

Adam M. Rude Director

### Allan Henderson Deputy Director

# BOARD OF ZONING APPEALS

### **MEETING DATE: 5/11/2021**

Case #:	BZA 2021-02: Michigan Road Warehouse, DSV			
Petitioner's Name:	Al Berthouex			
Owner's Name:	Al Berthouex			
Petitioner's Representative:	Tony Nicholson			
Address of Property:	1689 North Michigan	Road		
Subject Property Zoning Classification:	IG – General Industri			
Comprehensive Future Land use:	Heavy/Medium Indus	try		
	North	East	South	West
Surrounding Properties' Zoning Classifications:	IG – General Industrial	R1 – Single Family Residential	IG – General Industrial	IG – General Industrial
Surrounding Properties' Comprehensive Future Land Use	Heavy/Medium Industry	High-Tech/ Light Industrial	Heavy/Medium Industry	Heavy/Medium Industry
History:				
Vicinity Map:	Lostica de la companya de la companya de la company			
Action Requested:		for parking areas and	ariance from UDO 5.55 d approval of one devel tandards.	

- 1. The petitioner is requesting to build an industrial storage unit at 1689 north Michigan Road. The site is approximately 1.3 acres.
- 2. The UDO 5.55 Setback Standards (I)(4)(b & c) allows for parking lots and drives to encroach into front setback by twenty-five percent (25%) of the minimum required setback. The required minimum front yard setback is fifty (50) feet from an arterial road.
- 3. The petitioner, based on the angle of Michigan Road, has designed the parking lot of the building to encroach on the front yard setback.
- 4. The UDO 5.39 Loading Standards (B)(2) does not allow maneuvering within any street right-of-way and in no case shall a loading berth be located in such a manner as to require loading/unloading vehicles to back into a public right-of-way or overhang adjacent property.
- 5. The petitioner has designed the property to use the drive on the west-side of the property to be utilized for loading/unloading on the loading docks.

# BZA 2021-02-A: Variance From UDO 5.55(I)(4)(a) Setback Standards (Front Yard Setback Encroachment from Michigan Road)

Finding of Fact #1 – That the approval of the Development Standards Variance will not be injurious to the public health, safety, morals and general welfare of the community.

The applicant provided the following response to Finding of Fact #1: "This development will be consistent with the adjacent properties and meet all the city requirements with the approval of these two variances."

The planning staff has determined that the requested variance should not be injurious to the public health, safety, morals, and general welfare of the community. The requested variance would allow a smaller setback than what is described in UDO 5.55 Setback Standards while still remaining generally consistent with the development character and setbacks of other parking areas along Michigan Road. Because Michigan Road runs in a south-east to north-west pattern, the angle, makes it difficult for properties to meet the setback requirements of the UDO.

### Finding #1 has been satisfied by the petitioner

Finding of Fact #2 – That the use and value of the area adjacent to the subject property seeking a Development Standards Variance will not be affected in a substantially adverse manner;

The applicant provided the following response to Finding of Fact #2: "The use and the value will not affect adjacent properties as it will be an improvement."

The planning staff has determined that the requested variance from the Setback Standards should not have a substantially adverse effect on the use and value of the area adjacent to the subject property. As mentioned in Finding #1, the general character and setbacks of adjacent properties' parking lots, such as Knauf's property to the south of the subject property, is consistent with the proposed setback of the new parking area.

Finding #2 has been satisfied by the petitioner

Finding of Fact #3 – That the strict application of the terms of the ordinance will result in practical difficulties in the use of the property. The practical difficulty shall not be self-imposed, nor based on a perceived reduction of, or restriction on, economic gain;

The applicant provided the following response to Finding of Fact #3: "If not granted the variance for parking, the building may need to be smaller and could jeopardize the project as well as the access variance not being approved."

The planning staff has determined that there is a practical difficulty that is neither self-imposed, nor economic in nature, due to the strict application of the terms of the ordinance. Due to the subject lot's limited size and orientation to Michigan Road, without granting of the subject variance, parking would need to be reduced in the front of the building and distributed to other areas of the site; away from the main entrance.

Finding #3 has been satisfied by the petitioner

### STAFF RECOMMENDATION: APPROVAL

### BZA 2021-02-B: Variance From UDO 5.39 Loading Standards

Finding of Fact #1 – That the approval of the Development Standards Variance will not be injurious to the public health, safety, morals and general welfare of the community.

The applicant provided the following response to Finding of Fact #1: "This development will be consistent with the adjacent properties and meet all the city requirements with the approval of these two variances."

The planning staff has determined that the requested variance should not be injurious to the public health, safety, morals, and general welfare of the community. The requested variance would allow the petitioner to use a public street to stage delivery trucks for loading/unloading on the property docks. The public street provides access for two (2) additional properties, one (1) of which is owned by the petitioner.

### Finding #1 has been satisfied by the petitioner

Finding of Fact #2 – That the use and value of the area adjacent to the subject property seeking a Development Standards Variance will not be affected in a substantially adverse manner;

The applicant provided the following response to Finding of Fact #2: "The Loading Standard variance will be an improvement as this is how the adjacent properties use this dead-end road."

The planning staff has determined that the requested variance should not have a substantially adverse effect on the use and value of the area adjacent to the subject property. As mentioned in Finding #1,

the petitioner operates a similar type of facility directly to the south of the proposed location. That facility operates in a similar manner with loading and unloading of commercial trucks. The public street in question dead-ends into the petitioners property to the south only servicing one additional business.

Finding #2 has been satisfied by the petitioner

Finding of Fact #3 – That the strict application of the terms of the ordinance will result in practical difficulties in the use of the property. The practical difficulty shall not be self-imposed, nor based on a perceived reduction of, or restriction on, economic gain;

The applicant provided the following response to Finding of Fact #3: "If the access standard is not granted the public safety could be affected as the semi-trucks would unload on the dead-end street."

The planning staff has determined that there is a practical difficulty that is neither self-imposed, nor economic in nature, due to the strict application of the terms of the ordinance. Due to the subject lot's limited size and site constraints, there is no other possibility for loading/unloading of commercial trucks.

Finding #3 has been satisfied by the petitioner

STAFF RECOMMENDATION: APPROVAL

### DEVELOPMENT STANDARDS VARIANCE: BZA 2021-02: Michigan Road Warehouse, DSV

A. UDO 5.55 SETBACK STANDARDS

### FINDINGS OF FACT BY THE SHELBYVILLE BOARD OF ZONING APPEALS

### **Staff Prepared**

Motion:

(I) would like to make a motion to approve the requested development standard variance from UDO 5.55 to decrease the required front yard setback for the proposed parking area to 22.2 feet in accordance with the plans presented to this body, pursuant to the findings of fact presented in the planning staff's report.

1.	The approval of the Development Standards Variance <b>will not</b> be injurious to the public health, safety, morals and general
	welfare of the community.

