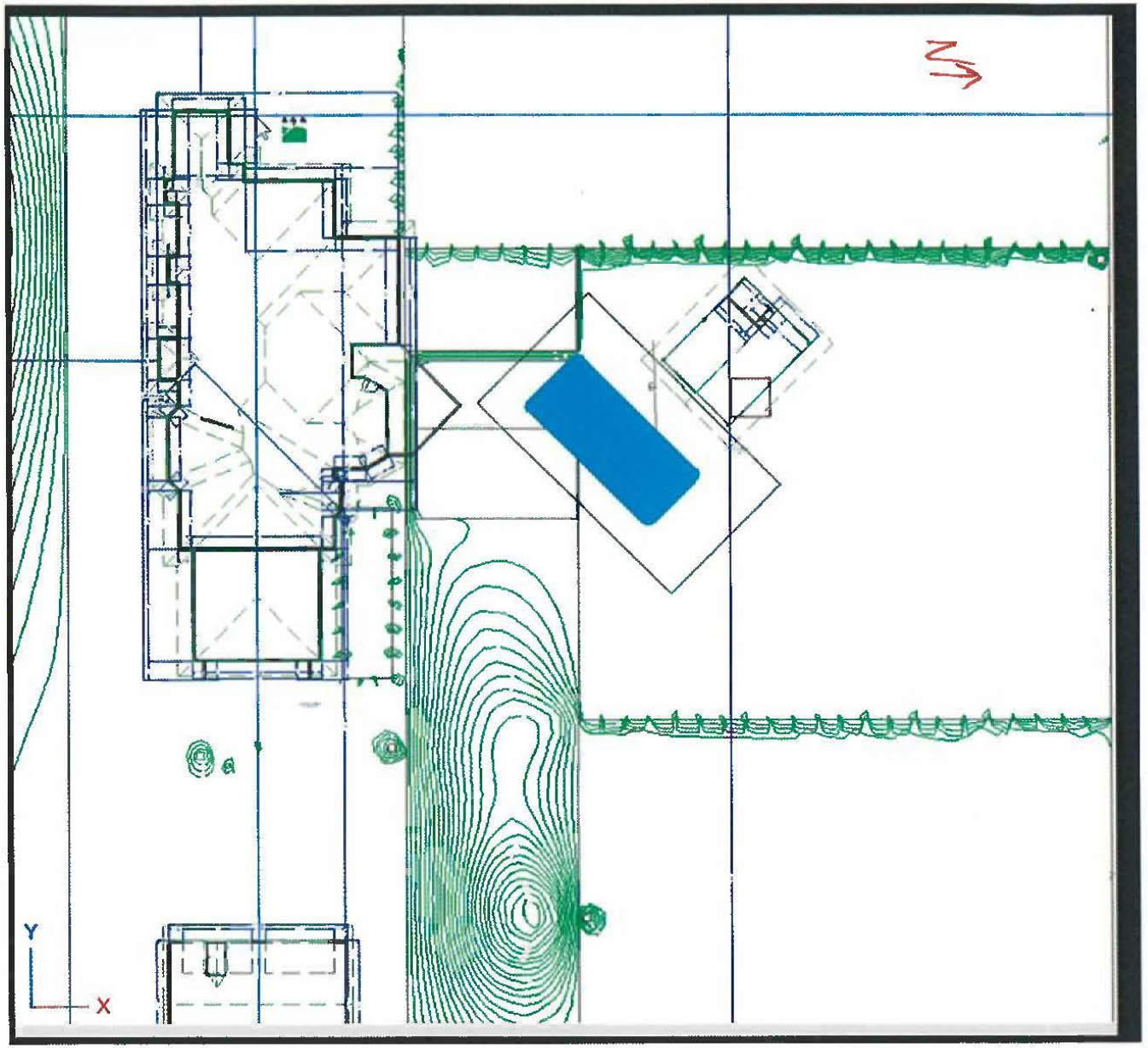

2825 Roundhill Rd.
Walnut Ridge Rd
Walnut Ridge Rd
Walnut Ridge Rd
Old Lyme Dr
Oak Knoll Dr
Oak Knoll Dr
N Revere Rd
N Revere Rd
Roundhill Rd
Oak Knoll Dr
Oak Knoll Dr
Roundhill Rd
Roundhill Rd
Top of the Hill Rd
Top of the Hill Rd
Yellow Creek Rd
Yellow Creek Rd
Yellow Creek
Yellow Creek Ln