The approval of the Development Standards Variance **will** be injurious to the public health, safety, morals and general welfare of the community.

2. The use and value of the area adjacent to the subject property seeking a Development Standards Variance will not be affected in a substantially adverse manner.

The use and value of the area adjacent to the subject property seeking a Development Standards Variance will be affected in a substantially adverse manner.

3. The strict application of the terms of the ordinance <u>will</u> result in practical difficulties in the use of the property. The practical difficulty shall not be self-imposed, nor based on a perceived reduction of, or restriction on, economic gain.

The strict application of the terms of the ordinance <u>will not</u> result in practical difficulties in the use of the property. The practical difficulty shall not be self-imposed, nor based on a perceived reduction of, or restriction on, economic gain.

### Additional conditions imposed by the Board of Zoning Appeals:

1.

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2.

3.

Shelbyville Board of Zoning Appeals

Chairperson

By: \_\_\_\_\_

Attest: \_\_\_\_\_

Secretary

- 5 -

DEVELOPMENT STANDARDS VARIANCE: BZA	2021-02: Michigan Road Warehouse, DSV
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E	8. UD	O 5.39 LOADING STANDARDS
FINI	DINGS	OF FACT BY THE SHELBYVILLE BOARD OF ZONING APPEALS
Sta	ff Pre	epared
		Motion: (I) would like to make a motion to approve the requested development standard variance from UDO 5.39 to allow the public right of way to be used for loading/unloading, pursuant to the findings of fact presented in the planning staff's report.
1.		The approval of the Development Standards Variance <b>will not</b> be injurious to the public health, safety, morals and general welfare of the community. The approval of the Development Standards Variance <b>will</b> be injurious to the public health, safety, morals and general
2.		welfare of the community. The use and value of the area adjacent to the subject property seeking a Development Standards Variance <u>will not</u> be affected in a substantially adverse manner. The use and value of the area adjacent to the subject property seeking a Development Standards Variance <u>will</u> be affected in a substantially adverse manner.
3.		The strict application of the terms of the ordinance <u>will</u> result in practical difficulties in the use of the property. The practical difficulty shall not be self-imposed, nor based on a perceived reduction of, or restriction on, economic gain. The strict application of the terms of the ordinance <u>will not</u> result in practical difficulties in the use of the property. The practical difficulty shall not be self-imposed, nor based on a perceived reduction of, or restriction on, economic gain.
ļ	dditio 1. 2.	onal conditions imposed by the Board of Zoning Appeals:
	3.	

Shelbyville Board of Zoning Appeals

Chairperson

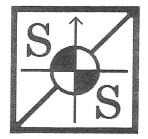
Dv/	•
bу	•

Attest: \_\_\_\_\_

Secretary

5/11/2021 - BZA 2021-02: Michigan Road Warehouse, DSV

		For Office lies Only
DEVELOPMENT STANDARDS		For Office Use Only:
Shelbyville Planning & Building Department	VARIANCE APPLICATION	Case #: BZA
44 West Washington Street Shelbyville, IN 46176		Hearing Date:
<sup>γ</sup> ο <sub>ε 1<sub>N PR</sub>ο<sup>6</sup><sup>κε<sup>2</sup></sup> P: 317.392.5102</sub>		Fees Paid: \$
		Final Decision:
		Approved Denied
1. Applicant	Property Owners Information	(if different there for the set)
Name: AL BERTHOUEX	Name: <u>SAME</u>	
Address: 345 W. BROADWAY 5	TAddress:	
<u>SHELBVUILLE, FN</u> 46176 Phone Number: 901-647-2187		
Fax Number: $N'A$	Phone Number:	
Email: 21brg@att.nET	Email:	
ů –		
2. Applicant's Attorney/Represențațive		
Name: 70 AU NICholson	Project Engineer Name: <u>5 PACE</u> AN	D SITES ILC.
Address: 6 E. TAYLOR ST.	Address: <u>6 F.</u>	
SHELDYVILLE, IN.	SHELOVUILLE	
Phone Number: 317 - 392 - 4440	Phone Number: 317 - 3	
Fax Number: <u>6/A</u> Email: <u>5 AME AS ENGINEER-</u>	Fax Number:	
Endle AN IL AN ALBERC	Email: SPACE2 nd	
3. Project Information:	90	COBAL , NET
General Location of Property (and address is applicable):	689 North Mic	LIGAN RD
Current Zoning Classification:	Existing Use: VACANT	Lot told ATM SITE
Number of Requested Variances: 2 5.55 + 5.3	Proposed Use: RETAIL	WAKE HOUSE
Section(s) of the Ordinance Requesting Variance(s) from; includi	ng Article, Section, Subsection, and Pa	ge Number:
4. Attachments		
Affidavit and Consent of Property Owner (if applicable)	Vicinity Map	
Proof of Ownership (copy of deed, recent property card)	Findings of Fact	
Letter of Intent	Application Fee	
Supporting Documents and Exhibits (Optional)		
The undersigned states the above information is true a		×-
The undersigned states the above information is true a	and correct as sine is informed a	ind believes.
	. 17	. )
Applicant: Must K Destaurity	Date:	16/2021
ASHLEY M WATSON Notary Public - Seal	Date:/2	. )
ASHLEY M WATSON Notary Public - Seal Shelby County - State of Inc	Date:/2	. )
ASHLEY M WATSON Notary Public - Seal Shelby County - State of Inc	Date: <u>4/2</u>	. )
ASHLEY M WATSON Notary Public - Seal Shelby County - State of In Commission Number NP072 My Commission Fynires Apr 7	diana 6185 , 2028	. )
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ASHLEY M WATSON Notary Public - Seal Shelby County - State of Inc Commission Number NP072 My Commission Expires Apr 7 Subscribed and sworn to before me balant Mot	diana 6185 , 2028 a this <u>Se</u> day of <u>April</u> ary Public	
ASHLEY M WATSON Notary Public - Seal Shelby County - State of Inc County of Shc1by) SS: Subscribed and sworn to before me bally Uatto Not	tiana 6185 , 2028 a this <u>Se</u> day of <u>Dpril</u> <u>AShky Ml</u> ary Public	



SPACE and SITES, LLC BUILDING DESIGN, LAND PLANNING 6 EAST TAYLOR ST, SHELBYVILLE, IN 46176 PH: 317-392-4444 spaceandsites@sbcglobal.net

April 26.2021

Letter of Intent

The site is 1.30 acres just North of Coffee Creek Center where a former ATM machine was located.

The owner is proposing to develop the site by adding back the ATM machine, a 6,000 square foot steel building with two (2) truck docks, and two (2) drive-in doors, with parking up front for customers, and parking in the rear for employees. The proposed drainage is located on the North side of the property in an existing storm sewer easement. Construction is expected to begin upon approval of Plan Commission.