0401639
0401120
0400339
0401438
0403692
0403691
0406751
ROUND HILL DR
0403693
0403694
940
960
970
980
990
910
920
930

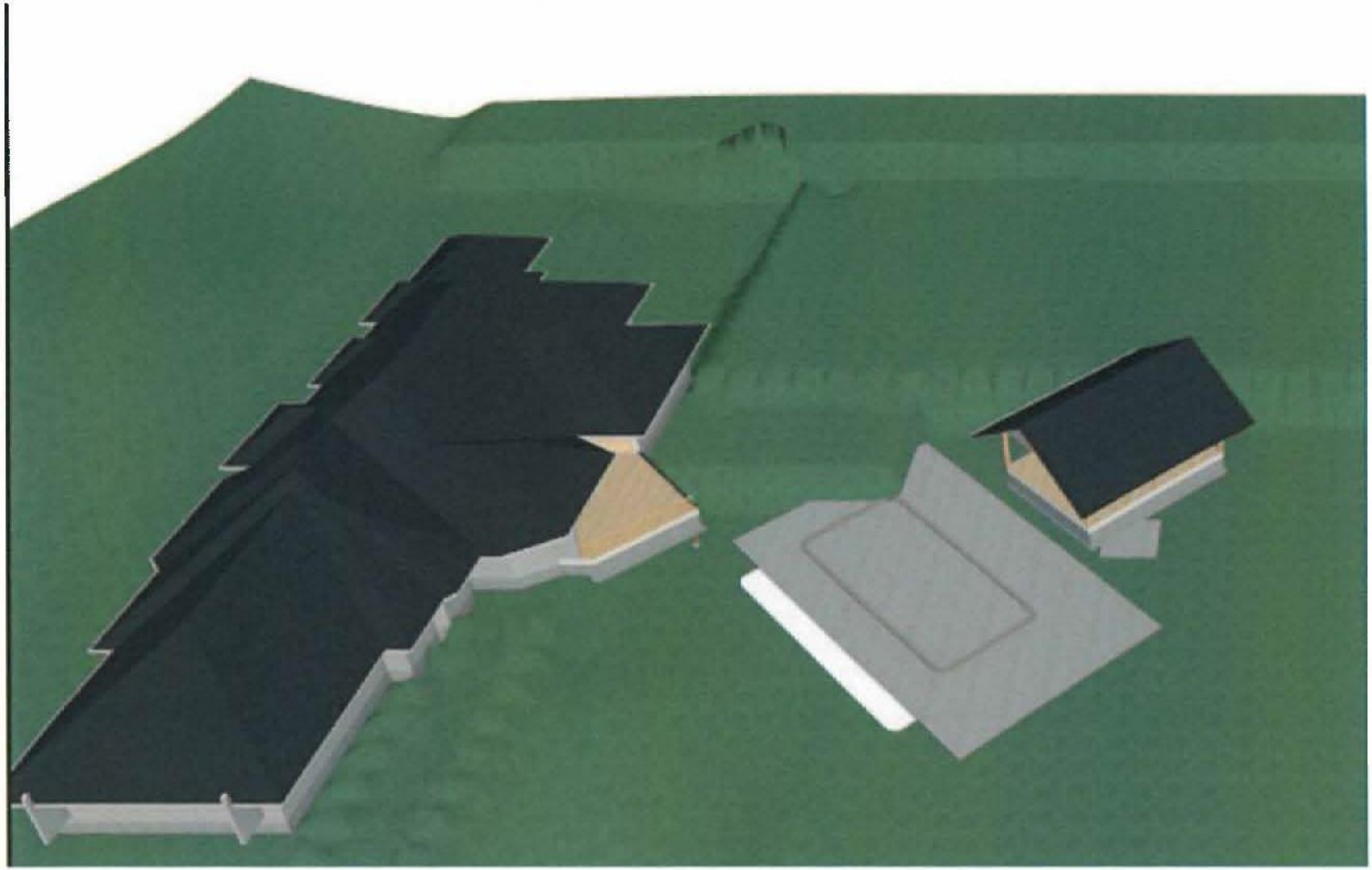

200+ feet from the Ravine
Pavilion
Pool
105ft from Ravine
62ft from well head


2825 Roundhill Rd, Bath Township, Parcel Id: 0403692, Generated 11-11-24, Carl Preusser, NewSeptic, LLC, Spray Onsite Wastewater Treatment System
N
532.23'
Soil Boundary
Soil Test 3
proposed pool bathroom
Pavilion
Pool
Pipe Cleanout
105 ft Sewer Main
Pipe Cleanout
600 Norweco Singulair 960 w/ UV Light
Mack 2500 gal Dose Tank
riparian setback
Soil Test 2
319.96'
Spray Head 1
29 ft. radius 360 degree arc
Pipe Cleanout
Pipe Cleanout
80 ft Sewer Main
35 ft Sewer Main
Pipe Cleanout
100 ft Force Main
Spray Head 2
Pipe Cleanout
Soil Test 1
5 bedroom house
detached garage
existing water well
Swimming pool top of wall
432.23'
GIS Legend
Parcel Lines
Buffers
Isolation Features Polygons
Parcel Lines Buffer 10 ft
Parcel Lines Buffer 50 ft
Soil Boundary
Distribution Bed
Hardscape
Building With Flow
Auxiliary Building
Isolation Features Lines
Measure Length
Force Main
Sewer Main
Pretreatment Tank
Water Well
Spray Head
Soil Test
Elevation Points
OH Summit 2 ft. interval contours
Scale => 1 in : 60 ft