Sincerely,

ulolsa

Tony L Nicholson Chief Designer



# SPECIAL INFORMATION SEARCH

Order No.: IN1807938

Liability Amount: \$150.00

Effective Date: September 13, 2018

SUBJECT TO the conditions, limitations and exclusions shown below.

- 1. Assured Party: Hamilton National Title LLC
- 2. Legal description of real estate searched:

PARCEL 1

Part of the South Half of Section 30, Township 13 North, Range 7 East in Shelby County, Indiana, more particularly described as follows:

Beginning at a point on the centerline of the Michigan Road (Old US 421) 17 feet South of the North line of the South Half of said Section 30, said point bearing South 88 degrees 42 minutes 25 seconds West a distance of 681.88 feet from the Southwest corner of the East Half of the Northeast Quarter of said Section 30; thence South 22 degrees 12 minutes 00 seconds East along the centerline of aforesaid road 945.7 feet to the Point of Beginning of the following described tract, said point also being the Southeast corner of a tract described in Shelby County Deed Record 262, Pages 686 and 943; running thence from said point of beginning South 22 degrees 12 minutes 03 seconds East along the centerline of aforesaid road 177.08 feet; thence North 89 degrees 56 minutes 03 seconds West 379.16 feet; thence North 00 degrees 06 minutes 22 seconds East 163.88 feet to the Southwest corner of aforesaid tract described in Shelby County Deed Record 262, Pages 686 and 943; thence South 89 degrees 56 minutes 03 seconds East 311.95 feet to the Point of Beginning 1.30 acres, more or less.

### PARCEL 2

An easement for the purposes of ingress and egress, said easement described as follows: Beginning at the Southwest corner of the above-described 1.30 acre tract; thence North 00 degrees 06 minutes 22 seconds East 389.49 feet to the South right-of-way line of North Ridge Drive; thence North 89 degrees 56 minutes 34 seconds West along said right-of-way line 50.00 feet; thence South 00 degrees 06 minutes 22 seconds West 389.48 feet; thence South 89 degrees 56 minutes 03 seconds East 50.00 feet to the Point of Beginning.

- 3. Property address (if available): 1689 N. Michigan Rd, Shelbyville, IN 46176.
- 4. Record title holder as shown in the deed dated April 13, 1990, recorded May 4, 1990 as Instrument No. Deed Record 304, Pages 668-669 in the Office of the Recorder of Shelby, Indiana:

### Farmers National Bank of Shelbyville

- 5. Lien search from the recording date of the above deed to the effective date of this report finds the following (including a ten-year judgment search of the title holder):
  - A. Taxes for the year 2017 payable in 2018 in the name of Farmers National Bank One National City Cnt

Brief Legal: PT S/2 30-13-7 1.30AC Taxing Unit: City of Shelbyville Parcel No: 73-07-30-400-008.000-002

Search Report

IN1807938

### SPECIAL INFORMATION SEARCH (Page 2 of 3)

1st installment: \$670.73 PAID 2nd installment: \$670.73 PAID

Assessed valuation as of Effective Date (for information only:) Land: \$45,500,00 Improvements: \$1,200.00 Exemptions: \$0.00

NOTE: Property sold at Tax Sale September 27, 2018 to Albert K. Berthouex. Tax Sale Certificate No. 731800006.

Β. Taxes for 2018 payable 2019, now a lien, not yet due and payable.

- Note: The real estate tax information set out above is all that is currently available in Shelby County C. Tax computer. Recent computer program changes may have rendered incomplete or inaccurate the available data. THIS INFORMATION MAY NOT BE SUFFICIENT FOR THE PURPOSE OF ESTABLISHING A PROPER REAL ESTATE TAX ESCROW. Neither the Company nor its agent, Hamilton National Title, LLC, assume or accept any responsibility for loss, damage, cost or expense due to, or arising out of, the present unavailability, or accuracy of tax information.
- Subject to storm sewer easement 20 feet of even width along the entire side as set out in Corporate D. Warranty Deed recorded May 4, 1990 in Deed Record 304, Pages 668-669, in the Office of the Recorder of Shelby County, Indiana.
- E. V
- Subject to sanitary sewer easement, being a tract of land 20 feet of even measured perpendicularly Southwest from the West right-of-way line of the Michigan Road as set out in Corporate Warranty Deed recorded May 4, 1990 in Deed Record 304, Pages 668-669, in the Office of the Recorder of Shelby County, Indiana.

END OF REPORT

Heathred.

### Hamilton National Title LLC, by

CONDITIONS AND LIMITATIONS - NOTE: The information contained in this report was obtained through searches and does not constitute a title examination. No representation is made as to the accuracy of the source of the information provided.

- No guarantee is given nor liability assumed with respect to the identity of any party named or referred to in this report, or with respect to 1. the validity, legal effect or priority of any matter shown herein. 2.
- The Company's liability hereunder is limited to loss sustained by only those parties named in this report as the Assured, by reason of any incorrectness in the matter set forth herein but in no event shall the Company's liability exceed the liability amount set forth herein. 3
- Failure to insert information in the blank spaces means no search was made for information in the appropriate category. Judgment Search of the Clerk's Office. The search made in the Office of the Clerk of the Circuit Court was limited to Judgments only,
- against the parties shown herein, the search being limited to the names as exactly set forth and not otherwise. Judgments docketed more than ten years ago and those which may have been released as to the subject real estate are not shown. 5.
- Lien Search of Recorder's Office. The search made in the Office of the Recorder was limited to liens which described the real estate shown herein and which were recorded during the search period shown herein. 6.
- Tax Search. A search was made in the Treasurer's Office for taxes which affect the subject real estate.

### **EXCLUSIONS**

- Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records subsequent to the 1. effective date hereof or of which the assured has or acquires actual knowledge.
- 2. Rights or claims of parties in possession.
- 3. Easements, or claims of easements,
- Encroachments, overlaps, boundary line disputes, or other matters which would be disclosed by an accurate survey or inspection of the 4.

Search Report

Part of the South Half of Section 30, Township 13 North, Range 7 East in Shelby County, Indiana, more particularly described as follows:

Beginning at a point on the centerline of the Michigan Boad (Old US 421) 17 feet south of the North line of the South Half of said Section 30, said point bearing South 88 degrees 42 minutes 25 seconds West a distance of 681.88 feet from the Southwest corner of the East Half of the Northeast Quarter of said Section 30; thence South 22 degrees 12 minutes 00 seconds East along the centerline of aforesaid road 945.7 feet to the point of beginning of the following described tract, said point also being the Southeast corner of a tract described in Shelby County Deed Record 262, pages \$86 and 943: Running thence from said point of beginning south 22 degrees 12 minutes 00 seconds East along the centerline of aforesaid road 177.08 feet; thence North 89 degrees 56 minutes 03 seconds West 379.16 feet; thence North 00 degrees 06 minutes 22 seconds East 163.88 feet to the Southwest corner of aforesaid tract described in Shelby County Deed Record 262, pages 686 and 943; thence south 89 degrees 56 minutes 03 seconds East 311.95 feet to the point of beginning, containing 1.30 acres, more or less.

ALSO, an easement for purposes of ingress and egress, said easement described as follows: Beginning at the Southwest corner of the above described 1.30 acre tract; thence North 00 degrees 06 minutes 22 seconds East 389.49 feet to the South right-of-way line of North Ridge Drive; thence North 89 degrees 56 minutes 34 seconds West along said right-of-way line 50.00 feet; thence south 00 degrees 06 minutes 22 seconds West 389.48 feet; thence South 8° degrees 56 minutes 03 seconds East 50.00 feet to the point of beginning.

Above described 1.30 acre tract subject to a storm sewer easement 20 feet of even width along the entire north side. Also subject to a sanitary sewer easement, said easement being a tract of land 20 feet of even width measured perpendicularly Southwest from the West rightof-way line of the Michigan Road and running North 22 degrees 12 minutes 60 seconds West parallel with said road along the entire East side of the subject tract.



# DEVELOPMENT STANDARDS VARIANCE

FINDINGS OF FACT

Petitioner's Name: <u>Al Berthouex</u> Location: 1689 North Michigan Road\_\_\_\_\_\_ Variance for: <u>Front yard parking and loading standards</u>

The Shelbyville Board of Zoning Appeals must determine that the following criteria have been met in order to approve an application for a Development Standard Variance. Using the lines provided, please explain how your request meets each of these criteria.

1. **General Welfare:** Explain why granting the request for a development standard variance will not be harmful to the public health, safety and general welfare of the City of Shelbyville.

This development will be consistent with the adjacent properties and meet all the city requirements with the approval of these two variances.

 Adjacent Property: Explain why the development standard variance request will not affect the use and the value of adjacent properties. For parking standards: the use and the value will not affect adjacent properties as it will be an improvement. The Loading

Standard Variance will also be an improvement as this is how the adjacent properties use this dead-end road.

3. **Practical Difficulty:** Please state the difficulties that will be faced if the project is not granted the requested development standard variance.

If not granted variance for the parking, the building may need to be smaller and could jeopardize the project as well as the access variance not being approved. Also, if access standard is not granted the public safety could be affected as the semi-trucks would unload on the dead-end street.

Note: For petitions with multiple requested variances, please submit one completed "Findings of Fact" for each requested variance.



February 23, 2021

Drainage Report Al Berthouex Site N. Michigan Road Shelbyville, IN 46176

### Project Scope:

The existing site is an area of grass with an asphalt drive and curbing for a previous ATM. The area of grass is being developed into a building with asphalt pavement, parking, and 6,000 square foot building. The area drains to an existing inlet located on the north side of the site. The storm sewer is an existing 30" pipe that runs east to Michigan Road. The proposed site will utility this existing pipe and provide enough detention prior to entering the existing storm system.

The proposed development will utilize a dry pond located on the north side of the site. The dry basin will provide enough detention in order to meet the required discharge rates. An existing beehive inlet will be used as the outlet with a 2.5" orifice. This orifice will control the stormwater discharge in order to meet the 2, 10, 10, 100 detention design method.

Please refer to the existing and proposed HydroCAD reports to show the calculations for each condition.

### **Design Parameters:**

The 2, 10, 10, 100 Detention Design Method and the Shelbyville Stormwater Design Manual is used for Design Criteria. To carry out the design, the HydroCAD V10.00 was used. The Huff Distributions have been used for the drainage analysis.

### Analysis:

Tuble 1. existing subin monnation and discharge rates			
Existing Site Acreage	0.87 acres		
Curve Number	80		
Existing 2-year Discharge Rate	0.35 cfs		
Existing 10-year Discharge Rate	0.94 cfs		
Existing 100-year Discharge Rate	3.79 cfs		

Table 1: existing basin information and discharge rates



Table 2: Proposed basin information and discharge rates

Proposed Basin Acreage	0.87 acres
Curve Number	97
Proposed 2-year Discharge Rate	0.14 cfs
Proposed 10-year Discharge Rate	0.21 cfs
Proposed 100-year Discharge Rate	0.27 cfs

### Soil Type Discussion:

From the Soil Maps, Brookston Silty clay loam and Crosby silt loam existing on the site. This soil types were considered while modeling the project and the Web Soil Survey can be found in the Site Information Appendix of this report.

### Flood Plain Discussion:

According to FEMA Flood Map Panel 18145C0116C dated November 5, 2014, the site of the project is located in the Zone X, "Area of Minimal Flood Hazard".

### Summary:

The proposed project is in accordance with the Shelbyville Stormwater Design Manual and provides no impact to the downstream properties. We are seeking approval of this drainage report to further this project.

Should you have any questions, please contact me at <a href="mailto:bruce.carter@gatespe.com">bruce.carter@gatespe.com</a>.