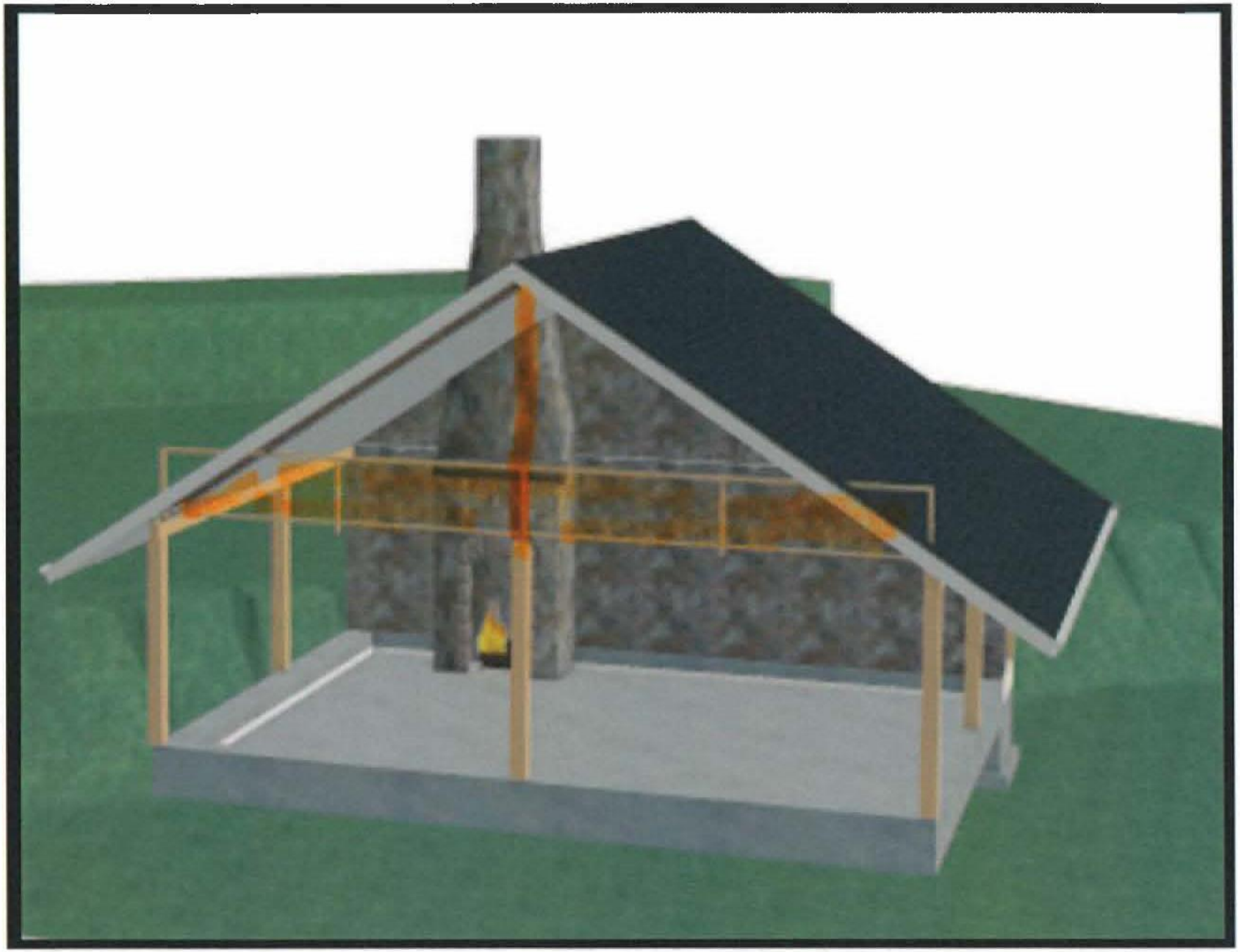
Site Layout with updated Grading

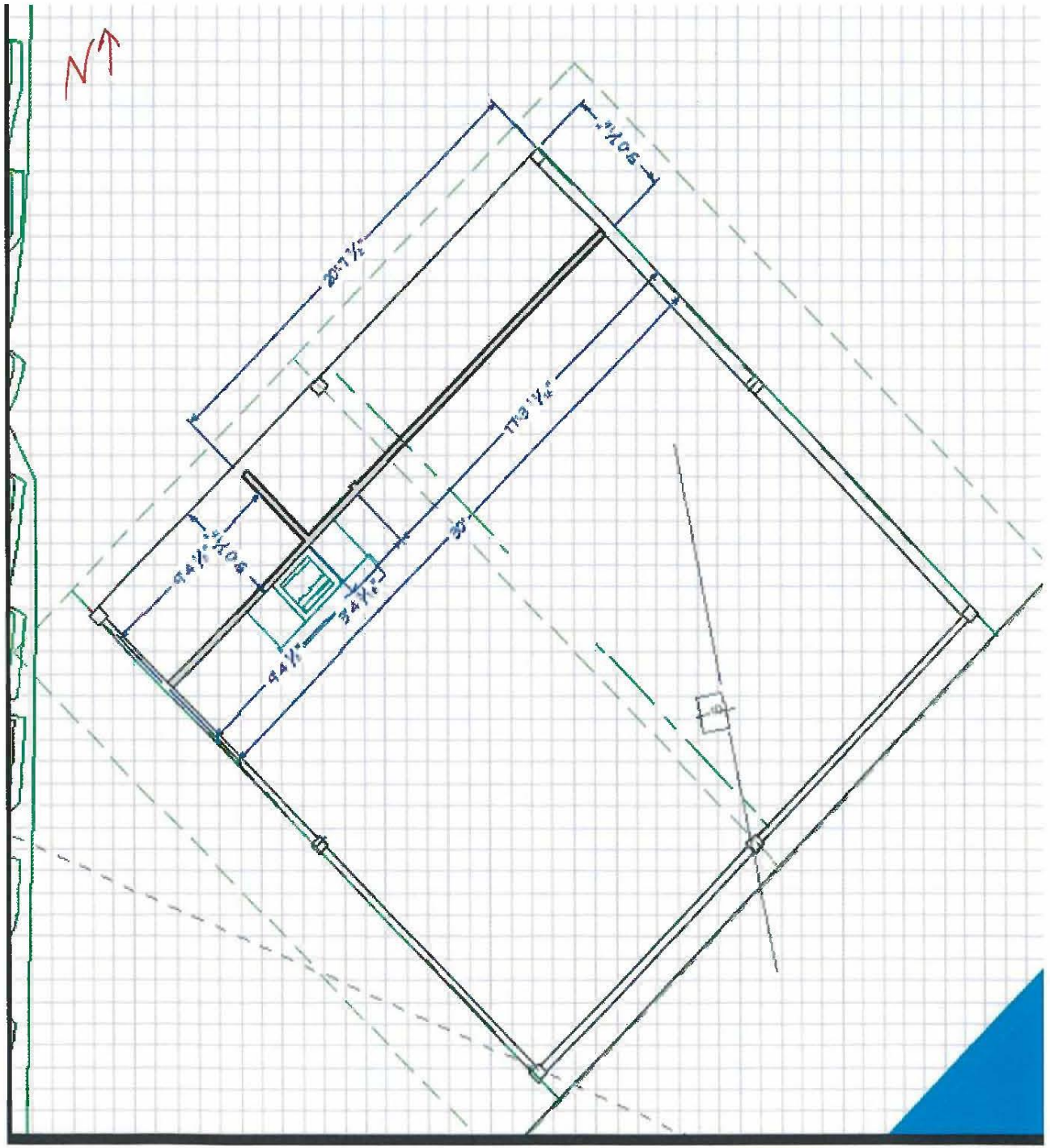