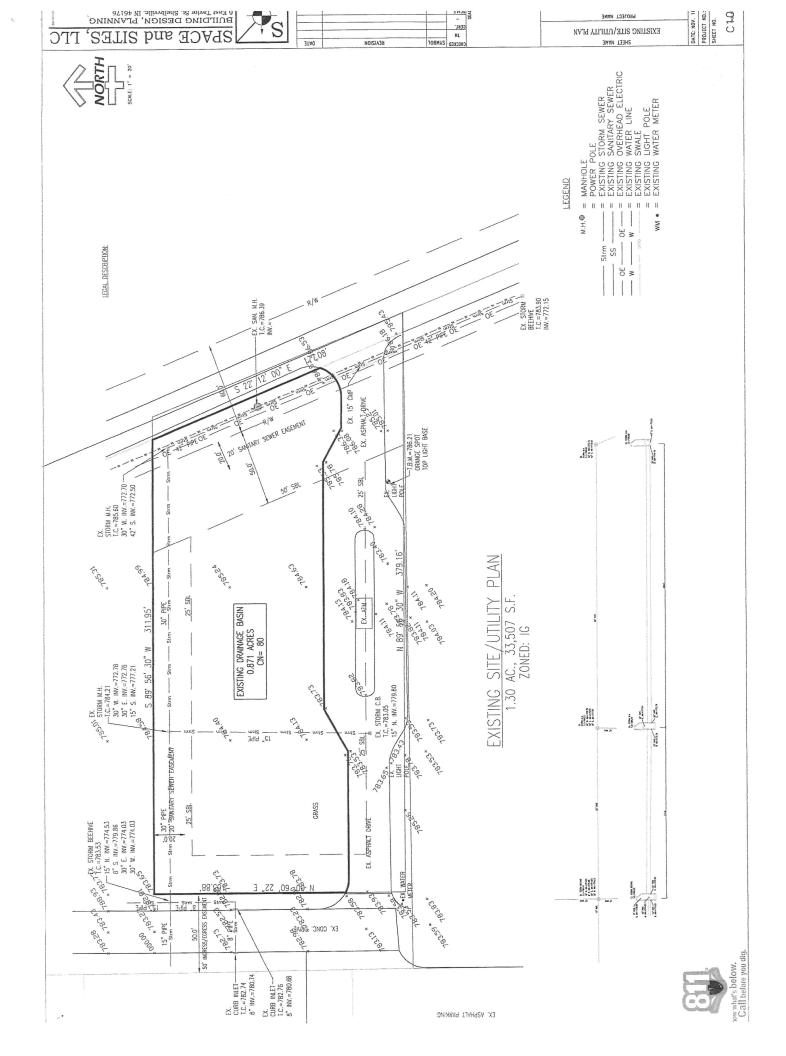
Sincerely,

Bruce G. Carter PE, IN 10000464





# EXISTING CONDITIONS



# Huff 0-10sm 1Q 6.00 hrs 100YR - 6HR Rainfall=5.13" Printed 2/21/2021

# **Events for Subcatchment 1S: Existing Conditions**

Event	Event Rainfall Runoff (inches) (cfs)		Volume (acre-feet)	Depth (inches)
2YR - 1HR	1.37	0.35	0.016	0.22
2YR - 24HR	2.92	0.16	0.086	1.19
2YR - 6HR	2.19	0.21	0.049	0.68
10YR - 0.17HR	0.89	0.41	0.004	0.05
10YR - 0.1HR	0.51	0.00	0.000	0.00
10YR - 0.25HR	1.15	0.60	0.010	0.13
10YR - 0.33HR	1.29	0.74	0.014	0.19
10YR - 0.5HR	1.57	0.92	0.023	0.32
10YR - 0.67HR	1.71	0.92	0.029	0.39
10YR - 0.83HR	1.85	0.93	0.034	0.47
10YR - 12HR	3.70	0.38	0.130	1.80
10YR - 1HR	2.00	0.94	0.041	0.56
10YR - 24HR	4.25	0.29	0.163	2.25
10YR - 2HR	2.46	0.78	0.063	0.86
10YR - 3HR	2.72	0.64	0.076	1.04
10YR - 6HR	3.19	0.43	0.101	1.39
100YR - 0.17HR	1.44	1.53	0.019	0.26
100YR - 0.1HR	0.82	0.29	0.003	0.04
100YR - 0.25HR	1.85	3.79	0.034	0.47
100YR - 0.33HR	2.08	2.56	0.044	0.61
100YR - 0.67HR	2.76	2.64	0.078	1.07
100YR - 0.83HR	2.98	2.59	0.090	1.24
100YR - 12HR	5.95	0.76	0.271	3.74
100YR - 1HR	3.21	2.52	0.102	1.41
100YR - 24HR	6.84	0.56	0.330	4.55
100YR - 2HR	3.97	1.87	0.146	2.02
100YR - 3HR	4.38	1.57	0.171	2.36
100YR - 6HR	5.13	1.11	0.218	3.01



### Area Listing (selected nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
0.871	80	>75% Grass cover, Good, HSG D (1S)

IN Shelbyville	Huff 0-10sm 1Q 1.00 hrs	2YR - 1HR Rainfall=1.37"
turner a		Printed 2/21/2021
Prepared by	s/n 00818 © 2018 HydroCAD Software Solutions LLC	Page 3
Hydrocade 10.00-22	S/11 00010 @ 2010 Hydroe, 12 Contraint	

# Summary for Subcatchment 1S: Existing Conditions

Runoff = 0.35 cfs @ 0.38 hrs, Volume= 0.016 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Huff 0-10sm 1Q 1.00 hrs 2YR - 1HR Rainfall=1.37"

Area	(ac)			ription			
0.	.871	80	>75%	>75% Grass cover, Good, HSG D			
0.	.871		100.0	00% Pervi	ous Area		
Tc (min)	Lengtl (feet		lope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
5.0						Direct Entry,	

# Summary for Subcatchment 1S: Existing Conditions

Runoff = 0.94 cfs @ 0.33 hrs, Volume= 0.041 af, Depth= 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Huff 0-10sm 1Q 1.00 hrs 10YR - 1HR Rainfall=2.00"

	Area	(ac)	CN	Desc	ription			
	0.	871	80	>75%	6 Grass co	over, Good	d, HSG D	
	0.	871		100.	00% Pervi	ous Area		
	Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
-	5.0						Direct Entry,	

# Summary for Subcatchment 1S: Existing Conditions

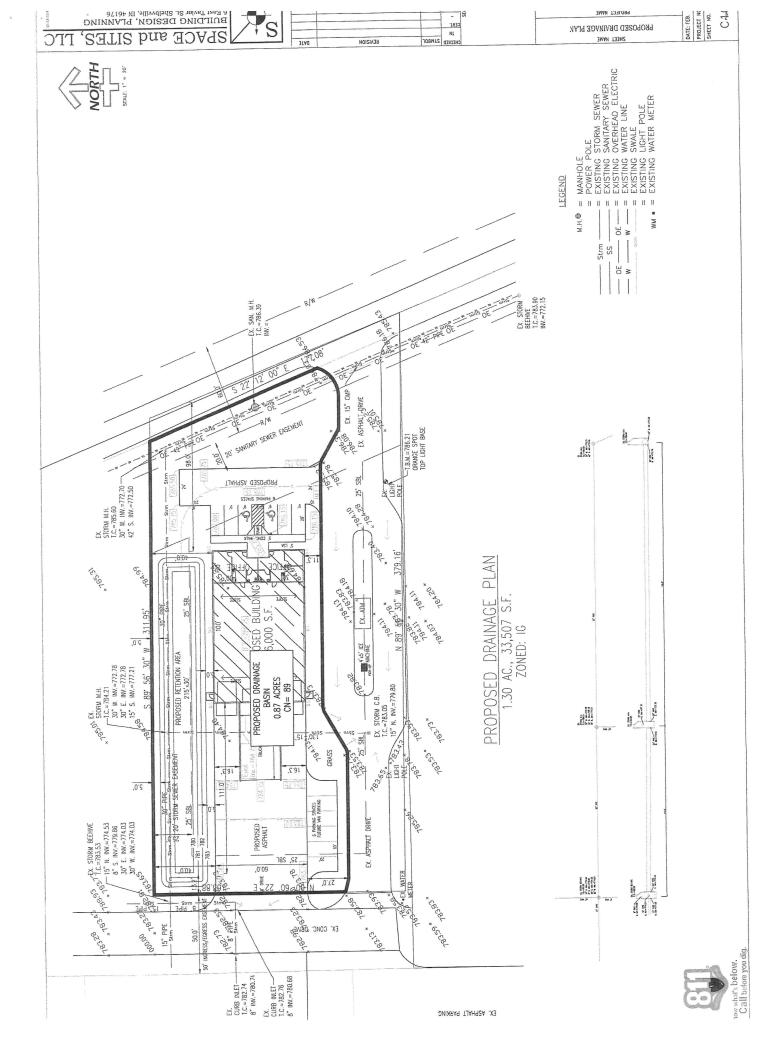
Runoff = 3.79 cfs @ 0.11 hrs, Volume= 0.034 af, Depth= 0.47"

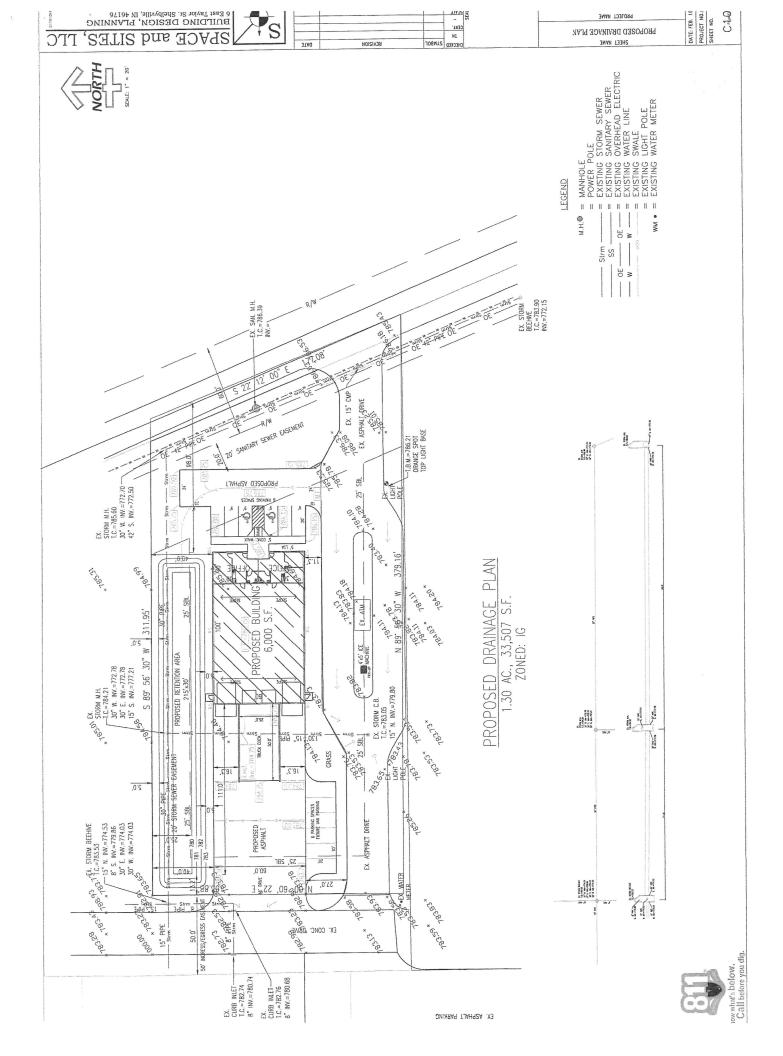
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Huff 0-10sm 1Q 0.10 hrs 100YR - 0.25HR Rainfall=1.85"

ŀ	Area (	ac)	CN		ription		
	0.0	871	80	>75%	6 Grass co	over, Good	I, HSG D
	0.	871		100.0	00% Pervi	ous Area	
(r	Tc min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.0						Direct Entry,



# PROPOSED CONDITIONS

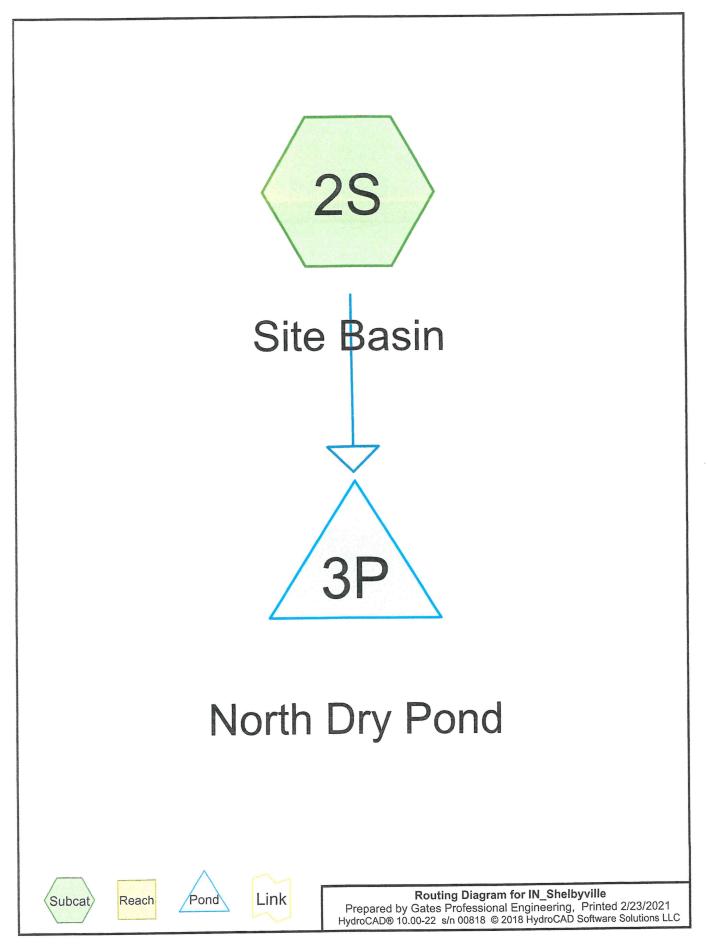




### IN\_Shelbyville

### Events for Pond 3P: North Dry Pond

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
2YR - 1HR	0.94	0.16	780.02	1,221
2YR - 24HR	0.23	0.15	779.93	1,013
2YR - 6HR	0.41	0.16	780.09	1,390
10YR - 0.17HR	1.76	0.13	779.71	603
10YR - 0.1HR	0.35	0.07	779.30	108
10YR - 0.25HR	1.89	0.15	779.94	1,055
10YR - 0.33HR	2.04	0.16	780.05	1,312
10YR - 0.5HR	2.16	0.18	780.27	1,863
10YR - 0.67HR	2.03	0.18	780.36	2,110
10YR - 0.83HR	1.93	0.19	780.45	2,364
10YR - 12HR	0.52	0.21	780.69	3,135
10YR - 1HR	1.87	0.20	780.54	2,639
10YR - 24HR	0.36	0.19	780.48	2,465
10YR - 2HR	1.44	0.21	780.72	3,214
10YR - 3HR	1.20	0.21	780.75	3,320
10YR - 6HR	0.83	0.21	780.71	3,187
100YR - 0.17HR	3.61	0.17	780.21	1,697
100YR - 0.1HR	1.44	0.12	779.64	489
100YR - 0.25HR	7.31	0.20	780.56	2,701
100YR - 0.33HR	4.81	0.21	780.71	3,187
100YR - 0.67HR	4.49	0.24	781.16	4,789
100YR - 0.83HR	4.27	0.24	781.28	5,286
100YR - 12HR	0.93	0.27	781.80	7,536
100YR - 1HR	4.16	0.25	781.41	5,804
100YR - 24HR	0.62	0.25	781.52	6,266
100YR - 2HR	3.28	0.27	781.72	7,176
100YR - 3HR	2.67	0.27	781.80	7,538
100YR - 6HR	1.76	0.27	781.78	7,460