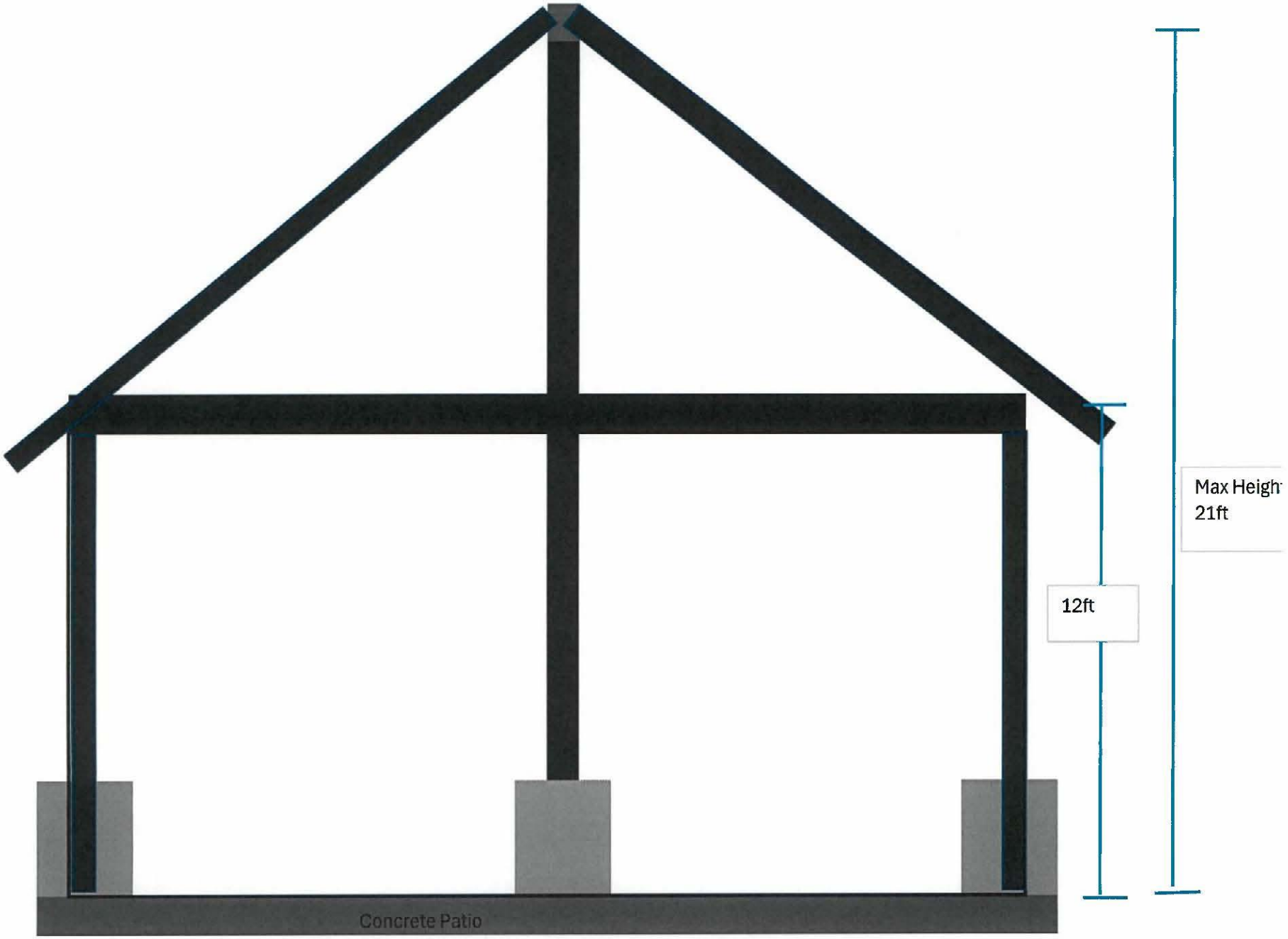
Overall View with updated grading and proposed pavilion and pool



Rough look of the pavilion




N
20'-7 1/2"
1'-10 5/8"
17'-3 1/4"
35'
9'-4 1/2"
1'-10 5/8"
3'-4 1/2"
9'-4 1/2"


Max Height
21ft
12ft
Concrete Patio

BATH TOWNSHIP BOARD OF ZONING APPEALS