### Summary for Subcatchment 2S: Site Basin

Runoff = 0.41 cfs @ 0.79 hrs, Volume= 0.086 af, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Huff 0-10sm 1Q 6.00 hrs 2YR - 6HR Rainfall=2.19"

Area	(ac)	CN	Desc	cription			
0.	293	98	Pave	d parking,	HSG D		
0.	137	98		s, HSG D			
0.	440	80	>75%	6 Grass co	over, Good	, HSG D	
0.	.870	89	Weig	hted Aver	age		
0.	.440		50.5	7% Pervio	us Area		
0.	.430		49.4	3% Imperv	vious Area		
Tc	Leng	th	Slope	Velocity	Capacity	Description	
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)		
5.0						Direct Entry,	

### Summary for Pond 3P: North Dry Pond

Inflow Are	ea =	0.870 ac, 49.43% Impervious, Inflow Depth = 1.19" for 2YR - 6HR event	
Inflow	=	0.41 cfs @ 0.79 hrs, Volume= 0.086 af	
Outflow	=	0.16 cfs @ 3.03 hrs, Volume= 0.086 af, Atten= 60%, Lag= 134.4 mi	n
Primary	Ξ	0.16 cfs @ 3.03 hrs, Volume= 0.086 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 780.09' @ 3.03 hrs Surf.Area= 2,475 sf Storage= 1,390 cf

Plug-Flow detention time= 105.0 min calculated for 0.086 af (100% of inflow) Center-of-Mass det. time= 105.0 min (250.4 - 145.4)

Volume	Invert	Avail.Stor		Storage De	and the second	
#1	779.00'	14,24	16 cf	Custom S	tage Data (P	rismatic)Listed below (Recalc)
Elevation (feet)	Su	rf.Area (sq-ft)		Store -feet)	Cum.Store (cubic-feet)	
779.00		1		0	0	
780.00		2,364		1,183	1,183	
781.00		3,654		3,009	4,192	
782.00		5,013		4,334	8,525	
783.00		6,429		5,721	14,246	
Device R	outing	Invert		et Devices		
#1 P	rimary	779.00'	2.5"	Vert. Orific	ce/Grate C=	0.600

**Primary OutFlow** Max=0.16 cfs @ 3.03 hrs HW=780.09' (Free Discharge) **1=Orifice/Grate** (Orifice Controls 0.16 cfs @ 4.77 fps)

### Summary for Subcatchment 2S: Site Basin

Runoff = 1.20 cfs @ 0.43 hrs, Volume= 0.120 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Huff 0-10sm 1Q 3.00 hrs 10YR - 3HR Rainfall=2.72"

	Area (	ac)	CN	Desc	cription		
	0.2	293	98	Pave	ed parking,	HSG D	
	0.1	137	98	Roof	s, HSG D		
	0.4	440	80	>75%	6 Grass co	over, Good	d, HSG D
	0.8	370	89	Weig	hted Aver	age	
	0.4	440		50.5	7% Pervio	us Area	
	0.4	430		49.4	3% Imperv	vious Area	
	Tc	Leng	th	Slope	Velocity	Capacity	
-	(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)	
	5.0						Direct Entry,

### Summary for Pond 3P: North Dry Pond

Inflow Are	ea =	0.870 ac, 49.43% Imperv	vious, Inflow Depth =	= 1.65" for 10YR - 3HR event	
Inflow	=	1.20 cfs @ 0.43 hrs, V			
Outflow	=	0.21 cfs @ 2.70 hrs, V		0 af, Atten= 82%, Lag= 136.6 mir	n
Primary		0.21 cfs @ 2.70 hrs, V	olume= 0.120	0 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 780.75' @ 2.70 hrs Surf.Area= 3,332 sf Storage= 3,320 cf

Plug-Flow detention time= 179.4 min calculated for 0.119 af (100% of inflow) Center-of-Mass det. time= 179.6 min (252.1 - 72.5)

Volume	Inver	t Avail.S	torage	Storage D	escription	
#1	779.00	)' 14,	246 cf	Custom S	itage Data (P	rismatic)Listed below (Recalc)
Elevatior (feet		Surf.Area (sq-ft)		.Store c-feet)	Cum.Store (cubic-feet)	
779.00		1	1	0	0	
780.00	)	2,364		1,183	1,183	
781.00	)	3,654		3,009	4,192	
782.00	)	5,013		4,334	8,525	
783.0	)	6,429		5,721	14,246	
Device #1	Routing Primary	Inver 779.00		et Devices Vert. Orifi	ce/Grate C=	0.600
11	Thinday	110.00				

**Primary OutFlow** Max=0.21 cfs @ 2.70 hrs HW=780.75' (Free Discharge)

IN Shelbyville	Huff 0-10sm 1Q 3.00 hrs	100YR - 3HR Rainfall=4.38"
Prepared by Gates Professional Engineering	9	Printed 2/23/2021
HydroCAD® 10.00-22 s/n 00818 © 2018 HydroCA		Page 4

### Summary for Subcatchment 2S: Site Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Huff 0-10sm 1Q 3.00 hrs 100YR - 3HR Rainfall=4.38"

Area	(ac)	CN	Desc	cription		
0.	293	98	Pave	d parking	HSG D	
0.	137	98	Roof	s, HSG D		
0.	440	80	>75%	6 Grass co	over, Good	d, HSG D
0.	870	89	Weig	hted Aver	age	
0.	440		50.5	7% Pervio	us Area	
0.	430		49.43	3% Imperv	ious Area/	
Tc	Leng		Slope	Velocity	Capacity	Description
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)	
5.0						Direct Entry,

### Summary for Pond 3P: North Dry Pond

Inflow Are	a =	0.870 ac, 49.43% Impervious, Inflow Depth = 3.18" for 100YR - 3HR e	vent
Inflow	=	2.67 cfs @ 0.40 hrs, Volume= 0.231 af	
Outflow	=	0.27 cfs @ 3.05 hrs, Volume= 0.231 af, Atten= 90%, Lag= 158.	9 min
Primary	=	0.27 cfs @ 3.05 hrs, Volume= 0.231 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs Peak Elev= 781.80' @ 3.05 hrs Surf.Area= 4,738 sf Storage= 7,538 cf

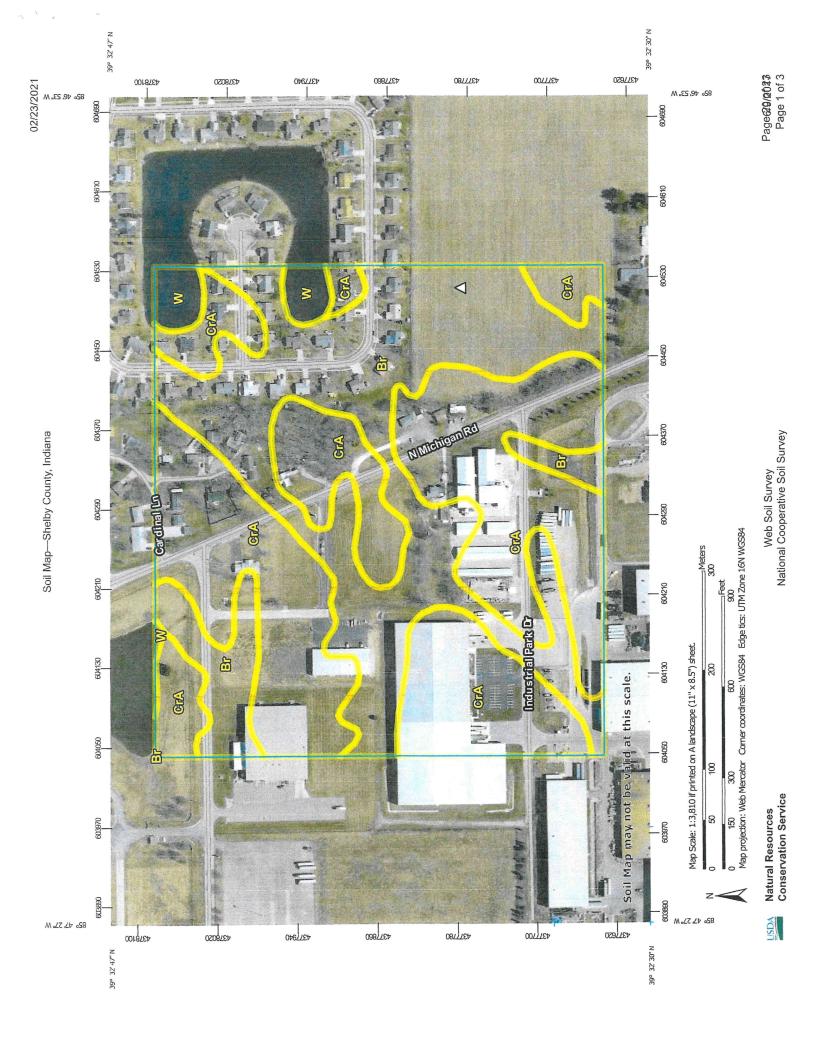
Plug-Flow detention time= 303.7 min calculated for 0.230 af (100% of inflow) Center-of-Mass det. time= 304.0 min (372.0 - 68.0)

Volume	Inve	rt Avail.S	torage	Storage	Description	
#1	779.0	0' 14	,246 cf	Custom	Stage Data (Pris	matic)Listed below (Recalc)
Elevatior (feet	-	Surf.Area (sq-ft)		c.Store c-feet)	Cum.Store (cubic-feet)	
779.00		1		0	0	
780.00	)	2,364		1,183	1,183	
781.00	)	3,654		3,009	4,192	
782.00		5,013		4,334	8,525	
783.00	)	6,429		5,721	14,246	
	Routing	Inve		et Device		
#1	Primary	779.0	D' <b>2.5"</b>	Vert. Ori	fice/Grate C= 0.	600

Primary OutFlow Max=0.27 cfs @ 3.05 hrs HW=781.80' (Free Discharge)



# SITE INFORMATION



02/23/2021

Soil Map-Shelby County, Indiana

		- CEND		
Area of I	Area of Interest (AOI) Area of Interest (AOI)	(II) ~ (C	Spoil Area Story Spot	The soil surveys that comprise your AOI were mapped at 1:15,800.
Soils		6	Very Stony Spot	Warning: Soil Map may not be valid at this scale.
	Soil Map Unit Polygons Soil Map Unit Lines	42	Wet Spot	Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of manning and accuracy of soil
	Soil Map Unit Points	$\triangleleft$	Other	line placement. The maps do not show the small areas of
Specia	Special Point Features	ţ	Special Line Features	contrasting soils that could have been shown at a more detailed scale.
9	Blowout	Water Features	atures	
23	Borrow Pit	1	Streams and Canals	Please rely on the bar scale on each map sheet for map measurements.
×	Clay Spot	Transportation +++ Rai	tation Rails	Source of Map: Natural Resources Conservation Service
$\diamond$	Closed Depression	2	Interstate Highways	Web Soil Survey URL: Coordinate Svstem: Web Mercator (FPSG:3857)
X	Gravel Pit	}	US Routes	Maps from the Web Soil Survey are based on the Web Mercator
4 9 9	Gravelly Spot		Major Roads	projection, which preserves direction and shape but distorts
Ð	Landfill		Local Roads	distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more
~	Lava Flow	Background	pui	accurate calculations of distance or area are required.
Canal Provider	Marsh or swamp	R	Aerial Photography	This product is generated from the USDA-NRCS certified data as of the version date(s) listed helow
ŝ.	Mine or Quarry			or and version date() indee bolow. Soil Survey Area: Chalby Pounty Indiana
0	Miscellaneous Water			
0	Perennial Water			Soil map units are labeled (as space allows) for map scales
>	Rock Outcrop			1:50,000 or larger.
	Saline Spot			Date(s) aerial images were photographed: Feb 26, 2012—Mar 10, 2012
с с 2 с 2 с	Sandy Spot			The orthophoto or other base map on which the soil lines were
	Severely Eroded Spot			compiled and digitized probably differs from the background
Ô	Sinkhole			imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
44	Slide or Slip			-
R.	Sodic Spot			

Web Soil Survey National Cooperative Soil Survey



# Map Unit Legend

Shelby County, Indiana (IN145)							
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI				
Br	Brookston silty clay loam, 0 to 2 percent slopes	22.8	41.5%				
CrA	Crosby silt loam, 0 to 2 percent slopes	. 30.8	56.0%				
W	Water	1.4	2.6%				
Totals for Area of Interest		55.1	100.0%				



# National Flood Hazard Layer FIRMette

02/23/2021

Legend

